

El Dorado to Clinton Rehabilitation

On State Route 99 between 0.2 mile south of El Dorado Street and the
Clinton Avenue Overcrossing

06-FRE-99-PM 21.2-24.4

EA 06-0W800/Project ID 0617000306

Draft Environmental Impact Report/ Environmental Assessment



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 U.S. Code 327 and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans.

September 2022



General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project in Fresno, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA), and Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans district office at 1352 West Olive Avenue, Fresno, California 93728, Gillis Branch Library, 629 West Dakota Avenue, Fresno, California 93705, and Fresno County Public Library at 2420 Mariposa Street, Fresno, California 93721.
- Attend the public information meeting on October 19, 2022. Please visit the project website on the Caltrans page for more information.
- We'd like to hear what you think. If you have any comments regarding the proposed project, please attend the virtual open house and/or send your written comments to Caltrans by the deadline.
- Submit comments via U.S. mail to: Trais Norris, Senior Environmental Planner, District 6 Environmental Division, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726.
- Submit comments via email to: trais.norris@dot.ca.gov.
- Submit comments by the deadline: November 18, 2022.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

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For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Trais Norris, District 6 Environmental Division, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; phone number 209-601-3521 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

Federal Highway Administration Highway ID Number
06-FRE-99-PM 21.2-24.4
EA 06-0W800/Project Number 0617000306

Rehabilitate the pavement, improve existing interchange spacings and structures, and replace interchanges on State Route 99 from post miles 21.2 to 24.4 in Fresno County

DRAFT ENVIRONMENTAL IMPACT REPORT /ENVIRONMENTAL ASSESSMENT

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

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agencies: California Transportation Commission



Diana Gomez
District Director
California Department of Transportation
NEPA and CEQA Lead Agency

9/22/2022

Date

The following may be contacted for more information about this document:

Trais Norris, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; 209-601-3521;
trais.norris@dot.ca.gov

Summary

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327 for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (Public Law 112-141), signed by President Barack Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding) with the Federal Highway Administration. The NEPA Assignment Memorandum of Understanding became effective October 1, 2012, and was renewed on May 27, 2022, for a term of 10 years. In summary, Caltrans continues to assume Federal Highway Administration responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, the Federal Highway Administration assigned, and Caltrans assumed all of the U.S. Department of Transportation Secretary’s responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance projects off of the State Highway System within the State of California, except for certain categorical exclusions that the Federal Highway Administration assigned to Caltrans under the 23 U.S. Code 326 Categorical Exclusion Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

The California Department of Transportation (Caltrans) proposes to rehabilitate State Route 99 between 0.2 mile south of the El Dorado Street Overcrossing and the Clinton Avenue Overcrossing within the City of Fresno in Fresno County. The project would remove the existing lanes and shoulders and replace them with continuously reinforced concrete pavement. The project proposes to rehabilitate the existing roadway at State Route 99 in the City of Fresno from 0.2 mile south of the El Dorado Avenue Overcrossing to the Clinton Avenue Overcrossing. The proposed work includes lengthening and/or widening seven structures and replacing three overcrossings and one railroad underpass, which would provide standard vertical clearances and longer structure spans that would accommodate the project’s required horizontal and vertical clearances.

The purpose of the State Route 99/El Dorado Street to Clinton Avenue Pavement Rehabilitation and Interchange Improvement Project is to:

- Provide a long-term solution to the deteriorating pavement within the project limits that reduces maintenance exposure and long-term maintenance expenditures.
- Provide standard vertical clearances at the El Dorado Street Overcrossing, Kerman Branch Underpass, Belmont Avenue Overcrossing, Teilman Overcrossing, Nielsen Undercrossing, McKinley Undercrossing, Motel Drive Undercrossing, and Olive Avenue Overcrossing.
- Bring any rehabilitated roadway and replaced structures up to current standards and allow for future implementation of the planned ultimate facility, including standard shoulder widths and horizontal clearances. Address the nonstandard spacing between the Belmont and McKinley Interchanges with other interchanges.
- Address the aging and obsolete pumping plants within the project limits.

The following needs have been identified within the project limits:

- The pavement on State Route 99 throughout the project limits is deteriorating and needs a long-term solution. Water has infiltrated the roadway base, which results in the hydraulic lifting of the roadway seat that is comprised of concrete panels. The uneven lifting of the panels results in cracking of the concrete panels and the asphalt overlay. The lifting and cracking result in a rough ride that causes traffic to slow down. A variety of maintenance projects have been implemented over the years to try and improve the conditions, including the replacement of panels and crack, seat, and overlay repairs. These temporary fixes have not resolved the issues, and maintenance and repair costs continue to rise because of the ongoing deterioration of the pavement.
- The structures within the project limits do not meet standard vertical clearances. El Dorado Street Overcrossing, Kerman Branch Underpass, Belmont Avenue Overcrossing, Teilman Overcrossing, Nielsen Undercrossing, McKinley Undercrossing, Motel Drive Undercrossing, and Olive Avenue Overcrossing have nonstandard vertical clearances that result in taller vehicles hitting the bottom of the bridges.
- The structures and roadways that need to be improved to address the needs above also do not meet other current standards or would not be adequate for the planned ultimate facility, such as shoulder widths and horizontal clearance limits.
- The Belmont Interchange and McKinley Partial Interchange have nonstandard spacing with other interchanges, which creates operational issues with weaving and queuing on State Route 99.
- Pumping plants within the project limits are obsolete and nearing their life expectancy.

More specifically, the project proposes to replace the following bridges: El Dorado Street Overcrossing, Kerman Branch Underpass (Railroad Underpass), Belmont Avenue Overcrossing, and Olive Avenue Overcrossing. The project would also remove the Pacific Avenue/Teilman Avenue Overcrossing and construct cul-de-sacs at the cut ends. The project also proposes to remove the six existing ramps at the Belmont and McKinley Avenue Interchanges. The proposed Olive Avenue Interchange enhancements are necessary to mitigate the closures of the Belmont Avenue and McKinley Avenue Interchange ramps.

Additionally, the project proposes to widen Nielsen Avenue Undercrossing and McKinley Avenue Undercrossing in the northbound and southbound directions, then widen the southbound State Route 99 off-ramp to the Motel Drive Undercrossing in the northbound direction. The project also proposes to provide Complete Streets features on the local road crossings. The Complete Streets Elements approach provides recommendations to encourage walking, bicycling, and transit use. For this project, these elements include increased width for pedestrians, bicyclists, transit facilities, and landscaping.

There are currently two Build Alternatives and a no-Build Alternative that are being considered for this project. Alternative 1 proposes a compact diamond interchange with dual roundabouts at the ramp terminals, and Alternative 2 proposes a diverging diamond interchange.

- Build Alternative 1: This would replace the existing Olive Avenue Interchange with a dual roundabout interchange. The interchange will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movement. The project would construct a

five-legged roundabout on the west side of State Route 99 and a four-legged roundabout on the east side of State Route 99. This alternative would also provide a direct connection to Parkway Drive and the five-legged roundabout. It is anticipated the project would need to acquire new right-of-way on the east and west sides of the Olive Avenue Interchange. The cost for this alternative is approximately a total of \$254 million for current year capital costs.

- The right-of-way requirement for the Olive Avenue Roundabout Interchange option under Alternative 1 would impact six commercial businesses, which include the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog. This alternative would also require partial acquisition on the ponding basin owned by Fresno Metropolitan Flood Control District. The ponding basin is impacted by the footprint of the proposed Olive Avenue northbound on-ramp. The current and escalated right-of-way estimates for Alternative 1 are \$49,350,408 and \$54,488,825, respectively.
- Build Alternative 2: This would replace the existing Olive Avenue Interchange with a diverging diamond interchange. The interchange will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movement. The alternative would realign the northern section of Parkway Drive between the connection of Olive Avenue/Parkway Drive about 300 feet south of the intersection. This section of Parkway Drive would be realigned as a frontage road to Crystal Avenue. It is anticipated that the diverging diamond interchange and the Parkway Drive realignment would need to acquire new right-of-way on the east and west sides of the Olive Avenue Interchange. In a diverging diamond interchange, traffic on the overcrossing would trade sides as traffic from the highway enters or exists the interchange with a slight curve. The diverging diamond interchange design reduces the number of potential conflicts at the intersections. The cost for this alternative is approximately a total of \$283 million for current year capital costs.
- The right-of-way requirement for the Olive Avenue diverging diamond interchange option under Alternative 2 would impact 12 commercial businesses, which include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog, Arco Gas Station, Fast N Easy Store, Rally's, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Rodeway Inn. Similar to Alternative 1, the property owned by the Fresno Metropolitan Flood Control District is currently used as a ponding basin and would be partially impacted by the footprint of the proposed Olive Avenue northbound on-ramp. The current and escalated right-of-way estimates for Alternative 2 are \$111,836,900 and \$123,560,000, respectively.

No-Build Alternative: This alternative will not construct the proposed project, and the existing conditions on State Route 99 within the project limits will not change. The failure to take action to address the project needs would allow the corridor deficiencies to continue to a more severe level which would not provide an efficient roadway for the traveling public.

The proposed project is a joint project by Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with the California Environmental Quality Act (also known as CEQA) and the National Environmental Policy Act (also known as NEPA). Caltrans is the lead agency under NEPA. Caltrans is the lead agency under CEQA. In addition, the Federal Highway Administration's responsibility for environmental review, consultation, and any other actions required by applicable federal

environmental laws for this project is being or has been carried out by Caltrans pursuant to 23 U.S. Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration and Caltrans.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often, a “lower level” document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment, which this document represents.

The next step in the environmental process is to circulate the Draft Environmental Impact Report/Environmental Assessment to the public for a 45-day review period. After receipt of comments from the public and reviewing agencies, a final Environmental Impact Report/Environmental Assessment will be prepared.

Caltrans may prepare additional environmental and/or engineering studies to address comments. The final Environmental Impact Report/Environmental Assessment will include responses to comments received on the draft Environmental Impact Report/Environmental Assessment and will identify the “preferred” alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement for compliance with NEPA. A Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government and the State Clearinghouse in compliance with Executive Order 12372.

Summary of Potential Impacts from Alternatives

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Land Use—Consistency with the City of Fresno General Plan	Consistent with the 2019 City of Fresno General Plan.	Consistent with the 2019 City of Fresno General Plan.	No Impact
Land Use—Consistency with Fresno County General Plan	Consistent with the 2019 City of Fresno General Plan.	Consistent with the 2019 City of Fresno General Plan.	No Impact
Coastal Zone	The project is not in a coastal zone.	The project is not in a coastal zone.	No Impact
Wild and Scenic Rivers	There are no wild or scenic rivers within the project area.	There are no wild or scenic rivers within the project area.	No Impact
Parks and Recreational Facilities	The project would not impact Fink-White Park or Basin XX. Roeding Park will be impacted. Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location.	The project would not impact Fink-White Park or Basin XX. Roeding Park will be impacted. Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location.	No Impact
Farmland and Timberland	There is no farmland or timberland within the project area.	There is no farmland or timberland within the project area.	No Impact
Growth	Alternative 1 is consistent with state, regional, and local plans, as well as the long-term goals of the 2022 Regional Transportation Plan for Fresno County, Fresno General Plan, Active Transportation Plan, and Downtown Neighborhood Community Plan. The project would not induce growth.	Alternative 2 is consistent with state, regional and local plans, as well as the long-term goals of the 2022 Regional Transportation Plan for Fresno County, Fresno General Plan, Active Transportation Plan, and Downtown Neighborhood Community Plan. The project would not induce growth.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Community Character and Cohesion	The project work on roadways in the area would alter access to community facilities, amenities, or services.	The project work on roadways in the area could alter access to community facilities, amenities, or services.	No Impact
Relocations and Real Property Acquisition— Business Displacements	Alternative 1 would impact six commercial businesses, which include the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog.	Alternative 2 would impact 12 commercial businesses, which include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog, Arco Gas Station, Fast N Easy Store, Rally's, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Rodeway Inn.	No businesses would be relocated.
Relocations and Real Property Acquisition— Housing Displacements	Alternative 1 would impact single-family residences that may need to be acquired for the project. There will be three residential displacements.	Alternative 2 would impact single-family residences that may need to be acquired for the project, in addition to the Rodeway Inn. There will be 79 residential displacements.	No housing displacements would occur.
Environmental Justice	The population within the socioeconomic study area would be subjected to disproportionately high and adverse effects due to increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements and relocations, and decreased accessibility to State Route 99.	The population within the socioeconomic study area would be subjected to disproportionately high and adverse effects due to increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements and relocations, and decreased accessibility to State Route 99.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Utilities and Emergency Services	Existing utilities may be relocated temporarily or permanently, and access rights or temporary construction easements may be required. Temporary lane closures during construction may slightly delay emergency services from accessing emergencies via State Route 99 or on State Route 99.	Existing utilities may be relocated temporarily or permanently, and access rights or temporary construction easements may be required. Temporary lane closures during construction may slightly delay emergency services from accessing emergencies via State Route 99 or on State Route 99.	No Impact
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Temporary delays and detours will occur during construction. Some local streets would experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets would increase. Auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue and from Olive Avenue to Clinton Avenue will be added. Temporary pedestrian bridges would be added at El Dorado Street, Olive Avenue, and McKinley Avenue during construction.	Temporary delays and detours will occur during construction. Some local streets would experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets would increase. Auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue and from Olive Avenue to Clinton Avenue will be added. Temporary pedestrian bridges would be added at El Dorado Street, Olive Avenue, and McKinley Avenue during construction.	The No-Build Alternative would result in higher congestion at major points of merging.

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Visual/Aesthetics	Temporary visual impacts are expected to be low. The overall visual impact of the proposed project is expected to be moderate to moderately low. The project is being designed with features that will offset visual impacts that reflect the desired goals of the local State Route 99 Corridor aesthetics theme. The project will have no impacts on scenic vistas, scenic resources within a state scenic highway, or create a new source of light or glare.	Temporary visual impacts are expected to be low. The overall visual impact of the proposed project is expected to be moderate to moderately low. The project is being designed with features that will offset visual impacts that reflect the desired goals of the local State Route 99 Corridor aesthetics theme. The project will have no impacts on scenic vistas, scenic resources within a state scenic highway, or create a new source of light or glare.	If the bridges are not replaced, the visual disparity between the new bridges and old bridges within the State Route 99 Corridor will continue.
Cultural Resources	There were two properties assumed eligible for the purposes of this project only: Southern Pacific/Central Pacific Railroad and Houghton Canal. The California Office of Historic Preservation concurred in a Finding of No Adverse Effect for those properties on May 18, 2022. The Roeding Park Historic District was also determined to be eligible for the National Register of Historic Places.	There were two properties assumed eligible for the purposes of this project only: Southern Pacific/Central Pacific Railroad and Houghton Canal. The California Office of Historic Preservation concurred in a Finding of No Adverse Effect for those properties on May 18, 2022. Finding of No Adverse Effect document under review at the California Office of Historic Preservation. Concurrence was received on May 18, 2022. The Roeding Park Historic District was also determined to be eligible for the National Register of Historic Places.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Hydrology and Floodplain	The project would not impact any floodplains within the project area. The project is not within a 100-year flood zone.	The project would not impact any floodplains within the project area. The project is not in a 100-year flood zone.	No Impact
Water Quality and Stormwater Runoff	The project has the potential to impact water quality standards and/or waste discharge requirements during construction and operation on surface water and groundwater. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.	The project has the potential to impact water quality standards and/or waste discharge requirements during construction and operation on surface water and groundwater. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.	No Impact
Geology, Soils, Seismicity, and Topography	The project would not impact the geology, soils, seismicity, or topography of the project area.	The project would not impact the geology, soils, seismicity, or topography of the project area.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Paleontology	The project area has the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations. The Paleontological Mitigation Plan would be prepared for applicable excavations within the project area and would be prepared, reviewed, and approved by a qualified paleontologist and State of California licensed Professional Geologist in accordance with the guidance provided in Caltrans' Standard Environmental References and Standard Special Provision 14-7.04.	The project area has the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations. The Paleontological Mitigation Plan would be prepared for applicable excavations within the project area and would be prepared, reviewed, and approved by a qualified paleontologist and a State of California licensed professional geologist in accordance with the guidance provided in Caltrans' Standard Environmental References and Standard Special Provisions Section 14-7.04.	No Impact
Hazardous Waste and Materials	There are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body, and food manufacturing/distribution plants within the project boundaries. The project work would not pose a significant hazard risk to the environment, and project construction would not create a significant hazard to the public or environment and constitutes a less than significant impact.	There are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body, and food manufacturing/distribution plants within the project boundaries. The project work would not pose a significant hazard risk to the environment, and project construction would not create a significant hazard to the public or environment and constitutes a less than significant impact.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Air Quality	During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other construction-related activities. However, the long-term emissions arising from the project are negligible in terms of the overall project and will not significantly impact the overall project emissions.	During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other construction-related activities. However, long-term emissions arising from the project are negligible in terms of the overall project and will not significantly impact the overall project emissions.	No transportation improvements. Air quality would worsen with time as population and traffic congestion increases along State Route 99.
Noise and Vibration	Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Long-term vibration is unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility. Noise at some locations will approach or exceed the noise abatement criteria. Two existing soundwalls will be rebuilt; all other soundwalls were determined not to be reasonable. Night work will be expected during construction.	Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Long-term vibration is unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility. Noise at some locations will approach or exceed the noise abatement criteria. Two existing soundwalls will be rebuilt; all other soundwalls were determined not to be reasonable. Night work will be expected during construction.	No Impact
Energy	The project would not result in wasteful, inefficient, or unnecessary consumption use of energy or wasteful use of energy resources.	The project would not result in wasteful, inefficient, or unnecessary consumption use of energy or wasteful use of energy resources.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Natural Communities	There are no sensitive natural communities within the project area.	There are no sensitive natural communities within the project area.	No Impact
Wetlands and Other Waters	The project would involve work in the Houghton Canal to widen Nielsen Avenue Undercrossing. Houghton Canal is designated as jurisdictional waterway. The project would permanently impact about 0.005 acre and temporarily impact about 0.007 acre of the waterway.	The project would involve work in the Houghton Canal to widen Nielsen Avenue Undercrossing. Houghton Canal is designated as a jurisdictional waterway. The project would permanently impact about 0.005 acre and temporarily impact about 0.007 acre of the waterway.	No Impact
Plant Species	Some vegetation and trees would be removed; however, are no plant species of concern within the project area.	Some vegetation and trees would be removed; however, are no plant species of concern within the project area.	No Impact
Animal Species	The project would include the removal of trees and shrubs that provide nesting habitats for birds protected by the Migratory Bird Treaty Act. The project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. Additional surveys may be necessary within a year before construction. However, there were no conclusive signs of bats roosting within the bridges in the project footprint.	The project would include the removal of trees and shrubs that provide nesting habitats for birds protected by the Migratory Bird Treaty Act. The project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. Additional surveys may be necessary within a year before construction. However, there were no conclusive signs of bats roosting within the bridges in the project footprint.	No Impact
Threatened and Endangered Species	There are no threatened and endangered species affected by the project.	There are no threatened and endangered species affected by the project.	No Impact
Invasive Species	There are no invasive species within the project area.	There are no invasive species within the project area.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Construction	The project would involve reusing or recycling salvageable construction materials. The project would also incorporate water-efficient project features, fuel-efficient measures both for construction equipment and traffic management during delays or detours, minimize material source hauling distance from the site, reduce the amount of fuel use, reduce driving, and provide construction personnel training to enhance knowledge in identifying environmental issues and construction best practice methods to minimize impacts to humans and the environment.	The project would involve reusing or recycling salvageable construction materials. The project would also incorporate water-efficient project features, fuel-efficient measures both for construction equipment and traffic management during delays or detours, minimize material source hauling distance from the site, reduce the amount of fuel use, reduce driving, and provide construction personnel training to enhance knowledge in identifying environmental issues and construction best practice methods to minimize impacts to humans and the environment.	No Impact
Cumulative Impacts	The project would have cumulatively considerable impacts on the following resources: Transportation/Traffic, Relocations, and Environmental Justice. Environmental Justice impacts would be significant.	The project would have cumulatively considerable impacts on the following resources: Transportation/Traffic, Relocations, and Environmental Justice. Environmental Justice impacts would be significant.	No Impact
Wildfire	The project is not in a wildfire zone.	The project is not in a wildfire zone.	No Impact
Climate Change	The project is not expected to increase operational greenhouse gas emissions.	The project is not expected to increase operational greenhouse gas emissions.	No Impact

Coordination With the Public and Other Agencies

The project would include coordination with agencies such as the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the Central Valley Regional Water Quality Control Board, the U.S. Environmental Protection Agency, and the State Historic Preservation Officer. Numerous outreach efforts were made in the form of public meetings and mailings to the public. Please see Chapter 4, Comments and Coordination, for a complete list of coordination efforts.

Permits and Approvals Needed

Agency	Permit, License, Agreement or Certification	Status
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	The application for a 1602 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
U.S. Army Corps of Engineers	A Regional General Permit for temporary and permanent impacts to Waters of the U.S.	The application for a 404 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
Central Valley Regional Water Quality Control Board	Section 401 Certification for a Water Discharge Permit.	The application for a 401 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
San Joaquin Valley Air Pollution Control District	Dust Control Plan and/or National Emissions Standards for Hazardous Air Pollutants. A notification would be required before the demolition of any bridges or structures.	Caltrans Standard Specifications about dust control plans would be included in the construction contract. Notification to the air district would be made during the construction phase of the project.
California State Office of Historic Preservation	Concurrence with Section 106 Consultation eligibility determination	A copy of the concurrence letter was received for the determination of eligible historic properties.
California State Office of Historic Preservation	Concurrence with Findings of No Adverse Effect	Two properties assumed eligible for the purposes of this project only, Southern Pacific/Central Pacific Railroad and the Houghton Canal, were the subject of a Finding of No Adverse Effect document under review at the California Office of Historic Preservation. Concurrence from the State Historic Preservation Officer was received on May 18, 2022.
City of Fresno	Concurrence with the Section 4(f) De Minimis Evaluation	The City of Fresno is actively working with Caltrans and has concurred with the preliminary Section 4(f) De Minimis determination. See Appendix A.
Fresno Irrigation District	Encroachment Permit at Houghton Canal	The application for the encroachment permit would be submitted in the Plans, Specifications, and Estimates phase of the project.
Fresno Metropolitan Flood Control District	Encroachment Permit for Pumping Plants	The application for the encroachment permit would be submitted in the Plans, Specifications, and Estimates phase of the project; this will be completed by the Central Valley Flood Protection Board.

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Chapter 1 Proposed Project

1.1 Introduction

Caltrans is proposing to rehabilitate and improve a 3.2-mile segment of State Route 99 within the city of Fresno. State Route 99, known as the Golden State Highway, is a principal arterial route running North to South throughout the California Central Valley, serving cities such as Bakersfield, Fresno, Stockton, and Sacramento. State Route 99 within the project limits is an urban six-lane freeway divided by a modified Type 50 concrete median barrier.

The mainline roadway generally consists of three 12-foot Portland Cement Concrete lanes with Asphalt Concrete overlays, a 10-foot Asphalt Concrete outside shoulder, and varying Asphalt Concrete inside shoulder widths of 5 feet to 7 feet. The posted speed limit is 65 miles per hour. Caltrans is the NEPA and CEQA lead agency for this project and would be funding the proposed project using State Highway Operation and Protection Program and Senate Bill 1 funds.

The proposed project is located in the middle of the city of Fresno and is about 3.2 miles in length. Figures 1-1 and 1-2 provide maps showing the project's vicinity and location. The project begins 0.2 mile south of the El Dorado Street Overcrossing, at the northern edge of downtown Fresno, and ends at the Clinton Avenue Overcrossing. The project lies next to Roeding Park/Chaffee Zoo and the State Route 99/State Route 180 Interchange. The project landscape is urban with a combination of hard landscape materials and vegetation along the shoulders of the existing highway. Eight structures are within the project limits, including three undercrossings, one underpass, and four overcrossings.

Caltrans is considering a No-Build Alternative and two Build Alternatives. The No-Build Alternative would keep State Route 99 in its existing condition. Both Build Alternatives propose to remove the existing pavement, construct six lanes with continuously reinforced concrete pavement, replace three overcrossings and an underpass, remove an overcrossing, widen three undercrossings, close the Belmont Avenue Interchange and the McKinley Avenue Partial Interchange, and replace an Interchange at Olive Avenue.

The Build Alternatives differ from the proposed work at the Olive Avenue Interchange:

Alternative 1: proposes to replace the existing interchange with a dual roundabout interchange; a five-legged roundabout would be built west of the highway, and a four-legged roundabout would be built east of the highway.

Alternative 2: proposes to replace the existing Olive Avenue Interchange with a diverging diamond interchange and realign the northern section of Parkway Avenue as a frontage road to Crystal Avenue.

1.2 Purpose and Need

The discussion of the purpose and need for this project provides the reasoning why the project is being considered. The purpose of a project identifies the objectives of the project; the need describes the key deficiencies of the roadway that the project is intended to address. The purpose and need form the basis for comparing the proposed alternatives, along with potential environmental impacts, to select an eventual “preferred” alternative to construct.

1.2.1 Purpose

The purpose of the State Route 99/El Dorado Street to Clinton Avenue Pavement Rehabilitation and Interchange Improvement Project is to:

- Provide a long-term solution to the deteriorating pavement within the project limits that reduces maintenance exposure and long-term maintenance expenditures.
- Provide standard vertical clearances at the El Dorado Street Overcrossing, Kerman Branch Underpass, Belmont Avenue Overcrossing, and Olive Avenue Overcrossing.
- Bring any rehabilitated roadway and replaced structures up to current standards allowing for future implementation of the planned ultimate facility.
- Address the nonstandard spacing between the Belmont and McKinley Interchanges with other interchanges.

1.2.2 Need

The following needs have been identified within the project limits:

- The pavement on State Route 99 throughout the project limits is deteriorating and needs a long-term solution. A variety of maintenance projects have been implemented over the years to try and improve the conditions, including the replacement of panels and crack, seat, and overlay repairs. These temporary fixes have not resolved the issues, and maintenance and repair costs continue to rise because of the ongoing deterioration of the pavement.
- The structures within the project limits do not meet standard vertical clearances. El Dorado Street Overcrossing, Kerman Branch Underpass,

Belmont Avenue Overcrossing, and Olive Avenue Overcrossing have nonstandard vertical clearances that result in taller vehicles hitting the bottom of the bridges.

- The structures and roadway that need to be improved to address the needs above also do not meet other current standards or would not be adequate for the planned ultimate facility.

The Belmont Interchange and McKinley Partial Interchange have nonstandard spacing with other interchanges, which creates operational issues with weaving and queuing on State Route 99.

Existing Conditions

State Route 99 within the project limits is an urban six-lane freeway divided by a modified Type 50 concrete median barrier. The mainline roadway generally consists of three 12-foot Portland Cement Concrete lanes with Asphalt Concrete overlays, a 10-foot Asphalt Concrete outside shoulder, and varying Asphalt Concrete inside shoulder widths of 5 feet to 7 feet. The posted speed limit is 65 miles per hour. Maintenance efforts and expenditures have increased to maintain the deteriorating pavement. Many existing bridges within the project limits have nonstandard vertical clearances resulting in vehicular collisions. Interchange spacing within the project limits does not meet current standards, which has affected traffic operations and motorists merging and changing lanes along the highway. The existing concrete pavement within the project limits had previously been cracked, sealed, and overlaid with 0.35 foot of Asphalt Concrete and 0.08 foot of rubberized hot mix asphalt concrete. In addition, many of the existing highway signs along this portion of State Route 99 have been damaged from vandalism and wear.

State Route 99 is used by local drivers, commuters, tourists, commercial trucks, and agricultural vehicles, including tractors. Although each of these users has specific transportation needs, improving mobility will benefit all users on State Route 99.

Traffic Collisions and Fatalities

District 6 Office of Traffic Operations performed a traffic operational analysis for this project, which was completed on September 10, 2020. The traffic operational analysis includes the northbound and southbound State Route 99 freeway mainline and ramps within the project limits. The conditions investigated were for the base year (2019), the “No Build” and “Build” conditions for the opening year (2029), and the design (2049) year based on the key roadway improvements assumed to be in place for the opening year.

Collision Rates (Mainline):

The mainline collision rates for this segment of State Route 99, in the northbound and southbound directions for the most recent three-year study

period (between January 1, 2017, and December 31, 2019), are indicated in the number of collisions per million vehicle miles.

Table 1.1 below displays the Freeway Ramp, Actual Fatal, Actual Fatal Plus Injury, Actual Total, Statewide Average Fatal, Statewide Average Fatal Plus Injury, and Statewide Average Total rates on northbound and southbound State Route 99 from post miles 21.2 to 24.4.

Table 1.1 Mainline Collision Rates From Post Miles 21.2-24.4

Freeway Ramp (Post Miles 21.2-24.4)	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Northbound State Route 99	0.018	0.56	2.00	0.005	0.29	0.87
Southbound State Route 99	0.009	0.50	1.75	0.005	0.29	0.87

District 6 Office of Traffic Operations report; completed on September 10, 2020.

The actual fatal, fatal plus injury, and total collision rates in the northbound and southbound directions for this State Route 99 segment are higher than the statewide average for similar roadways with comparable traffic volumes.

Most of the collisions in the northbound direction occurred in clear weather (84 percent), daylight (62 percent), and dry roadway (88 percent) conditions. Of all the collisions, 25 percent were recorded on a weekday during the evening peak travel time (4:00 p.m. to 6:00 p.m.). A rear-end type of collision accounted for 56 percent of the total northbound accidents, and side-swipe collisions accounted for 22 percent. This type of crash data is indicative of a section with recurrent congestion. It also corresponds with the existing operations of this portion of State Route 99, as heavy commutes often result in traffic volumes reaching capacity in bottleneck areas and breakdowns in traffic flow. The large percentage of rear-end and side-swipe collisions might also be symptomatic of poor weaving.

The Caltrans Highway Design Manual, Index 501.3, recommends a 2-mile interchange spacing between freeway-to-freeway interchanges and other interchanges and a minimum 1-mile spacing for urban interchanges. The interchanges within this section of State Route 99 are spaced considerably closer than those recommendations. The preferred alternative proposes to address problematic interchange spacing, update interchange design, and add auxiliary lanes.

Most of the collisions in the southbound direction occurred in clear weather (85 percent), daylight (71 percent), and dry roadway (89 percent) conditions. Twenty percent of all collisions were recorded on a weekday during the morning peak travel time (6:30 a.m. to 8:30 a.m.).

Rear-end collisions accounted for 47 percent of the total southbound accidents, and side-swipe collisions accounted for 25 percent. The crash data in the southbound direction is indicative of a section with recurrent congestion. It corresponds with the existing operations of this portion of State Route 99, as heavy commutes often result in traffic volumes reaching capacity in bottleneck areas and breakdowns in traffic flow. It is also symptomatic of insufficient weaving conditions that are exacerbated by close interchange spacing. Like the northbound direction, the proposed project would improve operations by addressing the problematic interchange spacing, updating interchange design, and adding auxiliary lanes.

Collision Rates (Ramps):

The freeway ramp collision rates along this segment of State Route 99 in the northbound and southbound directions for the most recent three-year study period (between 01-01-2017 and 12-31-2019) are indicated in the number of accidents per million vehicles.

Table 1.2 below shows the Freeway Ramp, Actual Fatal, Actual Fatal Plus Injury, Actual Total, Statewide Average Fatal, Statewide Average Fatal Plus Injury, and Statewide Average Total rates on northbound and southbound State Route 99 from post miles 21.54 to 22.23.

Table 1.2 State Route 99-State Route 180 Interchange Ramps From Post Miles 21.54-22.23

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Northbound off-ramp to State Route 180 (post mile 21.54)	0.000	0.25	0.38	0.002	0.09	0.28
Segment northbound off-ramp to westbound State Route 180 (post mile 21.67)	0.000	0.00	0.00	0.004	0.17	0.51
Segment northbound off-ramp to eastbound State Route 180 (post mile 21.67)	0.000	0.00	2.06	0.003	0.14	0.43
Southbound on-ramp from eastbound State Route 180 (post mile 21.72)	0.000	0.82	0.82	0.004	0.13	0.40
Northbound on-ramp from eastbound State Route 180 (post mile 21.76)	0.000	0.35	0.35	0.001	0.17	0.60
Southbound on-ramp from westbound State Route 180 (post mile 21.92)	0.000	0.23	0.93	0.001	0.17	0.60
Northbound on-ramp from westbound State Route 180 (post mile 22.04)	0.000	0.14	0.67	0.005	0.15	0.48

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Segment southbound off-ramp to westbound State Route 180 (post mile 22.10)	0.246	0.49	1.72	0.003	0.14	0.43
Segment southbound off-ramp to eastbound State Route 180 (post mile 22.10)	0.000	0.23	0.61	0.004	0.17	0.51
Southbound off-ramp to State Route 180 (post mile 22.23)	0.000	0.14	0.28	0.002	0.09	0.28

Source: District 6 Office of Traffic Operations report; completed on September 10, 2020.

The Actual Fatal collision rates for nine of the 10 ramps at this interchange are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. There was one fatal collision that occurred on the southbound State Route 99 connector to the westbound State Route 180. Seven of the ten ramps have Actual Fatal plus Injury rates that are higher than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. Also, seven of the ten ramps at this interchange have Actual Total rates that are higher than the statewide average collision rates for similar freeway ramps with comparable traffic volumes.

Twelve of the 15 accidents on the northbound State Route 99 to eastbound State Route 180 connector ramp occurred under wet conditions. District 6 Traffic Safety Investigations has reviewed this location and has recently recommended the installation of High Friction Surface Treatment on the ramp to address the potential for the occurrence of wet accidents.

The crash data is indicative of recurrent congestion on the northbound Route 99 connector on-ramp from westbound State Route 180. Once again, it corresponds with the existing operations on this ramp, as heavy commutes often result in traffic volumes reaching this section of State Route 99's capacity and this ramp's capacity. The proposed project would improve

operations by addressing the problematic interchange spacing, updating interchange design, and adding auxiliary lanes.

Table 1.3 State Route 99-Belmont Avenue Interchange Ramps From Post Miles 22.57-22.91

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Southbound on-ramp from Belmont Avenue. (post mile 22.57)	0.000	0.00	0.36	0.001	0.10	0.32
Northbound off-ramp to Belmont Avenue. (post mile 22.60)	0.000	0.70	1.92	0.008	0.39	1.03
Northbound on-ramp from Belmont Avenue. (post mile 22.85)	0.000	0.38	0.76	0.002	0.23	0.63
Southbound off-ramp to Belmont Avenue. (post mile 22.91)	0.000	0.45	0.89	0.008	0.39	1.03

Source: District 6 Office of Traffic Operations report; completed on September 10, 2020.

The Actual Fatal collision rates for all the ramps at this interchange are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. Three of the four ramps have Actual Fatal plus Injury rates that are higher than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. Also, three of the four ramps at this interchange have Actual Total rates that are higher than the statewide average collision rates for similar freeway ramps with comparable traffic volumes.

Table 1.4 State Route 99-Olive Avenue Interchange Ramps From Post Miles 23.10-23.45

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Northbound off-ramp to Olive Avenue (post mile 23.10)	0.000	0.00	0.52	0.008	0.39	1.03
Southbound on-ramp from Olive Avenue (post mile 23.17)	0.000	0.00	0.57	0.002	0.23	0.63
Northbound on-ramp from Olive Avenue (post mile 23.41)	0.000	1.28	2.56	0.002	0.23	0.63
Southbound off-ramp to Olive Avenue (post mile 23.45)	0.000	0.68	1.35	0.008	0.39	1.03
Northbound off-ramp to Olive Avenue (post mile 23.10)	0.000	0.00	0.52	0.008	0.39	1.03

Source: District 6 Office of Traffic Operations report; completed on September 10, 2020.

The Actual Fatal collision rates for all the ramps at this interchange are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. The northbound off-ramp to Olive Avenue and the southbound on-ramp from Olive Avenue have Actual Fatal plus Injury and Total collision rates that are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. The southbound off-ramp to Olive Avenue has a Fatal Plus Injury collision rate that is lower than the statewide average and a Total collision rate that is slightly higher than the statewide average collision rate for similar freeway ramps with comparable traffic volumes. The northbound on-ramp from Olive Avenue has Fatal Plus Injury and Total collision rates that are higher than the statewide average collision rates for similar freeway ramps with comparable traffic volumes.

Table 1.5 State Route 99-McKinley Avenue Interchange Ramps From Post Miles 23.65 to 23.72

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Northbound off-ramp to McKinley Avenue (post mile 23.65)	0.000	0.55	1.10	0.008	0.39	1.03
Southbound on-ramp from McKinley Avenue (post mile 23.72)	0.000	0.34	1.21	0.008	0.23	0.63

Source: District 6 Office of Traffic Operations report; completed on September 10, 2020.

The Actual Fatal collision rates for both ramps at this interchange are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes. However, both ramps have Actual Fatal plus Injury and Actual Total collision rates that are higher than the statewide average for similar freeway ramps with comparable traffic volumes.

Table 1.6 State Route 99-Clinton Avenue Interchange Ramps From Post Miles 24.10-24.38

Freeway Ramp	Actual Fatal	Actual Fatal Plus Injury	Actual Total	Statewide Average Fatal	Statewide Average Fatal Plus Injury	Statewide Average Total
Southbound on-ramp from Clinton Avenue (post mile 24.10)	0.000	0.00	0.08	0.001	0.10	0.32
Northbound off-ramp to Clinton Avenue (post mile 24.22)	0.000	0.09	0.14	0.005	0.32	0.92
Segment Old State Route 99 to Clinton Avenue (post mile 24.27)	0.000	0.00	0.00	0.004	0.34	0.70
Segment Northbound off-ramp to Clinton Avenue (post mile 24.27)	0.000	0.00	0.55	0.008	0.39	1.03
Segment Southbound off-ramp to Old State Route 99 (post mile 24.38)	0.000	0.00	0.00	0.004	0.17	0.51
Segment Clinton Avenue to Old State Route 99 (post mile 24.38)	0.000	0.00	0.00	0.007	0.21	0.61

Source: District 6 Office of Traffic Operations report; completed on September 10, 2020.

All the ramps within the project limits at the Clinton Avenue Interchanges have Actual Fatal, Fatal plus Injury, and Total collision rates that are lower than the statewide average collision rates for similar freeway ramps with comparable traffic volumes.

Traffic Volumes

The 2016 daily percentage of heavy vehicles within the project limits varies from 11 percent to 21 percent. According to the Caltrans District 6 Traffic Operations, the 2016 Average Daily Traffic within the project limits of State Route 99 varies from a low of 84,000, between Fresno Street and Stanislaus Street, to a high of 137,000, between State Route 180 and Belmont Avenue. Level of Service is used to describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. The project would not include new high-occupancy toll lanes, high-occupancy vehicle lanes, or general-purpose lanes on the mainline of State

Route 99. For this reason, the project will not require a vehicle miles traveled-based significance determination under CEQA. This project is a rehab project that will improve the existing highway and will not require an induced travel analysis under CEQA.

Table 1.7 displays 20-year and 40-year design designations for the mainline, which are the main travel lanes of the highway. Initially, the expected project completion year for this project was 2025, and the forecasted 2025 Average Daily Traffic was 163,000. Trucks comprise 23 percent of the Average Daily Traffic. Please refer to the tables below for traffic projections.

Table 1.8 displays the increase in annual truck average daily traffic on Olive and Clinton Avenues between the years 2029 and 2049 for both Build Alternatives and the no-Build Alternative.

Table 1.7 Average Daily Traffic on State Route 99 in 2016

Design Designation	20 Years (2025-2045)	40 Years (2045-2065)
Average Daily Traffic	240,000	353,500
Design Hourly Volume	21,600	32,000
Peak-Hour Directional Volume Percentage	55 percent	55 percent
Traffic Index (average time consumed in traffic)	17.5	19.5

Source: Caltrans Travel Forecasting; District 6 Office of Traffic Operations Data, Draft Project Report (November 2020).

Table 1.8 No-Build Versus Build Comparison of Truck Annual Average Daily Traffic (Belmont and McKinley Ramps Removed)

Intersection	2029 No-Build	2029		2049 No-Build	2049	
		Alternative 1 Divergent Diamond Interchange	Alternative 2 Dual Roundabout		Alternative 1 Divergent Diamond Interchange	Alternative 2 Dual Roundabout
Olive Avenue	1,479	2,892	2,892	2,096	4,578	4,578
Clinton Avenue	4,428	5,810	5,810	6,396	8,820	8,820

Source: Caltrans Travel Forecasting; District 6 Office of Traffic Operations Data

Bicycle and Pedestrian Traffic

Bicycle access is prohibited on State Route 99 within District 6. There are currently no existing facilities such as bike paths, bike lanes, and bike routes within the project route. However, pedestrian and bike facilities will be considered in all the proposed bridge replacement work and in coordination with the City of Fresno. Class 2 bike lanes are being planned for Alternative 1, and Caltrans plans to incorporate shared bicycle and pedestrian sidewalks within the influence of the proposed Olive roundabouts.

Logical Termini and Independent Utility

Federal Highway Administration (FHWA) regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The project has logical termini and is of sufficient length to address the deficiencies identified at the interchanges. The project would use pavement rehabilitation strategies, which include improved interchange spacings, consistency with nearby corridor pavement, traffic handling during construction, and long-term cost-effectiveness. The proposed project is consistent with the State Route 99 Transportation Concept Report and the Fresno/Madera Urban Route 99 Corridor System Management Plan.

The decision was made to proceed with the project as described herein. The new southern project limit of 0.2 mile south of the El Dorado Street Overcrossing at post mile 21.2 was determined to be a logical starting point. Thus, a Supplemental Project Initiation Report was requested and signed on October 12, 2020, with the intent of reducing the project costs while still meeting performance measures and the purpose and need of the project. The Supplemental Project Initiation Report reduced the project limits by eliminating the downtown portion of the project and by modifying the preferred interchange for Olive Avenue from a Type L-9 Interchange to a compact diamond interchange with roundabouts at the ramp terminals and became part of the Programmable Alternative.

District 6 Office of Traffic Operations, with support from the Project Development Team, performed traffic operational studies for the Olive Avenue interchange for the different ramp interaction scenarios with Belmont Avenue ramps closed and McKinley Avenue ramps opened and closed. The right-of-way and environmental impacts were evaluated for the Olive Avenue Roundabouts and single-point interchange options. Consequently, the single-point interchange was ruled out by the Project Development Team on July 23, 2019, due to high construction and right-of-way costs with no significant operational benefits. Thus, the interchange options for Olive Avenue were reduced to the compact diamond interchange with roundabouts (included in Build Alternative 1) and the Divergent Diamond Interchange (included in Build Alternative 2).

The project has independent utility and is a reasonable expenditure as the improvements address the identified deficiencies even if no other transportation improvements are made. There are no additional projects needed to address the identified deficiencies at the interchanges.

The project would not restrict the consideration of alternatives for reasonably foreseeable transportation improvements. The Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.

The Regional Transportation Plan's Chapter 4 (Action Element) describes transportation projects that may be completed during the Regional Transportation Plan horizon (2042) and considers congestion management activities within the region. The proposed rehabilitation project is within the Regional Transportation Beautification Master Plan as part of the State beautification and modernization pilot project (from American Avenue to San Joaquin River). The beautification plan specifically identifies El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue bridges for future gateway and aesthetic improvements. The proposed rehabilitation project addresses the aesthetic treatments of all bridges and walls that are part of the project scope.

The 2022 Regional Transportation Plan proposes several projects to improve bicycle and pedestrian mobility in the project area, as well as improvements to the State Route 99 Corridor. The project design has been developed to consider other reasonably foreseeable projects and would not conflict with or constrain the design of these other projects. The proposed project is being coordinated with the City of Fresno and will conform with City of Fresno planning documents, such as the Fresno General Plan, Active Transportation Plan, Fulton Corridor Specific Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan. The Fresno Council of Governments and Fresno County have also been consulted, and their feedback is being considered. Fresno Council of Governments' San Joaquin Valley Model Improvement Plan Phase 2 contains the latest traffic model applicable to this project. Please refer to Section 1.4, Project Alternatives to see the design features being proposed.

1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project while avoiding or minimizing environmental impacts. The alternatives are Build Alternative 1, Build Alternative 2, and the No-Build Alternative. Both Build Alternatives are the same in scope, except for the type of interchange that would be constructed at Olive Avenue. Criteria used to evaluate each alternative were

potential impacts on human and natural resources, project feasibility, ability to meet the project's purpose and need, and overall project cost.

The California Department of Transportation (Caltrans) proposes a roadway rehabilitation project on State Route 99 from 0.2 mile south of the El Dorado Street Overcrossing to the Clinton Avenue Overcrossing (between post mile 21.2 and post mile 24.4) in Fresno County. The project has several major components: (1) pavement replacement, (2) median widening, (3) alterations to several undercrossing and overcrossing structures, (4) addition of auxiliary lanes, (5) the installation of retaining walls, and (5) the replacement of pumping plants.

Pavement Replacement

State Route 99 within the project limits is an urban six-lane freeway divided by a modified Type 50 concrete median barrier. The mainline roadway generally consists of three 12-foot Portland Cement Concrete lanes with Asphalt Concrete overlays, a 10-foot Asphalt Concrete outside shoulder, and varying Asphalt Concrete inside shoulder widths of 5 feet to 7 feet. The project would excavate the existing pavement and grade soil to the required profile, install a pavement base (asphalt for concrete pavement), and place Continuously Reinforced Concrete Pavement on top of that base.

Median Widening

When a segment of the state highway system is being improved, it is Caltrans' policy to try and update the facility to current design standards. Since the pavement is going to be replaced, Caltrans is going to provide standard shoulders within the project limits. To accomplish this, the median will need to be widened to allow for standard shoulders. The existing median width varies from 13 feet to 20 feet along the project limits. Excavation will take place near the right-of-way line for a retaining wall to be placed, thus creating more usable space for pavement.

Structure Work

The proposed work would also include lengthening and/or widening seven structures and removing one structure to achieve the standard vertical clearance and shoulder widths. Additionally, the project would accommodate the ultimate facility and provide for Complete Streets features, which include improved pedestrian pathways on the local road crossings. The existing interchange spacing within the project limits does not meet the current interchange spacing standards, which has created traffic operational and safety issues.

More specifically, the proposed work includes replacing the El Dorado Street (Bridge Number 42 0184) Overcrossing, Belmont Avenue (Bridge Number 42 01896) Overcrossing, Olive Avenue (Bridge Number 42 0187) Overcrossing, and Kerman Branch (Number 42 0190) railroad structure, widening the

Nielsen Avenue (Bridge Number 42 0189) Undercrossing, McKinley Avenue (Bridge Number 42 0181) Undercrossing, and the Motel Drive (Bridge Number 42 0182) Undercrossing, and removing the Teilman Avenue (Bridge Number 42 0188) Overcrossing.

Auxiliary Lanes

Auxiliary lanes are proposed for this project. The auxiliary lanes will help balance the traffic load, add 0.5 mile of weaving length for traffic entering from State Route 180, and provide spacing before a freeway-to-freeway interchange. The project will construct auxiliary lanes in the northbound and southbound directions at the following locations.

- One auxiliary lane in each direction from Stanislaus Street ramps to the State Route 180 connectors.
- From State Route 180 connectors to Olive Avenue ramps, one auxiliary lane in the southbound direction and two auxiliary lanes in the northbound direction, which will taper to one auxiliary lane just south of the Belmont Avenue Overcrossing.
- One auxiliary lane in each direction from Olive Avenue ramps to Clinton Avenue ramps.

Retaining Walls

Fourteen retaining walls will be designed to allow for minimal disturbance to roadside vegetation. The height of the retaining walls would be designed for ease of maintenance. Existing vegetation will be identified during the design phase and will be preserved during construction.

Pumping Plants

The storage box and pumping plant, located next to the Kerman Branch Underpass and Olive Avenue Overcrossing, will be constructed. This work will be completed behind temporary railing.

Figure 1-1 Project Vicinity Map

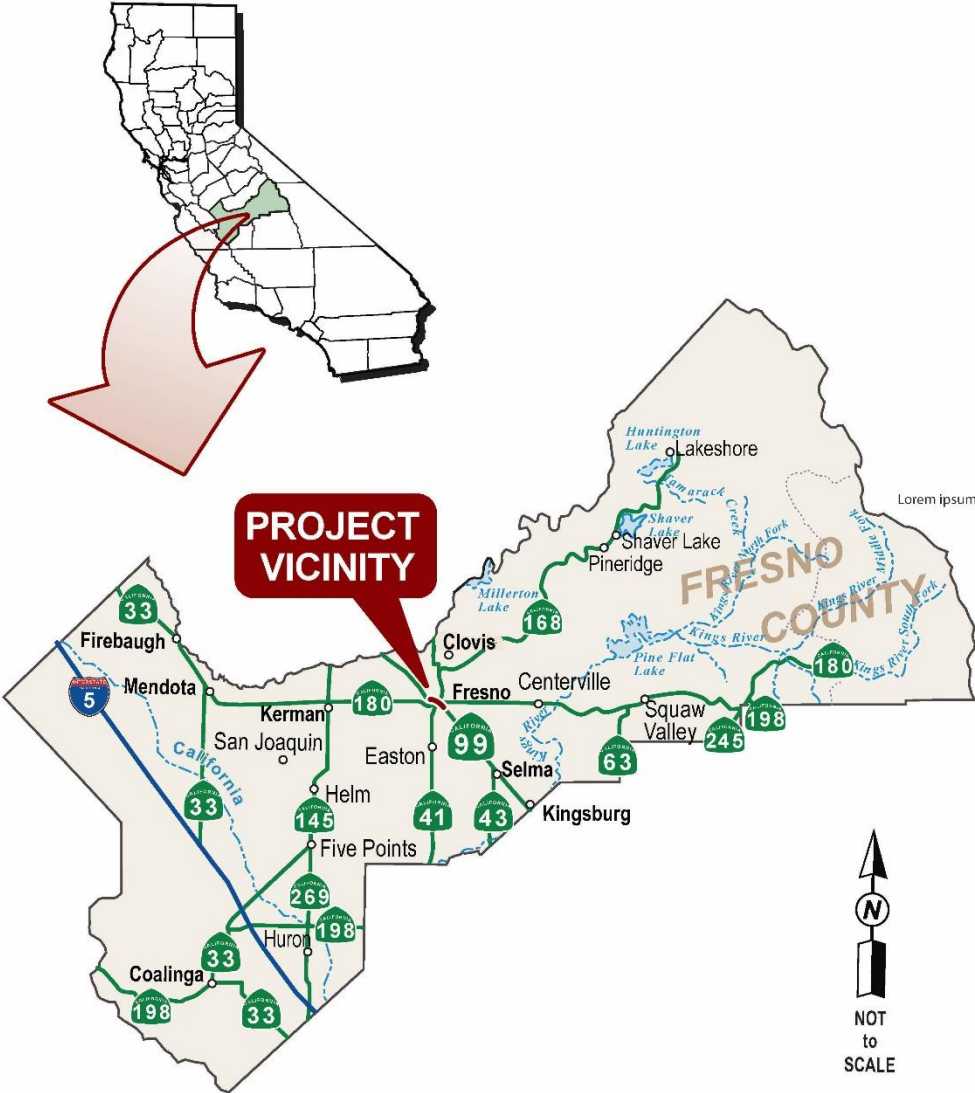
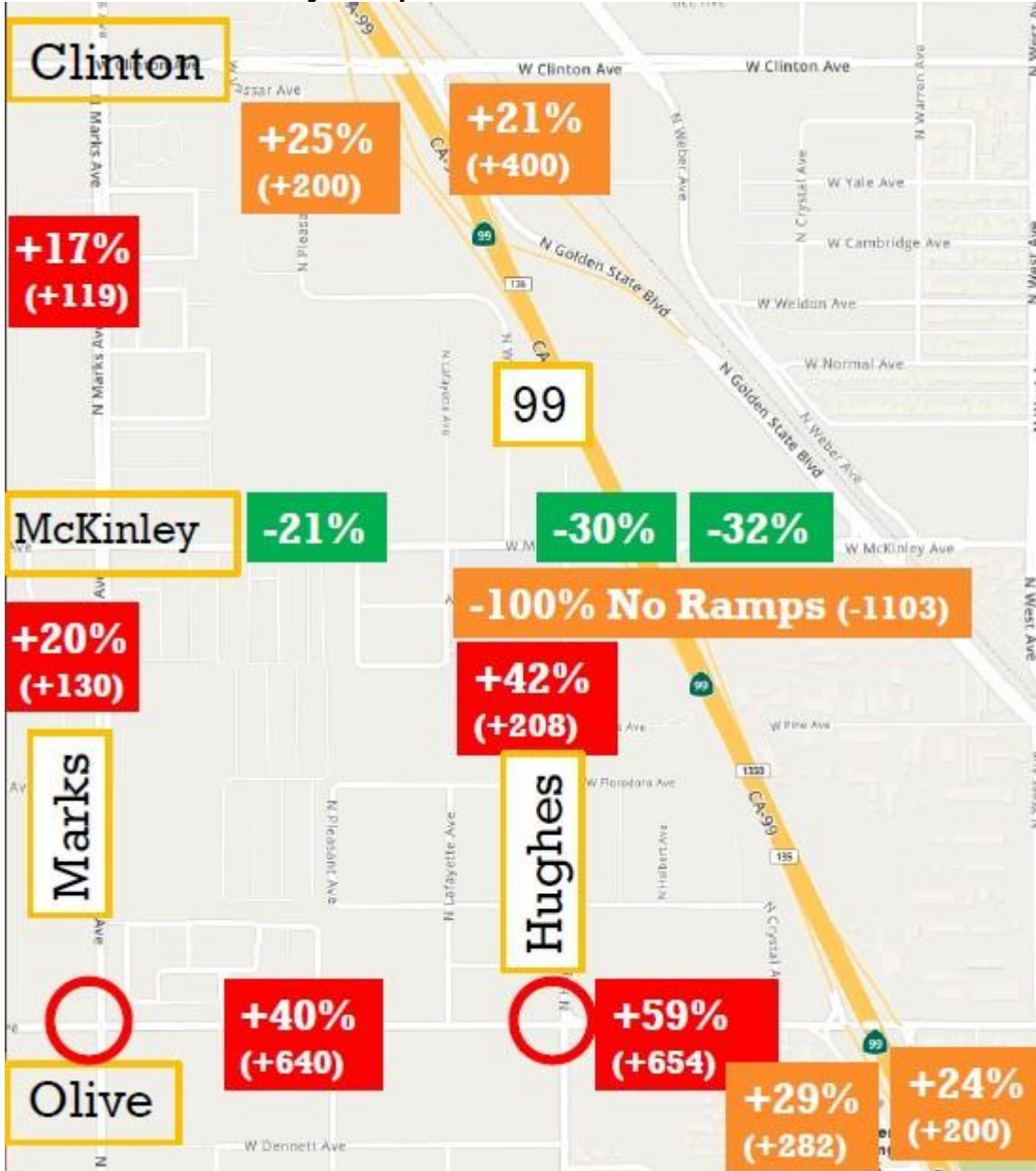


Figure 1-2 Project Location Map



Figure 1-3 Local Street Impacts on Clinton, Marks, Hughes and Olive Avenue with McKinley Ramp Removal



Note: An increase in percentage displays an increase in traffic, and the number below that percentage displays the increase in vehicles. Conversely, a decrease in percentage displays a decrease in traffic.

1.4 Project Alternatives

This section describes the Build Alternatives under consideration and compares the differences between them. The alternatives under consideration are Build Alternatives 1, 2, and the No-Build Alternative. The alternatives are evaluated by how well each meets the project's purpose and

need and avoids and/or minimizes environmental impacts. Criteria used to evaluate each of the alternatives were potential impacts on human and natural resources, project feasibility, ability to meet the project's purpose and need, and overall project cost.

1.4.1 Build Alternatives

Build Alternative 1: This would replace the existing Olive Avenue Interchange with a dual roundabout interchange (Figure 1-1). The interchange will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movement. The project would construct a five-legged roundabout on the west side of State Route 99 and a four-legged roundabout on the east side of State Route 99. This alternative would also provide a direct connection to Parkway Drive and the five-legged roundabout. It is anticipated the project would need to acquire new right-of-way on the east and west sides of the Olive Avenue Interchange. The cost for this alternative is about \$254 million for current year capital costs.

The right-of-way requirement for the Olive Avenue roundabout interchange option under Alternative 1 would impact six commercial businesses, which include the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog. This alternative would also require a partial acquisition of the ponding basin owned by the Fresno Metropolitan Flood Control District. The ponding basin is impacted by the footprint of the proposed Olive Avenue northbound on-ramp. The current and escalated right-of-way estimates for Alternative 1 are \$49,350,408 and \$54,488,825, respectively.

Build Alternative 2: This would replace the existing Olive Avenue Interchange with a diverging diamond interchange (Figure 1-2). The interchange will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movement. The alternative would realign the northern section of Parkway Drive between the connection of Olive Avenue/Parkway Drive about 300 feet south of the intersection. This section of Parkway Drive would be realigned as a frontage road to Crystal Avenue. It is anticipated the diverging diamond interchange and the Parkway Drive realignment would need to acquire new right-of-way on the east and west sides of the Olive Avenue Interchange. In a diverging diamond interchange, traffic on the overcrossing would trade sides as traffic from the highway enters or exits the interchange with a slight curve. The diverging diamond interchange design reduces the number of potential conflicts at the intersections. The cost for this alternative is about \$283 million for current year capital costs.

The right-of-way requirement for the Olive Avenue diverging diamond interchange option under Alternative 2 would impact 12 commercial

businesses, which include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog, Arco Gas Station, Fast N Easy Store, Rally's, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Rodeway Inn. Alternative 2 would also require access modification to the nearby Park View Mobile Home and RV Park. Similar to Alternative 1, the property owned by the Fresno Metropolitan Flood Control District is currently used as a ponding basin and would be partially impacted by the footprint of the proposed Olive Avenue northbound on-ramp. The current and escalated right-of-way estimates for Alternative 2 are \$111,836,900 and \$123,560,000, respectively.

No-Build Alternative: This alternative will not construct the proposed project, and the existing conditions on State Route 99 within the project limits will not change. The failure to take action to address the project needs would allow the corridor deficiencies to continue to a more severe level, which would not provide an efficient roadway for the traveling public.

Build Alternatives Common Design Features of the Build Alternatives

Both alternatives would:

- Remove the pavement under the existing six lanes and reconstruct the six lanes with Continuously Reinforced Concrete Pavement on State Route 99.
- Remove all existing lanes and shoulders, and either lower the State Route 99 profile, raise profiles on overcrossings, or a combination of both.
- Construct a 46-foot median with Type-A Hot Mix Asphalt from north of El Dorado Avenue Overcrossing to north of McKinley Avenue Undercrossing.
- Construct an auxiliary lane on the northbound and southbound sides of State Route 99 at three locations:
 - From the East Stanislaus Street Interchange to the State Route 99/State Route 180 junction.
 - From State Route 99/State Route 180 junction to the Olive Avenue Interchange. The project would construct a second auxiliary lane in the northbound direction between State Route 99/State Route 180 junction to the existing Belmont Avenue Overcrossing. The second auxiliary lane would taper off south of the Belmont Avenue Overcrossing.
 - From the Olive Avenue Interchange to the Clinton Avenue Interchange.
- Remove all the existing ramps at the Belmont Avenue Interchange and McKinley Avenue Interchange.

The following overcrossings and underpass would be replaced and constructed in the same alignment as the existing structure:

- El Dorado Street Overcrossing (Bridge Number 42-0184; post mile 21.461)
- Kerman Branch Underpass (Bridge Number 42-0190; post mile 22.427)
- Belmont Avenue Overcrossing (Bridge Number 42-0186; post mile 22.735)
- Olive Avenue Overcrossing (Bridge Number 42-0187; post mile 23.304)

The following undercrossings would be widened:

- Nielsen Avenue Undercrossing (Bridge Number 48-0188; post mile 22.133); on the northbound and southbound directions.
- McKinley Avenue Undercrossing (Bridge Number 42-0180; post mile 23.852); in the northbound and southbound directions.
- Motel Drive Undercrossing (Bridge Number 45-0182; post mile 24.205); Widening the southbound State Route 99 Off-Ramp to Motel Drive Undercrossing in the northbound direction.
 - Remove Pacific Avenue/Teilman Avenue Overcrossing (Bridge Number 42-0189; post mile 22.39) and construct cul-de-sacs at the cut ends.

Construct 14 retaining walls at various locations within the project limits:

- One along the southbound lane of northbound State Route 99 at Trinity Street, before the El Dorado Street Overcrossing.
- One just south of Nielsen Avenue near the Nielsen Avenue Undercrossing on northbound State Route 99, next to Migrant Glass distributors
- One immediately north of Nielsen Avenue on Northbound State Route 99, adjacent to Jatin's Truck Yard
- Four at each quadrant of Union Pacific Railroad tracks at the intersection of Teilman Avenue; just north of Stephens and Bean Funeral Chapel
- Five at each quadrant of Olive Avenue Overcrossing on Southbound State Route 99:
 - Two are southwest of Olive Avenue and State Route 99; located just east of Motel 6 and Denny's;
 - One at the southeast quadrant, adjacent to the Chevron gas station;
 - One at the northwest quadrant, adjacent to Motel 6;
 - One next to the Old California Highway Patrol Building
- Two on State Route 99, just north of McKinley Avenue:
 - One on southbound State Route 99, adjacent to Rosenbalm Rockery;
 - One on Northbound State Route 99, adjacent to AR Transmission

Both Build Alternatives would:

- Remove the on-ramps and off-ramps at the Belmont Avenue and McKinley Avenue Interchange.
- Both alternatives would also require the partial acquisition of the ponding basin owned by the Fresno Metropolitan Flood Control District. The ponding basin is impacted by the footprint of the proposed Olive Avenue northbound on-ramp.

Reconstruct the following soundwalls and pumping plants:

- North of Belmont Avenue in the northbound direction, adjacent to Roeding Park. In addition to rebuilding the existing soundwall, the project would also extend the south end limit by 300 feet toward Belmont Avenue.
- North of McKinley Avenue Undercrossing in the northbound direction, adjacent to the Three Palms Mobile Homes and RV Park.
- The storage box and pumping plant next to Olive Avenue will be built behind temporary railing. Intermittent lane closures will be required to install and remove temporary delineation and railing.
- The storage box and pumping plant next to the Kerman Branch Underpass will be built behind temporary railing. Intermittent lane closures will be required to install and remove temporary delineation and railing.

Confirm that the local road conforms to the El Dorado Overcrossing and the Belmont Avenue Overcrossing.

- Construct a new Parkway Drive connection to Belmont Avenue at the existing southbound off-ramp, which will be extended to the existing Parkway Drive; then rehabilitate the rest of the existing Parkway Drive up to the proposed Olive Avenue roundabout.

Local Road Improvements

Local road improvements (such as Complete Street elements) will be provided at the following intersections:

- Olive Avenue from Crystal Avenue to West Avenue.
- McKinley Avenue within McKinley Avenue Undercrossing.
- Hughes Avenue between Olive Avenue and McKinley Avenue.
- Fruit Avenue between Nielsen Avenue and Belmont Avenue
- Nielsen Avenue, between Teilman Avenue and Fruit Avenue.
- Hughes/Olive and Marks/Olive signalizations.

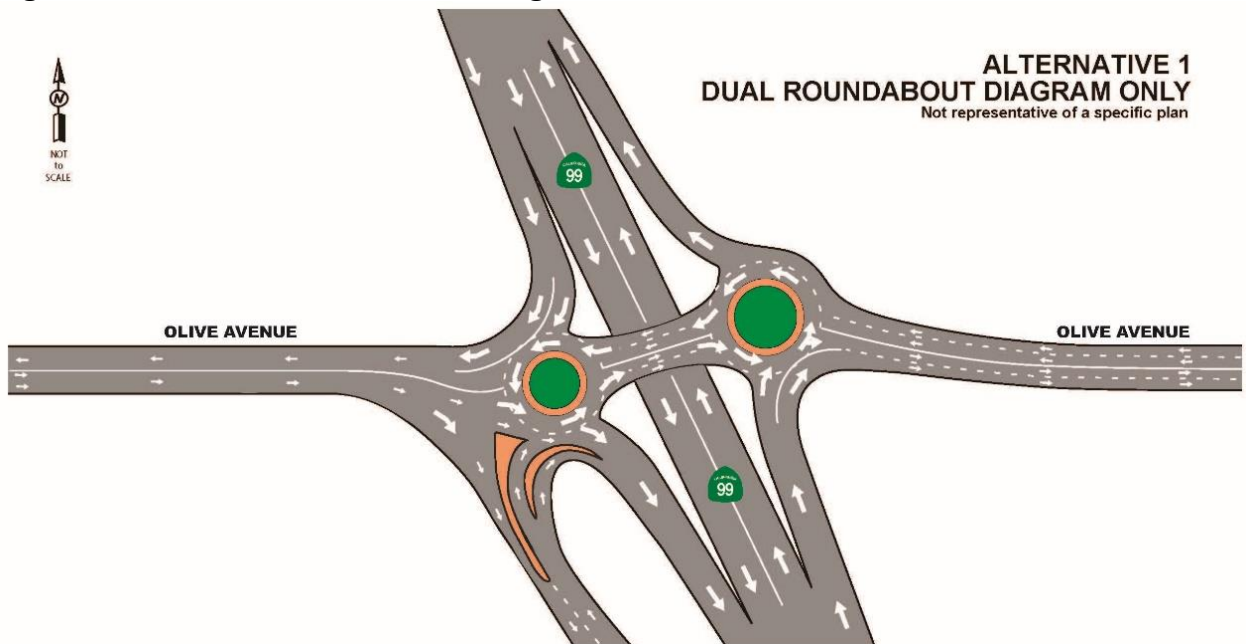
Unique Features of the Build Alternatives

Alternative 1

Alternative 1 would remove the existing Olive Avenue Interchange at post mile 23.3 and construct a compact diamond interchange with a roundabout at the intersections. This alternative would construct a five-legged roundabout west of State Route 99 and a four-legged roundabout east of State Route 99. The new overcrossing would be about 42.5 feet long and 19.72 feet wider than the existing structure to provide enough room for the auxiliary lanes and accommodate the additional traffic due to the closure of the Belmont Avenue and McKinley Avenue Interchanges.

The existing length of the overcrossing is 128 feet, and the existing total width is 76.12 feet. The proposed length of the overcrossing would be 170.5 feet, while the proposed width would be 95.84 feet. Alternative 1 proposes a new Parkway Drive connection to Belmont Avenue at the existing southbound off-ramp, which will be extended to the existing Parkway Drive. Alternative 1 also involves the rehabilitation and structural improvement of the rest of the existing Parkway Drive up to the proposed Olive Avenue roundabout. Some local improvements include 10-foot pedestrian- and bicycle-dedicated sidewalks on both sides of the Olive crossing on State Route 99. Alternative 1 is displayed in Figure 1-4 below.

Figure 1-4 Double Roundabout Diagram of Build Alternative 1



Alternative 2

This Build Alternative would remove the existing interchange at Olive Avenue and replace it with a diverging diamond interchange. The existing length of the overcrossing is 128 feet, and the existing total width is 76.12 feet.

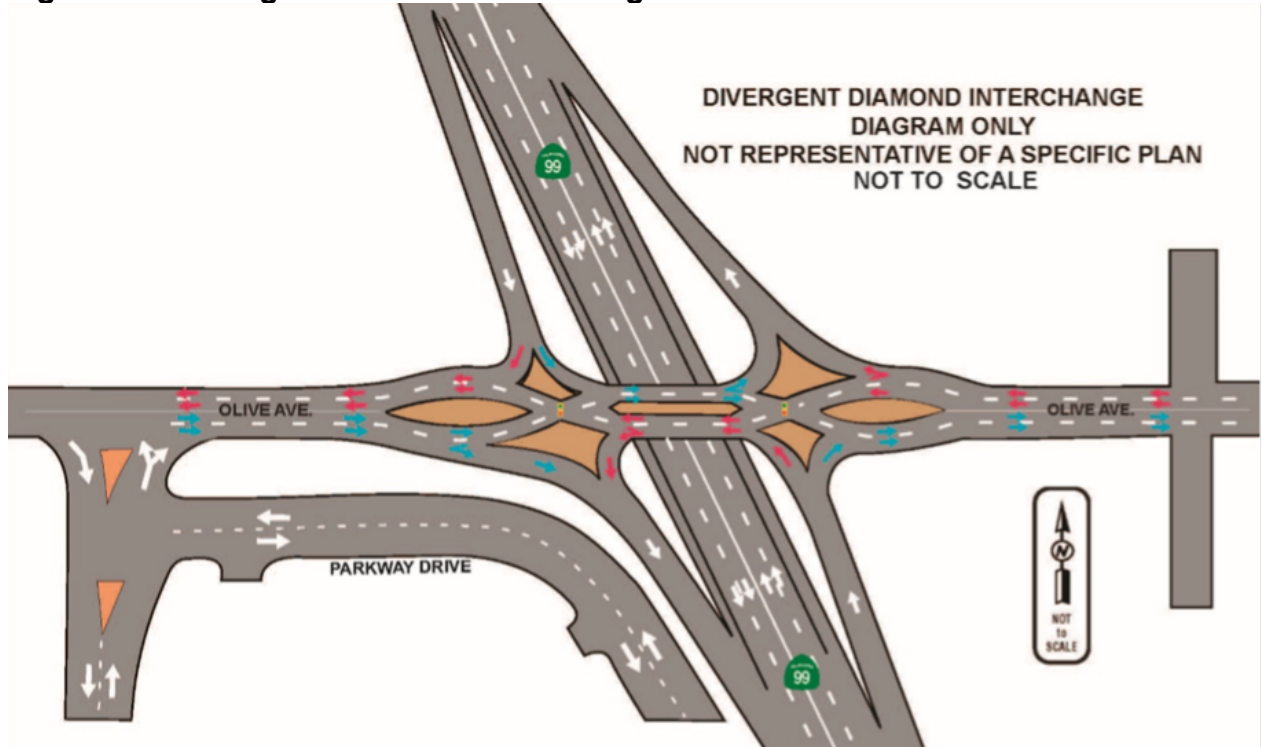
Response: The proposed dimensions of the Divergent Diamond Interchange would be approximately 180 feet, while the proposed width would be 100 feet.

The crossover intersections would be controlled by two-phased traffic signals, the off-ramps would be yield controlled, and the on-ramps would flow freely to dedicated lanes. In a diverging diamond interchange, traffic on the overcrossing would trade sides as traffic from the highway enters or exists the interchange with a slight curve. The connection between Olive Avenue/Parkway Drive would be removed because of the realignment of Parkway Drive. Between the intersection of Olive Avenue/Parkway Drive and 300 feet south of this point, Parkway Drive would be removed and realigned as a frontage road that connects to Crystal Avenue.

A diverging diamond interchange allows two directions of traffic to temporarily cross to the left side of the road. A motorist can enter the highway by turning right before the traffic signal or crossing to the other side of the interchange and turning left toward the on-ramp. Drivers making the left turn toward the on-ramp do not need to stop or wait for any oncoming traffic. The angle of the roads, raised curbed barriers, signs, and striping at each intersection would allow the driver to travel through the diverging diamond with ease. The design of the diverging diamond interchange would incorporate pedestrian and biking features.

Pedestrians would walk toward one of the intersections, cross over to the safety median, and cross again to the center median. A pedestrian would walk on the center median toward the other intersection. The lights would be timed so pedestrians and drivers would move safely. The construction of the realigned Parkway Drive would require the acquisition of 12 businesses. Figure 1-5 shows the design of Alternative 2.

Figure 1-5 Divergent Diamond Interchange of Build Alternative 2



Transportation System Management and Transportation Demand Management Alternatives

There were no modal or mass transit alternatives identified to replace or relieve the people or goods movements provided by State Route 99. Pedestrian and bicycle movements on connecting local roads are being maintained or enhanced.

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative would keep State Route 99 in its existing condition, and routine maintenance projects would continue. No action will lead to an increase of deficiencies along this section of the corridor and continued maintenance costs on State Route 99. The project needs to address the deteriorating condition of the existing pavement within the proposed project limits and the frequent repairs that subject construction and maintenance workers to live traffic.

1.5 Comparison of Alternatives

Two Build Alternatives are being considered for this project. They are identical regarding the proposed state route roadway work, structure work, and most of the local improvement work. Both Build Alternatives have different right-of-way and relocation impacts that are discussed within this

document; however, these two Build Alternatives vary considerably regarding the State Route 99 connection to Olive Avenue.

Alternative 1 would impact six commercial businesses, whereas Alternative 2 would impact 12 commercial businesses to construct the Parkway Drive realignment.

The following table (Table 1.9) compares the potential impacts identified for each of the proposed alternatives at each interchange location.

For further discussion of the environmental impacts, see Chapter 2, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures. Chapter 3, California Environmental Quality Act Evaluation, contains the CEQA-specific significance determinations.

Table 1.9 Comparison of Build Alternatives and the No-Build Alternative

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Land Use—Consistency with the City of Fresno General Plan	Consistent with the 2019 City of Fresno General Plan.	Consistent with the 2019 City of Fresno General Plan.	No Impact
Land Use—Consistency with Fresno County General Plan	Consistent with the 2019 City of Fresno General Plan.	Consistent with the 2019 City of Fresno General Plan.	No Impact
Coastal Zone	The project is not in a coastal zone.	The project is not in a coastal zone.	No Impact
Wild and Scenic Rivers	There are no wild or scenic rivers within the project area.	There are no wild or scenic rivers within the project area.	No Impact
Parks and Recreational Facilities	The project would not impact Fink-White Park or Basin XX. Roeding Park will be impacted. Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location.	The project would not impact Fink-White Park or Basin XX. Roeding Park will be impacted. Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Farmland and Timberland	There is no farmland or timberland within the project area.	There is no farmland or timberland within the project area.	No Impact
Growth	Alternative 1 is consistent with state, regional, and local plans, as well as the long-term goals of the 2022 Regional Transportation Plan for Fresno County, Fresno General Plan, Active Transportation Plan, and Downtown Neighborhood Community Plan. The project would not induce growth.	Alternative 2 is consistent with state, regional and local plans, as well as the long-term goals of the 2022 Regional Transportation Plan for Fresno County, Fresno General Plan, Active Transportation Plan, and Downtown Neighborhood Community Plan. The project would not induce growth.	No Impact
Community Character and Cohesion	The project work on roadways in the area would alter access to community facilities, amenities, or services.	The project work on roadways in the area could alter access to community facilities, amenities, or services.	No Impact
Relocations and Real Property Acquisition— Business Displacements	Alternative 1 would impact six commercial businesses, which include the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog.	Alternative 2 would impact 12 commercial businesses, which include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog, Arco Gas Station, Fast N Easy Store, Rally's, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Rodeway Inn.	No businesses would be relocated.
Relocations and Real Property Acquisition— Housing Displacements	Alternative 1 would impact single-family residences that may need to be acquired for the project. There will be three residential displacements.	Alternative 2 would impact single-family residences that may need to be acquired for the project, in addition to the Rodeway Inn. There will be 79 residential displacements.	No housing displacements would occur.

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Environmental Justice	The population within the socioeconomic study area would be subjected to disproportionately high and adverse effects due to increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements and relocations, and decreased accessibility to State Route 99.	The population within the socioeconomic study area would be subjected to disproportionately high and adverse effects due to increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements and relocations, and decreased accessibility to State Route 99.	No Impact
Utilities and Emergency Services	Existing utilities may be relocated temporarily or permanently, and access rights or temporary construction easements may be required. Temporary lane closures during construction may slightly delay emergency services from accessing emergencies via State Route 99 or on State Route 99.	Existing utilities may be relocated temporarily or permanently, and access rights or temporary construction easements may be required. Temporary lane closures during construction may slightly delay emergency services from accessing emergencies via State Route 99 or on State Route 99.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
<p>Traffic and Transportation/ Pedestrian and Bicycle Facilities</p>	<p>Temporary delays and detours will occur during construction. Some local streets would experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets would increase. Auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue and from Olive Avenue to Clinton Avenue will be added. Temporary pedestrian bridges would be added at El Dorado Street, Olive Avenue, and McKinley Avenue during construction.</p>	<p>Temporary delays and detours will occur during construction. Some local streets would experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets would increase. Auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue and from Olive Avenue to Clinton Avenue will be added. Temporary pedestrian bridges would be added at El Dorado Street, Olive Avenue, and McKinley Avenue during construction.</p>	<p>The No-Build Alternative would result in higher congestion at major points of merging.</p>
<p>Visual/Aesthetics</p>	<p>Temporary visual impacts are expected to be low. The overall visual impact of the proposed project is expected to be moderate to moderately low. The project is being designed with features that will offset visual impacts that reflect the desired goals of the local State Route 99 Corridor aesthetics theme. The project will have no impacts on scenic vistas, scenic resources within a state scenic highway, or create a new source of light or glare.</p>	<p>Temporary visual impacts are expected to be low. The overall visual impact of the proposed project is expected to be moderate to moderately low. The project is being designed with features that will offset visual impacts that reflect the desired goals of the local State Route 99 Corridor aesthetics theme. The project will have no impacts on scenic vistas, scenic resources within a state scenic highway or create a new source of light or glare.</p>	<p>If the bridges are not replaced, the visual disparity between the new bridges and old bridges within the State Route 99 Corridor will continue.</p>

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Cultural Resources	There were two properties assumed eligible for the purposes of this project only: Southern Pacific/Central Pacific Railroad and Houghton Canal. The California Office of Historic Preservation concurred in a Finding of No Adverse Effect for those properties on May 18, 2022. The Roeding Park Historic District was also determined to be eligible for the National Register of Historic Places.	There were two properties assumed eligible for the purposes of this project only: Southern Pacific/Central Pacific Railroad and Houghton Canal. The California Office of Historic Preservation concurred in a Finding of No Adverse Effect for those properties on May 18, 2022. Finding of No Adverse Effect document under review at the California Office of Historic Preservation. Concurrence was received on May 18, 2022. The Roeding Park Historic District was also determined to be eligible for the National Register of Historic Places.	No Impact
Hydrology and Floodplain	The project would not impact any floodplains within the project area. The project is not within a 100-year flood zone.	The project would not impact any floodplains within the project area. The project is not in a 100-year flood zone.	No Impact
Water Quality and Stormwater Runoff	The project has the potential to impact water quality standards and/or waste discharge requirements during construction and operation on surface water and groundwater. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.	The project has the potential to impact water quality standards and/or waste discharge requirements during construction and operation on surface water and groundwater. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Geology, Soils, Seismicity, and Topography	The project would not impact the geology, soils, seismicity, or topography of the project area.	The project would not impact the geology, soils, seismicity, or topography of the project area.	No Impact
Paleontology	The project area has the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations. The Paleontological Mitigation Plan would be prepared for applicable excavations within the project area and would be prepared, reviewed, and approved by a qualified paleontologist and State of California licensed Professional Geologist in accordance with the guidance provided in Caltrans' Standard Environmental References and Standard Special Provision 14-7.04.	The project area has the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations. The Paleontological Mitigation Plan would be prepared for applicable excavations within the project area and would be prepared, reviewed, and approved by a qualified paleontologist and a State of California licensed professional geologist in accordance with the guidance provided in Caltrans' Standard Environmental References and Standard Special Provisions Section 14-7.04.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
<p>Hazardous Waste and Materials</p>	<p>There are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body, and food manufacturing/distribution plants within the project boundaries. The project work would not pose a significant hazard risk to the environment, and project construction would not create a significant hazard to the public or environment and constitutes a less than significant impact.</p>	<p>There are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body, and food manufacturing/distribution plants within the project boundaries. The project work would not pose a significant hazard risk to the environment, and project construction would not create a significant hazard to the public or environment and constitutes a less than significant impact.</p>	<p>No Impact</p>
<p>Air Quality</p>	<p>During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other construction-related activities. However, the long-term emissions arising from the project are negligible in terms of the overall project and will not significantly impact the overall project emissions.</p>	<p>During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other construction-related activities. However, long-term emissions arising from the project are negligible in terms of the overall project and will not significantly impact the overall project emissions.</p>	<p>No transportation improvements. Air quality would worsen with time as population and traffic congestion increases along State Route 99.</p>

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Noise and Vibration	Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Long-term vibration is unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility. Noise at some locations will approach or exceed the noise abatement criteria. Two existing soundwalls will be rebuilt; all other soundwalls were determined not to be reasonable. Night work will be expected during construction.	Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Long-term vibration is unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility. Noise at some locations will approach or exceed the noise abatement criteria. Two existing soundwalls will be rebuilt; all other soundwalls were determined not to be reasonable. Night work will be expected during construction.	No Impact
Energy	The project would not result in wasteful, inefficient, or unnecessary consumption use of energy or wasteful use of energy resources.	The project would not result in wasteful, inefficient, or unnecessary consumption use of energy or wasteful use of energy resources.	No Impact
Natural Communities	There are no sensitive natural communities within the project area.	There are no sensitive natural communities within the project area.	No Impact
Wetlands and Other Waters	The project would involve work in the Houghton Canal to widen Nielsen Avenue Undercrossing. Houghton Canal is designated as jurisdictional waterway. The project would permanently impact about 0.005 acre and temporarily impact about 0.007 acre of the waterway.	The project would involve work in the Houghton Canal to widen Nielsen Avenue Undercrossing. Houghton Canal is designated as a jurisdictional waterway. The project would permanently impact about 0.005 acre and temporarily impact about 0.007 acre of the waterway.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Plant Species	Some vegetation and trees would be removed; however, are no plant species of concern within the project area.	Some vegetation and trees would be removed; however, are no plant species of concern within the project area.	No Impact
Animal Species	<p>The project would include the removal of trees and shrubs that provide nesting habitats for birds protected by the Migratory Bird Treaty Act.</p> <p>The project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. Additional surveys may be necessary within a year before construction. However, there were no conclusive signs of bats roosting within the bridges in the project footprint.</p>	<p>The project would include the removal of trees and shrubs that provide nesting habitats for birds protected by the Migratory Bird Treaty Act.</p> <p>The project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. Additional surveys may be necessary within a year before construction. However, there were no conclusive signs of bats roosting within the bridges in the project footprint.</p>	No Impact
Threatened and Endangered Species	There are no threatened and endangered species affected by the project.	There are no threatened and endangered species affected by the project.	No Impact
Invasive Species	There are no invasive species within the project area.	There are no invasive species within the project area.	No Impact

Potential Impact	Alternative 1	Alternative 2	No-Build Alternative
Construction	The project would involve reusing or recycling salvageable construction materials. The project would also incorporate water-efficient project features, fuel-efficient measures both for construction equipment and traffic management during delays or detours, minimize material source hauling distance from the site, reduce the amount of fuel use, reduce driving, and provide construction personnel training to enhance knowledge in identifying environmental issues and construction best practice methods to minimize impacts to humans and the environment.	The project would involve reusing or recycling salvageable construction materials. The project would also incorporate water-efficient project features, fuel-efficient measures both for construction equipment and traffic management during delays or detours, minimize material source hauling distance from the site, reduce the amount of fuel use, reduce driving, and provide construction personnel training to enhance knowledge in identifying environmental issues and construction best practice methods to minimize impacts to humans and the environment.	No Impact
Cumulative Impacts	The project would have cumulatively considerable impacts on the following resources: Transportation/Traffic, Relocations, and Environmental Justice. Environmental Justice impacts would be significant.	The project would have cumulatively considerable impacts on the following resources: Transportation/Traffic, Relocations, and Environmental Justice. Environmental Justice impacts would be significant.	No Impact
Wildfire	The project is not in a wildfire zone.	The project is not in a wildfire zone.	No Impact
Climate Change	The project is not expected to increase operational greenhouse gas emissions.	The project is not expected to increase operational greenhouse gas emissions.	No Impact

1.6 Alternatives Considered but Eliminated From Further Discussion

Single-Point Interchange and L-9 Interchange

A modified Type L-9 Interchange was considered for the Olive Avenue Interchange. The Type L-9 Partial Cloverleaf Interchange would have provided loop on-ramps in addition to the four diamond-type ramps. This interchange is suitable for large volume turning movements. The other option considered was a single-point urban interchange. The Type L-13, or single-point interchange, is a concept that essentially combines two separate diamond ramp intersections into one large at-grade intersection. Diamond interchanges provide a high standard of ramp alignment, direct turning maneuvers at the crossroads and usually have minimum construction costs. The diamond type is adaptable to a wide range of traffic volumes and the needs of transit, bicyclists, and pedestrians.

Due to significantly high project costs and a lack of significant operational benefits to the existing corridor, the project cost was reduced by modifying the Olive Avenue Interchange from a Type L-9 Interchange to a compact diamond interchange with roundabouts at the ramp terminals, as discussed for Alternative 2. As a result, the single-point interchange was eliminated from the discussion because it yielded the highest construction and right-of-way costs while not providing a significant operational benefit in comparison to the roundabouts and divergent diamond interchange. This alternative would not perform as well operationally as the other two alternatives, and the support system for this structure would interfere with State Route 99 traffic operations.

The project alternative needs to address the condition of the existing pavement within the proposed project limits and the frequent repairs needed that subject construction and maintenance workers to live traffic.

1.7 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permit, License, Agreement or Certification	Status
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	The application for a 1602 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
U.S. Army Corps of Engineers	A Regional General Permit for temporary and permanent impacts to Waters of the U.S.	The application for a 404 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
Central Valley Regional Water Quality Control Board	Section 401 Certification for a Water Discharge Permit.	The application for a 401 permit would be submitted during the Plans, Specifications, and Estimates phase of the project.
San Joaquin Valley Air Pollution Control District	Dust Control Plan and/or National Emissions Standards for Hazardous Air Pollutants. A notification would be required before the demolition of any bridges or structures.	Caltrans Standard Specifications about dust control plans would be included in the construction contract. Notification to the air district would be made during the construction phase of the project.
California State Office of Historic Preservation	Concurrence with Section 106 Consultation eligibility determination	A copy of the concurrence letter was received for the determination of eligible historic properties.
California State Office of Historic Preservation	Concurrence with Findings of No Adverse Effect	Two properties assumed eligible for the purposes of this project only, Southern Pacific/Central Pacific Railroad and the Houghton Canal, were the subject of a Finding of No Adverse Effect document under review at the California Office of Historic Preservation. Concurrence from the State Historic Preservation Officer was received on May 18, 2022.
City of Fresno	Concurrence with the Section 4(f) De Minimis Evaluation	The City of Fresno is actively working with Caltrans and has concurred with the preliminary Section 4(f) De Minimis determination. See Appendix A.
Fresno Irrigation District	Encroachment Permit at Houghton Canal	The application for the encroachment permit would be submitted in the Plans, Specifications, and Estimates phase of the project.
Fresno Metropolitan Flood Control District	Encroachment Permit for Pumping Plants	The application for the encroachment permit would be submitted in the Plans, Specifications, and Estimates phase of the project; this will be completed by the Central Valley Flood Protection Board.

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

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

- Coastal Zone: The project would not impact coastal resources because it is not within the coastal zone.
- Wild and Scenic Rivers: The project would not impact designated wild and scenic rivers because it is not next to a designated wild and scenic river.
- Farmland: The project would not impact farmlands because it is not next to designated farmland.
- Timberland: The project would not impact timberlands because the project is not in or next to designated timberland.
- Wildfire: The project would not cause more wildfires because the project is not in or near a high fire hazard area.
- Floodplain: The project would not impact any floodplains within the project area.
- Plant Species: The project would not impact sensitive plant species within the project area. There are no plant species within the project area that are of concern.
- Threatened and Endangered Species: The project would not affect any threatened or endangered species in the project area. There are no threatened or endangered species of concern within the project area.
- Natural Communities: The project would not impact any sensitive natural communities within the project area. Natural communities of concern were not found within the project area.

2.1 Human Environment

2.1.1 Existing and Future Land Use

Affected Environment

This section assesses the project's effects on the existing and future land uses in the study area. The following information presented in this section references material from the Community Impact Assessment, which includes information from the 2014 Fresno General Plan, 2019 Fresno Consolidated General Plan, Downtown Neighborhood Community Plan,

2022 Regional Transportation Plan, and Fresno County Long-Term Transit Plan. Please see Figure 2-1 to view the current land uses in Fresno County.

State Route 99 runs northwest and southeast on the western edge of the City of Fresno, connecting it with Sacramento, the San Francisco Bay Area, Bakersfield, and Los Angeles. It is designated as a High Emphasis Focus Route on the Caltrans Interregional Transportation Strategic Plan. State Route 41 runs north-south through the heart of the city, connecting it with Yosemite National Park. State Route 168 links downtown Fresno to Clovis, and State Route 180 runs east-west to both agricultural communities and Kings Canyon National Park (Fresno Consolidated General Plan 2017).

The city of Fresno, located in the Central Valley, covers an area of 113 square miles. Fresno is the largest city in Fresno County and the fifth largest city in California. Most of the existing environment surrounding the city is comprised of rural, residential, and agricultural land uses, despite the rapid expansion of commercial and housing developments.

The project is within the Downtown Community Plan Area. The City of Fresno is broken up into nine plan areas. The Downtown Neighborhoods Community Plan and the West Area Community Plan are within the study area. The Fresno Community Airport and the Commercial Center are east of the park along El Dorado Road.

Schools

The schools located within the study area are:

- Pershing Continuation High School–Central Unified School District; located at 855 West Nielsen Avenue, Fresno, California 93706
- Pathway Community Day School–Central Unified School District; located at 11 South Teilman Avenue, Fresno, California 93706
- Fresno EOC Head Start Ramacher (EOC)–Fresno Economic Opportunities Commission; located at 710 North Hughes Avenue, Fresno, California 93728
- Addams Elementary School–Fresno Unified School District; located at 2117 West McKinley Avenue, Fresno, California 93728
- Columbia Elementary School–Fresno Unified School District; located at 1025 South Trinity Street, Fresno, California 93706

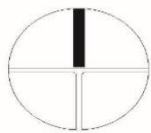
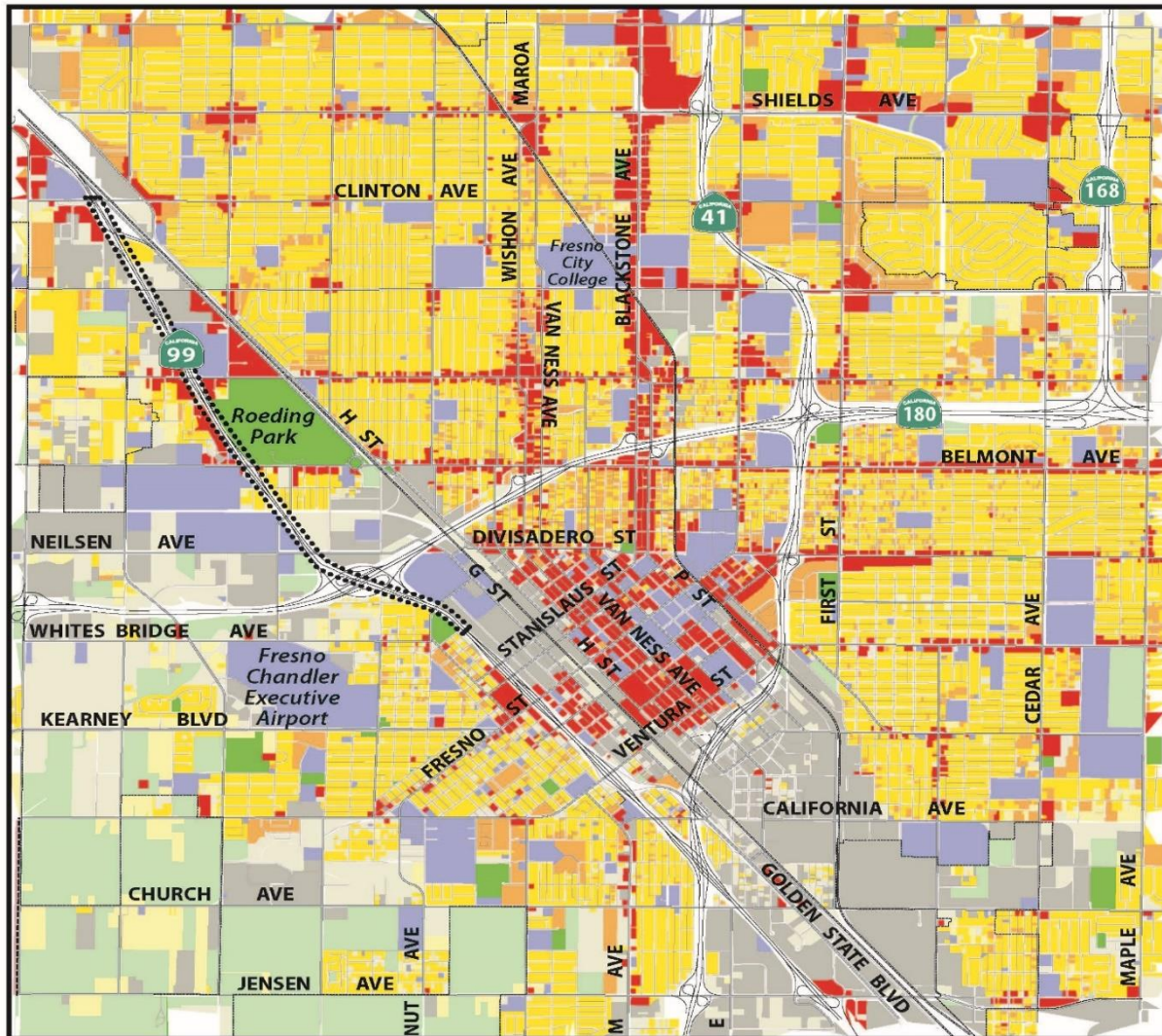
Land Use Designations and Zoning

The land use study area includes 1,864 accessor parcels; most of the parcels are within the City of Fresno. A small percentage of the study area is within Fresno County’s jurisdiction, even though the land is within the city’s Sphere of Influence.

City of Fresno

The proposed project is in the City of Fresno. The 2017 City of Fresno General Plan focuses on revitalizing downtown Fresno and increasing urban development through prioritizing development near the Downtown area or areas designated for mixed-use. Please refer to Figure 2-1, which displays the existing land uses of the City of Fresno.

Figure 2-1 Existing Land Use Map of the City of Fresno



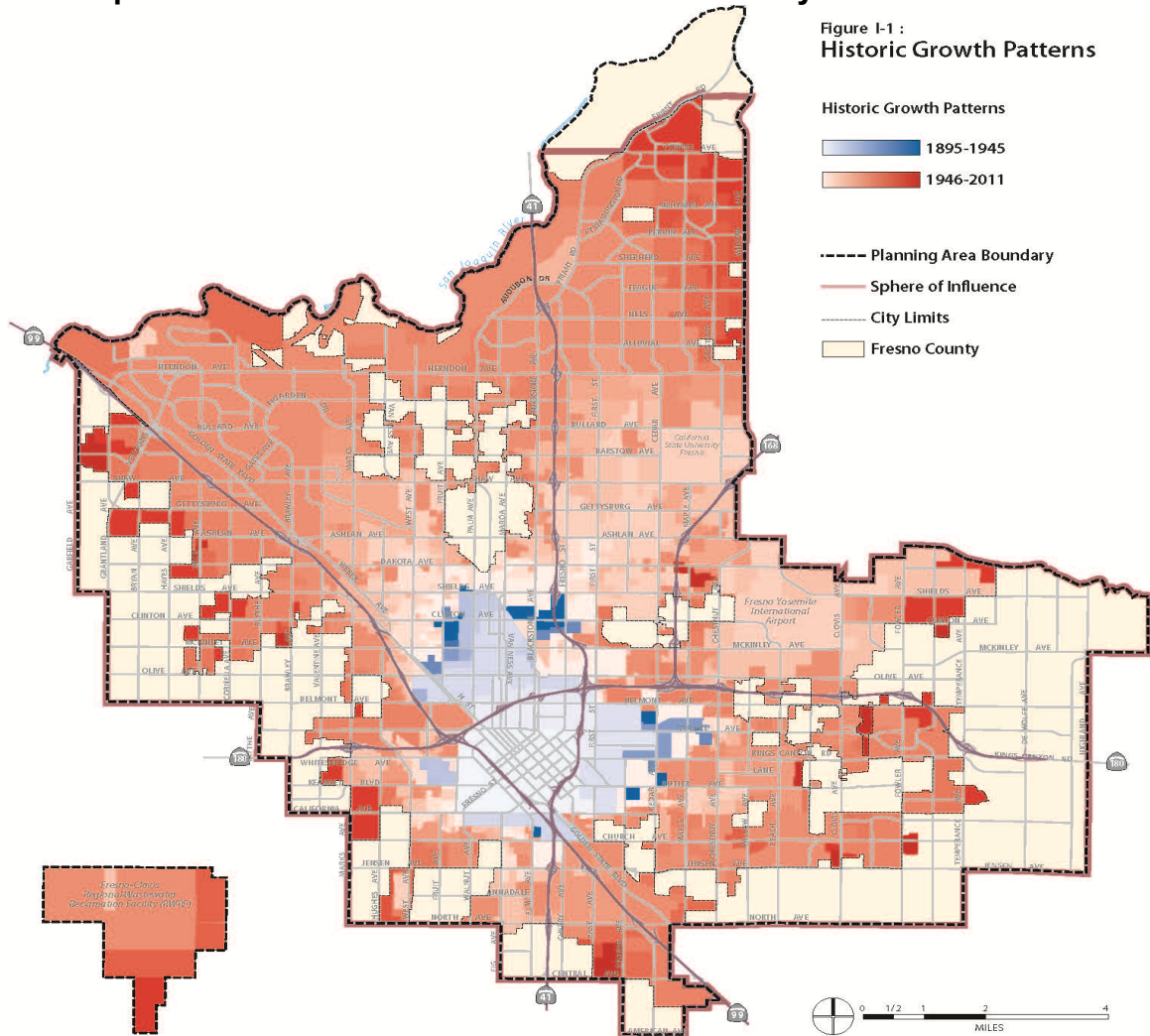
Source: City of Fresno, DARM Dept., 2010; Primary Land Use, Fresno County, 2010.



City of Fresno: Sphere of Influence

The Sphere of Influence is a boundary that encompasses lands that are expected to ultimately be annexed by the city; although, until annexed, it falls under the jurisdiction of Fresno County. The city's Sphere of Influence is determined by the Fresno Local Agency Formation Commission, which is an entity empowered to review and approve proposed boundary changes and annexations by incorporated municipalities. The city's Sphere of Influence comprises all land within the city limits, county islands (unincorporated land surrounded by the city), and land beyond the outer city limits on all sides (see Figure 2-2). The Sphere of Influence encompasses 157 square miles in total, of which 44 square miles are unincorporated land (City of Fresno General Plan 2014).

Figure 2-2 Sphere of Influence and Growth Patterns of City of Fresno



Source: City of Fresno Development and Resource Management Department, 2010.

Environmental Consequences

The land surrounding the interchange is zoned for residential and commercial uses; expected future uses would be consistent with current zoning. Relocations would take place due to the project work; however, reasonable relocation resources would be made available for displacees. Despite the conversion of some businesses and residences for transportation purposes, the current zoning status of the land would remain the same. Please refer to Chapter 2, *Section 2.1.6 Relocations and Real Property Acquisition* to view the parcels that may be converted for each alternative.

Alternative 1 and Alternative 2

The proposed project would close existing interchanges and rehabilitate State Route 99, which is an important arterial route throughout Fresno County. Both Build Alternatives would enhance the existing State Route 99 Corridor and improve transportation elements and transportation within existing pathways. The project is consistent with the goals of the 2019 Fresno County Regional Transportation Plan; one of the key goals is to provide necessary mobility to keep communities moving through the year 2042. In keeping with this federal direction, the Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens. As a result, there would be no major impacts to existing or future land use designations.

The Olive Avenue Interchange, El Dorado Street, Belmont Avenue, and McKinley Avenue Overcrossing, and will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movements. El Dorado Street would be converted to three lanes (including a two-way left-turn lane and a Class 2 bike lane with standard sidewalks on each side per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.

The project would not lead to changes in land use or density. The project proposes to modify and improve the existing roadway, prevent further deterioration, and bring the roadway up to standard. The added lanes and removing on-ramps, off-ramps, and overcrossings would improve travel rideability and commuting times, but that would not influence development significantly. The land within the project area is already highly developed and urbanized. As shown in Figure 2-1, most of the land within the project area is zoned as commercial, office, and industrial, with patches of residential neighborhoods.

Both Alternatives may have an impact on businesses located on the proposed alignments. Resources should be available to provide adequate replacement facilities for each business impacted by this project. Businesses affected by this project appear to have the financial ability to replace themselves along with relocation and acquisition monies that will be paid for the displacement. At this time, Caltrans does not foresee any issues with replacement sites for some of the current businesses identified. Some business types may have a greater challenge in finding adequate replacement sites because of the nature of their business; this is discussed in more detail in Chapter 2, *Section 2.1.6, Relocations and Real Property Acquisition*.

No-Build Alternative

The No-Build Alternative would not result in direct changes to existing land uses. However, the No-Build Alternative would not meet the objectives of the county and city general plans and Regional Transportation Plan to provide safe and enhanced modes of transportation within the area and accommodate development planned for the surrounding area. Increases in traffic associated with expected future growth would contribute to further deterioration of roadways and less safety for Fresno commuters.

Avoidance, Minimization, and/or Mitigation Measures

No specific avoidance, minimization, or mitigation measures are needed.

Consistency with State, Regional, and Local Plans and Programs

Affected Environment

The following sections provide an assessment of the project's consistency with plans and policies adopted by the City of Fresno, Fresno County, and the Fresno Council of Governments. Only policies with direct relevance to the project, such as transportation, land use, growth, and were included in the consistency analysis. Below is a list of plans, policies, and laws that local agencies implement to regulate land use within the study area. The proposed project is consistent with these plans:

Fresno Council of Governments—2022 Regional Transportation Plan/Sustainable Communities Strategy:

The plan identifies projects and needs for streets and highway systems, urban and rural public transportation, and rail, aviation, pedestrian, and bicycle facilities. The Regional Transportation Plan addresses greenhouse gas and other air emissions. The plan also addresses issues for planning sustainably, with purpose and direction. State Route 99 Transportation Concept Report. The 2022 Regional Transportation Plan continues to provide necessary mobility and methods of community advancement through the year 2042. The Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.

The 2022 Regional Transportation Plan's Chapter 4 Action Element describes transportation projects that may be completed during the Regional Transportation Plan horizon through the year 2042, which considers congestion management activities in this region. This State Route 99 El Dorado Street to Clinton Avenue Rehabilitation project is included within this action element framework. Caltrans, the Fresno Council of Governments, and local jurisdictions are committed to corridor preservation. This plan includes the construction of interchanges, as well as major local arterial and collector streets.

Highway 99 Beautification Master Plan:

The plan's goal is to create and sustain an image for the Highway 99 Corridor that communicates to travelers the agricultural significance, economic strength, scenic beauty, and community spirit of the study area. The plan also seeks to develop a landscape theme

that unifies the study area, enhances its visual appeal, and emphasizes the unique elements of Fresno County and the component cities and districts. The project would improve existing structures, replace nonstandard features of the transportation corridor, and incorporate elements that unify the appearance for the highway viewer.

2000 Fresno County General Plan: Transportation and Circulation Element:

Policy TR-A.12 The county, where appropriate, shall coordinate the multimodal use of streets and highways to ensure their maximum efficiency and consider the need for transit, bikeway, and recreational trail facilities when establishing the Ultimate Right-of-way Plan and Precise Plans of streets and highways. The project work would incorporate these elements to improve rider efficiency and commutes.

City of Fresno General Plan (adopted on December 18, 2014):

The City of Fresno General Plan is intended to serve as a guide to enable government at all levels, private enterprises, community groups, and individual citizens to make decisions and use community resources in a manner that would realize progress toward a common vision of a measurably enhanced physical, economic, and social environment. The general plan's objective for transportation/streets and highways is to provide a complete and continuous street and highway system throughout the Fresno metropolitan area that is safe for vehicle users, bicyclists, and pedestrians and that provides efficient movement of people and goods consistent with the goals and objectives of this plan.

Fresno Parks Master Plan (adopted on December 14, 2017):

The Community Plan Area is mixed, and access to existing park space is generally limited. The Community Plan Area contains Roeding Park—one of Fresno's three regional city parks—located in the Jane Addams neighborhood. It is home to the Chaffee Zoological Gardens and the Storyland and Playland amusement parks.

Roeding Regional Park and Fresno Chaffee Zoo Facility Master Plans (adopted on June 23, 2011):

The goal of this plan is to develop a more organized and simplified visitor circulation/wayfinding system, drastically improve vehicular and pedestrian circulation throughout the park, and create a distinct, memorable gateway experience when entering the park. The project plans to improve the transportation corridor and its aesthetic features, incorporating park features while linking cultural or aesthetic values and buildings or structures that provide valuable insight into potential historic periods and patterns of park development.

2016 Downtown Neighborhoods Community Plan:

Large portions of the Community Plan Area, including all of the Jane Addams and Lowell Neighborhoods, and large areas of the Jefferson, Southeast, and Edison Neighborhoods, do not have good pedestrian access within 1/2 mile of a full-service grocery store. The project work would incorporate Complete Streets elements to improve pedestrian access and transportation facilities, which is a major goal of this plan.

Fresno Chandler Executive Airport Specific Plan

The goal of this plan is to “protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public’s exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.” The project work would not lead to excessive noise and safety hazards that would interfere with airport operations in the project area,

State

The State Route 99 Transportation Concept Report and the Fresno/Madera Urban Route 99 Corridor System Management Plan present a 2030 concept for this segment of State Route 99 as a six-lane freeway plus auxiliary lanes and the ultimate transportation corridor within the proposed project limits as an eight-lane freeway plus auxiliary lanes.

Regional

The 2022 Regional Transportation Plan continues to provide necessary mobility and methods of community advancement through the year 2042. Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.

The 2022 Regional Transportation Plan’s Chapter 4 Action Element describes transportation projects that may be completed during the Regional Transportation Plan horizon through the year 2042, which considers congestion management activities in this region. This State Route 99 El Dorado Street to Clinton Avenue Rehabilitation project is included within this Action element framework. Caltrans, the Fresno Council of Governments, and local jurisdictions are committed to corridor preservation. This plan includes the construction of interchanges, as well as major local arterial and collector streets.

The proposed project is within the Fresno 99 Beautification Master Plan, as part of the State beautification and modernization pilot project, from American Avenue to the San Joaquin River. The beautification plan specifically identifies El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue bridges for future gateway and aesthetic improvements. The State Route 99 El Dorado Street to Clinton Avenue Rehabilitation project also addresses the aesthetic treatments to all bridges and walls that are included in the project scope. There is more information on this subject in Section 2.1.10, Visual/Aesthetics.

Local

The project is being coordinated with the City of Fresno; it will conform to the City of Fresno General Plan, Active Transportation Plan, Fulton Corridor Specific Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan. The Fresno Council of Governments and Fresno County have also been consulted, and their feedback is being considered. The Fresno Council of Governments San Joaquin Valley Model Improvement Plan, Phase 2, contains the latest traffic model applicable to this project. This

model was used to predict traffic volumes to design the State Route 99 and city-related facilities to be effective throughout the project's design life.

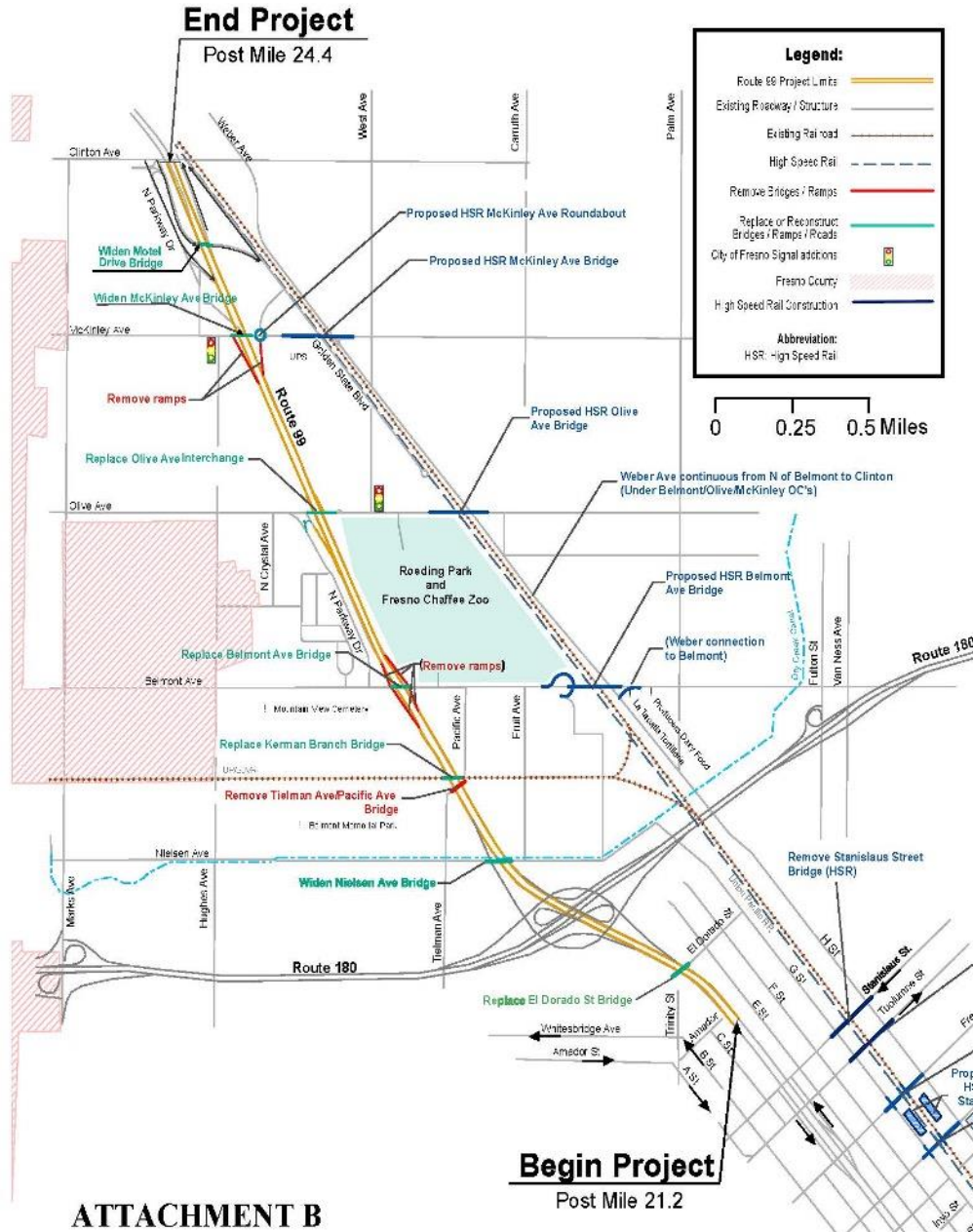
High-Speed Rail Improvements

The project is also being coordinated with the proposed California High-Speed Rail improvements, including High-Speed Rail/Railroad/Weber overcrossings at Belmont Avenue, Olive Avenue, and McKinley Avenue, the removal of Golden State Boulevard from Belmont Avenue to just past Olive Avenue, the signalization of the existing Belmont ramps, the McKinley roundabout on the existing northbound off-ramp, and the conversion of Weber Avenue to a road with no controlled stops, from Belmont Avenue to Clinton Avenue. The High-Speed Rail McKinley Avenue crossing, which lies east of State Route 99, will be constructed with four lanes. The city also plans to widen McKinley Avenue to four lanes between Hughes Avenue and Marks Avenue, which lies west of State Route 99. Below is an exhibit map that displays the location of the proposed High-Speed Rail improvements in proximity to the proposed project. The exhibit map on the following page shows the proposed High-Speed Rail improvements in Figure 2-3.

Figure 2-3 Exhibit Map for the State Route 99 El Dorado Street to Clinton Avenue Rehabilitation Project

Exhibit Map

SR 99 El Dorado St. to Clinton Avenue Rehabilitation Project



Environmental Consequences

Both Build Alternatives would be consistent with state, local and regional plans and improve the transportation corridor.

The proposed project addresses the objectives of the local land use planning programs. The proposed project is consistent with goals outlined in the California Transportation Plan 2025 that includes improvement of mobility and accessibility, enhanced goods movement mobility, reliability, system efficiency, and growth management. The project is listed as a Regionally Significant Project in the Fresno Council of Governments, the Regional Transportation Plan, and the State Route 99 Corridor Enhancement Master Plan. Likewise, the project is consistent with the City of Fresno General Plan (see Figure 2.1 Land Use). The proposed project is consistent with the objectives, goals, and/or policies of state, regional, and/or local plans.

The proposed project will reconstruct the existing six lanes and will include the construction of new auxiliary lanes in the northbound and southbound directions. This project will set the framework for the ultimate transportation corridor by widening the median to 46 feet for the future construction of the ultimate number one lane and shoulder in each traffic direction.

On September 14, 2017, a kick-off meeting was held for the Project Initiation Document Phase. A kick-off meeting with local agencies, including the City of Fresno, Fresno Council of Governments, and Fresno County Transportation Authority, was held on October 23, 2017. Subsequent project meetings/workshops were held with City of Fresno staff in December, April, and May. Prominent topics of discussion included alternative routes if the Belmont and/or McKinley access points to State Route 99 were eliminated, alternatives to maintain Belmont access, potential overcrossing removals and effects on local traffic circulations, effects to local businesses, the city's desire for Fresno Street to be the focal point of the Fresno/Tuolumne/Stanislaus Interchanges, and the city's desire to retain the El Dorado Overcrossing and truck routes postconstruction.

Please refer to Tables 2.1 through 2.4, which show that the project is consistent with state, local, and regional plans.

Table 2.1 Consistency With Fresno Council of Governments’ 2022 Regional Transportation Plan/Sustainable Communities Strategy

Policy	Alternative 1	Alternative 2	No-Build Alternative
Develop a regional street and highways system that has a balanced mix of high-speed and local corridors, which are functional and flexible for intermodal use, providing connectivity to the region, state, and nation.	Consistent. The proposed work includes lengthening and/or widening seven structures and removing another one to achieve the standard vertical clearance and shoulder widths to accommodate the ultimate facility and provide for Complete Streets features on the local road crossings.	Consistent. The proposed work includes lengthening and/or widening seven structures and removing another one to achieve the standard vertical clearance and shoulder widths to accommodate the ultimate facility and provide for Complete Streets features on the local road crossings.	Partially consistent. This alternative provides high-speed and local corridors, but they are not operating at Caltrans’ standards.
Maintain and improve existing facilities as the basic system which will address existing and future travel demands.	Consistent. The project will bring any rehabilitated roadway and replaced structures up to current standards and allow for future implementation of the planned ultimate facility.	Consistent. The project will bring any rehabilitated roadway and replaced structures up to current standards and allow for future implementation of the planned ultimate facility.	Not consistent. The no-Build Alternative would not improve existing facilities or future travel demands.
Incorporate principles for environmental justice into the transportation planning process and implementation.	Consistent. A community impact assessment and public outreach have been performed to implement this project.	Consistent. A community impact assessment and public outreach have been performed to implement this project.	Not Consistent. This alternative would not improve pedestrian access or local roads that communities require in their area.
Develop a regional transportation network that is environmentally sensitive, fosters sustainable regional growth, and helps reduce greenhouse gas emissions wherever possible.	Consistent. Executive Order B-30-15 directs Caltrans to consider future climate change conditions in all investment decisions.	Consistent. Executive Order B-30-15 directs Caltrans to consider future climate change conditions in all investment decisions.	Not Consistent. This alternative does not foster sustainable growth based on preliminary traffic data results and would not offset greenhouse gas emissions.
Develop and implement an integrated highway, streets, and road network that meets the mobility needs of urban and rural residents and the movement of goods.	Consistent. The Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.	Consistent. The Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.	Partially consistent. This alternative provides high-speed and local corridors, but they are not operating at Caltrans’ standards.

Policy	Alternative 1	Alternative 2	No-Build Alternative
Maintain an efficient highway, street, and road network that will allow for the effective movement of people and goods.	Consistent. The project would provide for the efficient movement of goods which would necessitate the need to replace three overcrossings and one railroad underpass.	Consistent. The project would provide for the efficient movement of goods which would necessitate the need to replace three overcrossings and one railroad underpass.	Not Consistent. This alternative would not improve traffic conditions or the state or local network that relies on the efficient movement of goods.

Table 2.2 Consistency With 2000 Fresno County General Plan

Policy	Alternative 1	Alternative 2	No-Build Alternative
Policy ED-B.14: The County shall support the enhancement of the county's recreational bikeways and promote the bikeway network as an important component of the county's tourism program.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Not consistent. This alternative would not provide bicycle paths, American with Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks.
Policy TR-A.6: The County shall continue to participate with the Council of Fresno County Governments, the California Department of Transportation, and other agencies, to maintain a current Regional Transportation Plan, and to identify funding priorities and development expenditure plans for available regional transportation funds in accordance with regional, state, and federal transportation planning and programming procedures. Such regional programming may include improvements to state highways, city streets, and county roadways.	Consistent. The proposed project is being coordinated with the City of Fresno and will conform with City of Fresno planning documents such as the Fresno General Plan, Active Transportation Plan, Fulton Corridor Specific Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan.	Consistent. The proposed project is being coordinated with the City of Fresno and will conform with City of Fresno planning documents such as the Fresno General Plan, Active Transportation Plan, Fulton Corridor Specific Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan.	Not Consistent. This alternative is not consistent with the goals of Caltrans or the Regional Transportation Plan for Fresno County. This alternative would not include any improvements to state highways, city streets, or county roadways.
Policy TR-D.8: The County shall support the development of facilities	Consistent. The interchange will accommodate Complete Streets elements for safe and efficient	Consistent. The interchange will accommodate Complete Streets elements for safe and efficient	Not consistent. This alternative would not provide bicycle paths, American with

Chapter 2 • Affected Environment, Environmental Consequences,
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Policy	Alternative 1	Alternative 2	No-Build Alternative
that help link bicycling with other modes of transportation.	pedestrian and bicycle movements for the El Dorado, Belmont, and McKinley crossings. El Dorado Street would be converted to three lanes, including a two-way left-turn lane and a Class 2 bike lane with standard sidewalks on each side per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.	pedestrian and bicycle movements for the El Dorado, Belmont, and McKinley crossings. El Dorado Street would be converted to three lanes (including a two-way, left-turn lane and a Class 2 bike lane with standard sidewalks on each side per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.	Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks.

Table 2.3 Consistency With 2016 Highway 99 Beautification Master Plan

Policy	Alternative 1	Alternative 2	No-Build Alternative
GOAL 1: Create and sustain an image for the State Route 99 Corridor that communicates to travelers the agricultural significance, economic strength, scenic beauty, and community spirit of the study area.	Consistent. The proposed project is within the Fresno 99 Beautification Master Plan as part of the State beautification and modernization pilot project (from American Avenue to San Joaquin River). The beautification plan specifically identifies El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue bridges for future gateway and aesthetic improvements. The Fresno 99 rehabilitation project addresses the aesthetic treatments of all bridges and walls that are part of the project scope.	Consistent. The proposed project is within the Fresno 99 Beautification Master Plan as part of the State beautification and modernization pilot project (from American Avenue to San Joaquin River). The beautification plan specifically identifies El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue bridges for future gateway and aesthetic improvements. The Fresno 99 rehabilitation project addresses the aesthetic treatments of all bridges and walls that are part of the project scope.	Not consistent. This alternative would not comply with the aesthetic goals of the Highway 99 Corridor Beautification Plan.
GOAL 5: Develop a landscape theme that unifies the study area, enhances its visual appeal, and emphasizes the unique elements of Fresno County and the component cities and districts.	Consistent. The project will benefit from aesthetic treatments that are contextually appropriate and which will follow the guidance from the City of Fresno General Plan for its gateway enhancement plans and the Highway 99 Beautification Master Plan.	Consistent. The project will benefit from aesthetic treatments that are contextually appropriate and which will follow the guidance from the City of Fresno General Plan for its gateway enhancement plans and the Highway 99 Beautification Master Plan.	Not consistent. This alternative would not unify the study area or enhance the visual appeal of the highway corridor in Fresno County.
Policy 7-A: Develop a plant palette of drought tolerant and native species to be used throughout the corridor.	Consistent. Replacement planting will be programmed and constructed. The spin-off project will be under construction within two years of acceptance of the proposed project. A minimum 3-year plant establishment period will facilitate the success of the highway planting.	Consistent. Replacement planting will be programmed and constructed. The spin-off project will be under construction within two years of acceptance of the proposed project. A minimum 3-year plant establishment period will facilitate the success of the highway planting.	Not Consistent. This alternative would not incorporate drought-tolerant or native vegetation on the existing corridor.

Table 2.4 Consistency With City of Fresno General Plan (adopted on December 18, 2014)

Policy	Alternative 1	Alternative 2	No-Build Alternative
Use Complete Neighborhood design concepts and development standards to achieve the development of Complete Neighborhoods and the residential density targets of the General Plan.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Not consistent. This alternative would not provide bicycle paths, American with Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks. There will also be no Complete Streets elements incorporated into local communities.
Design land uses and integrate development site plans along BRT corridors with transit-oriented development that supports transit ridership and convenient pedestrian access to bus stops and BRT station stops.	Consistent. This project supports transit ridership and convenient pedestrian access to bus stops and BRT station stops, as pavement rehabilitation and local street improvements will improve rideability for buses. The project will also not displace any existing bus stops.	Consistent. This project supports transit ridership and convenient pedestrian access to bus stops and BRT station stops, as pavement rehabilitation and local street improvements will improve rideability for buses. The project will also not displace any existing bus stops.	Partially consistent. This alternative does not provide upgraded pedestrian access, which could help transit-oriented individuals who rely on BRT corridors for their daily commute.
Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into activity centers and transit stops. Provide priority transit routes and facilities to serve the activity centers.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Consistent. The project would adopt Complete Streets elements, such as upgraded sidewalks, pedestrian facilities, bicycle pathways, and American with Disability Act curb ramps.	Not consistent. This alternative would not provide bicycle paths, American with Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks. There will also be no Complete Streets elements incorporated into local communities.

Policy	Alternative 1	Alternative 2	No-Build Alternative
Design local roadways to connect throughout neighborhoods and large private developments with nearby major roadways and pathways of existing nearby development. Create access for pedestrians and bicycles where a local street must be a dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.	Consistent. The project will bring any rehabilitated roadway and replaced structures up to current standards and allow for future implementation of the planned ultimate facility, including standard shoulder widths and horizontal clearances. This work will help connect neighborhoods to major roadways and create pedestrian access where it did not exist before.	Consistent. The project will bring any rehabilitated roadway and replaced structures up to current standards and allow for future implementation of the planned ultimate facility, including standard shoulder widths and horizontal clearances. This work will help connect neighborhoods to major roadways and create pedestrian access where it did not exist before.	Not consistent. This alternative would not provide bicycle paths, American with Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks. There will also be no Complete Streets elements incorporated into local communities.

No-Build Alternative

No changes will be made to the existing transportation corridor and would not meet most of the goals of state, local and regional plans for transportation in the City of Fresno. Specifically, this alternative would not provide bicycle paths, American with Disabilities Act pathways, upgraded pedestrian pathways, or upgraded curbs or sidewalks. This alternative would not unify the study area or enhance the visual appeal of the highway corridor in Fresno County, as much of the existing corridor is deteriorating. This alternative would also not comply with the aesthetic goals of the Highway 99 Corridor Beautification Plan, which calls for the implementation of Complete Streets elements.

Avoidance, Minimization, and/or Mitigation Measures

No specific avoidance, minimization, or mitigation measures are needed.

2.1.2 Parks and Recreational Facilities

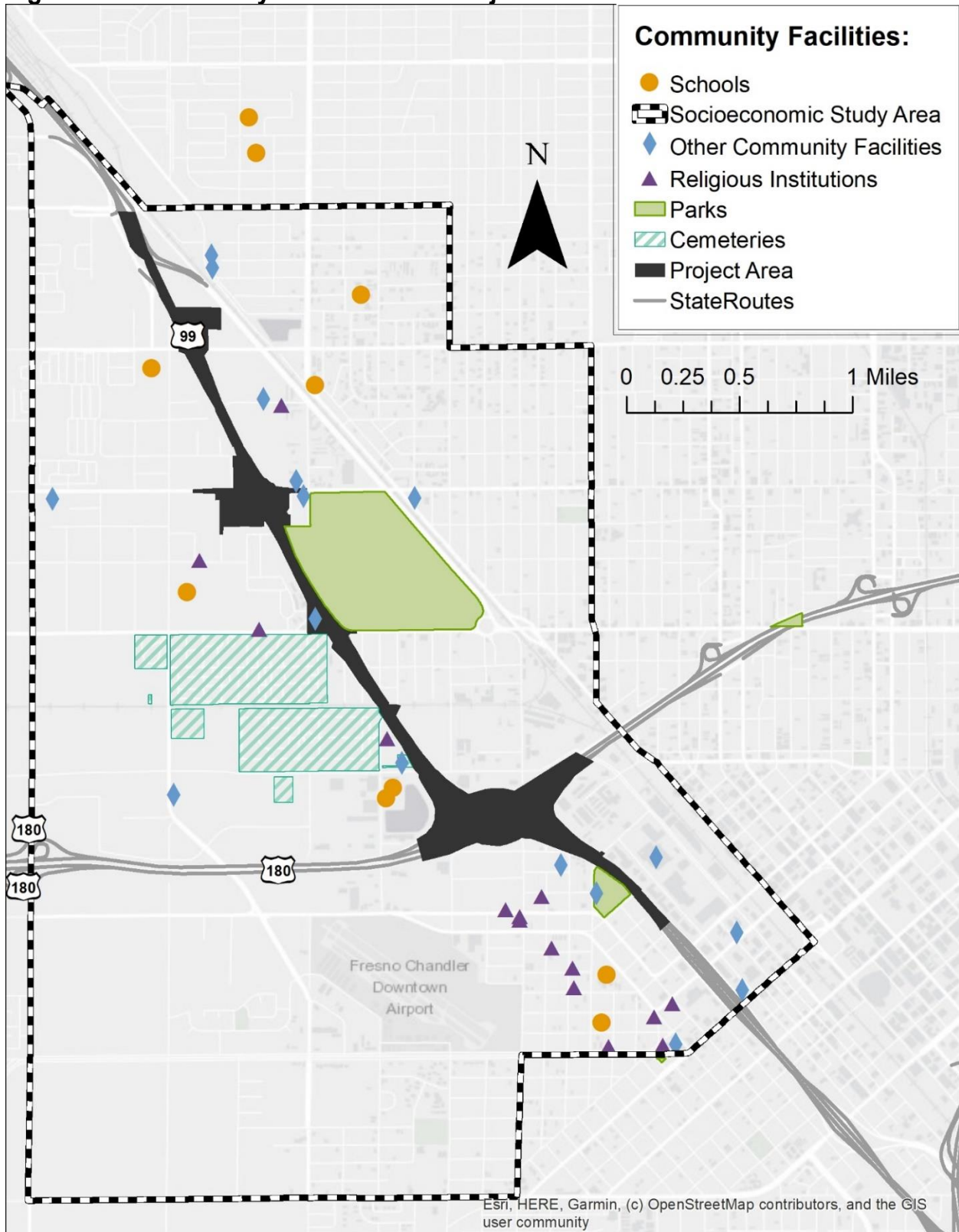
Regulatory Setting

The Park Preservation Act (California Public Resources Code Sections 5400-5409) prohibits local and state agencies from acquiring any property that is used as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the parkland and any park facilities on that land.

Affected Environment

The Fink-White Park, Roeding Park, and Basin XX Park are within the land use study area. Figure 2-4 displays the parks and their proximity to the project area.

Figure 2-4 Community Facilities With Project Area



The 2017 Fresno Parks Master Plan classified the Fink-White Park and Basin XX Park as neighborhood parks and classified Roeding Park as a regional park. The 2017 Fresno Parks Master Plan defines a neighborhood park as a park that ranges from two to 10 acres in size and provides basic recreational activities for the community within 0.5 mile of the park. A regional park is about 40 to 1,000 acres in size and serves the community within a 30-minute drive from the park.

Stormwater basins within the project area:

Basin XX

The Park, After School, Recreation and Community Services Department has a joint-use agreement with Fresno Metropolitan Flood Control District for this facility. Basin XX is one of 20 Fresno Metropolitan Flood Control District stormwater detention basins that are available for public recreational use. The basins also help recharge our community's groundwater aquifer. Recreation is yet another use of public land at 23 of these stormwater basins. Some are simply open green spaces; others have play equipment, baseball diamonds, or soccer fields. The basins are available for public use from May to November, depending on weather and stormwater detention needs.

Basin XX is east of Hughes Avenue and south of the Addams Elementary playground. Basin XX is about 6.41 acres. Basin XX has a concrete sidewalk for pedestrians to walk toward the open space. The open space has a baseball-like fence on the northeast side of the property.

Two parks—Fink-White Park and Roeding Park—are found within the project area.

Fink-White Park

The Fink-White Park is west of State Route 99 and in between South Trinity Street and East Amador Street. The eastern edge of the park faces State Route 99. The park is about 8.71 acres in size. This center A structure in the park has a kitchenette, a large social hall, two offices, four outdoor restrooms, two barbecues, four lighted basketball courts, one lighted baseball diamond, one lighted soccer field, a tot lot, a wading pool, and a learner pool. The Fink-White Park is host to many events for the Boys and Girls Club of Fresno.

Roeding Park

Within the Community Plan Area, the quantity of parks and open space is generally limited. Roeding Park, located in the Jane Addams neighborhood, is one of Fresno's three regional city parks. It is home to the Chaffee Zoological Gardens and the Storyland and Playland amusement parks. Roeding Park is a 159-acre Regional Park located on Belmont Avenue next to State Route 99 and attracts 600,000 visitors annually. This park includes a lake, several ponds, groves of ashes, cedar, pine, eucalyptus, maple, and redwood trees. There are numerous playgrounds, 96 picnic tables, and five picnic shelters scattered throughout the park.

Existing Soundwall at Roeding Park

This soundwall is adjacent to Roeding Park (northbound direction between Belmont and Olive Avenue). This wall was built in 1988; it seems to be in fair condition, even though the

wall on the freeway side has been vandalized by graffiti and repainted several times. Small spalls in masonry blocks were also noted.

A visual inspection of the Roeding Park soundwall was conducted on July 19, 2020. The existing horizontal clearance of the wall to the proposed edge of the traveled way will be decreased, and a north portion of the wall will not satisfy the requirement for a minimum clear recovery zone width of 30 feet. This portion of the wall would need to be protected by a concrete barrier or reconstructed with a safety-shape barrier type per Caltrans' current standards. A section of the wall approaching the northbound off-ramp to Olive Avenue would also yield a nonstandard shoulder width (approximately 7 feet to 9 feet). To achieve a standard shoulder width, a portion of the Roeding Park right-of-way at about 650 square feet would need to be acquired.

A traffic noise study was conducted for this project by the Central Region Environmental Engineering Branch to determine future traffic noise impacts. The proposed improvements under the project Build Alternatives include an analysis of the Roeding Park soundwall.

Environmental Consequences

Parks and Recreational Facility Impacts for Both Build Alternatives

Fink-White Park and Basin XX

The project would not impact Fink-White Park or Basin XX.

Roeding Park:

Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location. This option also proposes to extend the southern edge of the soundwall 300 feet. The new soundwall would be constructed on a 3-foot safety barrier. This would provide enough space for a standard 10-foot outside shoulder, but it would require obtaining about 650 square feet of right-of-way from Roeding Park.

This design option would need a 2-foot-wide and 1,900-foot-long temporary construction easement in Roeding Park. Caltrans will be providing art on the Roeding Park soundwall that shows the local scene and instills pride in the Fresno community. This process is being coordinated with the District 6 Landscape Architect team.

Noise-Related Impacts for Both Build Alternatives:

The project is expected to create noise impacts for the Fink-White Park Community and Roeding Community. Equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at a distance of 50 feet. The noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance. Construction noise varies greatly depending on the construction process, the type and condition of equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Please refer to Chapter 2, Section 2.2.5, *Noise*, for more details.

No-Build Alternative:

The no-Build Alternative would not affect any of the existing park facilities or soundwalls; however, the roadway within the project limits will continue to deteriorate and worsen because of increased traffic congestion and travel delays. Also, the roadway features will not meet Caltrans' current standards.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would provide Roeding Park a reasonable allowance after discussing replacement aesthetic features: The Caltrans Division of Engineering Services has proposed future wall proposal concepts:

- Incorporate about six rectangular columns decorated with zoo-related depictions, including decorative patterns on the walls and vines.
- Incorporate free-standing background murals with Roeding Park to replace existing backgrounds.
- Continue to work with Roeding Park on soundwall aesthetics for exterior and interior walls.
- Propose improvements to textured walls and pilasters to enhance the view from inside the park.
- The extension of the soundwall to Belmont is an improvement in terms of noise abatement.
- Consider form liner designs on parkside pilasters, also where visible.

2.1.3 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluating the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations (40 Code of Federal Regulations 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

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

Affected Environment

Fresno, like other Central California cities, is expected to continue experiencing growth and development over the next 20 years. This growth will bring both opportunities (new jobs,

new housing, and increased prosperity) and challenges (increased traffic congestion, air pollution, and general overcrowding) (Community Impact Assessment 2021).

With Fresno County’s population expected to grow from 1,047,440 people to 1.3 million people by 2042, growth management, transit, and land development policies are necessary, and Fresno will need to consider proactive planning. For this reason, it is important to rehabilitate existing arterial highway systems to improve the circulation of traffic and ensure the safety of travelers within Fresno County.

Fresno is on the California High-Speed Rail route, and a station is planned for downtown Fresno. The High-Speed Rail is expected to be a major catalyst for development and redevelopment in Fresno, although the general plan is not reliant on it to achieve its stated infill, development, and redevelopment goals.

The City of Fresno has a substantial development footprint. The incorporated city is 113 square miles (72,320 acres), and the city’s sphere of influence is 157 square miles (100,480 acres). Additionally, there are 11 square miles (7,040 acres) of unincorporated county islands inside Fresno’s city limits (City of Fresno 2011 General Plan Map Atlas).

Table 2.5 below displays the land use designations and general plan acreage increases in the City of Fresno. This table highlights the growth taking place in residential, commercial, open space, and mixed-use facilities.

Table 2.5 General Plan Update Statistics

Land Use Designation	Existing General Plan Acreage	General Plan Update Acreage	Change in Acreage
Residential	41,688	46,043	4,355
Commercial	6,456	6,913	457
Industrial	12,072	9,578	Negative 2,494
Mixed Use	557	4,223	3,666
Public Facilities	17,329	17,671	342
Open Space	1,665	3,001	1,336
Other	26,260	18,598	Negative 7,662
Total	106,027	106,027	0
Population	790,000	970,000	180,000

Source: City of Fresno Development and Resource Management Department, 2012

Downtown Neighborhood Community Plan: Complete Streets Elements

Streets typically account for 80 percent of a community’s public space and, accordingly, act not only as transportation conduits but also as spaces for strolling, recreation, and interaction among neighbors. Creating an environment where people can work, shop, go to school, and participate in outdoor activities near where they live means less energy is expended getting around, time is not wasted driving long distances to get to these places, and exercise is incorporated into daily routines. Different transportation projects will influence growth to different degrees and in different ways, and Caltrans used a two-phase approach to evaluate growth-related impacts. The first phase, called “first-cut screening,” is designed to help the environmental planner figure out the likely growth potential effect and

whether further analysis of the issue is necessary (Community Impact Assessment 2021). This will be discussed further in the Environmental Consequences section.

2022 Regional Transportation Plan Chapter 4, Goods Movement

Shipping raw materials and finished goods is a central feature of any economy. While the trucking industry carries most of the freight, commodity movement can occur by road, rail, air, and pipeline. Throughout the state, freight movement over state highways has grown faster than capacity; Fresno County is no exception to this trend.

1. If the first-cut screening reveals that no further analysis is required, document that here by discussing the following:
 - a. How, if at all, does the project potentially change accessibility?
 - b. How, if at all, do the project type, project location, and growth pressure potentially influence growth? Some transportation projects may have little influence on future growth, while others may have a lot. Some geographic locations are more conducive to influencing growth, while others are highly constrained. These differences may result from physical constraints, planning and zoning factors, or local political considerations.
 - c. Determine whether project-related growth is “reasonably foreseeable” as defined by NEPA. Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable as opposed to remote and speculative.

If there is project-related growth, how, if at all, will that affect resources of concern? Identify which resources of concern are likely to be affected by the foreseeable future growth. If a project is likely to influence future growth, but no resources of concern will be affected, then state that here and indicate that no further growth analysis is necessary

Environmental Consequences

Build Alternative 1 and Alternative 2

The proposed project would improve accessibility within the existing project limits.

- a. How, if at all, does the project potentially change accessibility?

Response: The project work does have the potential to alter accessibility at existing pedestrian access points. The project is in a highly developed urbanized landscape and is comprised of various industries, businesses, and residences. The project area is already highly accessible by vehicles.

- b. How, if at all, do the project type, project location, and growth pressure potentially influence growth? Some transportation projects may have very little influence on future growth, while others may have a great influence. Some geographic locations are more conducive to influencing growth, while others are highly constrained. These differences may result from physical constraints, planning and zoning factors, or local political considerations.

Response: The primary goal for this project is to rehabilitate the existing pavement and bring roadway features up to Caltrans standards, thereby decreasing the frequency of

maintenance expenditures and frequent repairs. Many features of the highway would be enhanced and brought to current Caltrans standards. The project would address the condition of the existing pavement within the proposed project limits and the frequent repairs needed that subject construction and maintenance workers to live traffic. The project area is already built-out and urbanized; it is not likely to stimulate commercial or real estate development in an area that is already highly developed. The project would not add a new bypass, roadway, new interchange/intersection, or include high-occupancy vehicle lanes. This project would not add additional through capacity or open up new areas for development. Therefore, this project would not influence growth.

- c. Determine whether project-related growth is “reasonably foreseeable” as defined by NEPA. Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable as opposed to remote and speculative.

Response: The project would remove an overcrossing and two interchanges, which would involve the closure of certain ramps/off-ramps. No project-related growth is anticipated.

Growth Impacts for both Build Alternatives:

Based on the responses to the first-cut screening, the project has been determined to not have any growth-related effects, and no further analysis is required.

Alternatives 1 and 2 would be consistent with the goals and policies of the regional, state, and local plans. The proposed project would achieve the standard vertical clearance and shoulder widths of the existing highway, promote facility improvements to other transportation system components, such as drainage systems, roadside signs, signal controls and lightings, intelligent transportation systems, and landscaping and hardscaping, including bridge and wall aesthetics, and incorporate Complete Streets elements. The proposed project is also consistent with the long-term goals of the 2022 Regional Transportation Plan for Fresno County, Fresno General Plan, Active Transportation Plan, and Downtown Neighborhood Community Plan.

No-Build Alternative

The No-Build Alternative would not be consistent with the Regional Transportation Plan, Long Term Improvement Plan, or the city and county general plans because the existing roadway does not meet the projected road capacity demand expected for the future. The proposed project area would deteriorate considerably due to increases in average daily traffic volumes to avoid the more heavily congested segments of this section of State Route 99.

2.1.4 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). The Federal Highway Administration, in its implementation of NEPA (23 U.S.

Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

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

Affected Environment

Defining Community Cohesion

Community cohesion is the degree to which residents have a “sense of belonging” to their neighborhood, a level of commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually because of continued association over time. The information in this section comes from the *Community Impact Assessment* (May 2021) prepared for this project. Measuring the quality of life within a neighborhood is an important aspect in determining the satisfaction of individuals with their community or neighborhood. What one defines as the quality of life is subjective. Many factors may contribute to an individual's image of a community; for example, the opportunity to form friendships, the attachment of residents to their neighborhood, and a positive sense of the nearby physical and cultural environment.

Community Study Area

The study area for socioeconomic analysis of population and housing is defined as Census Tracts 2, 7, 20, 21, and 37.01, all of which border the project. These Census Tracts were chosen because they overlap with a buffered range along the project area. A buffer range of 0.25 mile was used around the El Dorado Street Overcrossing, the Tielman Avenue Overcrossing, and the Belmont Avenue, Olive Avenue, and McKinley Avenue Interchanges, as these project locations would likely result in the most impacts to the surrounding communities and businesses. The buffer range was then reduced to 500 feet for the remainder of the project area length, as the work would remain on the main State Route 99 roadway and is unlikely to impact the surrounding communities and businesses. Though Census Tract 42.05 intersects the project area buffer, it was not included in the analysis because all communities and businesses within this tract are 1 mile north of the project area (Community Impact Assessment 2021). Figure 2-5 illustrates where the socioeconomic study area is within the boundary of Fresno City and Fresno County. Figure 2-6 shows a closer view of the same socioeconomic study area, which is divided by each Census Tract. Figure 2-6 also displays the location of the project area and the extent of the buffers used to determine the Census Tracts to be included in the study area.

Figure 2-5 Socioeconomic Study Area Location

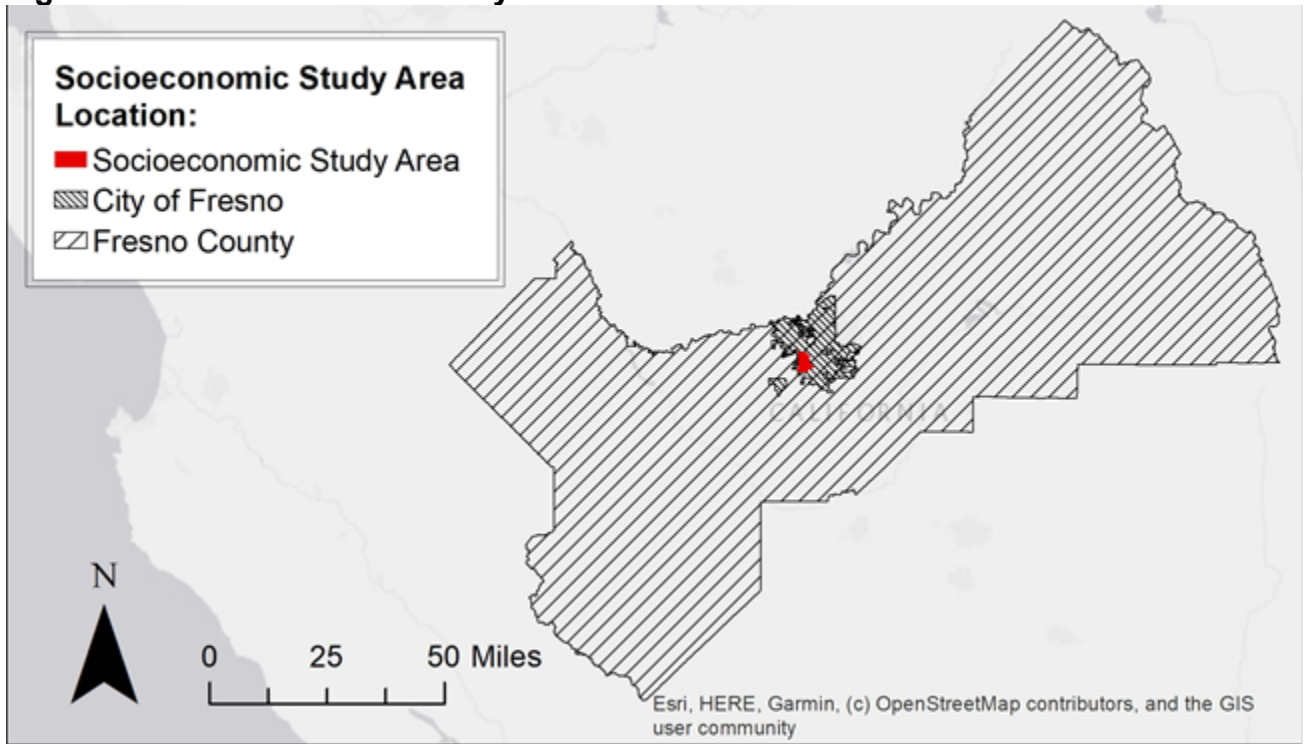
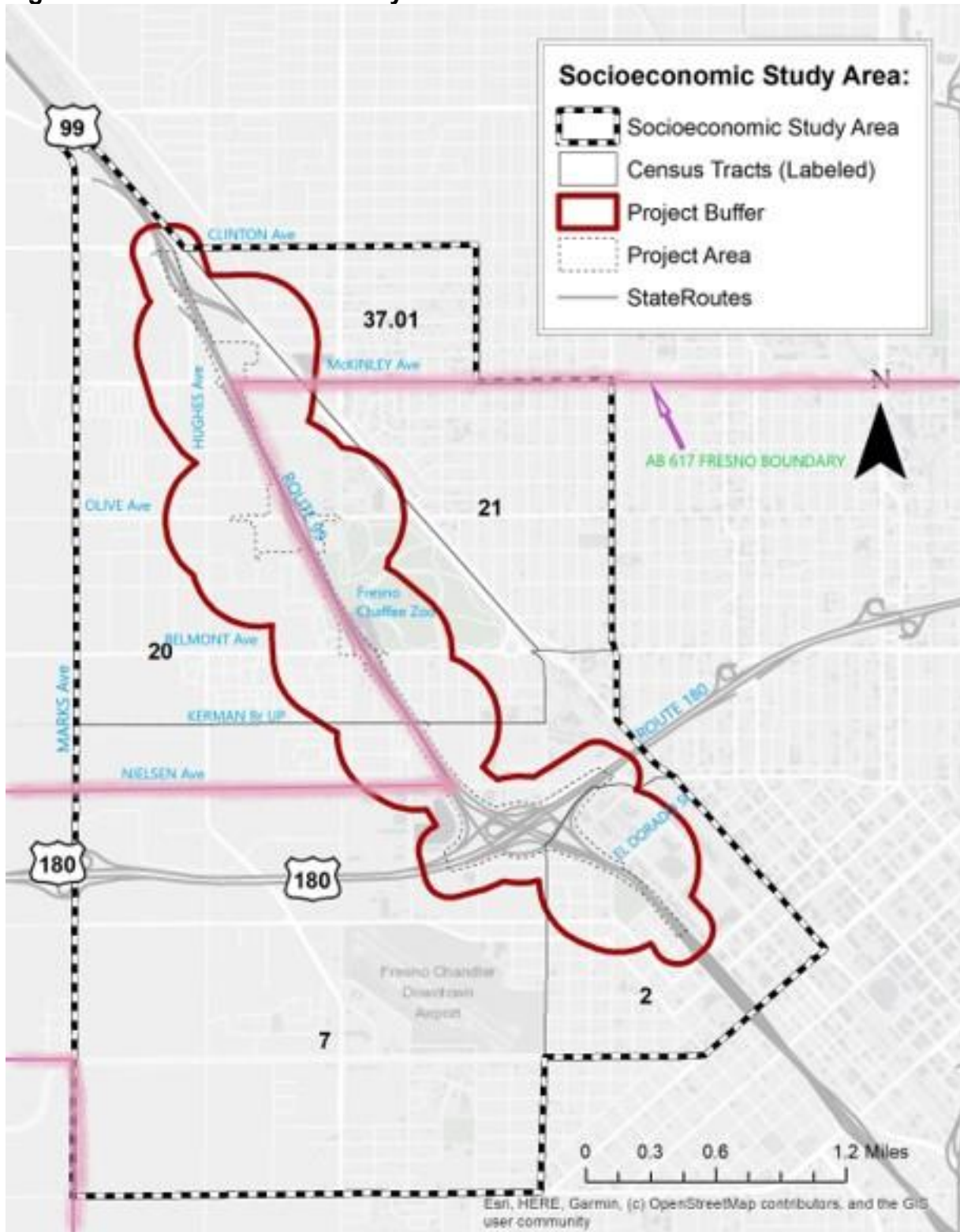


Figure 2-6 Socioeconomic Study Area



The socioeconomic study area includes many distinct communities (refer to Figure 2-6), each with its own character and level of cohesion. Indicators of community cohesion

include long residency tenures, households that have more than one person, community gathering places, home ownership, community activity, ethnic homogeneity, and the presence of stay-at-home parents or the elderly. Communities selected for analysis were located within the socioeconomic study area and positioned within one city block of each structure to be altered. Conclusions regarding neighborhood-level cohesion were inferred from U.S. Census Bureau data available by census tract, community plans, regional plans, onsite observation, a community survey, and discussions with residents at public scoping meetings. The table on the following page displays the neighborhood where each community is located, along with their corresponding level of community cohesion.

The following section presents information regarding each community in proximity to the project location. The Community Impact Assessment prepared for this project presents a thorough discussion of the potential community impacts of the project work, providing more detailed information on economic, population, and housing impacts as a result of the project. Please refer to Section 2.1.7, Environmental Justice, to view more detailed census data within these communities.

Figure 2-7 Community Plan Areas Studied

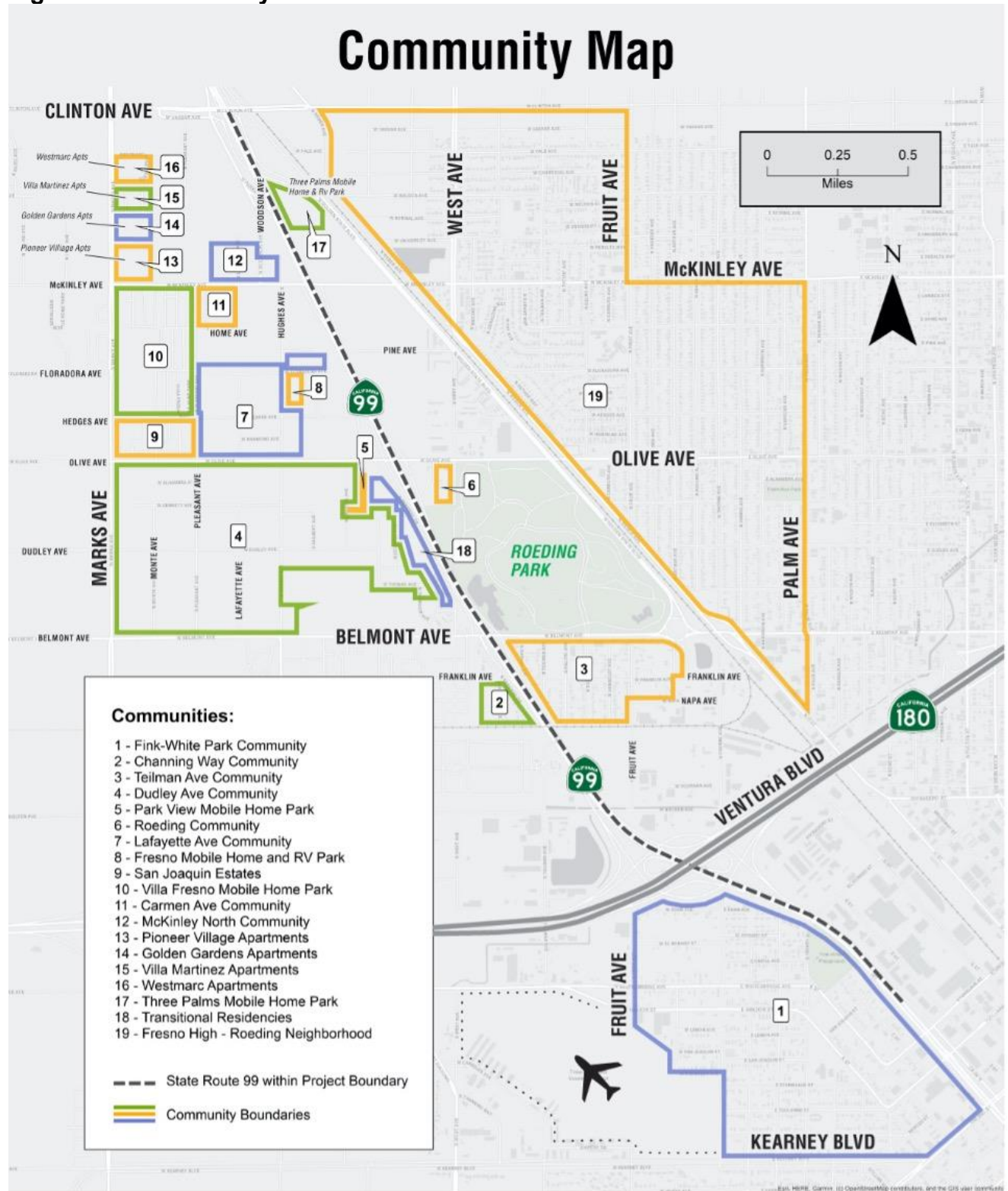
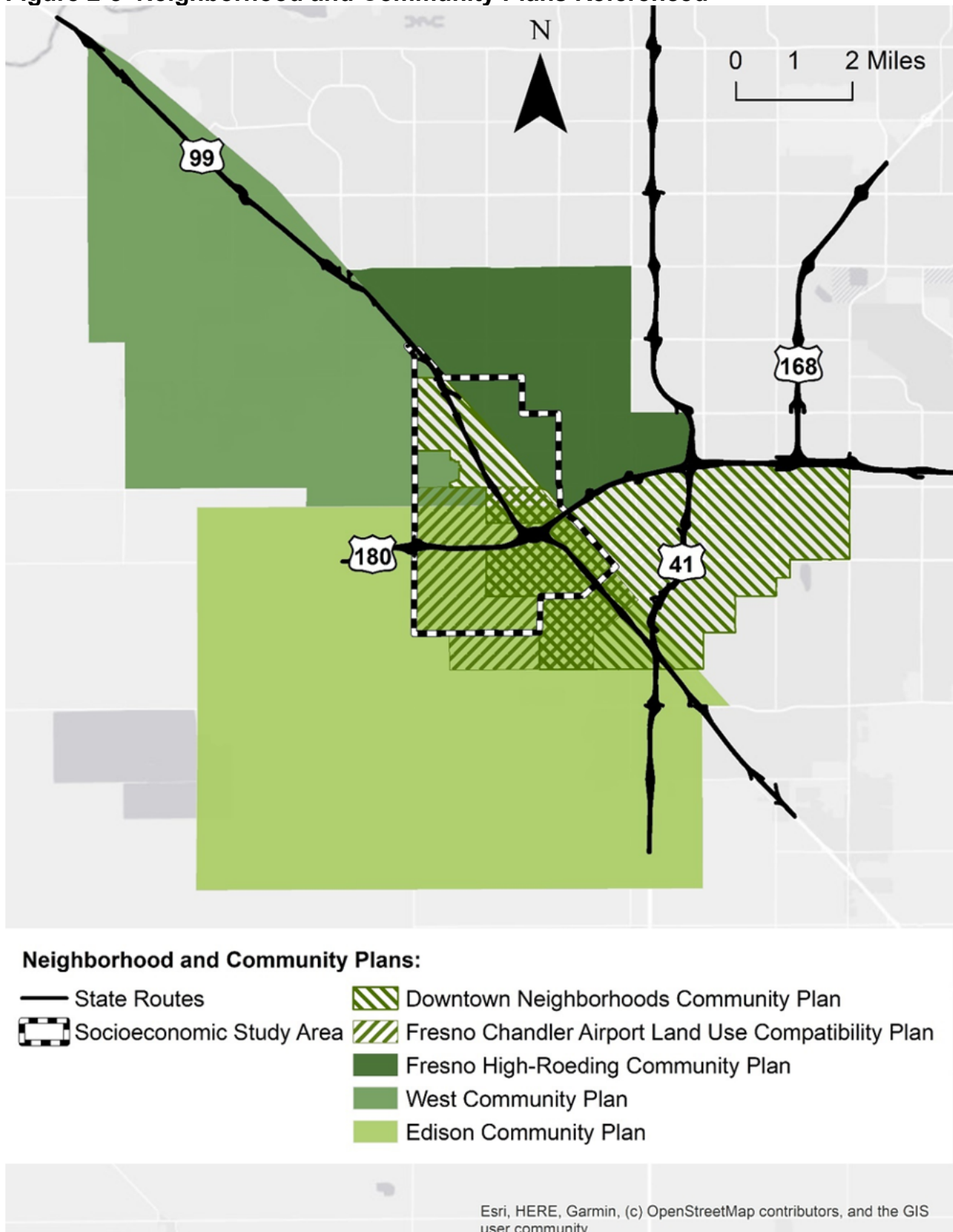


Figure 2-8 Neighborhood and Community Plans Referenced



Population

Based on the information gathered from the U.S. Census Bureau, approximately 22,645 people are living within the socioeconomic study area. This area represents 4.3 percent of the city-wide population, while the City of Fresno represents about 53.3 percent of the county-wide population, as seen in Table 2.6.

Table 2.7 shows there are an estimated 96 males per 100 females living in the study area. This ratio between males and females remains consistent for most Census Tracts individually. The median age of those living in the socioeconomic study area is 28 years old, whereas the median age of those living in Fresno County is 32 years old.

Table 2.6 Estimated Regional Population and Age

Category	Socioeconomic Study Area	City of Fresno	Fresno County
Total Population	22,645	527,422	989,255
Median age	28	32	32

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates, and U.S. Census Bureau, 2017 American Community Survey One-Year Estimates

Table 2.7 Estimated Population Characteristics

Category	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Average
Median Age	26	33	26	28	27	28
Sex Ratio (Males per 100 Females)	96	98	95	94	97	96
Percentage With a Disability	12.5	20.8	19.5	16.2	16.2	17.0

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates

Household Size and Type

Fresno households are expected to increase by 47 percent by 2050. There are approximately 6,883 households within the socioeconomic study area. Families compose 4,712 of these households, with an average size of 3.9 family members. Larger families tend to occur in Census Tracts 2 and 20. There are about 2,171 nonfamily households. Around 3,005 households have one or more people under 18, while 1,409 households hold at least one person over age 65. There is a greater percentage of households with people under age 18 in Census Tracts 1, 20, and 37.01. Adversely, the highest percentage of households with people over the age of 65 are in Census Tract 21. The Census Tract with the highest percentage of single-person households is Census Tract 21. There are 368 mobile home units in the area, all of which occur within Census Tract 20. Overall, there are

more renter-occupied units than owner-occupied units within the socioeconomic study area; this is also true for the City of Fresno; however, there are more owner-occupied units in Fresno County.

There are approximately 7,435 housing units within the socioeconomic study area, 552 of which are vacant. Most of the occupied housing units are single-unit detached homes. However, about 27 percent of all housing units are attached to other units, such as in an apartment complex. A breakdown of household sizes and types within the socioeconomic study area can be seen in Table 2.8 and Table 2.9. The averages from these tables are then compared to averages for the City of Fresno and Fresno County in Table 2.10.

Table 2.8 Estimated Households by Type

Household Description	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Total
Total Households	812	1,130	1,762	2,119	1,060	6,883
Total Families	595	795	1,369	1,233	720	4,712
Nonfamily Households	217	335	393	886	340	2,171
Households With Related Children of Householder Under 18 Years	417	416	980	691	501	3,005
Households With One or More People 65 Years and Over	146	339	314	404	206	1,409

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates

Table 2.9 Estimated Average Household Size

Household Type	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Average
Household Size	3.6	3.1	3.7	2.7	3.3	3.3
Family Size	4.3	3.7	4.1	3.6	3.7	3.9

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates

Table 2.10 Estimated Regional Percentage of Household Type and Size

Household Category	Socioeconomic Study Area Average	City of Fresno	Fresno County
Family Households	68	69	73
Nonfamily Households	32	31	27
Average Household Size	3.3	3.1	3.2
Average Family Size	3.9	3.7	3.7

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates, U.S. Census Bureau, 2017 American Community Survey One-Year Estimates

Household Income and Poverty

About 40.7 percent of the population within the socioeconomic study area is below the poverty level; this is greater than the poverty rates for the City of Fresno and Fresno County, where 28 and 25 percent of the population is below the poverty level, respectively. Within the socioeconomic study area, about 20.6 percent of people over age 65 are below the poverty level, and 50.0 percent of adolescents under age 18 are below the poverty level. Poverty rates are higher for those over age 25 who have not achieved a high school education. About 14.7 percent of those working full time are still below the poverty level. The highest percentages of poverty are in Census Tracts 2 and 20, with over 50 percent of these populations living below the poverty level. Census Tract 20 also has the highest percentage of people over age 65 who are below the poverty level. The lowest poverty rate in the study area is in Census Tracts 21.

City of Fresno household income projections for 2050 estimate the mean household income to increase from \$59,080 in 2015 to \$85,970 in 2050. The current median household incomes for the City of Fresno and Fresno County are \$48,600 and \$51,800, respectively. However, for the Census Tracts studied, an average of 15.6 percent of the households in the assessment area have an annual income of less than \$10,000, 28.1 percent of the households have an annual income of less than \$15,000, and 48.6 percent of the households have an annual income of less than \$25,000. Only 13.8 percent of households make more than \$75,000 annually. There are much greater proportions of households below the poverty level within Census Tracts 2, 7, and 20, with the average median household income for these tracts being approximately \$22,456 and their overall average income being \$33,093.

In Table 2.11, the median and mean annual income ranges for households in the socioeconomic study area are compared to the average income ranges within the City of Fresno and Fresno County. Poverty levels within the region are shown in Table 2.12.

Table 2.11 Estimated Median and Mean Annual Income Range for Households

Income Range	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Census Tract Average	City of Fresno	Fresno County
Household Median Income (Dollars)	22,159	21,606	23,603	35,194	34,327	30,617	48,600	51,800
Household Mean Income (Dollars)	32,776	35,804	30,700	49,744	44,420	40,604	Not Applicable	Not Applicable

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates, U.S. Census Bureau, 2017 American Community Survey One-Year Estimates

Table 2.12 Estimated Population Percentage Below Poverty Level by Demographic Characteristics

Demographic	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Census Tract Average	City of Fresno	Fresno County
All Ages	50.8	38.8	53.4	28.1	32.6	40.7	28.4	25.4
Under 18 Years	60.5	43.0	66.3	39.0	42.8	50.5	40.1	36.5
18 to 64 Years	48.9	41.7	47.0	23.8	29.0	38.1	25.3	22.5
65 Years and Over	10.9	16.8	39.0	22.3	14.1	20.6	13.7	12.6
Less Than High School Graduate	56.3	48.2	51.9	37.5	25.3	43.8	39.5	35.5
Bachelor's Degree or Higher	0.0	15.0	28.4	21.9	33.3	19.7	5.8	5.2
Employed	35.0	25.2	24.1	14.0	19.4	23.5	13.7	12.6
Unemployed	23.1	48.9	84.3	41.0	49.8	49.4	45.8	40.7

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimate

Greater Downtown Area

The socioeconomic study area for this project is primarily within the greater downtown area. The greater downtown area is primarily composed of multifamily buildings and mixed-density neighborhoods south of State Route 180. North of State Route 180, there are many single-family homes, with some mixed-density neighborhoods near Roeding Park. In 1957, State Routes 99, 41, and 180 were constructed to form a freeway loop around downtown Fresno, which divided formerly unified neighborhoods without surface crossings. This had a devastating impact on the social and economic vitality of Downtown and its surrounding neighborhoods.

Table 2.13 Community Cohesion

Community Name	Community Number	Neighborhood	Level of Community Cohesion	Location
Fink-White Park Community	1	Edison	Moderate to High	Located directly next to State Route 99, just south of the project location.
Channing Way Community	2	Jane Addams	Low	Located just south of Belmont Avenue and west of State Route 99.
Teilman Community	3	Jane Addams	Low	Located just south of Roeding Park, east of State Route 99, and north of the Teilman Avenue Overcrossing.
Dudley Avenue Community	4	Jane Addams	Moderate	Located west of State Route 99 between Olive Avenue and Belmont Avenue.
Park View Mobile Home Park	5	Jane Addams	Moderate	Located south of Olive Avenue, west of State Route 99.
Roeding Community	6	Jane Addams	Low to Moderate	Located south of Olive Avenue and east of State Route 99.
Lafayette Avenue Community	7	Jane Addams	Moderate	Located north of Olive Avenue and west of State Route 99.
Fresno Mobile Home and RV Park	8	Jane Addams	Low to Moderate	Located east of Hughes Avenue between McKinley Avenue and Olive Avenue.
San Joaquin Estates	9	Jane Addams	Moderate	Located just north of Olive Avenue and just east of Marks Avenue.
Villa Fresno Mobile Home Park	10	Jane Addams	Moderate	Located just south of McKinley Avenue and just east of Marks Avenue.
Carmen Avenue Community	11	Jane Addams	Moderate to High	Located just south of McKinley Avenue, east of Addams Elementary School.

Community Name	Community Number	Neighborhood	Level of Community Cohesion	Location
McKinley North Community	12	Jane Addams	Low	Located north of McKinley Avenue and west of State Route 99
Pioneer Village Apartments	13	Jane Addams	Moderate	Located at the intersection of Marks Avenue and McKinley Avenue.
Golden Gardens Apartments	14	Jane Addams	Moderate	Located on Marks Avenue between Clinton and McKinley Avenues.
Villa Martinez Apartments	15	Jane Addams	Moderate	Located between the intersection of Marks Avenue and McKinley Avenue.
Westmarc Apartments	16	Jane Addams	Moderate	Located between the intersection of Marks Avenue and McKinley Avenue.
Three Palms Mobile Home Park	17	Jane Addams	High	Located east of State Route 99 and west of Golden State Boulevard.
Transitional Residencies	18	Jane Addams	Low	Various complexes are located next to State Route 99, between Belmont and Olive Avenues.
Fresno High-Roeding Neighborhood	19	Fresno High-Roeding	Moderate	Three neighborhood blocks east of Weber Avenue between Clinton Avenue and Belmont Avenue.
Entire Downtown Neighborhood	20	Downtown	Low to Moderate	Bordered to the east and south by State Route 41 and bordered to the west and south by State Route 99.
Entire Edison Neighborhood	21	Edison	Moderate	Bordered to the north by State Route 180 and to the south by Church Avenue.
Entire Jane Addams Neighborhood	22	Jane Addams	Low	Located at Nielson Avenue and north along State Route 99 to Clinton Avenue.

Discussion of Communities and Level of Cohesion

Downtown Neighborhoods

The downtown neighborhood subarea is bordered to the east and south by State Route 41 and bordered to the west and south by State Route 99. The northern border lies along Tulare Avenue. This downtown neighborhood subarea is in the City of Fresno and is comprised of seven distinct subdistricts, including the Fulton District, the Mural District, Civic Center, Chinatown, South Stadium, Armenian Town/Convention Center, and the Divisadero Triangle. This is the location of many city, county, state, and federal agencies and contains many visitor-serving uses, including Fresno Convention Center, Chukchansi Park, and several hotels. It also contains a mix of underperforming retail, restaurant, and entertainment facilities, with a high retail and office vacancy rate and very few residential buildings or dwelling units. Yet it is still one of the largest job centers in the region, holding about 30,000 jobs. It continues to be an attractive location for government offices, legal, and medical services and features a stable base of office employment due to its concentration of public sector employment. It generally lacks pedestrian-supporting streetscapes and has an overabundance of parking. The most common building types are mixed-use buildings, theaters, civic/institutional buildings, and industrial warehouses. With minimal residential units and high vacancy rates, the Downtown Neighborhood is considered to have a low to moderate level of community cohesion.

Edison Neighborhood

The Edison neighborhood lies in the southwestern section of the project area. It is bordered to the north by State Route 180 and bordered to the south by Church Avenue. Its western border is Golden State Boulevard, and the eastern border extends to Southwest Avenue (northern part) and Thorne Avenue (southern part). This neighborhood is considered a subarea of the greater downtown area, but it is largely disconnected from the rest of downtown and Chinatown by State Route 99. This neighborhood is a multiethnic community that was once the center of Fresno's African American community. It is primarily residential and contains some of Fresno's oldest neighborhoods, with most of the homes dating from the early 20th century through the 1960s. Some homes date as far back as the 1800s. It contains many dilapidated buildings with several street closures and neglected alleys. Other than the Kearney Palms Shopping Center, it is deficient in proximate neighborhood-serving retail, banking, and other services. However, it does contain more churches than any other part of Fresno on a per capita basis, and seven schools, including public, charter, and private schools. The Fresno Chandler Executive Airport is in this neighborhood as well. The community cohesion for the entire Edison Neighborhood is considered to be moderate.

Fink-White Community

The Fink-White Community is isolated from nearby commercial and public facilities; the main connections between this neighborhood and downtown are the South Trinity Street/El Dorado Street Overcrossing, Whitesbridge Avenue/Stanslaus Street Overcrossing, and Tuolumne Street Overcrossing. Fink-White Park is directly next to State Route 99, just south of the project location. This park contains multiple fields for soccer, several courts for basketball, a playground, and an indoor facility, and is surrounded by a residential community. Columbia Elementary School is around 0.15 mile south of the park, and Big

Picture Educational Academy is roughly 0.35 mile south of the park. A total of 60.1 to 80 percent of people in this neighborhood identify as Hispanic or Latino. Additionally, 21 to 31 percent of residents speak only Spanish in their homes; 41 to 60 percent of these residents have very limited proficiency in English. About 42 to 51 percent of the residents are under age 17. Family incomes in this area are less than \$25,000 annually for over 60 percent of the residents. About 10 to 25 percent of residents in this area are unemployed, and over 40 percent live below the poverty level. Due to the high level of ethnic homogeneity, Spanish-speaking culture, a large percentage of children, two nearby schools, a community park, visual confirmations of high levels of pedestrian activity, and a high number of religious facilities occurring in the area, this community is considered to have a moderate to high level of community cohesion.

Jane Addams Neighborhood

The Jane Addams neighborhood lies in the northern section of the project area, beginning at Neilson Avenue, and continuing north along State Route 99 to Clinton Avenue. The eastern limit of the neighborhood is bordered by the railroad, while the western limit lies roughly one city block west of State Route 99 and forms the western agricultural edge of Fresno. This neighborhood is considered a subarea of the larger Downtown neighborhood. It is generally more rural in character, with few pedestrian or vehicular overcrossings across the State Route 99/State Route 180 Interchange.

The residential buildings are primarily small houses on large lots, with several mobile home developments. Auto-oriented motels have fallen into disrepair and are mainly occupied by transitional housing. There is one school, the Jane Addams Elementary School; however, there are two additional schools immediately south of the official Jane Addams Neighborhood border, and one that lies in a pocket of county land at the western edge of the Jane Addams Neighborhood border. Even though it lacks neighborhood-scale public open and recreational space, it does include the Belmont Memorial Park (along with several more cemeteries immediately next to the Jane Addams western border), Roeding Park, the Fresno Chaffee Zoological Gardens, Playland, and Storyland. It also lacks curbs, sidewalks, street trees on arterial streets, neighborhood-serving retail and services, and has several vacant lots. Several industrial buildings and complexes are within this neighborhood.

The land use immediately surrounding Roeding Park consists of commercial and office buildings, with a few public facilities. Single units and rural residential units reside just beyond the circle of commercial/office buildings surrounding the park. Rural residences are scattered throughout the neighborhoods to the west and south, while more uniform single-unit residences lie to the east. The immediate area north of Olive Avenue is comprised of mostly industrial and commercial land use, with sparsely scattered neighborhoods of single-unit residential homes and a few multiunit residential homes. Family incomes in the Jane Addams Neighborhood are less than \$25,000 annually for over 60 percent of the residents, with 10 to 15 percent of residents being unemployed. Over 20 percent of residents in this area live below the poverty level; 40 percent of residents who live west of the railroad live below the poverty level. Due to the lack of connectivity between residential neighborhoods, lack of community resources, lack of religious institutions and schools, lack

of walkability, and minimal pedestrian activity observed, the level of community cohesion for the entire Jane Addams Neighborhood is low.

Channing Way Community

This community is south of Belmont Avenue and west of State Route 99. It is a very small and isolated community. There are sidewalks present, but they are not maintained. Severe deterioration is evident throughout the community. There is a fair amount of ethnic homogeneity, with 60.1 to 80 percent of the residents identifying as Hispanic or Latino. Despite the high ethnic homogeneity, there are no community facilities or signs of extreme deterioration in the area, which suggests a low community cohesion in the Channing Way community.

Teilman Community

This community is just south of Roeding Park, east of State Route 99, and north of the Teilman Avenue Overcrossing. Older rural residencies and detached single-unit homes make up the neighborhood. It is bordered by cemeteries, businesses, and industrial facilities. There is a fair amount of ethnic homogeneity, with 60.1 to 80 percent of the residents identifying as Hispanic or Latino. During an onsite survey, a high amount of traffic congestion was seen passing through the neighborhood. There are no sidewalks, and no pedestrians were seen. This neighborhood also lacks community facilities. Though there is a fair amount of ethnic homogeneity, there were minimal pedestrians seen, no religious or communal buildings, and minimal evidence of community care. Therefore, it can be assumed that this community has a low level of community cohesion.

Dudley Avenue Community

This community is west of State Route 99 between Olive Avenue and Belmont Avenue. It is bordered by commercial businesses, gas stations, cemeteries, and motels. This area consists of older houses with no sidewalks. Most of the homes are renter occupied. During an onsite survey, there were minimal pedestrians observed, but people were seen sitting in their front yards. There was also some evidence of care and maintenance despite signs of dispersed deterioration, trash, and junked cars. About 32 to 41 percent of the residents are under age 17. Continuing west, this increases to about 42 to 51 percent. There is a high amount of ethnic homogeneity, with 20.1 to 40 percent of residents identifying as Hispanic or Latino. Continuing west, this increases to 80.1 to 100 percent. Also, 40.1 to 60 percent of residents identify as Asian in the eastern side of this community. There is a high poverty level, with 40.1 to 60 percent of residents living below the poverty level, and 20.1 to 40.1 percent do not have high school diplomas. The lack of community facilities and services, the high amount of ethnic homogeneity, the high number of young residents, and apparent long-term residencies in the homes that were highly maintained lend to the estimation of moderate community cohesion for the Dudley Avenue Community.

Park View Mobile Home Park

This mobile home park is south of Olive Avenue, west of State Route 99. About 20.2 to 40 percent of the residents identify as Hispanic or Latino, and about 40.1 to 60 percent identify as Asian. Also, 20.1 to 40 percent are living below the poverty level. Based on the high

levels of ethnic homogeneity, it can be assumed that the Park View Mobile Home Park has a moderate amount of community cohesion.

Roeding Community

This community is south of Olive Avenue and east of State Route 99. It is an extremely small community consisting of roughly six homes and is bordered by fast food restaurants, a motel, a gas station, and Roeding Park. About 20 to 40 percent of those living in this area have a family income of less than \$25,000, and about 80.1 to 90 percent of the homes are owner-occupied. The lack of community facilities, apparent isolation from surrounding neighborhood communities, and high ownership rates suggest low to moderate community cohesion.

Lafayette Avenue Community

This community is north of Olive Avenue and west of State Route 99; it is surrounded by mobile homes, RV parks, and commercial businesses. The community contains a diverse range of housing sizes and is generally older homes, over 80 percent of which are owner-occupied. There are sufficient pedestrian pathways, and the surrounding community looks fairly maintained. Around 40.1 to 60 percent of the residents identify as Hispanic or Latino, and about 20.1 to 40 percent of residents live below the poverty level. The lack of community facilities, the diversity in resident home expression and maintenance, along with high homeownership rates suggest moderate community cohesion.

Fresno Mobile Home and RV Park

This is a mobile home and RV Park just east of Hughes Avenue between McKinley Avenue and Olive Avenue. This community hosts new RVs and homes, over 80 percent of which are owner-occupied. The community is relatively small but appears to be fully occupied. During an onsite survey, residents were seen working in their yards. The community's aesthetic is well maintained. Around 40.1 to 60 percent of the residents identify as Hispanic or Latino, and about 20.1 to 40 percent live below the poverty level. The level of maintenance in this park and ethnic homogeneity, paired with the low likelihood of long-term residency, suggests the community cohesion to be relatively low to moderate.

San Joaquin Estates

This is a mobile home community located north of Olive Avenue and east of Marks Avenue. The mobile homes tend to be older but are generally well-maintained with manicured yards. About 80 percent of the homes are owner-occupied. About 40.1 to 60 percent of the residents identify as Hispanic or Latino, and 20.1 to 40 percent live below the poverty level. The age and ownership of the homes, along with moderate ethnic homogeneity suggest a moderate level of community cohesion.

Villa Fresno Mobile Home Park

This is a mobile home community located south of McKinley Avenue and east of Marks Avenue. The mobile homes tend to be older but are generally well-maintained with manicured yards. About 80 percent of the homes are owner-occupied, 40.1 to 60 percent of the residents identify as Hispanic or Latino, and 20.1 to 40 percent live below the poverty

level. The age and ownership of the homes, along with moderate ethnic homogeneity, suggest a moderate level of community cohesion.

Carmen Avenue Community

This community is located south of McKinley Avenue, east of Addams Elementary School. This is a small community of older homes of several different sizes. The sidewalks and yards are well maintained. About 21 to 31 percent of residents are under the age of 17. Additionally, 40.1 to 60 percent of the residents identify as Hispanic or Latino. About 20.1 to 40 percent of the residents live below the poverty level, but over 80 percent of the homes are occupied by the owner. Because of the small size of the community and apparent maintenance of the homes, ethnic homogeneity, along with the proximity to Addams Elementary School where community functions can be held, it is estimated that the community cohesion for the Carmen Avenue community is moderate to high.

McKinley North Community

This community lies north of McKinley Avenue and west of State Route 99. The homes are sparsely situated in the area and are interspersed amongst businesses and the light industry. Around 20.1 to 40 percent of the population in this area identify as Black or African American, and 20.1 to 40 percent identify as Hispanic or Latino. About 60 to 80 percent have a family income of less than \$25,000 and 40.1 to 60 percent of the households are below the poverty level. About 80.1 to 100 percent of the households are renter-occupied. Due to the high number of rental units in the area, along with the inconsistent zoning and industrial blocks in the area, it is estimated that the community cohesion for the McKinley North community is low.

Apartment Complex Communities

There are four separate apartment complexes next to each other in the socioeconomic study area. These include the Westmarc Apartments, Villa Martinez Apartments, the Golden Gardens apartment complex, and the Pioneer Village Apartments. They are located east of Marks Avenue, between Clinton Avenue and McKinley Avenue. They are generally clean, fenced in, and appear relatively new. They are well-kept and maintained with a lot of surrounding foliage. There is a high percentage of youths in this area; 42 to 51 percent of the residents are under age 17. Roughly 20.1 to 40 percent identify as Hispanic or Latino, and 20.1 to 40 percent identify as Black or African American. There is a higher poverty rate here, with 40.1 to 60 percent of the residents being below poverty, and 20.1 to 40 percent do not have high school diplomas. Since these are apartment complexes, they are likely all renter-occupied. The high renter occupancy rates, the large percentage of children living in these apartment complexes, and the high percentage of minority individuals and maintenance of the facilities suggest a moderate level of community cohesion.

Three Palms Mobile Home and RV Park

This mobile home and RV park is located east of State Route 99 and west of Golden State Boulevard, between McKinley Avenue and Clinton Avenue. This park contains older trailers and mobile homes, some with signs of significant deterioration. Despite this, some are well maintained, and children were seen playing outside. A discussion with a resident revealed a significant problem with homeless encampments nearby and concern for the safety of the

children and other residents. Long-term residents occupy this relatively small park. About 42 to 51 percent of the residents are under age 17; 20.1 to 40 percent identify as Black or African American, while 20.1 to 40 percent identify as Hispanic or Latino. There is a high poverty rate here, with 40.1 to 60 percent of the residents below the poverty level. About 20.1 to 40 percent do not have high school diplomas. With this invested interest in community activities and safety, a high number of children at play, the large presence of minority individuals, and the appearance of long-term residencies, the community cohesion for the Three Palms Mobile Home and RV Park is estimated to be high.

Transitional Residences

Several motels may contain permanent residents directly west of Roeding Park. During an onsite survey, there was evidence of this at Parkside Inn. Other motels nearby with minimal evidence of this include the Travel Inn and Suites, Welcome Inn, Palace Inn, Villa Motel, Valley Inn, Sierra Inn, Roadway Inn, Super 8, and Days Inn. These transitional residences are assumed to have low community cohesion.

Fresno High-Roeding Neighborhood

There are three dense neighborhood blocks east of Weber Avenue between Clinton Avenue and Belmont Avenue. These all contain relatively small, uniform homes. They appear to be older houses but are well maintained with nicely manicured yards and sidewalks. An onsite visit revealed this area to be clean and relatively quiet. As one travels north through the neighborhoods, there is a perceived increase in lot maintenance and pedestrian use. Between Olive Avenue and McKinley Avenue, the homes appear newer and larger. There were more children and dog walkers observed in this area as well. About 21 to 31 percent of the residents are under age 17, and this increases to 32 to 41 percent as one travels north. There is a fair amount of ethnic homogeneity, with the southern homes containing 40.1 to 60 percent of residents that identify as Hispanic or Latino. The northern area has about 20.1 to 40 percent of the residents identifying as Black or African American. This entire area is mostly renter-occupied. The low number of community facilities, the high rate of renter occupancies, the level of community maintenance, and the evidence of many family occupancies, pedestrian use, and ethnic homogeneity suggest a moderate level of community cohesion.

Schools

There are also eight schools within 0.5 mile of the project, including high schools, elementary schools, preschools, and day cares. These schools are a part of the Fresno Unified School District, Central Unified School District, Fresno County Office of Education, and Fresno Economic Opportunities Commission. These include Columbia Elementary School, Big Picture High School, Pathway Community Day School, Pershing Continuation High School, Fresno Economic Opportunities Commission Head Start Ramacher School, Addams Elementary/Preschool, Fresno Economic Opportunities Commission Head Start Brooks School, and Fremont Elementary School. These schools are dispersed throughout the study area, with the high schools located next to elementary schools. Two additional schools—Homan Elementary School and Our Lady of Victory Catholic School—within 0.5 mile of the project area lie outside the socioeconomic study area.

Religious Institutions

There are 12 religious institutions within 0.5 mile of the project area. These include the God Abundance Harvest Church, Life Ministries of Fresno, All Nation House of Prayer, House-Miracles Faith Ministries, Mount Pleasant Missionary Baptist Church, Feed My Sheep Ministry, Church of Jesus Christ of Fresno, Trinity Church of God in Christ, True Love Tabernacle Church, Templo Bethel, Bochasanwasi Akshar Purushottam Shri Swaminarayan Mandir temple, and West Park Baptist Church. There are also two chapels associated with funeral homes in the area called Chapel of the Light and Stephens and Bean Funeral Chapel. Most of these religious institutions are in the Edison Neighborhood, south of State Route 180.

Cemeteries

There are several cemeteries within 0.5 mile of the project area. These cemeteries include Belmont Memorial Park, Mountain View Cemetery, Beth Israel Cemetery, Masis Ararat Armenian Cemetery, Fresno County Cemetery, Holy Cross Catholic Cemetery, and the Fresno Pet Cemetery. All these are in the same general area, just west of State Route 99 between Nielson Avenue and Belmont Avenue.

Other Community Services and Amenities

A few other facilities within 0.5 mile of the project also serve their surrounding communities. Two parks are within the study area, including Fink-White Park and Roeding Park. Fink-White Park contains a building for indoor activities and club gatherings. Further discussion on these two parks can be found in Section 2.1.3, Parks and Recreation. A Boys and Girls Club, Kings View Community Services, Fresno County Human Services, a U.S. Postal Service office, the District Office for the California Department of Transportation, a Department of Motor Vehicles, The Central Valley Yemen Association, The Veterans of Foreign Affairs facility, Fresno Humane Animal Services, and the Kinetic Sports Academy are also near the project. The only three medical centers within 0.5 mile of the project area are Golden Cross Health Care, Care Meridian, and Belmar Villa Assisted Living north of McKinley Avenue (Community Impact Assessment 2021).

Environmental Consequences

Permanent Impacts for Alternatives 1 and 2

Project-related changes that may have the potential to impact community facilities include changes in noise and air quality levels, visual changes, and traffic congestion. Additionally, work on roadways in the area could alter access to community facilities, amenities, or services.

El Dorado Street Overcrossing/Nielson Avenue Undercrossing Alterations

Alterations to the El Dorado Street Overcrossing and the Nielson Avenue Undercrossing are not expected to impact the community cohesion or character of any community in the project area.

Teilman Avenue Overcrossing Closure

The permanent closure of the Teilman Avenue Overcrossing could permanently impact the Teilman Avenue community just north of the overcrossing. Direct access to Belmont Memorial Park, Stephens and Bean Funeral Chapel, Pershing Continuation High School, and Pathway Community Day School will no longer be available. Community members would no longer be able to access this overcrossing to access these facilities. The most immediate alternate route involves a 1-mile detour that uses Fruit Avenue. The elimination of this overcrossing could potentially reduce the amount of traffic that this community currently experiences and could increase the community's aesthetic character and improve its level of safety. However, community members who rely on this overcrossing to reach their destinations would be impacted by its closure. A 1-mile detour would add 2 miles for those who use this overcrossing to and from their destination.

This closure will separate the Teilman Avenue community from Belmont Memorial Park, Stephens and Bean Funeral Chapel, Fresno Humane Animal Services, Pershing Continuation High School, and Pathway Community Day School. A 0.5-mile to 1-mile permanent detour would have to be used for this neighborhood to gain access to these facilities after construction. This detour would use Franklin Avenue, Fruit Avenue, and Neilson Avenue and would likely not accommodate pedestrian access.

Belmont Avenue Interchange Closure

The permanent closure of the Belmont Avenue Interchange would potentially impact the quality of life for residents of the Dudley Avenue community, the Park View Mobile Home Park, the Channing Way community, and the transitional residencies in the area. For those living near the interchange, the reduction in access to State Route 99 could increase commute times. However, with the additional Parkway Drive connection to Belmont Avenue, along with improvements along Parkway Drive, communities may experience minimal increases in traffic volumes and congestion on surrounding surface streets.

The access to the cemeteries and chapels in the area will be less direct, and interchanges further from Belmont Avenue would have to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180. These locations are typically destination facilities, and the surrounding community does not necessarily need to be nearby for the community to continue accessing the facilities. People will most likely seek out the locations, regardless of the ease of access, based on their established loyalty to that location; this also applies to the Veterans of Foreign Wars establishment. Finally, there is a preschool called Fresno EOC Head Start Ramacher School, and the families who use this facility likely live in the surrounding area. However, if families use the State Route 99 and Belmont Avenue Interchange, an alternative interchange would need to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180; this could add 1 to 2 miles to their commute.

Olive Avenue Interchange Improvements

Both Alternatives planned for the Olive Avenue Interchange improvements will likely have permanent impacts on the Dudley Avenue community, the Park View Mobile Home Park, the San Joaquin Estates, the Lafayette Avenue community, the Fresno Mobile Home and

RV Park, and the transitional residencies in the area. Nearby residents may need to take alternate routes to use facilities that were directly accessible before construction.

For both Build Alternatives, public facilities at the Olive Avenue Interchange may be affected. Access alterations may also occur for the Central Valley Yemeni Association, which lies near the interchange. Lastly, an increased amount of traffic on Olive Avenue due to the closure of the McKinley Avenue and Belmont Avenue Interchanges may occur near the Department of Motor Vehicles.

McKinley Avenue Partial Interchange Closure

Because the Olive Avenue Interchange may have increased traffic redirected from the McKinley Avenue and Belmont Avenue Interchanges, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. This could increase commuting times for community residents and decrease the aesthetic character of the communities. However, improvements to local roads are planned for this project to accommodate traffic increases, including Hughes Avenue between Olive Avenue and McKinley Avenue. Please refer to Figure 2-9 below, which displays the McKinley Avenue removal.

The permanent closure of the McKinley Avenue Partial Interchange may impact the surrounding apartment complex communities, the Carmen Avenue community, the Three Palms Mobile Home and RV Park, and the Villa Fresno Mobile Home Park. For those living near the interchange, the reduction in access to State Route 99 could increase commute times. As residents travel to the nearest interchanges at Olive Avenue and Clinton Avenue, communities could experience increased traffic and congestion on the surrounding surface streets. It is unlikely that these impacts will influence the level of cohesion in the surrounding communities. After construction, the acreage of the Three Palms Mobile Home and RV Park would be reduced, but the project is not expected to displace any homes. Therefore, the long-term cohesion of this community is not expected to be impacted by the project.

Figure 2-9 McKinley Avenue Interchange Closure



Comparison of Alternatives 1 and 2

Under Alternative 1, the Park View Mobile Home Park would continue to have direct access to the interchange and the surrounding facilities after construction; however, the changes in traffic volumes and flow may impact the ease with which they access surrounding facilities in the future. Alternative 1 would not have permanent impacts on community facilities within the socioeconomic study area. These construction impacts could reduce the aesthetic character of the park temporarily. This could potentially lead to a decrease in community interaction with neighbors or other community members temporarily. Residents may also be concerned about a decreased sense of privacy within their community, which could disrupt their sense of comfort and safety and interrupt their daily routines.

Under Alternative 2, the Park View Mobile Home Park residents would no longer have direct access to Olive Avenue, and the changes in traffic volumes and flow would impact the ease with which they access surrounding facilities in the future. Alternative 2 would permanently impact surrounding community facilities because of the partial interchange ramp closures at the McKinley Avenue Interchange. Addams Elementary School, Addams Preschool, and Fresno Economic Opportunities Commission Head Start Brooks School are all located on McKinley Avenue. People who use State Route 99 to access these facilities will most likely use the interchange at Olive Avenue to accommodate the permanent ramp closures at McKinley Avenue. These facilities will likely retain their use during the project and are unlikely to experience significant decreases in use after the project is complete despite the reduction in direct access for commuters.

Temporary Impacts for both Build Alternatives:

Construction-related impacts are typically temporary and can change as construction progresses. Temporary impacts would be the same for each alternative.

El Dorado Street Overcrossing/Nielson Avenue Undercrossing Alterations

The Fink-White Park Community may have limited access to the facilities east of the El Dorado Street Overcrossing. A detour may be placed for traffic intending to use this facility, and public transportation may be rerouted, adding to travel times. This could result in a decreased level of public access to public facilities on the other side of the overcrossing. A vehicle would have to be used to access these facilities with a 1-mile detour. Construction may also reduce the amount of street parking available for the park and playground. Pedestrian access to facilities east of the El Dorado Street Overcrossing may not be possible for those with limited mobility during this time. Fink-White Park and the Sequoia Courts Boys and Girls Club lie next to the El Dorado Street Overcrossing. Noise impacts could also affect Columbia Elementary School and Big Picture Educational Academy. By impairing the use of the park and schools, communication between children and/or adults may be dampened for recreational and learning purposes.

In the Edison Neighborhood south of State Route 180 and west of State Route 99, it is unlikely that the project would have significant construction-related impacts on the community facilities in this area. This is because they are all located within the Edison Neighborhood on the west side of State Route 99, except for the U.S Postal Service office, Fresno County Human Services, and Kings View Community Services, which lie east of State Route 99. There are no residential living facilities on the east side of State Route 99, so community members would not be using the El Dorado Street Overcrossing to access the parks, churches, or schools in this area. To access facilities east of State Route 99, an overcrossing called Whitesbridge Avenue Overcrossing will remain open during construction about 0.45 mile south of the El Dorado Street Overcrossing.

Alterations to the Nielsen Avenue Undercrossing could cause temporary noise disturbances and access limitations to Pathway Community Day School, Pershing Continuation High School, and Fresno Humane Animal Services.

Teilman Avenue Overcrossing Closure

Construction at the Nielson Avenue Undercrossing and the Teilman Avenue Overcrossing may impact the homes next to this area. Access to homes and street parking may be restricted or reduced during the construction of the new cul-de-sac on Teilman Avenue and the removal of the overcrossing structure. These temporary impacts would also apply to the entrance of Belmont Memorial Park. Removing the Teilman Avenue Overcrossing and consequential construction of the replacement cul-de-sac could also cause temporary noise disturbances for the chapel and cemetery operations, as they lie directly next to this overcrossing. Construction activities may also reduce access to street parking for these facilities.

Belmont Avenue Interchange Closure

The removal of the State Route 99 on-ramps and off-ramps at Belmont Avenue, as well as the Belmont Avenue Overcrossing modification and Parkway Drive improvements, may require temporary access restrictions for the area. Traffic may be controlled, or detours may be used to redirect traffic in the area. For residents living west and/or south of the State Route 99 and Belmont Avenue Interchange, access to Roeding Park may require longer travel times or alternate transportation methods to reach the park. Restricted access on Parkway Drive may also occur.

This restriction may temporarily reduce access to West Park Baptist Church, Mountain View Cemetery, Beth Israel Cemetery, Masis Ararat Armenian Cemetery, Fresno County Cemetery, Holy Cross Catholic Cemetery, the Fresno Pet Cemetery, the Chapel of the Light, Veterans of Foreign Affairs, and the Fresno Economic Opportunities Commission Head Start Ramacher School. Detours may be required to access facilities that community members regularly visit. Families who live east of State Route 99 would need to take an alternate route to reach the Fresno Economic Opportunities Commission Head Start Ramacher School and would likely use the Olive Avenue Overcrossing to do so, which could add 1 to 2 miles in travel distance.

North of Belmont Avenue, Olive Avenue has three public facilities that may be affected by the temporary ramp and overcrossing closures at the State Route 99 and Olive Avenue Interchange. The Department of Motor Vehicles at Olive Avenue and North Carruth Avenue may require community members to use temporary detours to access the facility during construction. These detours would mostly impact those living west of State Route 99 and could add 1 to 2 miles in travel distance. Access restrictions may also occur for the Central Valley Yemeni Association and the Caltrans District 6 Office, both of which are next to the interchange.

Olive Avenue Interchange Improvements

Similar impacts could occur at the Olive Avenue Interchange improvements. Access restrictions to Roeding Park for residents west of State Route 99 may occur. Considering the level of alterations each Build Alternative requires, it is likely that the overcrossing will be closed to traffic traveling on Olive Avenue during construction. Residents may need to increase their travel time to reach the park. They may also require an alternate means of transportation to the park facilities if pedestrian access was typically used. This temporary obstruction of traffic flow would not likely add to the isolation of any community. Construction activities would likely extend onto Olive Avenue until the next nearest intersection, resulting in additional detours and rerouted traffic. Community members may not be able to access some facilities during construction.

McKinley Avenue Partial Interchange Closure

Temporary reductions in through traffic may occur on McKinley Avenue during the widening of the State Route 99 Overpass and the elimination of the on-ramps and off-ramps at this location. This could restrict access to the elementary school if families live east of State Route 99.

Temporary access may be restricted for eastbound and westbound traffic on McKinley Avenue during construction. Since Addams Elementary School arrival and departure times are routine occurrences, these restrictions could increase traffic volumes for surface streets surrounding these schools that do not normally receive such traffic volumes at these times. This could also translate to increased commute times for families and bus routes. The Bochasanwasi Akshar Purushottam Shri Swaminarayan Mandir temple, the Kinetic Sports Academy, and Fresno Economic Opportunities Commission Head Start Brooks School are all located on the east side of State Route 99 just south of McKinley Avenue. Access to these community facilities would remain the same for residents living nearby and east of State Route 99, but temporary access restrictions of the McKinley Avenue Overcrossing may have community members using Clinton Avenue or Olive Avenue to cross State Route 99, adding to their distance traveled. Lastly, the Care Meridian, Belmar Villa Assisted Living, and Fremont Elementary School occur north of McKinley Avenue. These facilities lie near Clinton Avenue, and it is unlikely that permanent or temporary access changes will affect these locations.

Three Palms Mobile Home Park

Finally, the Three Palms Mobile Home Park may be directly impacted by this project. The soundwall currently separating the park from State Route 99 may be moved east, reducing the amount of land the community maintains. These construction impacts could reduce the aesthetic character of the park temporarily. The quality of life for residents may also be reduced as construction takes place due to the potential obstruction of existing pathways and a heightened sense of danger navigating through or near a construction area; this could potentially lead to a decrease in community interaction with neighbors or other community members temporarily. Residents may also be concerned about a decreased sense of privacy within their community, which could disrupt their sense of comfort and safety and interrupt their daily routines. On August 13, 2020, and October 2, 2020, the Caltrans Project Development team met with the Three Palms Mobile Home Park Management to discuss the proposed reconstruction of the existing wall adjacent to their property and its impact on the residents during construction. Caltrans will continue to meet with Three Palms Mobile Home Park Management to ensure their concerns are addressed adequately, specifically pertaining to the construction noise resulting from the wall construction and the overall project impact to their community.

No-Build Alternative

The No-Build Alternative would not impact the community character and cohesion of the communities located inside the socioeconomic study area.

Avoidance, Minimization, and/or Mitigation Measures

To avoid, minimize, or mitigate long-term impacts related to community character or cohesion, approved measures identified for related resource topics would be incorporated into the Build Alternatives.

Identified measures that would also serve to minimize short-term construction community character and cohesion effects include:

COM-1: Notifying the contractor who will work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.

COM-2: Good public relations will be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities will be provided. A construction noise monitoring program to track sound levels and limit the impacts will be implemented. The following measures are recommended to minimize any adverse economic effects on local businesses in the study area:

COM-3: Minimizing congestion through speed limit reduction, ground-mounted detour signs, traffic radio announcements, media alerts, night work, brochures, public meetings, a planned lane closure website, and Construction Zone Enhanced Enforcement Program.

COM-4: Use the posting of advisory speeds on warning signs to advise the public what speed is considered appropriate at specific locations, such as points of curvature or traffic diversion. The selected speed should be what a driver exercising due care would drive in normal conditions of light and weather.

COM-5: Keep pedestrian facilities clear of obstructions. Traffic control devices, equipment, and other construction materials and features should not protrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facilities.

COM-6: To alleviate temporary project impacts, the following temporary pedestrian bridges will be added at Olive Avenue, Belmont Avenue, and El Dorado Street. These temporary bridges will be greatly beneficial for those who rely on pedestrian access during construction.

Figure 2-10 Olive Avenue Temporary Pedestrian Overcrossing



Olive Avenue: Temporary Pedestrian Overcrossing

The replacement of the Olive Avenue Overcrossing is the first order of work on the project, and the new overcrossing bridge is at the same location as the existing bridge and cannot be staged to remain open during construction, which is approximately 10 months. The Temporary Pedestrian Overcrossing is proposed during this time just to the south of the existing bridge to allow pedestrian traffic to cross State Route 99 on the side of Olive Avenue with the most foot traffic. It will allow for connectivity of a mobile home park and many low-income residences on the west side of State Route 99 to the popular Roeding Park facilities to the east of State Route 99 with access to bus stops and businesses (restaurants, gas stations, dollar store, etc.) on both sides.

Figure 2-11 Belmont Avenue Temporary Pedestrian Overcrossing



Belmont Avenue: Temporary Pedestrian Overcrossing

The replacement of the Belmont Ave Overcrossing will occur after the Olive Avenue Interchange is complete, and the new overcrossing bridge is at the same location as the existing bridge and cannot be staged to remain open during construction, which is approximately eight months. The Temporary Pedestrian Overcrossing is proposed during this time just to the north of the existing bridge to allow pedestrian traffic to cross State Route 99 on the side of Belmont Avenue with the most foot traffic. It will allow for connectivity of many low-income residences, cemeteries, and a residential subdivision on the west side of State Route 99 to the popular Roeding Park facilities to the east of State Route 99 with access to businesses (restaurants, gas stations, etc.) on both sides.

Figure 2-12 El Dorado Street Temporary Pedestrian Overcrossing



El Dorado Street: Temporary Pedestrian Overcrossing

The replacement of the El Dorado Street Overcrossing will occur during the early stages of construction, and the new overcrossing bridge is at the same location as the existing bridge and cannot be staged to remain open during construction, which is approximately eight months. The temporary pedestrian overcrossing is proposed during this time just to the north of the existing bridge to allow pedestrian traffic to cross State Route 99 on the side of El Dorado Street with the most foot traffic. It will allow for the connectivity of the high-density residential area and Fink-White Park to the west of State Route 99, with the industrial and municipal services on the east side of State Route 99.

2.1.5 Relocations and Real Property Acquisition

Regulatory Setting

The Department's Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of the Department's Title VI Policy Statement.

Affected Environment

A draft Relocation Impact Statement was prepared on November 23, 2020, to provide Caltrans, local agencies, and the public with information on the impact this project will have on residential and nonresidential occupants within the preferred project alternative.

Approximately 189 businesses are in the project socioeconomic study area that may be affected by this proposed project. A large portion of the businesses is classified as industrial. However, the commercial businesses that do exist in the area are generally classified as motels, gas stations, and food establishments. There are also a few office/commercial buildings, municipal service centers, and small businesses, most of which are not directly next to the project. There are also multifamily and single-family residences and a motel within the project area.

There are at least two major employers of concern in the project area, including La Tapatia Tortilleria and Producers Dairy Foods, both of which receive a large amount of truck traffic on a regular basis. An illustration of existing land use classified for business and industry, specifically highlighting businesses that exist within 500 feet of the project area.

For information regarding the existing business activity within the socioeconomic study area, refer to the Community Impact Assessment.

Environmental Consequences

Alternative 1

Alternative 1 would replace the existing interchange at Olive Avenue with a double roundabout design. This alternative would impact six commercial businesses; the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog.

Additional right-of-way may also be acquired from surrounding businesses. These businesses include but are not limited to Executive Inn, Denny's, PB Liquor, Amstar Gas Station, and Rodeway Inn. These acquisitions would be minor in nature and are not likely to impact the operations of the businesses. Minor access changes may also be made to PB Liquor to accommodate traffic flow between Parkway Drive, Crystal Avenue, and Olive Avenue.

Alternative 2

Alternative 2 would replace the existing interchange at Olive Avenue with a diverging diamond design. This alternative would impact 12 commercial businesses. Businesses that would be impacted by Alternative 2 with potential relocation benefits include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog, Arco Gas Station, Fast N Easy Store, Rally's, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Rodeway Inn.

Additional right-of-way may also be acquired from surrounding businesses. These businesses include but are not limited to Denny's, PB Liquor, Amstar Gas Station, California Green Hydroponics, Seiberts' Oil Company Incorporated, Busseto Foods Incorporated, and Jack in the Box. These acquisitions would be minor in nature and are not likely to impact the operations of the businesses. Minor access changes may also be made to PB Liquor to accommodate traffic flow between Parkway Drive, Crystal Avenue, and Olive Avenue.

Table 2.14 Estimated Total Displacements by Alternatives 1 and 2

Build Alternatives (Residential Impacts)	Alternative 1	Alternative 2
Owner Occupants Of Mobile Homes	0	0
Total Residential Units	3	79
Not Applicable	Not Applicable	Not Applicable
Non-Residential	Alternative 1	Alternative 2
Commercial Businesses	6	12
Industrial/Manufacturing Businesses	0	0
Agricultural/Farms	0	0
Total Non-Residential Units	5	12
Total Residential And Non-Residential Units	8	91

Table 2.15 Summary of Residential and Nonresidential Displacements for Alternatives 1 and 2

Alternatives	Single-Family Units	Mobile Homes	Multifamily Units	Residential Displacements (Units/Residents)	Nonresidential Displacements (Type/Employees)
Alternative 1 Roundabout	1-3 Bedrooms	0	0	3 plus/-	Six Commercial (26 Employees)
Alternative 2 Divergent Diamond Interchange	1-3 Bedrooms; 2-2 Bedrooms	0	One Motel	79 plus/-	12 Commercial (51 Employees)

In the table above, the estimate of residents is based on an average of 3.01 residents per unit (2018 American Community Survey). Source: California State Department of Finance Demographic Research Unit. Residential displacees were not interviewed or contacted to complete surveys. Further, the type of nonresidential units and the number of employees is based on field review and online research.

Both alternatives may have an impact on businesses located on the proposed alignments. At this time, Caltrans does not foresee any issues with replacement sites for some of the current businesses identified. Both alternatives may impact four residential single-family residences that may need to be acquired for the project. Alternative 2 may impact the Roadway Inn. Based on a field review of the Roadway Inn, there are about 100 rooms available to rent. It is not yet known if the Roadway Inn houses long-term, low-income residents and will not be known until the appraisal process begins. The final Relocation Impact Statement will provide a more detailed analysis of the actual number of vacant units, the location of the replacement sites, and what are some of the replacement options for those sites.

U.S. Census data indicate that about 21.1 percent of the population of Fresno County is below the poverty level. Therefore, it is likely that low-income displacees will be

encountered in this project. Prior relocation experience with low-income individuals has revealed that individuals with low income typically require higher relocation payments of Last Resort Housing and greater assistance in finding replacement housing due to financial limitations. More information on these economic impacts may be found in the Community Impact Assessment. According to the draft Relocation Impact Statement, it is assumed that 89 multifamily residences, 96 two-bedroom houses, 388 three-bedroom houses, 203 four-bedroom houses, and 16 mobile homes will be available for relocation resources for residential displacements; this information was obtained from the website Zillow. It is also assumed that 20 office complex buildings, four special service/gas stations, 25 commercial operation buildings, 20 commercial property buildings, and four motel buildings will be available for relocation resources for non-residential displacements. This information was obtained from the website, LoopNet for Fresno, Madera, and Tulare counties.

Residential relocations can have physical, financial, and psychological effects on the residents. The psychological effects of relocation are primarily related to the change in a person's living conditions and the level of attachment involved. Psychological impacts may be intensified for elderly and disabled persons, families with children in school, long-term residents, and mobile home residents. Elderly and disabled residents especially rely on others for emotional support and are frequently dependent on community services and local access to stores. However, in certain circumstances, the impacts of relocations may be positive, such as selling property that may have been otherwise difficult to sell or relocating to a more desirable home or area.

Replacement resources would provide adequate facilities for each business impacted by this project. Businesses affected by this project appear to have the financial ability to replace themselves, along with relocation and acquisition monies that will be paid for the displacement. Both Alternatives may have an impact on businesses located on the proposed alignments. Caltrans does not foresee any issues with replacement sites the current businesses identified. Certain business types may have more of a challenge in finding adequate replacement sites due to the nature of their business; this will depend on the business's ability to access their current clientele base and relocate their existing employees. Once the final Relocation Impact Statement is available, the specific impacts to each business will be known. However, replacement resources should be adequate to provide adequate facilities for each business impacted by this project. All actions taken by Caltrans will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

No-Build Alternative

The No Build alternative would increase state maintenance efforts and expenditures, and operational issues will continue. The vitality and efficiency of State Route 99 would continue to decrease, impacting the reliability of this corridor for transporting goods and services in the region. In addition, the No-Build Alternative would not create construction activity or generate business or property tax impacts from changes in private to public ownership of taxable property within the socioeconomic study area.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced because of the acquisition of real property for public use in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. At this time, there are no specific mitigation measures for this project.

2.1.6 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2019, this was \$25,750 for a family of four.

Minority communities are defined as having Black/African Americans, Hispanics, Asian Americans, Native Hawaiians or Other Pacific Islanders, and American Indians or Alaska Natives jointly represent 50 percent or more of the total population in the affected area. A low-income community defines as a census tract with either 1) median household incomes at or below 80 percent of the statewide median income or 2) median household income at or below the threshold designated as low-income by the Department of Housing and Community Development's State Income Limits pursuant to the Health and Safety Code Section 50093.

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

A Regional Transportation Plan Environmental Justice Analysis assures that the Fresno Council of Governments conforms to federal environmental justice principles, policies, and regulations, including Title VI policy.

Fresno Council of Governments' three main principles underlying environmental justice are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority and low-income populations.
- To provide opportunities for full and fair participation by all potentially affected communities in the transportation decision-making process.

- Prevent denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

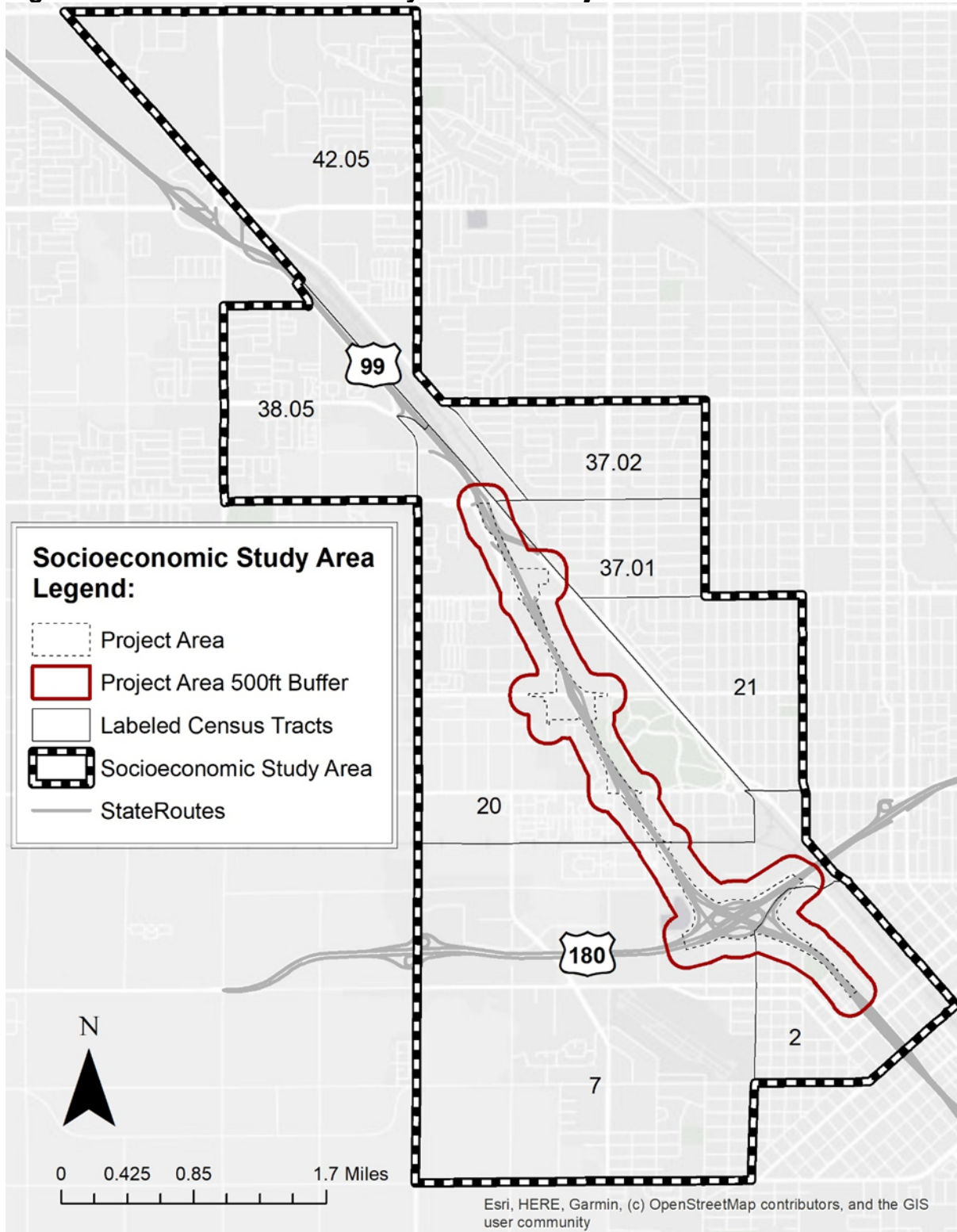
Affected Environment

Communities selected for analysis were located within the socioeconomic study area and positioned within one city block of each structure to be altered. The reference community for this environmental justice analysis is within the Fresno County region, specifically within the city of Fresno. Conclusions regarding neighborhood-level cohesion were inferred from U.S. Census Bureau data available by census tract, community plans, regional plans, onsite observation, a community survey, and discussions with residents at public scoping meetings.

Community information was collected for the Community Impact Assessment using Google Maps, Google Earth, Fresno County Geographic Information Systems, City of Fresno Geographic Information Systems, Division of Environmental Analysis Geographic Information Systems Community Facilities (religious institutions, community centers, schools, medical and health care facilities, public assistance services, libraries, and post offices). emergency services (law enforcement, fire protection, ambulance service) were also documented. Field data was collected and organized using Excel and Google Earth files.

The entire population in the socioeconomic study area has been identified as a minority and low-income population. Therefore, any project effects would occur to both types of populations of concern for environmental justice for Census Tracts 2, 7, 20, 21, and 37.01. Because there is the potential for the socioeconomic impacts of the proposed project to affect minority and low-income populations, further environmental justice analysis was required to determine if these impacts would be disproportionate to these populations, which is presented below.

Figure 2-13 Socioeconomic Study Area and Project Buffer



Demographic Data Regarding Environmental Justice Categories

The Socioeconomic Study Area for direct and indirect effects on low-income and minority populations is defined as census block groups that pass through portions of “five” census tracts, from which socioeconomic data from the 2013–2017 U.S. Census have been collected. There are many low-income and minority populations in the project area. Table 2.16 lists the census tracts for both Build Alternatives and provides race and ethnic composition for each group. The City of Fresno and Fresno County serve as communities of comparison, and the race and ethnic composition of these two jurisdictions is also included in Table 2.17.

Table 2.16 Estimated Population Percentage by Race/Ethnicity for Census Tracts*

Race/Ethnicity	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Average
White	58.7	54.4	64.0	70.9	47.8	59.2
Hispanic or Latino	68.1	64.8	62.1	60.8	67.6	64.7
Black or African American	17.7	27.9	8.3	6.1	7.1	13.4
American Indian and Native Alaskan	2.3	2.4	5.6	2.3	2.2	3.0
Asian	12.1	5.9	9.9	2.4	3.7	6.8
Native Hawaiian and Other Pacific Islander	0.9	0.0	0.0	2.0	0.0	0.6
Some Other Race	13.3	14.3	21.6	19.4	43.8	22.5

*(Can identify with each race/ethnicity solely or in combination with other races/ethnicities) Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates.

As shown in Table 2.18, minority populations dominate the study area, with race and ethnicity varying greatly among each Census Tract. Those who identify as Hispanic or Latino, either solely or partially, make up most of the population. In total, an average of 64.7 percent of the population identifies as Hispanic or Latino; this is a higher percentage than what is represented by the City of Fresno and Fresno County, which have about 49.1 percent and 52.4 percent of the population identifying as Hispanic or Latino, respectively.

Additionally, Census Tracts 2 and 7 are represented by large populations of Black or African American residents, with Census Tract 7 representing the most, with 27.9 percent of the population identifying as Black or African American. Again, this is a greater percentage than what is represented by the City of Fresno and Fresno County, which have approximately 9.1 percent and 5.9 percent of the population identifying as Black or African American, respectively.

Large populations of those that identify as Asian reside within Census Tract 2. In total, an average of approximately 6.8 percent of the studied population identifies as Asian; this is less than what is represented by the City of Fresno and Fresno County, which have about 15 percent and 11.3 percent of the population identifying as Asian, respectively. Native Hawaiian and Pacific Islanders are represented only in Census Tracts 2 and 21, with the largest population percentage residing in Census Tract 21 at 2 percent; this is similar to what is represented by the City of Fresno and Fresno County.

American Indians and Alaska Natives are represented in every Census Tract, most of which make up less than 3 percent of the population, except for Census Tract 20, which makes up 5.6 percent of the population; this is similar to what is represented by the City of Fresno and Fresno County, which both have approximately 2.5 to 2.3 percent of the population identifying as American Indian and Alaskan Native, respectively. Lastly, many individuals identify as “some other race (other than white)” in each Census Tract. However, Census Tract 37.01 contains the most, with approximately 43.8 percent of the population identifying as such; this is much higher than what is represented by the City of Fresno and Fresno County, which both have approximately 17.5 to 17.4 percent of the population representing this category.

Table 2.17 Race and Ethnic Composition of the Project Area Population by Block Group*

Race or Ethnicity	Socioeconomic Study Area Average Population Percentage	City of Fresno Population Percentage	Fresno County Population Percentage
White	59.2	60.2	66.9
Hispanic or Latino	64.7	49.1	52.4
Black or African American	13.4	9.1	5.9
American Indian and Alaska Native	3.0	2.5	2.3
Asian	6.8	15.0	11.3
Native Hawaiian and Other Pacific Islander	0.6	0.4	0.4
Some Other Race	22.5	17.5	17.4

*(Can identify with each race/ethnicity solely or in combination with other races/ethnicities) Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates.

The socioeconomic study area has a higher percentage of minority populations than the City of Fresno region. Residents in the socioeconomic study area also have lower median household incomes than the citywide average; most of the Census Tracts in the area have higher percentages of the population below the federal poverty level, apart from Census Tract 21.

As illustrated in Table 2.17, every Census Tract in the socioeconomic study area has a percentage of minority populations above the City of Fresno average, which is currently 65.3 percent. Census Tracts 2 and 7 contain the highest percentages of minority

populations with over 96 percent, while Census Tracts 20, 21, and 37.01 contain minority populations of 71 to 80 percent.

Alternatives 1 and 2:

Only Census Tract 21 contained a lower percentage of residents below the poverty level at 28.1 percent than the City of Fresno's percentage at 28.4 percent. Census Tracts 2, 7, 20, and 37.01 have percentages of residents below the poverty level at 50.8 percent, 38.8 percent, 53.4 percent, and 32.6 percent, respectively.

Household Income and Poverty in Study Area

About 40.7 percent of the population within the socioeconomic study area is below the poverty level; this is greater than the poverty rates for the City of Fresno and Fresno County, which have 28 and 25 percent of the population below the poverty level, respectively. Within the socioeconomic study area, about 20.6 percent of people over age 65 are below the poverty level, and 50.0 percent of adolescents under age 18 are below the poverty level. Poverty rates are higher for those over age 25 who have not achieved a high school education. A total of 14.7 percent of those working full time are still below the poverty level. The highest percentages of poverty are in Census Tracts 2 and 20, with over 50 percent of these populations living below the poverty level. Census Tract 20 also has the highest percentage of people over age 65 below the poverty level; the lowest poverty rate in the study area is in Census Tract 21.

The median household income for the City of Fresno is \$48,600. Every Census Tract in the socioeconomic area has a median household income lower than the City of Fresno median household income; the highest median household incomes occur in Census Tract 21 and Census Tract 37.0 at \$35,194 and \$34,327, respectively. The remaining Census Tracts' median household incomes range from \$21,606 to \$23,603, which is less than half of the median household income for the City of Fresno.

City of Fresno household income projections for 2050 estimate the mean household income to increase from \$59,080 in 2015 to \$85,970 in 2050. The current median household incomes for the City of Fresno and Fresno County are \$48,600 and \$51,800, respectively. However, for the Census Tracts studied, an average of 15.6 percent of the households in the assessment area have an annual income of less than \$10,000, 28.1 percent of the households have an annual income of less than \$15,000, and 48.6 percent of the households have an annual income of less than \$25,000. Only 13.8 percent of households make more than \$75,000 annually. There are much greater proportions of households below the poverty level within Census Tracts 2, 7, and 20, with the average median household income for these tracts being approximately \$22,456 and their overall average income being \$33,093.

In Table 2.18, the median and mean annual income ranges for households in the socioeconomic study area are compared to the average income ranges within the City of Fresno and Fresno County. Poverty levels within the region are shown in Table 2.19.

Table 2.18 Estimated Median and Mean Annual Income Range for Households

Income Range	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Census Tract Average	City of Fresno	Fresno County
Household Median Income (Dollars)	22,159	21,606	23,603	35,194	34,327	30,617	48,600	51,800
Household Mean Income (Dollars)	32,776	35,804	30,700	49,744	44,420	40,604	No Data	No Data

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates, U.S. Census Bureau, 2017 American Community Survey One-Year Estimates.

Table 2.19 Estimated Population Percentage Below Poverty Level by Demographic Characteristics

Demographic	Census Tract 2	Census Tract 7	Census Tract 20	Census Tract 21	Census Tract 37.01	Census Tract Average	City of Fresno	Fresno County
All Ages	50.8	38.8	53.4	28.1	32.6	40.7	28.4	25.4
Under 18 Years	60.5	43.0	66.3	39.0	42.8	50.5	40.1	36.5
18 to 64 Years	48.9	41.7	47.0	23.8	29.0	38.1	25.3	22.5
65 Years and Over	10.9	16.8	39.0	22.3	14.1	20.6	13.7	12.6
Less Than High School Graduate	56.3	48.2	51.9	37.5	25.3	43.8	39.5	35.5
Bachelor's Degree or Higher	0.0	15.0	28.4	21.9	33.3	19.7	5.8	5.2
Employed	35.0	25.2	24.1	14.0	19.4	23.5	13.7	12.6
Unemployed	23.1	48.9	84.3	41.0	49.8	49.4	45.8	40.7

Source: U.S. Census Bureau, 2013-2017 American Community Survey Five-Year Estimates.

Demographic Data of Block Groups studied within Census Tracts

For this project, specific block groups were selected within the census tracts that are in closer proximity to the project site. This data would help in gaining a more detailed understanding of the block groups within the project area:

1. Census Tract 2: Block Groups 1, 2, and 3
2. Census Tract 7: Block Group 2
3. Census Tract 20: Block Groups 1, 2, 3 and 5
4. Census Tract 21: Block Groups 2, 3, 4 and 5
5. Census Tract 37.01: Block Group 1

The following tables (Table 2.20 to Table 2.23) list the respective block groups for both Build Alternatives in relation to the City of Fresno and Fresno County. The categories presented below are household income, racial composition, and poverty level for the year 2019.

Table 2.20 Household Income of Block Groups Studied in Comparison to the City of Fresno and Fresno County (2019)

Household Income (2019)	Total Households of Block Group Study Area	Average Income Percentage of Block Group Study Area	Average Income Percentage of City of Fresno	Average Income Percentage of Fresno County
Less Than \$10,000	683	13.5	8.6	7.7
\$10,000 to \$14,999	307	6.1	5.6	5.3
\$15,000 to \$24,999	1102	21.7	10.1	9.7
\$25,000 to \$34,999	688	13.6	10.8	10.1
\$35,000 to \$49,999	1142	23.4	12.2	11.5
\$50,000 to \$74,999	733	14.4	18.4	17.0
\$75,000 to \$99,999	250	4.9	11.6	12.4
\$100,000 to \$149,999	218	4.3	14.0	14.4
\$150,000 to \$199,999	157	3.1	4.9	6.4
\$200,000 or More	0	0	3.8	5.4

Source: U.S. Census Bureau, 2019 American Community Survey Detailed One-Year Estimates.

Table 2.20 shows that an average of 13.5 percent of the households for the block groups studied have an annual income of less than \$10,000, 19.6 percent of the households have an annual income of less than \$15,000, and 41.3 percent of the households have an annual income of less than \$25,000. Only 12.3 percent of households make more than \$75,000 annually. For the City of Fresno and Fresno County, 30.5 and 33.2 percent of the population has an annual income of more than \$75,000, respectively.

Table 2.21 Poverty Level of Block Groups Studied in Comparison to the City of Fresno and Fresno County (2019)

Poverty Status (2019)	Block Group Study Area	City of Fresno	Fresno County
Population Below Poverty Level	4,686	144,946	243,040
Percentage of Population Below Poverty Level	27.1	28.4	25.4

Source: U.S. Census Bureau, 2019 American Community Survey Detailed One-Year Estimates.

In Table 2.21, 27.1 percent of the population within the block group study area is below the poverty level. The poverty level for the City of Fresno and Fresno County is 28.4 and 25.4 percent of the population, respectively.

Table 2.22 Racial Composition Within Block Groups Studied in Comparison to City of Fresno and Fresno County (2019)

Racial Composition (2019)	Block Group Study Area Average Population Percentage	City of Fresno Population Percentage	Fresno County Population Percentage
White Alone	35	60.4	63.9
Hispanic or Latino	42.2	49.9	53.8
Black and African American Alone	6.9	7.1	4.7
American Indian and Alaska Native Alone	0.01	1.0	1.3
Asian Alone	3.3	13.8	13.6
Native Hawaiian and Other Pacific Islander Alone	0	0.1	1.9
Some Other Race Alone	12.1	13.2	15.2

Source: U.S. Census Bureau, 2019 American Community Survey Detailed One-Year Estimates.

As shown in Table 2.22, minority populations dominate the block group study area. Those who identify as Hispanic or Latino, either solely or partially, make up most of the population. In total, an average of 42.2 percent of the population identifies as Hispanic or Latino; this is a lower percentage than what is represented by the City of Fresno and Fresno County, which have about 49.9 percent and 53.8 percent of the population identifying as Hispanic or Latino, respectively.

Environmental Consequences

The following impacts induced by the project would occur because of the Build Alternatives:

Alternative 1:

Traffic Congestion and Accessibility

- Changes in circulation, possibly resulting in the following:
- Decreased vitality of minority-owned businesses on Belmont Avenue and McKinley Avenue;
- Loss of direct access to State Route 99 for communities living near the existing Belmont Avenue and McKinley Avenue Interchanges.
- Changes in access to State Route 99, businesses, community facilities, and services;

Community Cohesion

Reduction in pedestrian access to businesses, community facilities, and services;

- Altered circulation routes for emergency services, possibly increasing response times for events occurring near the closed Interchanges;
- Additional Proposed Detour Travel Impacts:
 - The northbound off-ramp to Belmont Avenue: an additional 1.25 miles
 - Northbound on-ramp from Belmont Avenue: an additional 0.15 miles
 - Southbound off-ramp to Belmont Avenue: an additional 0.05 miles
 - The southbound on-ramp from Belmont Avenue: an additional 1.25 miles
 - The northbound off-ramp to McKinley Avenue: an additional 0.40 miles
 - The southbound on-ramp from McKinley Avenue: an additional 0.20 miles

Relocation Impacts

Alternative 1 would replace the existing interchange at Olive Avenue with a double roundabout design. This alternative would impact six commercial businesses; the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario Smog.

For information on displacement and relocation of residents, refer to Chapter 4, Section 4.4.2, *Relocations and Real Property Acquisition*.

Traffic Circulation Impacts

The following improvements would be made to both Build Alternatives to improve circulation in the project area:

- Addition of auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue, and from Olive Avenue to Clinton Avenue.

- Addition of ramp metering for each ramp within the project boundaries.
- Improved intersection configuration at State Route 99 and Olive Avenue.

Traffic volumes could increase at the McKinley Avenue Partial Interchange if the ramps remain open. Increased traffic levels at Olive Avenue Interchange may influence some residents to access southbound State Route 99 from McKinley Avenue or exit onto McKinley Avenue during peak congestion times.

This alternative would replace the existing interchange with two roundabouts while diverting traffic on Parkway Drive to Crystal Avenue; these roundabouts would have four legs each and would be yield-controlled. Volume-to-capacity ratios would vary between 0.851 and 0.656 in 2029 and between 0.939 and 0.760 in 2049. Peak hour level of service for this alternative would range from A to C in 2029 and 2049.

Visual Impacts

The overall visual impact of the proposed project is expected to be moderate to moderately low. Moderate and moderately low impacts can be mitigated using conventional practices.

In addition to the above-listed visual impacts:

- The project will not impact scenic vistas.
- The project will not impact scenic resources within a state scenic highway.
- The project will have a less than significant impact on the existing visual character of the site and its surroundings.
- The project will not create a new source of light or glare.

Visual impacts due to the contractor's operations, such as night lighting, dust, temporary structures, hauling materials, contractor yards, or detours, are not expected to be out of the ordinary for a roadway construction area.

Temporary construction visual impacts are expected to be low.

Noise Impacts

Construction Noise impacts for Alternatives 1 and 2

Construction of this project is estimated to last five years (April 2025 to April 2030). Construction activities will be performed during the day and night. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area.

There will be night work anticipated during construction. Whenever this type of activity takes place, there will be standard special provisions showing the days and times of such activities. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at 50 feet. The noise produced by construction equipment

would be reduced over distance at a rate of about 6 decibels per doubling of distance.

Construction noise varies greatly depending on the construction process, the type and condition of equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise.

Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable in areas located immediately next to the proposed project alignment.

The noise level requirement specified herein will apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the contractor.

Vibration due to construction activities would be temporary in nature, and long-term vibration would be unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility.

Alternative 2

Traffic Congestion and Accessibility

Changes in circulation, possibly resulting in the following:

- Decreased vitality of minority-owned businesses on Belmont Avenue and McKinley Avenue;
- Loss of direct access to State Route 99 for communities living near the existing Belmont Avenue and McKinley Avenue Interchanges.
- Changes in access to State Route 99, businesses, community facilities, and services;

Community Cohesion

- Reduction in pedestrian access to businesses, community facilities, and services;
- Altered circulation routes for emergency services, possibly increasing response times for events occurring near the closed interchanges;
- Additional Proposed Detour Travel Impacts:
 - Northbound off-ramp to Belmont Avenue: an additional 1.25 miles
 - Northbound on-ramp from Belmont Avenue: an additional 0.15 mile
 - Southbound off-ramp to Belmont Avenue: an additional 0.05 mile
 - Southbound on-ramp from Belmont Avenue: an additional 1.25 mile
 - Northbound off-ramp to McKinley Avenue: an additional 0.40 mile

- Southbound on-ramp from McKinley Avenue: an additional 0.20 mile

Relocation Impacts

Alternative 2 would replace the existing interchange at Olive Avenue with a diverging diamond design; this alternative would impact 12 commercial businesses. Businesses that would be impacted by Alternative 2 with potential relocation benefits include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog/Auto Shop, Arco Gas Station, Fast N Easy Store, Rally's Restaurant, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Roadway Inn.

For information on displacement and relocation of residents, refer to Chapter 4, Section 4.4.2, Relocations and Real Property Acquisition.

Traffic Impacts

This alternative would involve two directions of traffic on Olive Avenue crossing to the opposite side on both sides of the State Route 99 Overcrossing. The crossover intersections would be controlled by two-phased traffic signals, the on-ramps would flow freely, and the off-ramps would be yield-controlled. Volume-to-capacity ratios would vary between 0.45 and 0.59 in 2029 and between 0.48 and 0.60 in 2049. Peak hour level of service for this alternative would range from A to B in 2029 and would remain at Level of Service B in 2049.

Visual Impacts

The overall visual impact of the proposed project is the same as Alternative 1.

Noise Impacts

The overall noise impact of the proposed project is the same as Alternative 1.

Temporary Impacts for Build Alternatives 1 and 2

The following adverse temporary impacts induced by construction-related activities would occur because of the Build Alternatives:

Alternative 1

Air Quality and Noise

- Increased noise, air pollutant emissions, and wear on local streets;
- Increased noise and air pollutant emissions at the Olive Avenue Interchange;
- Increased noise and air pollutant emissions for Park View Mobile Home Park.
- Alterations to access and circulation, resulting in increased congestion on local roadways and freeways;
- Pedestrian, bicycle, and transit delays and/or detours;

- Detoured local emergency service response routes, with possible increases in response times due to traffic congestion;
- Detoured, altered, or delayed public transit;
- Brief interruptions in utility service where relocation or connections would be required;
- Increased lighting during nighttime construction work and visual changes to the existing landscape;
- Loss of access or detours to public facilities, services, and cemeteries;
- Loss of local economic revenue for businesses due to a change or reduction in access;
- Decreased level of separation from hazardous roads, noises, air pollutant emissions, and construction operations for Park View Mobile Home Park and Three Palms Mobile Home and RV Park.

Alternative 2

Air Quality and Noise

- Increased noise, air pollutant emissions, and wear on local streets;
- Increased noise and air pollutant emissions at the Olive Avenue Interchange;
- Increased noise and air pollutant emissions for Park View Mobile Home Park.

Alterations to access and circulation and increased congestion on local roadways and freeways;

- Pedestrian, bicycle, and transit delays and/or detours;
- Detoured local emergency service response routes, with possible increases in response times due to traffic congestion;
- Detoured, altered, or delayed public transit;
- Brief interruptions in utility service where relocation or connections would be required;
- Increased lighting during nighttime construction work and visual changes to the existing landscape;
- Loss of access or detours to public facilities, services, and cemeteries;
- Loss of local economic revenue for businesses due to a change or reduction in access;
- Decreased level of separation from hazardous roads, noises, air pollutant emissions, and construction operations for Park View Mobile Home Park and Three Palms Mobile Home and RV Park.

Alternate Routes for Alternatives 1 and 2:

Alternate routes include the temporary pedestrian bridges at El Dorado Street, Belmont Avenue, and Olive Avenue; these will be open and accessible throughout construction and have pedestrian access on both sides of the bridges. Parkway Drive would also be converted to a truck route between Belmont and Olive Avenues for a more direct connection to Belmont Avenue, providing alternative truck routes to avoid Olive Avenue if needed. The Parkway Drive roadway will be rebuilt but remain in its same location until it slightly bows out toward Denny's as it approaches the Olive Avenue roundabout.

Parkway Drive will remain open throughout the project with at least one way of reversing traffic control access. Generally, the right-of-way line between State Route 99 and Parkway Drive will move 4 feet toward Parkway Drive. An increase in traffic of approximately 25 percent is expected due to the McKinley northbound off-ramp and southbound on-ramp removals.

These four ramps are designed or will be designed to absorb these increases. On local streets, Marks Avenue traffic would increase about 20 percent on either side of McKinley Avenue to direct west side traffic to the Clinton or Olive Interchanges. Hughes Avenue would incur a 42 percent increase between McKinley Avenue and Olive Avenue, but it would not experience heavy volumes. Olive Avenue would be impacted the most, and signals would be required at the Olive/Marks Avenue and Olive/Hughes Avenue intersections. The most impacted segment of Olive Avenue, between Hughes and State Route 99, is mainly businesses that would welcome the increase in traffic.

There is one law clinic, Community Justice Center, that is located within the project vicinity but not located within the project limits. The project work would not reduce access to this center, as it can be accessed at the Clinton Avenue Interchange that was previously enhanced. The project would not impact the on-ramps, off-ramps, or access points to reach this clinic.

No-Build Alternative

Under the No-Build Alternative, the project roadways would remain as currently developed. Minority and low-income populations in the socioeconomic study area and residing within the region would be subject to deteriorating roadways, nonstandard road conditions, and increased congestion on State Route 99. Minority and low-income populations would not experience the effects of the project, such as construction noise, dust, and changes to local roadway circulation; however, these populations would also not experience the beneficial effects associated with the project.

Conclusions

Environmental Justice Discussion

The Environmental Justice impacts are predominately borne by a minority population and/or a low-income population. Adverse impacts to the Environmental Justice populations in the socioeconomic study area would occur from increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements/relocations, decreased accessibility to State Route 99 and community facilities, increased local traffic congestion, and altering circulation routes for emergency services and impacts related to construction activities. The project would disrupt access to jobs and community services from or within the minority and low-income communities. The project would remove traffic and potential customers from local businesses along Belmont Avenue and McKinley Avenue.

The existing pavement along this State Route 99 throughout the project limits is deteriorating and needs a long-term solution. The failure to take action to address the project needs would allow the corridor deficiencies to continue to a more severe level which would not provide a safe and efficient roadway for the traveling public. If this project is not completed, there would be a need to involve increased costs of an extraordinary magnitude. Regarding the deteriorating condition of the existing pavement, water will continue to seep through the asphalt, penetrating throughout the pores of the pavement and weakening the condition of the roadway. As a result, the water will continue to spread horizontally above and below the asphalt. As it travels horizontally under the asphalt in the subgrade, the subgrade weakens and develops large areas of potholes and alligator cracks.

The pavement on State Route 99 throughout the project limits is deteriorating and needs a long-term solution. Water has infiltrated the roadway base, which results in the hydraulic lifting of the roadway seat that is comprised of concrete panels. The uneven lifting of the panels results in cracking of the concrete panels and the asphalt overlay. The lifting and cracking result in a rough ride that causes traffic to slow down. Various maintenance projects have been implemented over the years to try and improve the conditions, including replacing panels and cracks, seats, and overlay repairs. These temporary fixes have not resolved the issues, and maintenance and repair costs continue to rise because of the ongoing deterioration of the pavement. The expenditures would increase while not providing long-term operational benefits to the project area.

The City of Fresno, Fresno Council of Governments, and Fresno County Transportation Authority have taken an active role in offering input on the alternatives and need for the project. They have also offered input on potential overcrossing removals, effects on local traffic circulations, effects on local businesses, the city's desire for Fresno Street to be the focal point of the

Fresno/Tuolumne/Stanslaus Interchange, and the city's desire to retain the El Dorado Overcrossing and truck routes postconstruction. The Project Development Team performed traffic operational studies for the Olive Avenue Interchange for the different ramp interaction scenarios with Belmont Avenue ramps closed and McKinley Avenue ramps opened and closed.

The right-of-way and environmental impacts were evaluated for the Olive Avenue Roundabouts and Single-Point Interchange options.

This alternative would also result in significant relocation and right-of-way costs, which would cause more displacement of businesses and residents. Consequently, the single point interchange was ruled out by the Project Development Team on July 23, 2019, due to high construction and right-of-way costs with no significant operational benefits. Thus, the interchange options for Olive Avenue were reduced to the compact diamond interchange with roundabouts (included in Build Alternative 1) and the Divergent Diamond Interchange (included in Build Alternative 2).

Potential Benefits of Alternatives 1 and 2

Alternatives 1 and 2 would benefit the Fresno region by bringing the existing roadway and roadway features to current standards, minimizing frequent roadway repairs, reducing traffic congestion, and reducing traffic-related accidents. Consequently, a reduction in commute times, improved emergency response times to the region, safer traveling conditions, and an increase in the long-term vitality of State Route 99 would occur. Improvements and increased traffic levels along Olive Avenue would likely attract additional businesses and services to the area, while existing businesses may experience revenue increases. In addition to the operational and traffic benefits, members of the public have shared their support for the project. The upgraded pavement, lighting features, signals, and pedestrian facilities would improve rideability and community access for those who rely on these facilities to travel to work, surrounding businesses, or schools.

Visual Benefits for Alternatives 1 and 2

The proposed project is within the Regional Transportation Fresno 99 Beautification Master Plan as part of the State beautification and modernization pilot project (from American Avenue to San Joaquin River). The beautification plan specifically identifies El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue bridges for future gateway and aesthetic improvements. Project work would address the aesthetic treatments of all bridges and walls that are within the project limits.

Air Quality and Noise Related Benefits for Alternatives 1 and 2

The decreased level of traffic along Belmont Avenue, Pacific Avenue, and McKinley Avenue would improve existing safety levels, air pollution

emissions, and noise levels for the environmental justice populations in those areas.

Community Benefits for Alternatives 1 and 2

Other benefits include the Olive Avenue Interchange, El Dorado Street, Belmont Avenue, and McKinley Avenue crossings enhancements that will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movements. El Dorado Street would be converted to three lanes (including a two-way, left-turn lane and a Class 2 bike lane with standard sidewalks on each side, per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.

Community Benefits of McKinley Avenue Ramp Closures

A meeting between Caltrans Design Team and Addams Elementary took place on September 23, 2020, to discuss the Olive Avenue Interchange and closure of McKinley Avenue ramps. Project Manager Scott Friesen provided a presentation for the El Dorado to Clinton Pavement Rehabilitation Project and focused on the possibility of McKinley Avenue ramp closures. Alex Belanger, the Chief Executive of Operations for Fresno Unified School District, attended this meeting.

At this time, it is difficult for students to safely cross the on-ramps and off-ramps at McKinley Avenue. Large trucks travel by this school due to the existing on-ramps and off-ramps to and from State Route 99, contributing to air pollution and traffic congestion. Heavy vehicles and trucks traveling on Hughes Avenue to McKinley Avenue ramps are deteriorating the roads and increasing smog for students. Belanger stated that road repairs are needed, in addition to more stop signs to slow down traffic.

Sidewalks are missing on McKinley Avenue from Marks Avenue, along Golden State Boulevard, and Hughes Avenue. Sidewalks on Golden State Boulevard, next to United Parcel Service (UPS) property, were removed and not replaced. Sidewalks are also non-existent on Hughes Avenue, on the opposite side of Addams Elementary School.

When the school's main office and student drop-off/pick-up is relocated to Hughes Avenue, most of Hughes Avenue traffic will be headed toward the Olive Avenue Interchange. The Fresno Unified School District would prefer diverting traffic from Hughes Avenue and more traffic controls, especially for truck traffic.

Upgraded Lighting/Signaling Benefits for Alternatives 1 and 2

On State Route 99, many existing lighting circuits have been in place for nearly 60 years and are beyond the useful service life for this type of installation. In addition, many of the existing light poles do not meet current standards and need to be replaced. Although some parts of the lighting

systems have been updated by various projects through the years, much of it is the original installation and in need of replacement.

In addition, the existing metal conduit that is part of these systems is corroded to the point where new conductors cannot be installed. Also, insulation on existing conductors has deteriorated, and short circuits may occur, undermining the reliability of these systems. Most importantly, older lighting systems use the metal conduit system as the ground conductor; when these conduits fail, the grounding system is compromised and will no longer adequately protect the system. This project will replace the deficient parts of this system and update it to Caltrans' current lighting standards. Many of the existing electric service enclosures cannot be adequately secured to prevent vandalism and no longer meet National Electrical Code requirements.

Avoidance, Minimization, and/or Mitigation Measures

The project would incorporate Complete Street elements that would improve transportation within the surrounding community:

EJ-1: Provide shoulders to accommodate bike lanes on El Dorado Street.

EJ-2: Provide safer pedestrian crossings at Belmont Avenue and McKinley Avenue by removing six ramp crossings, enhanced pedestrian pathways, and shoulders to accommodate bicycle lanes.

EJ-3: Safer pathways would be provided to Jane Addams Elementary School due to reduced traffic from the ramp removals and improved pathways from east of State Route 99.

EJ-4: Olive Interchange Roundabout pedestrian/bicycle crossings would provide a safer passage.

EJ-5: Improve or add pedestrian facilities such as crosswalks, sidewalks, and traffic calming devices (the roundabouts will calm and slow traffic down).

EJ-6: Improve or add bicycle lanes that were not present.

EJ-7: Signalize and unsignalize intersections (creating a safer pathway to cross the street).

EJ-8: Add Complete Streets elements, such as benches at bus stops, lighting where it is not present, and/or bus shelters (keeping bus patrons out of direct sunlight or rain).

EJ-9: To alleviate temporary project impacts, the following temporary pedestrian bridges will be added at Olive Avenue, Belmont Avenue, and El Dorado Street; these temporary bridges will benefit those who rely on pedestrian access during construction. Please refer to Chapter 2, Section

2.1.4, *Community Character and Cohesion, Avoidance and Minimization Measures*, for more details on these temporary pedestrian bridges.

EJ-10: Minimize excessive fossil fuel emissions that contribute to climate change due to large trucks and vehicles idling on the improved pathway.

EJ-11: Removing the Kerman Branch Underpass railroad crossing at Teilman/Pacific Avenue will provide safer conditions for pedestrians.

EJ-12: Improved infrastructure, highway landscaping, and soundwall aesthetics along the roadway will enhance the visual appeal for commuters and outside visitors.

EJ-13: All pull boxes and electric service enclosures will be secured to reduce the occurrence of wire theft.

EJ-14: The local communities could also experience temporary benefits from the construction project; this includes the generation of regional construction industry jobs and the revenue that will likely be generated directly from the construction workers in the local community. This local revenue and job generation could benefit the local minority and low-income populations.

2.1.7 Utilities and Emergency Services

Affected Environment

Utilities

The Caltrans Utility Engineering Workgroup conducted a preliminary review of the existing utilities inside the project limits on August 20, 2020. The following utility systems are within the project limits:

- City of Fresno: Water and Sewer lines
- Pacific Gas and Electric: Gas and electric lines
- Fresno Irrigation District: Canal and irrigation Pipes
- Fresno Metropolitan Flood Control District: Pipes and Basin
- American Telephone and Telegraph: Overhead and underground telephone lines and fiber optic
- Sprint/Verizon: Fiber optic lines and cell tower
- Comcast: Utility lines and cell tower
- Central Valley Independent Network: Fiber optic line

The following emergency services are near the project limits:

- City of Fresno Fire Department
- City of Fresno Police Department

There are several community facilities near the project area, including schools, religious institutions, community centers, public service agencies, and cemeteries. Most of these are religious institutions, as well as cemeteries and schools. Community facilities within 0.5 mile of the project were analyzed for this section.

Emergency Services

The emergency service stations nearest the project area are Fire Station Number 3, Fire Station Number 9, Fire Station Number 19, and the Southwest District Police Station. The three fire stations border the project to the east, south, and west. Fire Station 3 lies closest to the project, at about 0.8 mile south of El Dorado Street, Fire Station Number 19 is on Belmont Avenue, about 1.3 miles west of State Route 99. Fire Station Number 9 is on Clinton Avenue, about 1.2 miles east of State Route 99. Ambulances may also use State Route 99 and surrounding local streets as they respond to emergencies.

Environmental Consequences

Utility Impacts for Both Build Alternatives

Both project alternatives would have the same utility impacts. The utility engineering group uses available verification sources, such as as-built plans from Caltrans, the City of Fresno, utility owners, survey data, field investigations, and underground utility imaging surveys, such as ground-penetrating radar and time-domain electromagnetics, to identify approximate locations of utilities. Multiple utility facilities were noted and will require relocation efforts. In addition to the utilities identified, irrigation boxes, water valves, sewer holes, and fire hydrants are also within the project area. Access rights and temporary construction easements will be required.

Potholing will be performed to confirm the horizontal and vertical locations, or positive locations, of all subsurface utilities impacted by the project. Utility companies would be given enough notice to relocate their facilities before construction, or at a later stage of construction, as appropriate. Existing utilities listed may be relocated temporarily or permanently as needed, and access rights or temporary construction easements would be necessary.

Such coordination is standard during the design phase. Utility relocations would be done using standard engineering practices, so substantial service disruption is not expected.

Both Build Alternatives will have the following utility impacts.

El Dorado Avenue Bridge Removal and Reconstruction

- City of Fresno—Water line in the bridge, street lighting, and sewer holes (to be adjusted to grade)
- Pacific Gas and Electric Company—Gas line in the bridge

- Pacific Gas and Electric Company—Overhead and Underground electric lines
- Unknown Overhead Telephone lines (ownership to be determined)
- City of Fresno—Street lighting
- City of Fresno Sewer—adjust sewer holes to grade

Potential Impacts

- Underground telephone lines
- Overhead electric poles and guy wires (Pacific Gas and Electric Company)
- City of Fresno—Residential water meters
- Pacific Gas and Electric Company gas service meters/gas lines—residential service connections, valves (depends on profile/grade changes to existing roadway and sidewalk; information not yet confirmed).

Nielson Avenue Bridge Widening

Houghton Canal, owned by the Fresno Irrigation District, will be impacted by the construction of additional bents next to the canal and other activities related to the work.

Potential Conflicts

Other utilities, such as Pacific Gas and Electric Company overhead lines and some underground telephone lines, may be impacted but still need to be verified.

Teilman Avenue Overcrossing Bridge Removal

No utility impacts are expected from the bridge removal at this time.

Kerman Branch Railroad Overhead Structure Removal and Reconstruction

- Pacific Gas and Electric Company—Overhead electric lines and poles
- City of Fresno—Sewer line
- City of Fresno—Street lighting
- American Telephone and Telegraph Telephone line—Overhead telephone line
- Railroad—Union Pacific Railroad

Potential Conflicts

Sprint—Fiber Optic line in railroad right-of-way may be a potential impact.

Belmont Avenue Overcrossing Removal and Reconstruction

- Pacific Gas and Electric Company—Gas line in the bridge
- Pacific Gas and Electric Company—Underground electric lines

- Telephone line—Underground telephone lines (ownership to be determined)
- City of Fresno—Street lighting
- City of Fresno sewer holes—adjust sewer holes to grade

Potential Impacts

Central Valley Independent Network—Fiber optic line crossing State Route 99 at Belmont Avenue.

Parkway Avenue Improvements Between Belmont Avenue and Olive Avenue

- City of Fresno—water valves, fire hydrants, street lighting, reclaimed water line valves/apparatus
- Pacific Gas and Electric Company—Overhead electric lines/poles
- Pacific Gas and Electric Company—Underground gas lines, service meters/valves
- Fresno Irrigation District—Cole Street, Bridge Number 40 (irrigation pipe crossing under existing State Route 99 just south of Olive Avenue)

Potential Impacts

- City of Fresno—Fiber optic line (follows the path of reclaimed water line)
- Sprint/Verizon—Cell Tower

Olive Avenue Overcrossing Improvements

- City of Fresno—Water line in the bridge
- Pacific Gas and Electric Company—Gas line in the bridge
- Pacific Gas and Electric Company—Overhead and Underground electric lines
- Telephone line—Overhead telephone lines (ownership to be determined)
- City of Fresno—Street lighting
- City of Fresno Sewer—Adjust sewer holes to grade
- Fresno Metropolitan Flood Control District—pipe and basin
- Fresno Irrigation District—Cole Street, Bridge Number 40 (irrigation pipe crossing under existing State Route 99 just south of Olive Avenue)

McKinley Avenue Improvements

- Pacific Gas and Electric Company—Overhead and Underground electric lines
- Telephone line—Overhead telephone lines (ownership to be determined)
- City of Fresno—Street lighting

Potential Conflicts

- City of Fresno—Water line
- City of Fresno—Sewer holes
- Pacific Gas and Electric Company—Gas line in the bridge

The utility relocation plans would be prepared during the design phase. As part of that effort, the design team would work with the utility provider to identify the relocation area that would minimize the impact on the various resources. Generally, utilities, except for large electrical towers, would be relocated within the existing right-of-way. These areas are already disturbed, so impacts are not expected, and implementation of standard engineering practices would ensure that no substantial interruptions of utility service would occur. Should the relocation of the utilities result in impacts on resources, additional environmental clearance will be required.

No-Build Alternative

The No-Build Alternative would not require any utility relocation. However, the existing roadway would continue to deteriorate and not meet Caltrans' current standards.

Emergency Services Impacts for Alternatives 1 and 2

Emergency services should not be disrupted after project construction. Fire station Number 19 and Fire Station Number 9 are located on either side of the project at about equal distances from State Route 99. These services will continue to serve the areas east and west of the project area without needing to use detours or access restrictions to overcrossings. Fire Department Number 3 lies south of the project and can cross into the east and west sides of the project area without intercepting construction. The Southwest District Police Station is near Fire Station Number 3 and would be able to access the east and west sides of State Route 99 easily throughout construction. However, temporary lane closures during construction may slightly impede emergency services from accessing emergencies via State Route 99 or emergencies on State Route 99. Once construction is complete, the additional lanes and elimination of the Belmont Avenue Interchange will improve the flow of traffic and should improve the delivery of emergency services to the area.

No-Build Alternative

The No-Build Alternative would not impact emergency services; however, the project area would not benefit from the operational improvements to State Route 99 to improve traffic flow and decrease travel delays.

Avoidance, Minimization, and/or Mitigation Measures

During construction activities, the following strategies would be used to avoid, minimize or mitigate potential impacts, per Caltrans' standard practice:

UT-1: A Traffic Management Plan has been prepared to minimize congestion due to construction activities. Elements of the plan may include but are not limited to speed limit reduction, ground-mounted detour signs, traffic radio announcements, media alerts, night work, brochures, public meetings, a planned lane closure website, and Construction Zone Enhanced Enforcement Program.

2.1.8 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

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

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

Affected Environment

The project portion of State Route 99 is an urban six-lane freeway divided by a Type 60 concrete median barrier. It is a mostly straight alignment on level grade with good sight distance. The mainline roadway generally consists of three 12-foot travel lanes (comprised of locations of Asphalt Concrete and Portland Cement Concrete, a 5-foot Asphalt Concrete inside shoulder, and a 10-foot Asphalt Concrete outside shoulder in both directions). The paved median is mostly 12 feet wide. The shoulder and median dimensions are condensed considerably near older bridge structures along this portion of State Route 99. Bicycle access is prohibited on State Route 99 within District 6. There are no existing bicycle facilities such as bike paths, lanes, and routes within the project limits.

The posted speed limit is 65 miles per hour. Most of the existing pavement stripes and markers are in good condition. The 2017 Annual Average of Daily Traffic on State Route 99, within the project limits, varies from a low of 129,000 (between Olive Avenue and McKinley Avenue) to a high of 139,000 (between State Route 180 and Belmont Avenue).

Table 2.23 displays the Mainline State Route 99 traffic data for the years 2029 and 2049, which provides the morning and evening peak level of service for both years. It is important to note that the level of service on the Mainline State Route 99 is an F. The F rating indicates that traffic is at a forced or breakdown flow during the Morning Peak and Evening Peak of the day. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Table 2.24 displays the annual average daily traffic and annual average daily truck traffic for both Build Alternatives at Olive and Clinton Avenue for the years 2029 and 2049.

Table 2.23 Mainline State Route 99 (Open Year-2029/Horizon Year-2049) Traffic Data

Year	Annual Average Daily Traffic	Percent of Trucks	Morning Peak Level of Service	Evening Peak Level of Service	Morning Peak (Vehicles per Hour)	Evening Peak (Vehicles per Hour)
2029	158,941	21	F	F	11,401	12,534
2049	205,635	21	F	F	14,516	16,808

Source: Caltrans Travel Forecasting; District 6 Office of Traffic Operation.

Table 2.24 Annual Average Daily Traffic for Build Alternatives

Alternatives	2029 Annual Average Daily Traffic	2029 Truck Annual Average Daily Traffic	2049 Annual Average Daily Traffic	2049 Truck Annual Average Daily Traffic
Mainline	158,941	33,378	205,635	43,183
Divergent Diamond Interchange at Olive Avenue	20,657	2,892	32,700	4,578
Divergent Diamond Interchange at Clinton Avenue	38,734	5,810	58,800	8,820
Roundabout at Olive Avenue 36	20,657	2,892	32,700	4,578
Roundabout at Clinton Avenue	38,734	5,810	58,800	8,828

Source: Caltrans Travel Forecasting District 6 Office of Traffic Operations.

Local Roads

The project proposes to remove the six existing ramps at the Belmont and McKinley Avenue Interchanges and primarily use the enhanced Olive and Clinton Avenue Interchanges to absorb the traffic. The project work would also fill in missing sidewalks on existing local streets with 10 feet of

pedestrian/bike dedicated sidewalks on both sides of Olive Avenue crossing on State Route 99.

Railroad Facilities

The Kerman Branch Union Pacific (Bridge Number 42-190) is a simple-span plate girder grade separation structure crossing over State Route 99. This railroad bridge was built in 1956 and is 136.20 feet long. The existing minimum vertical clearance at this bridge is 15.75 feet, with a horizontal clearance of 50.50 feet. Union Pacific Railroad owns this facility, and the San Joaquin Valley Railroad conducts train operations on the tracks; the railroad's main traffic sources are agricultural products. Per the Federal Railroad Administration Crossing Inventory Form, the number of daily train movements passing through this bridge is 2, and a total of 10 train movements per week. A shoofly structure will be built to allow railroad traffic to continue during construction and will be designated as a permanent structure.

Fresno is considered a transportation hub because it is at the center of a network of transportation corridors connecting it to major metropolitan areas in California and Nevada (Fresno County Comprehensive Economic Development Strategy 2015). The major freeways and highways serving the study area are State Route 99, State Route 180, and Golden State Boulevard. There are also several local roadways, bicycle, and pedestrian facilities in the study area directly associated with the project, including the El Dorado Street Overcrossing, Nielsen Avenue Undercrossing, Teilman Avenue Overcrossing, Belmont Avenue Overcrossing, Olive Avenue Overcrossing, and McKinley Avenue Undercrossing. The Fresno County General Plan of 2017 recognizes the need to improve regional roads. Fresno County is crossed by two major freight rail lines—the Burlington Northern Santa Fe Railway and the Union Pacific Railroad (Community Impact Assessment 2021).

Pedestrian and Bicycle Facilities

Existing Facilities

Pedestrian facilities in the land use study area consist of curb ramps, sidewalks, marked and unmarked crosswalks, signage, median islands, landscaping, and lighting. Sidewalks are largely absent from the project's socioeconomic study area. Several neighborhoods, particularly those north of State Route 180, lack a comprehensive sidewalk system. Sidewalks are also inconsistent along arterial and collector city streets within the study area.

Currently, pedestrians in the socioeconomic study area have pedestrian facilities to cross State Route 99 at El Dorado Street Overcrossing, the north side of the Pacific Avenue Overcrossing, the Belmont Avenue Overcrossing, the Olive Avenue Overcrossing, and the south side of the McKinley Avenue Undercrossing. In some cases, sidewalks are not available on either side of the street in the socioeconomic study area. These locations are the Nielsen

Avenue Undercrossing, the south side of the Pacific Avenue Overcrossing, and the north side of McKinley Avenue Undercrossing.

In some cases, sidewalks are not available on either side of the street in the socioeconomic study area. These locations are the Nielsen Avenue Undercrossing, the south side of the Pacific Avenue Overcrossing, and the north side of McKinley Avenue Undercrossing.

Americans with Disabilities Act curb ramps are also not available at some intersections, and many sidewalk segments lack lighting, crosswalks, and other features. Each of the following locations lacks one or more of these pedestrian amenities: the El Dorado Overcrossing, the Nielsen Avenue Undercrossing, the Pacific Avenue Overcrossing, the Belmont Avenue Overcrossing, the Olive Avenue Overcrossing, and the McKinley Avenue Undercrossing. Below is a table that displays existing pedestrian facilities within the community area.

Table 2.25 Existing Pedestrian Facilities in the Project Area

Pedestrian Facility Location	Facility Features
State Route 99 and El Dorado Street	Sidewalks on the north and south sides of overcrossing; one asphalt concrete ramp on the northeast side of overcrossing.
State Route 99 and Nielsen Avenue	Sidewalk on the south side of undercrossing.
State Route 99 and Pacific Avenue	Sidewalk on the north side of overcrossing; two asphalt concrete ramps on the northeast side and northwest side.
State Route 99 and Belmont Avenue	Sidewalks on the north and south sides of overcrossing, four ramps on the south side of overcrossing.
State Route 99 and Olive Avenue	Sidewalks on the north and south sides of overcrossing, eight ramps on the south side of overcrossing, and four ramps on the north side of overcrossing.
State Route 99 and McKinley Avenue	Sidewalk on the south side of undercrossing; six ramps on the south side of undercrossing, two of which are asphalt concrete ramps located on the southeast and southwest corners.

Source: Community Impact Assessment, 2021

Planned Facilities

Sidewalks are expected to be widened and enhanced on several local streets throughout the project area. Most planned additions will connect existing segmented sidewalk facilities and complete Americans with Disabilities Act requirements.

Sidewalk connectivity improvements within the socioeconomic study area are expected on Parkway Drive and at El Dorado Street, Belmont Avenue, Olive Avenue, and McKinley Avenue State Route 99 crossing locations. Larger and enhanced sidewalk improvements are expected at the following locations: El Dorado Street, connecting the residential neighborhoods and park to the west with the industrial/commercial area to the east; Belmont Avenue from Parkway Drive to Roeding Park; Olive Avenue between Crystal Avenue and West Avenue; Parkway Drive near Belmont Avenue to Olive Avenue; and underneath the McKinley Undercrossing, connecting the proposed city improvements in front of Jane Addams Elementary School to the high-speed rail improvements, which are proposed to the east of the existing northbound off-ramp. Existing pedestrian facilities can be seen in Figure 2-14.

Bicycle Facilities

Existing and planned bicycle facilities in the socioeconomic study area consist primarily of Class 1 and Class 2 Bikeways. Class 1 Bikeways are bike paths that are often referred to as shared-use paths or trails that are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Class 2 Bikeways are bike lanes that are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. Existing and planned bicycle facilities are shown in Figure 2-15.

Figure 2-14 Existing Pedestrian Facilities in the Socioeconomic Study Area

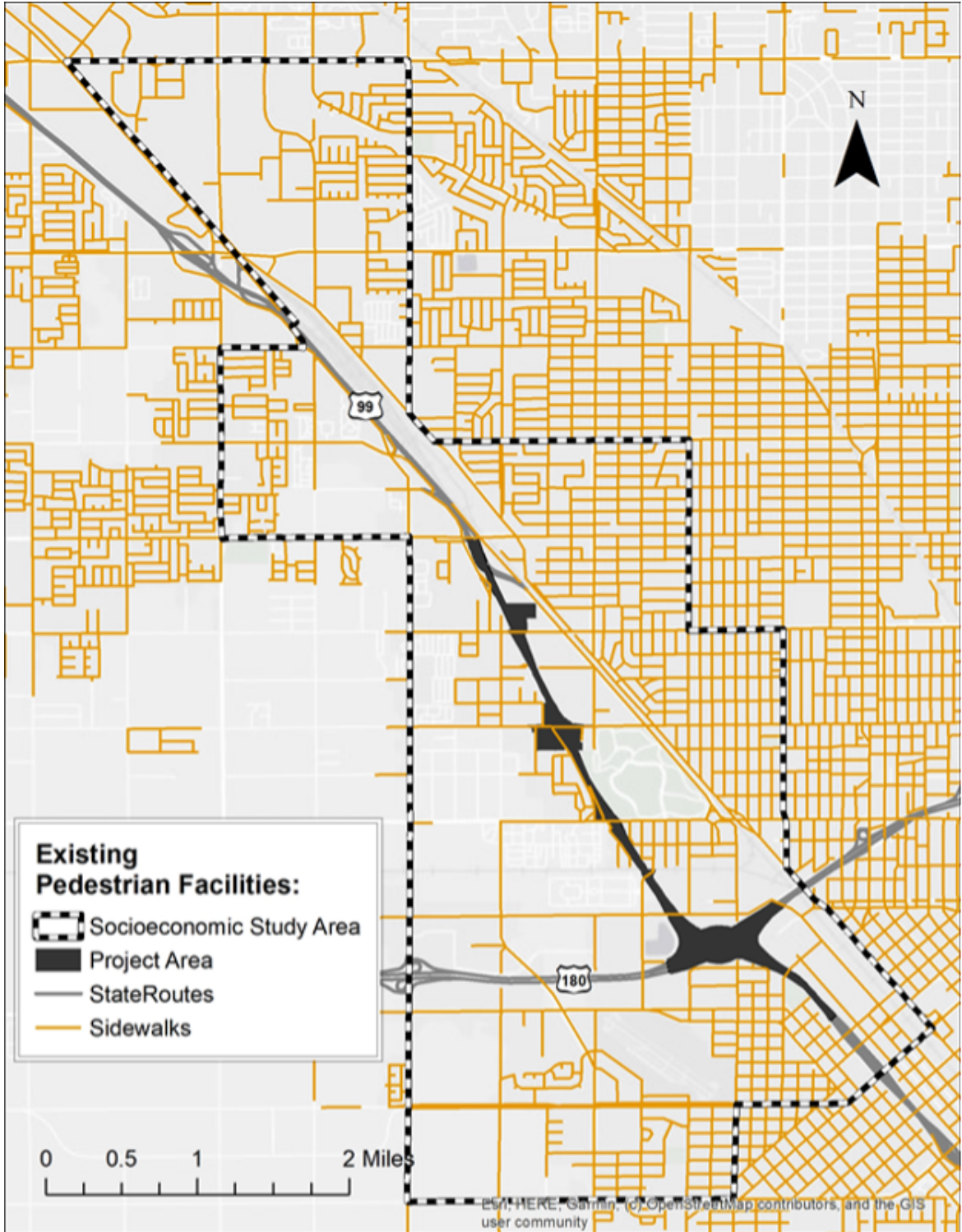
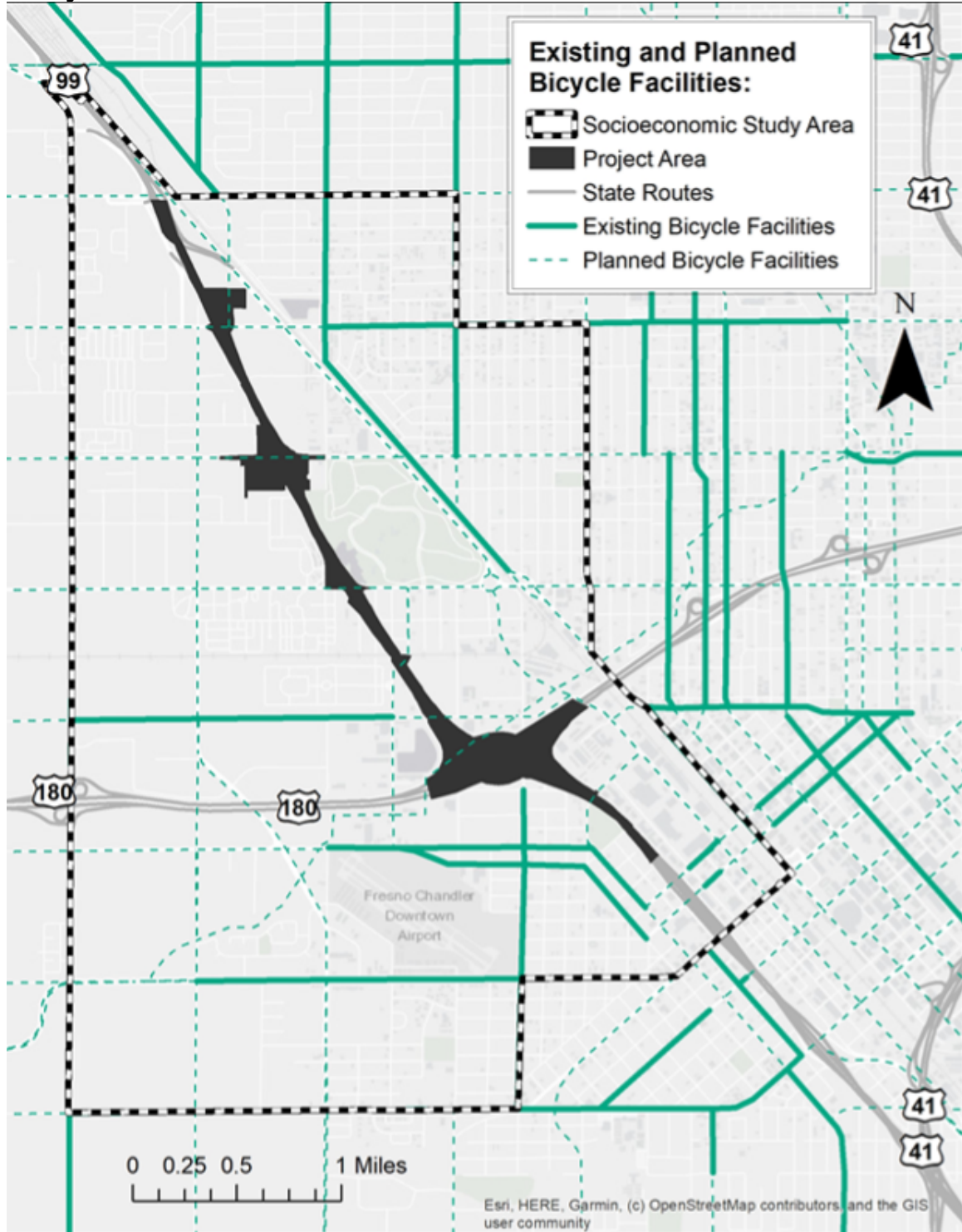


Figure 2-15 Existing and Planned Bicycle Facilities in Socioeconomic Study Area



Existing Facilities

Existing bicycle facilities in the study area include a Class 2 Bikeway on Olive Avenue from State Route 99 to Hughes Avenue, a Class 2 Bikeway on

Nielsen Avenue from Marks Avenue to Teilman Avenue, a Class 2 Bikeway on Thorne Avenue from the State Route 180 and State Route 99 Junction to California Avenue, a Class 2 Bikeway on Whitesbridge Avenue from West Avenue to Stanislaus Avenue, a Class 2 Bikeway on Amador Avenue from Whitesbridge Avenue to Stanislaus Avenue, a Class 2 Bikeway on Weber Avenue from Belmont Avenue to West Avenue, and a Class 2 Bikeway on West Avenue from Weber Avenue to Shaw Avenue.

Planned Facilities

Class 1 Bike Paths are planned on the north side of Whitesbridge Avenue from Thorne Avenue to Blythe Avenue, on Nielsen Avenue from Hughes Avenue to Thorne Avenue, and on Belmont Avenue from Motel Drive to Grantland Avenue.

Priority Class 2 Bike Lanes are planned for McKinley Avenue from Grantland Avenue to Clovis Avenue and Hughes Avenue from McKinley Avenue to Kearney Avenue.

Additional Class 2 Bike Lanes are planned for both traffic directions on El Dorado Street from G Street until Kearney Boulevard, the remainder of Nielsen Avenue Undercrossing from G Street to Blythe Avenue, the Pacific and Teilman Avenue Overcrossing from Whitesbridge Avenue to Belmont Avenue, the Belmont Avenue Overcrossing from Grantland Avenue to McCall Avenue, Parkway Drive from Belmont Avenue to Olive Avenue, the remainder of Olive Avenue from Grantland Avenue to Fancher Avenue, Marks Avenue from Shields Avenue to North Avenue, the remainder of Weber Avenue from Clinton Avenue to McKinley Avenue, the remainder of Fruit Avenue from Clinton Avenue to Belmont Avenue, and E Street from El Dorado Street to Ventura Avenue.

Roadways

Highways within the socioeconomic study area are State Route 99 and State Route 180.

Interchanges within the project area are the State Route 99 and State Route 180 Junction, the State Route 99 and Belmont Avenue Interchange, the State Route 99 and Olive Avenue Interchange, and the State Route 99 and McKinley Avenue Partial Interchange.

Major city streets include both arterial streets and collector streets. The arterial streets include Marks Avenue, McKinley Avenue, Clinton Avenue, Weber Avenue, Fresno Street, and West Avenue. The collector streets include El Dorado/Trinity Street, Nielsen Avenue, Belmont Avenue, Olive Avenue, Whitesbridge Avenue, Thorne Avenue, Teilman Avenue, Pacific Avenue, Hughes Avenue, Motel Drive, and Clinton Avenue.

Parking

The socioeconomic study area is urbanized, with unrestricted parallel street parking in most areas and private surface parking lots provided by individual commercial, industrial, and residential entities. Existing conditions for areas with the potential for the temporary or permanent elimination of parking are described below.

There are about 140 feet of perpendicular street parking for Fink-White Park located on the north side of Trinity Avenue and about 170 feet of parallel street parking east of the El Dorado Street Overcrossing on both sides of the street. There are about 500 feet of curbside parking on the east side of Teilman Avenue, along with a 46-space lot just south of Stephens and Bean Funeral Chapel.

Additionally, about 100 feet of curbside parking exists on Parkway Drive in both directions, about 500 feet of residential parking on Crystal Avenue in both directions, about 100 feet of curbside parking on Crystal Avenue just north of Olive Avenue in both directions, 700 feet of curbside parking on West Avenue where it intersects with Olive Avenue in either direction, 21 parking spots in the Caltrans parking lot, and 97 spots in the Motel 6 north of Olive Avenue. Lastly, there are about 250 feet of curbside parking on the north side of McKinley Avenue. The proposed project will not permanently impact any current parking spaces or parking access.

Environmental Consequences

The September 2020 Traffic Operations Report provides traffic volumes and level of service ratings for the proposed Build Alternatives and the No-Build Alternative for each interchange. The No-Build Alternative portrays roadway conditions as if no transportation improvements were made.

Caltrans uses annual average daily traffic volumes to measure the carrying capacity of roadway features, such as roadway segments, intersections, and interchanges. Average Daily Traffic volume numbers represent the traffic demand or the volume of traffic using a roadway in a 24-hour period. Roadways are designed to handle specific volumes of traffic. When the capacity of a roadway is exceeded, the effectiveness of the roadway is reduced.

Caltrans uses level of service (also known by the acronym “LOS”) to indicate how effectively a roadway or interchange transports vehicles. The level of service rating system uses letters “A” through “F” to describe and measure service quality. A designation of a level of service “A” indicates excellent travel conditions, while a level of service “F” indicates very poor, congested conditions. According to Caltrans standards, ratings of “A” through “D” are considered acceptable ratings, depending on other measures used to analyze the effectiveness of a facility.

Note: Vehicle miles traveled is a measure used in transportation planning to represent the amount of travel for all vehicles in a geographic region over a given period of time, typically one year. This project is considered “a project type that is unaffected by the use of vehicle miles traveled” as a measure of transportation impacts because it “is assumed to not lead to measurable and substantial increases in vehicle travel.” The project complies with the Caltrans Policy Memo entitled “Caltrans Policy on Transportation Impact Analysis and the California Environmental Quality Act Significance Determinations for Projects on the State Highway System” (September 10, 2020), Caltrans’ “Transportation Analysis Framework” (September 10, 2020), and “Transportation Analysis under the California Environmental Quality Act” guidance documents for the implementation of Senate Bill 743 (Steinberg, 2013), which is codified at Public Resources Code Section 21099. These documents are available on Caltrans’ website at: <https://dot.ca.gov/programs/sustainability/sb-743>.

All proposed improvements would be constructed to meet the requirements of the 1990 Americans with Disabilities Act.

Project-related changes may have the potential to impact traffic congestion. Additionally, work on roadways in the area could alter access and/or parking to community facilities, amenities, or services.

The existing interchange at Olive Avenue is a compact diamond configuration (Type L-1) and is fully developed in each quadrant. The distance between the ramp intersections is approximately 240 feet. Olive Avenue, within this interchange, is a four-lane local street with a posted speed limit of 40 miles per hour. Each of the ramp intersections is signalized with a left-turn lane along Olive Avenue. These signals are programmed with protected/permissive phasing for Olive Avenue left-turn movements.

Parkway Drive functions as a frontage road on the west side of State Route 99, between Belmont Avenue and Olive Avenue. Parkway Drive forms “T” intersections at Olive Avenue and Belmont Avenue, approximately 50 feet and 150 feet, respectively, west of the southbound State Route 99 ramp intersections. Traffic on Parkway Drive is controlled with a stop sign at both intersections. Table 2.26 displays the traffic conditions for the no-Build Alternative.

Table 2.26 No Build Conditions for the Olive Avenue Interchange (Open Year-2029/Horizon Year-2049) Traffic Data

Year	Intersection	Intersection Control	Highway Capacity Manual Control Delay Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	Olive Avenue/State Route 99 Southbound Ramps	Signal	16.6 (17.8)	B(B)

Year	Intersection	Intersection Control	Highway Capacity Manual Control Delay Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	Olive Avenue/State Route 99 Northbound Ramps	Signal	14.9 (21.2)	B (B)
2029	Olive Avenue/Parkway Drive	One-Way Stop	2.4 (3.7)	A (A)
2049	Olive Avenue/State Route 99 Southbound Ramps	Signal	17.6 (22.0)	B (B)
2049	Olive Avenue/State Route 99 Northbound Ramps	Signal	14.9 (21.2)	B (C)
2049	Olive Avenue/Parkway Drive	One-Way Stop	2.5 (3.7)	A (A)

Source: Caltrans Travel Forecasting District 6 Office of Traffic Operations.

Year 2029 Build Conditions: Olive Avenue Interchange

The interchange improvements would include roundabouts for the State Route 99 northbound and southbound ramp intersections at Olive Avenue and maintain Parkway Drive as a two-way street with its current alignment. The southbound ramp intersection roundabout is proposed to incorporate Parkway Drive.

With the inclusion of Parkway Drive, the proposed roundabout at the southbound ramp intersection would consist of five legs. The preliminary design for this intersection accommodated two lanes for each approach.

The proposed outside lane for Parkway Drive would bypass to the southbound State Route 99 on-ramp. The roundabout exits for Olive Avenue and the southbound State Route 99 on-ramp would provide two lanes, and a single-lane exit would be provided at Parkway Drive; this hybrid roundabout design, with a 180-foot inscribed circle, would provide two circulating lanes for eastbound and westbound traffic and a single lane for southbound traffic.

The preliminary design at the Olive Avenue/northbound ramp intersection would consist of four legs. Olive Avenue and the northbound State Route 99 off-ramp would have two lanes on each approach. The proposed outside lane for the northbound off-ramp would bypass to eastbound Olive Avenue. Two lanes would be provided for the roundabout exits in each Olive Avenue direction, and a single lane exit would be provided at the northbound State Route 99 on-ramp.

This hybrid roundabout design, with a 180-foot inscribed circle, would provide two circulating lanes for eastbound and westbound traffic and a single lane for northbound traffic.

Table 2.27 Year 2029 Build Conditions on State Route 99 Southbound Ramps at Olive Avenue

Year	Approach	Volume/Capacity Ratio Morning (Evening)	Average Delay(s) Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	Olive Avenue Westbound	0.354 (0.403)	6.6 (6.4)	A (A)
2029	State Route 99 Southbound Off-Ramp	0.385 (0.360)	14.5 (13.9)	B (B)
2029	Olive Avenue Eastbound	0.851 (0.752)	25.4 (19.2)	D (C)
2029	Parkway Drive	0.282 (0.390)	9.5 (9.8)	A (A)
2029	Full Intersection	0.851 (0.752)	14.9 (12.0)	B (B)

Source: Updated Traffic Operational Analysis, September 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

The predicted 2029 volume-to-capacity ratio, average delay, and level of service for each approach and the full intersection in the Morning and Evening peak hours at the southbound ramp intersection are indicated in Table 2.27. As shown, the intersection would operate at a satisfactory level.

Table 2.28 Year 2029 Build Conditions on State Route 99 Northbound Ramps at Olive Avenue

Year	Approach	Volume/Capacity Ratio Morning (Evening)	Average Delay(s) Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	State Route 99 Northbound Off-Ramp	0.410 (0.535)	13.0 (14.3)	B (B)
2029	Olive Avenue Westbound	0.421 (0.656)	10.5 (17.9)	B (C)
2029	Olive Avenue Eastbound	0.185 (0.198)	5.1 (5.6)	A (A)
2029	Full Intersection	0.421 (0.656)	9.9 (13.4)	A (B)

Source: Source: Updated Traffic Operational Analysis, September 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

The predicted 2029 volume-to-capacity ratio, average delay, and level of service for each approach and the full intersection in the morning and evening peak hours at the northbound ramp intersection are indicated in Table 2.28. As shown, the intersection would operate at a satisfactory level.

Year 2049 Build Conditions: Olive Avenue Interchange

Staged interchange improvements are not currently planned for this project; thus, the interchange configurations described for the 2029 Build Conditions would also be in place for the 2049 Build Conditions.

Table 2.29 Year 2049 Build Conditions on State Route 99 Southbound Ramps at Olive Avenue

Year	Approach	Volume/Capacity Ratio Morning (Evening)	Average Delay(s) Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2049	Olive Avenue Westbound	0.377 (0.439)	6.7 (6.5)	A (A)
2049	State Route 99 Southbound Off-Ramp	0.427 (0.516)	14.9 (15.8)	B (C)
2049	Olive Avenue Eastbound	0.939 (0.956)	35.8 (40.6)	E (E)
2049	Parkway Drive	0.388 (0.548)	10.6 (12.5)	B (B)
2049	Full Intersection	0.939 (0.956)	18.7 (19.6)	C (C)

Source: Updated Traffic Operational Analysis, September 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

The predicted 2049 volume-to-capacity ratio, average delay, and level of service for each approach and the full intersection in the Morning and Evening peak hours at the southbound ramp intersection are indicated in Table 2.29. As shown, the intersection would operate without failure into this design year.

Table 2.30 Year 2049 Build Condition on State Route 99 Northbound Ramps at Olive Avenue

Year	Approach	Volume/Capacity Ratio Morning (Evening)	Average Delay(s) Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2049	State Route 99 Northbound Off-Ramp	0.457 (0.586)	13.7 (15.1)	B (C)
2049	Olive Avenue Westbound	0.456 (0.760)	11.3 (24.3)	B (C)
2049	Olive Avenue Eastbound	0.208 (0.246)	5.0 (5.5)	A (A)
2049	Full Intersection	0.457 (0.760)	10.4 (15.7)	B (C)

Source: Updated Traffic Operational Analysis, September 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

The predicted 2049 volume-to-capacity ratio, average delay, and level of service for each approach and the full intersection in the morning and evening peak hours at the northbound ramp intersection are indicated in Table 2.30. As shown, the intersection would operate at a satisfactory level.

Permanent Impacts for Alternatives 1 and 2

Teilman Avenue Overcrossing Closure Traffic Impacts

The permanent closure of the Teilman Avenue Overcrossing could permanently impact local circulation for businesses, public facilities, and the Pacific Avenue community next to the overcrossing. Direct access between State Route 99 and Belmont Memorial Park, Stephens and Bean Funeral Chapel and Flower Shop, Fresno Humane Animal Services, Pershing Continuation High School, and Pathway Community Day School will no longer be available. The nearest exit from State Route 99 is Olive Avenue and would require 2 miles of surface street travel. Alternatively, access from State Route 180 could be achieved from the Marks Avenue Interchange, requiring 1.65 miles of surface street travel. The most immediate alternate route for those living in the Pacific Avenue Neighborhood involves a 1-mile detour that uses Fruit Avenue, making pedestrian access to the cemetery and schools less feasible. However, eliminating this overcrossing could potentially reduce the amount of traffic that this community currently experiences and could increase the Pacific Avenue community's aesthetic character and improve its level of safety.

Belmont Avenue Closure Traffic Impacts

The permanent closure of the Belmont Avenue Interchange could permanently impact local circulation for businesses, public facilities, and community members. Belmont Avenue may experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets may increase. The reduction in direct access to the businesses lining Belmont Avenue may have a significant effect on business vitality. Several gas stations, motels, and food establishments rely on direct access from the nearest freeway and primarily target traveling clientele. These businesses include Motel 6, Chevron, Valero, Sinclair, Triangle Drive-in, Travel Inn and Suites, Welcome Inn, Palace Inn, Villa Motel, Valley Inn, Sierra Inn, and Parkway Inn. However, these businesses will still be accessible via Olive Avenue and Parkway Drive, adding up to 0.5 mile of travel time. Also, two major employers that frequently use this interchange are Producer's Dairy Foods and La Tapatia Tortilleria. This is an industrial facility that receives a large amount of truck traffic for shipments on a regular basis.

Therefore, surface streets may experience an increase in truck circulation because of these ramp closures. Trucks may access and depart the area in several ways postconstruction. One way would be to travel eastbound on Belmont Avenue and merge onto State Route 180 at the Fulton Avenue Interchange. Two other options involve using Weber Avenue to reach the State Route 99 Interchanges at either Olive Avenue or Clinton Avenue. This additional traffic on any of these surface streets could intensify wear and damage on these local roadways and impact the vitality of these facilities. Lastly, access to public facilities, cemeteries, chapels, and schools in the area

will be less direct from State Route 99, and interchanges further from Belmont Avenue may have to be used.

Olive Avenue Interchange Traffic Impacts

The interchange improvements at Olive Avenue will likely have permanent circulation and access impacts on businesses, public facilities, and community members in the area. Both Build Alternatives will shift the Parkway Drive connection to Olive Avenue westward. This change would provide permanent changes in access for PB Liquor and Park View Mobile Home Park. Additionally, as the Olive Avenue Interchange may have traffic redirected from the McKinley Avenue and Belmont Avenue Interchanges, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. This increased amount of traffic has the potential to boost revenue for businesses, especially for the businesses that provide convenience services to traveling clientele. There is also a possibility that the increase in traffic volumes could attract future businesses to the area.

Minor access changes may also be made to PB Liquor Store to accommodate traffic flow between Parkway Drive, Crystal Avenue, and Olive Avenue. The Olive Avenue Interchange, including ramps and bridge, would be closed for approximately 10 months starting September 2024. There would be no physical impact to PB Liquor, and Parkway Drive would remain open throughout construction.

Traffic Circulation Impacts for Alternatives 1 and 2

The following improvements would be made to both Build Alternatives to improve circulation in the project area:

- Addition of auxiliary lanes to northbound and southbound State Route 99 from the State Route 180 junction to Olive Avenue and from Olive Avenue to Clinton Avenue.
- Addition of ramp metering for each ramp within the project boundaries.
- Improved intersection configuration at State Route 99 and Olive Avenue.

Alternative 1

Traffic volumes could increase at the McKinley Avenue Partial Interchange if the ramps remain open. Increased traffic levels at Olive Avenue Interchange may influence some residents to access southbound State Route 99 from McKinley Avenue or exit onto McKinley Avenue during peak congestion times.

This alternative would replace the existing interchange with two roundabouts while diverting traffic on Parkway Drive to Crystal Avenue. These roundabouts would have four legs each and would be yield-controlled. Volume to capacity ratios would vary between 0.851 and 0.656 in 2029 and between 0.939 and 0.760 in 2049. The peak hour level of service for this

alternative would range from A to C in 2029 and 2049, as shown below in Table 2.30.

The predicted 2029 volume-to-capacity ratio, average delay, and level of service for each approach and the full intersection in the morning and evening peak hours are indicated in Table 2.31.

Table 2.31 2029 and 2049 Traffic Operations (Alternative 1)

Year	Intersection	Volume/Capacity Ratio Morning (Evening)	Average Delay(s) Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	Olive Avenue and State Route 99 Southbound Ramps	0.851 (0.752)	14.9 (12.0)	B (B)
2029	Olive Avenue and State Route 99 Northbound Ramps	0.421 (0.656)	9.9 (13.4)	A (B)
2049	Olive Avenue and State Route 99 Southbound Ramps	0.939 (0.956)	18.7 (19.6)	C (C)
2049	Olive Avenue and State Route 99 Northbound Ramps	0.457 (0.760)	10.4 (15.7)	B (C)

Source: Updated Traffic Operational Analysis, September 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

Removing ramps at the Belmont Avenue and McKinley Avenue Interchanges would balance the travel load of the mainline traffic on State Route 99 and provide adequate spacing for weaving between interchanges.

However, the permanent closure of the McKinley Avenue Partial Interchange could permanently impact local circulation for businesses, public facilities, and community members; this could potentially restrict access and complicate circulation to Addams Elementary School. Alternate routes may add to travel time, and traffic conditions on the other surface streets surrounding the school may become congested, especially during school pick-up and drop-off times. The UPS Customer Center is a major employer that also frequently uses this interchange. Delivery vehicles, trucks, and clientele may access and depart the area in several ways postconstruction, either via northbound Motel Drive to the Clinton Avenue Interchange or southbound Motel Drive to the Olive Avenue Interchange. These interchanges lie about 1 mile away from the UPS customer center.

Alternative 2

This alternative would involve two directions of traffic on Olive Avenue crossing to the opposite side on both sides of the State Route 99 Overcrossing. The crossover intersections would be controlled by two-phased

traffic signals, the on-ramps would flow freely, and the off-ramps would be yield-controlled. Volume to capacity ratios would vary between 0.45 and 0.59 in 2029 and between 0.48 and 0.60 in 2049. Peak hour level of service for this alternative would range from A to B in 2029 and remain at Level of Service B in 2049, as shown below in Table 2.32.

Table 2.32 2029 and 2049 Traffic Operations (Alternative 2)

Year	Intersection	Volume/Capacity Ratio Morning (Evening)	Highway Capacity Manual Morning (Evening)	Peak Hour Level of Service Morning (Evening)
2029	Olive Avenue and State Route 99 Southbound Ramps	0.45 (0.50)	9.5 (10.6)	A (B)
2029	Olive Avenue and State Route 99 Northbound Ramps	0.56 (0.59)	12.4 (12.6)	B (B)
2049	Olive Avenue and State Route 99 Southbound Ramps	0.48 (0.53)	10.2 (11.3)	B (B)
2049	Olive Avenue and State Route 99 Northbound Ramps	0.57 (0.60)	12.4 (12.6)	B (B)

Source: Updated Traffic Operational Analysis, January 2020. The Traffic Operations were modeled using San Joaquin Valley Model Improvement Plan, and Phase 2 model traffic growth was generated by the Fresno Council of Governments (Fresno Council of Governments).

Belmont and McKinley Avenue Ramp Removal Traffic Impacts

Removing ramps at the Belmont Avenue and McKinley Avenue Interchanges would balance the travel load of the mainline traffic on State Route 99 and provide adequate spacing for weaving between interchanges.

However, the permanent closure of the McKinley Avenue Partial Interchange could permanently impact local circulation for businesses, public facilities, and community members. This could potentially restrict access and complicate circulation to Addams Elementary School. Alternate routes may add to travel time, and traffic conditions on the other surface streets surrounding the school may become congested, especially during school pick-up and drop-off times. The UPS Customer Center is a major employer that also frequently uses this interchange. Delivery vehicles, trucks, and clientele may access and depart the area in several ways postconstruction, either via northbound Motel Drive to the Clinton Avenue Interchange or southbound Motel Drive to the Olive Avenue Interchange. These interchanges lie about 1 mile away from the UPS customer center.

Temporary Impacts for Alternatives 1 and 2

El Dorado Street Overcrossing/Nielson Avenue Undercrossing Alterations

It is unlikely that the project would have significant construction-related impacts on the community facilities in the Edison neighborhood south of State Route 180 and west of State Route 99. This is because they are all located within the Edison Neighborhood on the west side of State Route 99, except for the U.S Postal Service office, Fresno County Human Services, and Kings View Community Services, which lie east of State Route 99. There are no residential living facilities on the east side of State Route 99, so community members would not be using the El Dorado Street Overcrossing to access the parks, churches, or schools in this area. To access facilities east of State Route 99, another overcrossing will remain open during construction about 0.45 mile south of the El Dorado Street Overcrossing called Whitesbridge Avenue Overcrossing. Pedestrian access to facilities east of the El Dorado Street Overcrossing may not be possible for those with limited mobility during this time. Fink-White Park and the Sequoia Courts Boys and Girls Club lie next to the El Dorado Street Overcrossing. Air quality impacts from the construction equipment may affect the use of the park and club. Noise impacts could also affect Columbia Elementary School and Big Picture High School. By impacting pedestrian access to the park and schools, communication between children and/or adults may be dampened for recreational, learning, and supervisory purposes.

Alterations to the Nielsen Avenue Undercrossing could cause temporary pedestrian access limitations to Pathway Community Day School, Pershing Continuation High School, and Fresno Humane Animal Services.

Alternate Routes

Alternate routes include the temporary pedestrian bridges at El Dorado Street, Belmont Avenue, and Olive Avenue. These will be open and accessible throughout construction and have pedestrian access on both sides of the bridges. Parkway Drive would also be converted to a truck route between Belmont and Olive Avenues for a more direct connection to Belmont Avenue, providing alternative truck routes to avoid Olive Avenue if needed. The Parkway Drive roadway will be rebuilt but remain in its same location until it slightly bows out toward Denny's, as it approaches the Olive Avenue roundabout.

Parkway Drive will remain open throughout the project with at least one way of reversing traffic control access. Generally, the right-of-way line between State Route 99 and Parkway Drive will move 4 feet toward Parkway Drive. An increase in traffic of approximately 25 percent is expected due to the McKinley northbound off-ramp and southbound on-ramp removals. These four ramps are designed or will be designed to absorb these increases. On local streets, Marks Avenue traffic would increase about 20 percent on either side of McKinley Avenue to direct west side traffic to the Clinton or Olive

Interchanges. Hughes Avenue would incur a 42 percent increase between McKinley Avenue and Olive Avenue, but it would not experience heavy volumes. Olive Avenue would be impacted the most, and signals would be required at the Olive/Marks Avenue and Olive/Hughes Avenue intersections. The most impacted segment of Olive Avenue, between Hughes and State Route 99, is mainly businesses that would welcome the increase in traffic.

Pacific/Teilman Avenue Overcrossing Removal Impacts

Removing the Pacific/Teilman Avenue Overcrossing and the construction of the new cul-de-sacs on Pacific Avenue and Teilman Avenue will cause a reduction in access, circulation, and street parking for Stephens and Bean Funeral Chapel and Flower Shop, Belmont Memorial Park, and homes along Pacific Avenue. Equipment may be stored in this area, and construction activities could temporarily reduce accessibility to these locations. Alternative routes would also need to be established during construction, as the overcrossing would no longer be available for use.

Belmont Avenue Overcrossing Removal Impacts

Movement may be restricted during the removal of the interchange ramps at Belmont Avenue and the modification of the Belmont Avenue Overcrossing. Traffic may be controlled, and detours may be used to redirect traffic, leading to increased travel times and higher levels of surrounding street traffic. These restrictions may temporarily reduce access and circulation levels to nearby businesses. The businesses most likely to receive these impacts include Motel 6, Chevron, Valero, Triangle Drive In, Parkway Liquor, and Sinclair. This restriction may temporarily reduce access to West Park Baptist Church, Mountain View Cemetery, Beth Israel Cemetery, Masis Ararat Armenian Cemetery, Fresno County Cemetery, Holy Cross Catholic Cemetery, the Fresno Pet Cemetery, the Chapel of the Light, Veterans of Foreign Affairs, and the Fresno Economic Opportunities Commission Head Start Ramacher School. Detours may be required to access facilities that community members regularly visit. Families who live east of State Route 99 would need to take an alternate route to reach the Fresno Economic Opportunities Commission Head Start Ramacher School and would likely use the Olive Avenue Overcrossing to do so, which could add 1 to 2 miles in travel distance.

Olive Avenue Interchange Construction Impacts

During the construction of the Olive Avenue Interchange, access and circulation may be restricted partially or completely to businesses, public facilities, and community facilities in the area. Construction activities would likely extend onto Olive Avenue until the nearest intersection, resulting in additional detours, increased travel times, and higher levels of street traffic. Access may be reduced for Kentucky Fried Chicken, Ambassador Inn and Suites, McDonald's, PB Liquor, Garrafa, Al's Café, JP Air Conditioning, Seiberts' Oil Co. Incorporated, Choice Food Market, Family Dollar, D&S Electronic Recycling, Rally's, Donut Queen, Bruce's Auto Supply, Denny's,

Chevron, Parkside Inn, Taco Bell, Lyle's Construction, and Jack in the Box. Public and community facilities that may be affected are Roeding Park, the California Department of Transportation, the Department of Motor Vehicles, and the Central Valley Yemen Association. Belmont Avenue or McKinley Avenue could be used during construction to detour traffic, both of which are 0.5 mile away from Olive Avenue. Clinton Avenue could also be used, which is 1 mile away from Olive Avenue. These detours would add about 1 to 2 miles in travel distance for community members and business clientele.

McKinley Avenue Construction Impacts

Temporary reductions in circulation may occur on McKinley Avenue during the widening of the State Route 99 Overpass and elimination of the on-ramps and off-ramps at this location; this could potentially restrict access and complicate circulation to Addams Elementary School. Detours may add to travel time, and traffic conditions on the other surface streets surrounding the school may become congested during pick-up and drop-off times. Additionally, construction at this location could cause temporary reductions in access for nearby businesses and public facilities, including AR Transmission, Safeguard Mini Storage, UPS Customer Center, West Coast Enterprises Truck and Trailer Sales Inc, Coutrell Sales and Parts, Ray Brothers Transportation, X.J.D Auto Paint and Touch Up, Joe's Tires, Chuy's Tacos Y Taquisas, Rosenbalm Rockery, Bochasanwasi Akshar Purushottam Shri Swaminarayan Mandir temple and the Kinetic Sports Academy. These restrictions may result in the use of Clinton Avenue or Olive Avenue to access the facilities.

Railroad Impacts

The project proposes to replace and realign the existing Union Pacific Railroad and tracks to the south of the existing Kerman Branch Underpass bridge to meet the project's required horizontal clearances. The Kerman Branch Underpass (Bridge Number 42-190) is a simple-span plate girder grade separation structure crossing over State Route 99. This railroad bridge was built in 1956 and is 136.20 feet long. The existing minimum vertical clearance at this bridge is 15.75 feet, with a horizontal clearance of 50.50 feet. The Union Pacific Railroad owns the railroad facility, and the San Joaquin Valley Railroad conducts train operations on the tracks. The railroad's main traffic sources are agricultural products and construction materials. Per the Federal Railroad Administration Crossing Inventory Form, the number of daily train movements passing through this bridge is two per weekday (one train into downtown and one out).

The project proposes to replace the existing Kerman Branch Underpass to meet the project's required horizontal clearance. The existing State Route 99 mainline profile will be lowered at this location to meet the required standard vertical clearance. Steel through plate girders with bolted bottom flanges is

currently being considered for the superstructure type. Construction of the proposed bridge will be expected to minimize disruptions to train operations.

Regarding railroad operations, the Caltrans project team will coordinate with the railroad owner and operator throughout project development. Union Pacific Railroad will serve as the lead agency for reviews of this project, and San Joaquin Valley Railroad will also be involved in the process. A Construction and Maintenance Agreement will be required between Caltrans and Union Pacific Railroad.

No-Build Alternative

The No-Build Alternative would not impact transportation or pedestrian facilities within the socioeconomic study area. However, the existing roadway within the project limits would continue to deteriorate and not meet Caltrans' current standards.

Avoidance, Minimization, and/or Mitigation Measures

Please refer to the Avoidance and Minimization Measures in Chapter 2, Section 2.1.2, *Community Character and Cohesion*, for more details on the temporary pedestrian bridges that will help alleviate traffic impacts and provide temporary pedestrian facilities due to construction.

TRA-1: The project would convert Parkway Drive to a truck route between Belmont and Olive Avenues and re-routing Parkway Drive for a more direct connection to Belmont Avenue.

TRA-2: Per the District Office of Traffic Operations, three lanes of traffic in each direction on the State Route 99 mainline will be maintained except as permitted by the lane closure requirement chart. A decision to use a single phase or multiple phases on bridge constructions is yet to be determined by the project team.

Elements of this plan may include the following:

- Public Awareness Campaign
- Highway Advisory Radio
- Portable changeable message signs
- Temporary loop sensor/signals
- Bus or Shuttle Service
- Construction Zone Enhanced Enforcement Program

For this project, the Traffic Management Plan estimates that the number of working days requiring lane, shoulder, ramp, freeway, and highway closures is 900, and a total of 1,280 working days to build the project. Brochures,

mailers, traffic radio announcements, ground-mounted detour signs, and media alerts will be provided to the public.

TRA-3: Local traffic and non-motorists' access to east and west of State Route 99 is also being planned. The installation of safety barrier systems and construction area signs will help to direct traffic and provide protection to the traveling public and construction personnel.

TRA-4: Other roadway features such as but not limited to roadside signs, overhead signs, electrical systems, Intelligent Traffic System elements, drainage systems, pumping plant storage boxes, soundwalls, and irrigation systems will be built in sequential stages. Implementing Early Work Scope to shorten the project construction window may affect the sequencing of the proposed construction staging.

TRA-5: A Traffic Management Plan would be developed and implemented before and during project construction to notify the public and minimize any potential temporary impacts to traffic circulation on the mainline and/or local streets and railroads in and near the project area.

TRA-6: The construction engineer is responsible for confirming that traffic moves through the work zone according to traffic control plans. If a change order modifies the plans, construction engineers should take the steps necessary to verify that the modified plans are adequate to provide the highest level of traffic safety and service consistent with the conditions actually encountered. All traffic control devices should conform to Section 12, Temporary Traffic Control, of the Caltrans' Standard Specifications; for their application, review the current California Manual on Uniform Traffic Control Devices.

2.1.9 Visual/Aesthetics

Regulatory Setting

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

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the

state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” (CA Public Resources Code Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought-resistant landscaping and recycled water when feasible and to incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

A Visual Impact Assessment (Moderate Study Level) was completed on October 7, 2020, to assess the potential visual impacts caused by the proposed project and recommend measures to lessen any detrimental impacts that are identified. State Route 99 is functionally classified as a principal arterial in the State of California, which runs in the north and south directions with a high percentage of truck traffic. It is part of the National Highway System as a Strategic Highway Network route under the Federal-aid Surface Transportation Program. State Route 99 is also on the National Truck Network for Surface Transportation Assistance Act trucks. Within the project limits, State Route 99 is an urban six-lane freeway divided by a modified Type 50 concrete median barrier. The mainline roadway generally consists of three 12-foot Portland Cement Concrete lanes with asphalt concrete overlays, a 10-foot asphalt concrete outside shoulder, and varying asphalt concrete inside shoulder widths of 5 feet to 7 feet. The posted speed limit is 65 miles per hour.

The proposed project is in the San Joaquin Valley area of California's Central Valley on State Route 99 in the City of Fresno from 0.2 mile south of the El Dorado Street Overcrossing to Clinton Avenue. The project crosses the densely developed city near downtown Fresno. Nearby land uses include commercial, industrial, residential, recreational, and institutional.

Much of the regional landscape consists of ornamental trees and shrubs. A notable element of the landform is the large eucalyptus trees that can regularly be viewed along the freeway right-of-way. Eucalyptus and oleander trees are an iconic feature of State Route 99. Sound walls are also prevalent along this portion of the highway.

Visual Assessment and Key Views

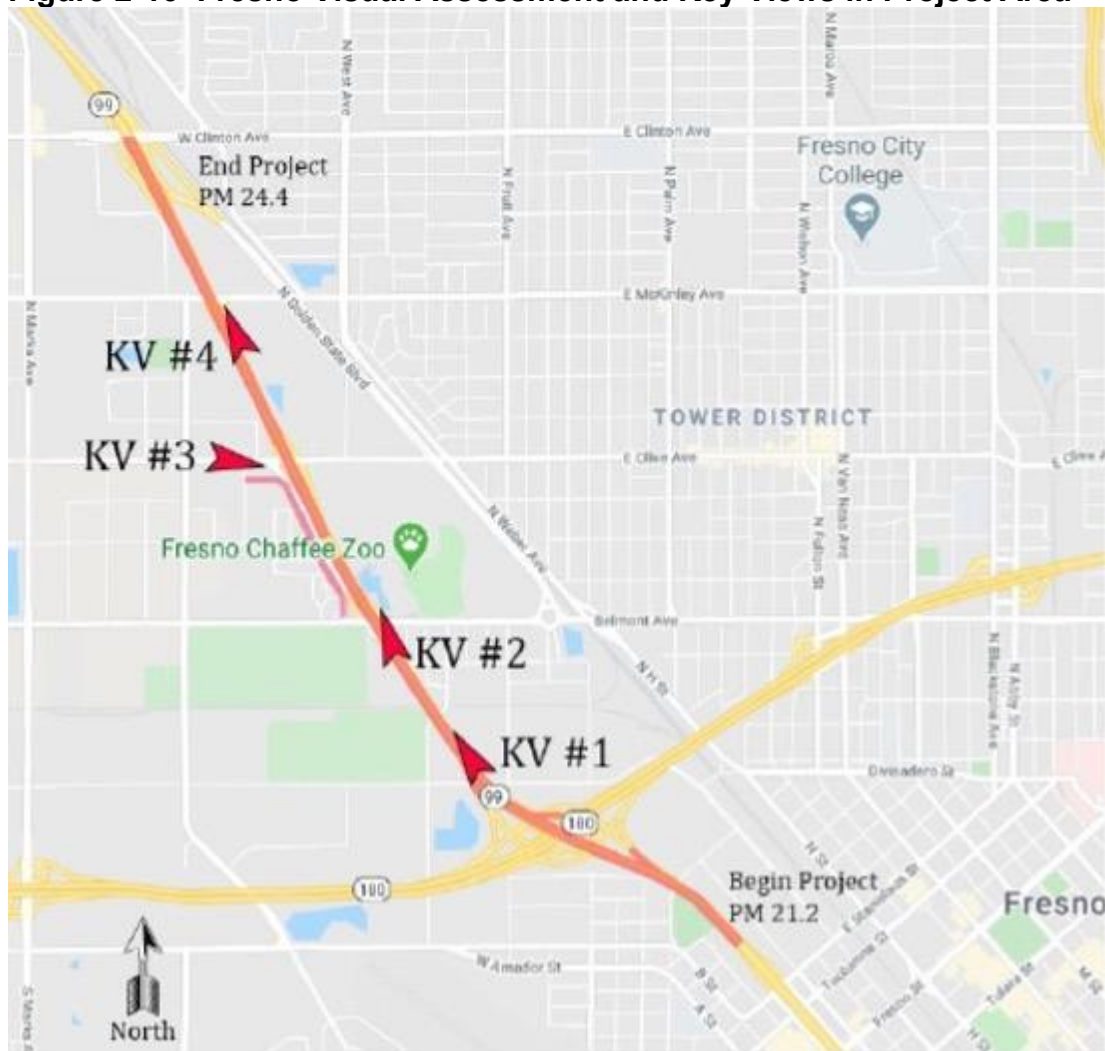
Because it is not feasible to analyze all the views in which the proposed project would be seen, four key views were selected that most clearly demonstrate the changes in the project's visual resources and represent the viewer groups that have the highest potential to be affected by the project. Each of the key views was evaluated independently of the other key views. Visual resources in each key view were assessed based on an objective set of defined criteria for visual character and visual quality. These criteria were assessed before and after construction. The degree of change was then assigned a value, ranging from low resource change to high resource change.

A methodology for assessing visual attributes of transportation project corridors is to divide the corridor into a series of outdoor rooms or visual assessment units that have common visual characteristics. Each visual assessment unit has its own visual character and visual quality. It is typically defined by the limits of a viewshed. For this project, the following visual assessment unit and its associated key views have been identified:

- Key View 1: Post Mile 22.2 (Northbound) near Teilman Avenue looking north
- Key View 2: Post Mile 22.8 (Northbound) at Roeding Park looking north
- Key View 3: Post Mile 23.3 (Southbound) at Olive Avenue looking east
- Key View 4: Post Mile 23.9 (Southbound) at McKinley Avenue looking south

The map shown in Figure 2-16 illustrates the visual assessment unit and key views for the project. Each of these key views was analyzed in detail in the Visual Impact Assessment. The key views were analyzed using the criteria for Visual Resource Change as described in the following sections.

Figure 2-16 Fresno Visual Assessment and Key Views in Project Area



Visual Resources and Resource Change

Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the project corridor before and after project construction. Resource change is one of the two major variables in the equation that determine visual impacts, and the other is viewer response.

The change likely to be caused by the project is assessed according to the visual attributes of objects (pattern elements) and the relationships between those objects (pattern character) in the visual environment before and after the project is built. A six-point scale for visual character consisting of a rating system from negative 3 (indicating incompatibility) to positive 3 (indicating compatibility) is used to reflect the compatibility of project features after construction. The amount of change (absolute value) between the existing and proposed visual environment at each key view is determined, then the degree of change is assigned a value that ranges from low to high.

Visual character includes attributes, such as form, line, color, and texture, and is used to describe, not evaluate; that is, these attributes are neither considered good nor bad. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. The following attributes were considered for this project:

- Form—Visual mass or shape
- Line—Edges or linear definition
- Color—Reflective brightness (light, dark) and hue (red, green)
- Texture—Surface coarseness
- Scale—Apparent size as it relates to the surroundings
- Diversity—A variety of visual patterns
- Continuity—Uninterrupted flow of form, line, color, or textural pattern
- Dominance—Position, size, or contrast

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of visual quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur because of the project. The three criteria for evaluating visual quality are defined below:

- **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Viewers and Viewer Response

The population affected by the project is composed of viewers. Viewers are people whose views of the landscape may be altered by the proposed project—either because the landscape itself has changed or their perception of the landscape has changed. Viewers, or more specifically, the response viewers have to changes in their visual environment, are one of two variables that determine the extent of visual impacts that will be caused by the construction and operation of the project.

Viewer Exposure and Viewer Sensitivity

Viewer exposure is a measure of the viewer's ability to see a particular object. It has three attributes:

- **Location** relates to the position of the viewer in relation to the object being viewed. The closer the viewer is to the object, the more exposure.
- **Quantity** refers to how many people see the object. The more people can see an object or the greater frequency an object is seen, the more exposure the object has to viewers.
- **Duration** refers to how long a viewer can keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Viewer sensitivity is a measure of the viewer's recognition of a specific object. It has three attributes:

- **Activity** relates to the preoccupation of viewers. Are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings? The more they observe their surroundings, the more sensitivity viewers will have to changes to visual resources.
- **Awareness** relates to the focus of view. Is the focus wide and the view general, or is the focus narrow and the view specific? The more specific the awareness, the more sensitive a viewer is to change.
- **Local values** and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, viewers will likely be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual changes.

Definition of Visual Impact Levels

Low—Low negative change to existing visual resources and low viewer response to that change. May or may not require mitigation.

Moderately Low—Low negative change to the visual resource with a moderate viewer response, or moderate negative change to the resource with a low viewer response. The impact can be mitigated using conventional practices.

Moderate—Moderate negative change to the visual resource with moderate viewer response. The impact can be mitigated within five years using conventional practices.

Moderately High—Moderate negative visual resource change with high viewer response or high negative visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.

High—A high level of negative change to the resource or a high level of viewer response to visual change such that extraordinary architectural design and landscape treatment may not mitigate the impacts below a high level. An alternative project design may be required to avoid high negative impacts.

Environmental Consequences

Alternatives 1 and 2

Figure 2-17 Existing Teilman Avenue Overcrossing and Kerman Avenue Underpass



Key View 1

Key View 1 is located at post mile 22.2 on the northbound side of State Route 99, about 300 feet south of the Teilman Avenue Overcrossing, looking north. Removing the Teilman Avenue bridge will reduce the visual clutter between the two adjacent bridges. The new Kerman Branch Underpass will be designed with bridge aesthetics that match the corridor theme. Retaining walls will also be designed with aesthetics to match the corridor theme. The new taller concrete median barrier will reduce negative views and provide screening from oncoming headlight glare. The resulting overall change to the visual character will be moderately low. The overall change to visual quality will be low.

**Figure 2-18 Existing Condition of State Route 99 at Belmont Avenue,
Facing North at Roeding Park**



Key View 2

The second key view is located at post mile 22.8 on the northbound side of State Route 99 at Belmont Avenue, looking north at Roeding Park. The visual character in this key view is mainly defined by the adjacent Roeding Park. An existing soundwall at the top of the slope separates the freeway from the park. The existing soundwall will be replaced in kind. The new soundwall at this location, along with the new soundwall at Three Palms Mobile Home and RV Park, will be designed with a coordinated aesthetic theme. Removing the soundwall at Roeding Park/Playland will result in the removal of murals that provide a visual backdrop for the park. However, after consulting with Roeding Park and Playland management, it was decided that the murals can be replaced. There will be new planting in front of the wall to enforce the visual screening of the wall facing the freeway; this will help to reduce the visual disparity from the freeway side of the soundwall.

The new auxiliary lane will require a new retaining wall along the ramps and along the mainline. The retaining wall and ramps will also be designed with corridor theme aesthetics. The Belmont Avenue Overcrossing will be replaced at this location. The new bridge will receive aesthetic treatments consistent with the Caltrans Landscape Architecture Route 99 Corridor Aesthetics Master Plan. Removing soundwalls will directly impact neighbors of the freeway. The murals on the soundwalls at Playland will be removed. The existing soundwall at the Three Palms Mobile Home and RV Park is adjacent to a residential area. These viewers have consistent, lingering views of the soundwall. Viewer response is expected to be moderately high.

Figure 2-19 Existing Condition East of Olive Avenue on the Southbound Side of State Route 99



Key View 3

Key View 3 is located at post mile 23.3 on the southbound side of State Route 99 at Olive Avenue, looking east. There is nothing in this area with outstanding or memorable visual character or visual quality. The main design feature at Key View 3 will be the new roundabouts at the top of the interchange ramps. The new roundabouts will improve the visual character by strengthening pattern elements and pattern character. The new roundabouts will be more memorable, strengthening the visual quality. The visual resource change will be moderate, the viewer response will be moderate, and the overall visual impact will be moderate.

Figure 2-20 Existing Condition on the Northbound Side of State Route 99 at McKinley Avenue



Key View 4

There is nothing memorable or prominent in the views at Key View 4. The McKinley Avenue Interchange currently has one off-ramp in the northbound direction and no on-ramp. In the southbound direction, there is no off-ramp, but there is an on-ramp. The highway planting at this interchange is dense and healthy, providing an excellent screen for nearby land uses. These land uses are strictly business and industrial. Removing the ramps at the McKinley Avenue Interchange will only slightly affect the visual character and quality of the interchange. Removing the ramps will create an opportunity to enhance the screening effect of the vegetation on the nearby land uses. The widened bridge at McKinley Avenue will strengthen the corridor aesthetic theme by including bridge aesthetics that match other bridges in the corridor. The visual resource change will be low. The viewer response will be moderate. Table 2.33 displays a summary of visual impacts for each view below.

Table 2.33 Summary of Visual Impacts by Key View

Key View Summary	Resource Change	Viewer Response	Visual Impact
Key View 1	Moderately Low	Moderate	Moderate
Key View 2	Low	Moderately High	Moderate
Key View 3	Moderate	Moderate	Moderate
Key View 4	Low	Moderate	Moderately Low

The visual impacts of each of the four key views are summarized in Table 2.44 above. At three of the four key views, the resource change will be either low or moderately low. However, the resource change at Key View 3 (Olive Avenue) is expected to be higher (moderate); this is mainly due to the new intersection with roundabouts at the intersection of the ramps with Olive Avenue near the new Olive Avenue Bridge. The new roundabouts are

expected to result in a greater resource change than the other interchanges in the project corridor without roundabouts.

Viewer responses to the resource changes are expected to be moderate at three of the four key views. However, the viewer response at Key View 3 (Roeding Park) is expected to be higher than the other three key views; this is mainly due to the nature of viewer activity within Roeding Park. These neighbors are expected to have a high level of response to any changes to the visual environment. The viewer response rating at this location is tempered by the views of freeway users who are not as sensitive as those within the park.

The visual elements that will be most noticeable by all viewers include reconstructing all lanes and shoulders, constructing a paved median with a new concrete median barrier, constructing new auxiliary lanes, constructing new retaining walls and soundwalls, replacing bridges, and upgrading interchanges. The project is being designed with features that will offset visual impacts and that reflect the desired goals of the local State Route 99 Corridor aesthetics theme. Project features include aesthetic treatments for bridge structures, interchange ramps, retaining walls, soundwalls, roundabouts, and extended gore paving.

Visual Impacts for Both Build Alternatives

The project will require the removal of trees and shrubs that currently provide a visual screen between the freeway and adjacent land uses. Funding for replacement planting is included with the project to replace the screening effect at all interchanges and along the freeway corridor where planting is removed. All disturbed soil areas will be treated with either permanent vegetation, wood mulch, or a native or drought-tolerant erosion control seed mix to visually blend disturbed slopes with the nearby landscape and prevent soil erosion.

The overall visual impact of the proposed project is expected to be moderate to moderately low. Moderate and moderately low impacts can be mitigated using conventional practices.

In addition to the above-listed visual impacts:

- The project will not impact scenic vistas.
- The project will not impact scenic resources within a state scenic highway.
- The project will have a less than significant impact on the existing visual character of the site and its surroundings.
- The project will not create a new source of light or glare.

Visual impacts due to the contractor's operations, such as night lighting, dust, temporary structures, hauling materials, contractor yards, or detours, are not

expected to be unusual for a roadway construction area. Temporary construction visual impacts are expected to be low.

Cumulative impacts are those resulting from past, present, and reasonably foreseeable future actions, combined with the potential visual impacts of this project. It has been determined that no cumulative visual impacts are expected to occur for this project.

No-Build Alternative

The Visual Impact Assessment also considers the potential impacts of a no-Build Alternative. If the auxiliary lanes are not constructed, there will be no need for retaining walls. The existing large, mature highway planting that provides a visual screen will remain intact. If the bridges are not replaced, the visual disparity between the new bridges and the old bridges within the State Route 99 Corridor will continue.

Avoidance, Minimization, and/or Mitigation Measures

This section describes additional avoidance, minimization, and/or mitigation measures to address specific visual impacts; these will be designed and implemented with the concurrence of the District Landscape Architect.

Including aesthetic features in the project design would help generate public acceptance of the project.

VIS-1: Minimize tree removal. Remove only those trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses such as construction staging areas or temporary stormwater conveyance systems.

VIS-2: Avoid mass grading. Where feasible, avoid mass grading the project site. Avoid removal and grading areas where existing vegetation provides screening of adjacent properties.

2.1.10 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (for example, 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 those listed below.

The National Historic Preservation Act 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. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the Department went into effect for Department projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservation's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The Federal Highway Administration's responsibilities under the Programmatic Agreement have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

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

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 Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. Historical resources are defined in California Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 added the term "tribal cultural resources" to CEQA, and Assembly Bill 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 California Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources 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 California Public Resources Code Section 21083.2.

California Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans 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 before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with California Public Resources Code Section 5024 are outlined in a Memorandum of Understanding between the Department and State Historic Preservation Officer, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 Programmatic Agreement will satisfy the requirements of California Public Resources Code Section 5024.

Affected Environment

An Archaeological Study Report, Supplemental Archaeological Survey Report, Historical Resources Evaluation Report, and Historical Property Survey Report were completed for this project in May 2021.

A cultural resource records search was requested from the Southern San Joaquin Valley Information Center at California State University, Bakersfield by Caltrans on June 3, 2019 (refer to Chapter 4, Comments and Coordination). A 0.25-mile radius was requested to reflect previous inventories and recorded archaeological and historic-era sites within and adjacent to the Area of Potential Effect. Native American consultation was initiated through letters to tribal representatives on January 24, 2019 (see Chapter 4 Comments and Coordination for further details).

Area of Potential Effects

The Area of Potential Effects for the project encompasses an area that project construction may affect directly or indirectly. For this project, the Area of Potential Effects is limited to the Caltrans right-of-way, which is 160 feet wide by 6 feet deep, except for Olive Avenue and the State Route 99/180 junction, where the Area of Potential Effect expands to 320 feet wide with a maximum depth of 6 feet for the roadway between the project post mile limits. For the widening of Nelson Avenue, the footings will have a maximum depth of 250 feet.

Archeological Resources

Thirteen archaeological surveys have been conducted within the Area of Potential Effects. Another 23 surveys have been conducted within 0.25 mile of the project area.

A pedestrian archaeological field survey of the project area was conducted on June 21, 2019, by personnel from the Caltrans Central Region Environmental Office. No cultural resources were identified during the archaeological survey.

Twenty-four historic-era properties were identified within the Area of Potential Effects. The historic-era properties are comprised of ubiquitous examples of residential properties built in the Craftsman, Minimal Traditional, and Vernacular styles. Commercial buildings within the project Area of Potential Effects were built primarily in the commercial tradition. All of these properties are commonplace within the City of Fresno and throughout the San Joaquin Valley and San Joaquin County. The subject properties are not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources.

The Southern Pacific Railroad spur line between Fresno and Kerman, California, and the Houghton Canal, were assumed eligible for the purposes of this project only. The following properties were considered eligible for inclusion in the National Register of Historic Places for the purposes of this project only because the evaluation was not possible, in accordance with Section 106 PA Stipulation VIII.C.4.

- P-10-003930–The Southern Pacific/Central Pacific Railroad that crosses State Route 99 at post mile 22.42. The linear feature of the railroad was considered eligible for inclusion in the National Register of Historic Places. This resource is not state-owned.
- P-10-007097–Houghton Canal is on Nielson Avenue. It consists of an earthen- and concrete-lined canal with a possible construction date of 1891. State Route 99 sits off the ground, above the canal. The linear feature of the canal was considered eligible for inclusion in the National Register of Historic Places. This resource is not state-owned.

Roeding Park Historic District

In 2009, Roeding Park was found eligible for listing in the National Register of Historic Places as a Historic District in the Roeding Park and Fresno Chaffee Zoo Facility Master Plans Draft Environmental Impact Report (Page and Turnbull). Three years later, the Historic Architectural Survey Report Final: Merced to Fresno Section High-Speed Train Project Environmental Impact Report/Environmental Impact Statement (AECOM 2012) also evaluated the eligibility of Roeding Park. This study agreed with the eligibility and extended the period of significance to include Storyland and Playland.

The Roeding Park Historic District contains 29 contributing resources, including Playland, constructed in 1955, and Storyland in 1962. The property is eligible under criteria A and C, and the period of significance is 1903 to 1962. The Roeding Park Historic American Landscapes Survey documentation completed in 2010 by PGAdesign Landscape Architects did

not include Playland and Storyland because the 2009 eligibility finding did not include those areas as contributing resources.

The approximately 1,870-foot long soundwall is adjacent to the Roeding Park western boundary extending behind the park maintenance yard, Storyland, and Lake Washington. The Playland train track is parallel to the soundwall as it travels around the lake for approximately 750 feet. The railroad track will not need to be moved for the project.

Environmental Consequences

Cultural Impacts for Both Build Alternatives

The pedestrian survey for built environment resources resulted in 24 historic-era resources being identified within the project's Area of Potential Effects (Brady 2020). All 24 resources were formally evaluated under the criteria of the National Register of Historic Places. These properties were also evaluated in accordance with Section 15064.5 (a)(2) - (c) of the California Environmental Quality Act (CEQA) Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code. These properties were determined not eligible for the National Register of Historic Places or the California Register of Historical Resources under any qualifying criteria.

The State Historic Preservation Officer concurred in a letter dated January 29, 2021. Please see Appendix F, State Historic Preservation Officer Letters. Two additional historic-era resources, the Kerman Branch Spur Line of the Southern Pacific Railroad and the Houghton Canal, are assumed eligible for the National Register of Historic Places under Criterion A for the purposes of the project only.

Caltrans Section 106 Coordinator David Price in the Cultural Studies Office of the Division of Environmental Analysis, Sacramento, California, approved the assumption of eligibility for the purposes of the project only in an email dated February 6, 2020. Caltrans, in applying the criteria of adverse effect, proposed a Finding of No Adverse Effect is appropriate and was seeking the State Historic Preservation Officer's concurrence in this finding pursuant to Section 106 PA Stipulation X.B.2(a). Project activities will be completed in a manner that will ensure that none of the character-defining features of the two historic properties will be adversely affected.

Historic Architectural Resources for both alternatives

The Historical Resources Evaluation Report identified 24 historic-era properties within the Area of Potential Effects. Two of the properties, Southern Pacific/Central Pacific Railroad (Kerman Branch Spur Line) and the Houghton Canal, were assumed eligible for the purposes of this project only from the National Register of Historic Places. Project activities will minimally impact the two historic properties (the Kerman Branch Spur Line and the Houghton Canal).

Kerman Branch Spur Line Impacts

The removal of the Kerman Branch Underpass (railroad bridge) and replacement with a contemporary one will minimally impact the spur line physically. The total length of the spur line is over 71,438 linear feet (approximately 13.73 miles). Eight hundred feet of the line, which includes a small portion of the original alignment and the underpass, will impact less than 1 percent of the total length of this historic property.

Replacing the Kerman Branch Underpass at post mile 22.43 and realigning a small portion of the tracks (approximately 300 feet on either side of the railroad bridge) will not alter the original function of the spur line (carrying rail cars over the railroad line). Furthermore, the bridge replacement will not change the character of the Kerman Branch Spur Line or its physical features with the property's setting that contributes to this historic property.

Houghton Canal Impacts

The widening of the Nielsen Avenue Undercrossing (Bridge Number 42 0188) at post mile 23.13 will have a minimal impact on this historic property. The bridge was originally built in 1956, after the period of significance for the Houghton Canal. The bridge columns for this bridge were placed on the west embankment of the Houghton Canal; however, installing concrete columns did not impact the canal's ability to transport irrigation water.

The bridge will be widened, thus requiring the placement of additional columns in the gunite-lined embankments of Houghton Canal. The portion of the canal within the project Area of Potential Effect amounts to approximately 850 linear feet. The Houghton Canal is 83,107 feet long (15.74 miles; Willison 1980). The total area of the canal within the project Area of Potential Effect is less than one percent. Adding new columns on the south embankment of Houghton Canal will minimally reduce the historical integrity of the setting and feeling at this location. The canal retains good historic integrity in all seven aspects.

The expansion of the bridge will minimally add to the existing visual and audible elements that have existed at this location since the construction of the Nielsen Avenue Undercrossing over the Houghton Canal in 1956. The expansion of the Nielsen Avenue Undercrossing will not change the character of this historic property's use or physical features at post mile 23.13. The property's setting that contributes to its significance will be minimally changed. The total area of the canal to be impacted by construction-related activities is less than one percent.

Caltrans requested concurrence from the State Historic Preservation Office for a No Adverse Effect without Standard Conditions at the end of December 2021. A request for concurrence was sent on February 11, 2022. The Finding of No Adverse Effect was provided on May 18, 2022. Caltrans has applied the Criteria of Adverse Effect as defined in 36 CFR 800.5(a)(1) and has

determined that the Undertaking will not adversely affect historic properties. While the project will minimally affect both resources, it will be minor effects on the two linear features.

Roeding Park Soundwall

Based on the review of the previous studies, the soundwall is not a contributing feature of the Roeding Park Historic District. The replacement of the soundwall will not affect the eligibility of Storyland and Playland, two contributing resources to the Roeding Park Historic District. Please see Appendix A, Section 4(f) for additional details. Removing the soundwall will impact only architectural or engineering resources that are exempt from evaluation.

Section 4(f) Resources

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity. However, this project will not “use” those properties, as defined by Section 4(f). Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details.

Archeological Resources for Both Alternatives

There are no known prehistoric or historic archeological resources within the Build Alternatives. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner should be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendant. At this time, the person who discovers the remains will contact Mandy Marine from the District 6 Environmental Branch so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of the Public Resources Code Section 5097.98 are to be followed as applicable.

No-Build Alternative

The no-Build Alternative would not impact cultural resources or historical resources within the project area.

Avoidance, Minimization, and/or Mitigation Measures

CR-1: A principal architectural historian would review construction plans as developed and monitor construction activities associated with the two properties.

CR-2: The State Historic Preservation Officer would be notified immediately if any significant changes are made to the construction plans or during construction activities that have the potential to adversely impact the properties or any of its contributors.

2.2 Physical Environment

2.2.1 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements

Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the U.S. from any point source unlawful unless the discharge complies with a National Pollutant Discharge Elimination System permit. A point source is any discrete conveyance such as a pipe or a human-made ditch. This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the National Pollutant Discharge Elimination System permit scheme. The following are important Clean Water Act sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request, which is discussed later in this document.
- Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (Municipal Separate Storm Sewer Systems).

- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers’ Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers’ decision to approve is based on compliance with the U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (40 Code of Federal Regulations Part 230) and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into waters of the U.S. only if there is no practicable alternative that would have less adverse effects.

The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have lesser effects on the waters of the U.S. and not have any other significant adverse environmental consequences. According to the guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to the waters of the U.S. The U.S. Environmental Protection Agency defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.” In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 Code of Federal Regulations 320.4. A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements

Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act and regulates discharges to the waters of the state. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable Regional Water Quality Control Boards Basin Plan. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use.

The State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (National Pollutant Discharge Elimination System permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total maximum daily loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, total maximum daily loads, and National Pollutant Discharge Elimination System permits. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water

resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems. A Municipal Separate Storm Sewer System is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as an owner/operator of a Municipal Separate Storm Sewer System under federal regulations. Caltrans’ Municipal Separate Storm Sewer System permit covers all rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues National Pollutant Discharge Elimination System permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department’s Municipal Separate Storm Sewer System Permit, Order Number 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order Number 2014-0006-EXEC (effective January 17, 2014), Order Number 2014-0077-DWQ (effective May 20, 2014), and Order Number 2015-0036-EXEC (conformed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit;
2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges; and
3. Caltrans’ stormwater discharges must meet water quality standards through the implementation of permanent and temporary (construction) Best Management Practices, to the maximum extent practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The Stormwater Management Plan assigns responsibilities within the Department for implementing stormwater management procedures and practices, training, public education and participation, monitoring and research, program evaluation, and reporting

activities. The Stormwater Management Plan describes the minimum procedures and practices the Department uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest Stormwater Management Plan to address stormwater runoff.

Construction General Permit

Construction General Permit, Order Number 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order Number 2010-0014-DWQ (effective February 14, 2011) and Order Number 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans, to implement sediment, erosion, and pollution prevention control measures, and to obtain coverage under the Construction General Permit.

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

Section 401 Permitting

Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to waters of the U.S. must obtain a 401 Certification, which certifies that the project will comply with state water quality standards. The most common federal permits triggering 401 Certification are Clean Water Act Section 404 permits issued by the U.S.

Army Corps of Engineers. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board, dependent on the project location, and are required before the U.S. Army Corps of Engineers issues a 404 permit.

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

Affected Environment

A Water Quality Report was completed on August 13, 2020. The project area is part of the Fresno Hydrologic Area (551.30), which is part of the South Valley Floor Hydrologic Unit in the Tulare Lake Basin. The Dry Creek Canal carries irrigation deliveries from the Friant-Kern Canal. Dry Creek Canal also carries urban stormwater runoff and surface waters from upgradient ephemeral streams.

The Fresno Irrigation District operates and controls the water distribution to the municipal, industrial and agricultural water users through these irrigation canals in Fresno County. Waters of Dry Creek Canal are periodically monitored by the Fresno Irrigation District to ensure water quality standards are acceptable within the county limits.

The Central Valley adopted a Water Quality Control Plan for the Tulare Lake Basin, Third Edition, revised May 2018 (hereinafter Basin Plan), that designates beneficial uses in Section 2, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

The Basin Plan identifies beneficial uses of valley floor waters, such as the Dry Creek Canal, as municipal and domestic, agricultural, industrial service, and industrial process supply; water contact and noncontact water recreation; warm freshwater, wildlife, and rare, threatened, or endangered species habitat; and groundwater recharge.

Area groundwater is part of a regional aquifer, which has been designated by the U.S. Environmental Protection Agency as a sole source aquifer. The Basin Plan identifies existing and potential beneficial uses of area groundwater as domestic, industrial, and agricultural supply.

Fresno Irrigation District

Two reinforced concrete culverts owned by the Fresno Irrigation District had been identified. The two culverts cross State Route 99. A 36-inch reinforced concrete pipe transports water from the Fanning Ditch across State Route 99 and State Route 180 at South Thorne Avenue. The reinforced concrete pipe culvert is expected to be in good condition because it was replaced in 1996. The other culvert is a 30-inch reinforced concrete pipe siphon located about 600 feet south of Olive Avenue. This reinforced concrete pipe is more than 60 years old and is in poor condition. The pipe crosses State Route 99 and runs next to the northbound Olive Avenue off-ramp; it crosses Olive Avenue in front of the Caltrans District 6 office. It is recommended to replace the portion of culverts that cross State Route 99. There is a possibility that the portion of culverts that cross Olive Avenue need to be replaced as well. Coordination with the Fresno Irrigation District is needed to determine their specific needs. Caltrans is expected to pay for the replacement of the culvert across State Route 99.

Environmental Consequences

Water Quality for Both Build Alternatives

The modification of the existing interchanges and other project activities are not expected to require major realignments on canals, which could cause long-term impacts on water quality in the vicinity of the proposed project limits. Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation via storm runoff or mechanical equipment.

Stormwater

The project area is in the urbanized area of the City of Fresno, which operates under the General Permit for Discharges from the Municipal Separate Storm Sewer System.

Per the National Pollutant Discharge Elimination System Stormwater Program, the project will be required to comply with existing regulatory requirements to prepare a Stormwater Pollution Prevention Plan designed to control erosion and the loss of topsoil to the extent practicable using Best Management Practices that the Regional Water Quality Control Board has deemed effective in controlling erosion, sedimentation, and runoff during construction activities. The specific controls are subject to review and approval by the Regional Water Quality Control Board and are an existing regulatory requirement.

There are several Caltrans drainage basins within the project limits; one is at the Clinton Interchange, and six others are in the vicinity of the State Route

99 and State Route 180 junction. These basins can handle the additional freeway runoff. However, the capacity of the basins should not be decreased with the widening of the freeway. Basins 1 and 2 receive the runoff of the area between the southern limits of the project at the State Route 99 and State Route 180 interchange. Preliminary design plans indicate that Basin 1 may be affected by the widening. To protect the hydraulic capacity of the basin, there may be a need to shave the basin sides slopes and build a concrete barrier (about 500 feet) along the northbound lanes between the freeway and the basin. Otherwise, an alternative would be to buy right-of-way for a new basin. If this occurs, an additional environmental analysis will be required for a new basin.

Pumping Plants

Preliminary plans indicate that two of the three existing pumping plants within the project limits, Kerman Branch Pump and Olive Avenue Pump, will be impacted by the project, so new pumping plants will be required, and current design criteria will be used.

Fresno, State Route 99, Post Mile 22.39 (Kerman Branch)

The existing two 50-horsepower pumps were built in 1957. The designed storm intensity is designed for a 10-year storm event; the drainage area is 17.5 acres; the combined flow rate is 19.12 cubic feet per second, and the box water storage capacity is 18,600 cubic feet. These pumps drain into an outfall pipe on Nelson Avenue and discharge at the Fresno Metropolitan Flood Control Basin RR.

Preliminary hydraulic calculations indicate that the new pump drainage area is 22.19 acres, and the preliminary recommendations are:

- Replace the pumps with equivalent 50 horsepower and 4,900 gallons per minute pumping flow rate per pump.
- Construct a new box water storage with a minimum 22,000 cubic feet storage volume. A 6-cell reinforced concrete box that is 47 feet long, 10 feet wide, and 8 feet high is recommended.
- Replace the trunk pipe from the median with a new trunk pipe to the southbound shoulder, as shown in the drainage conceptual plans.
- Replace the pump outfall pipe as shown in the drainage conceptual plans.

Fresno, State Route 99, Post Mile 23.38 (Olive Avenue)

The existing two 30-horsepower pumps were built in 1955. The designed storm intensity is designed for a 10-year storm event; the drainage area is 13.64 acres; the combined flow rate is 13.90 cubic feet per second; and the box water storage capacity is 12,910 cubic feet. These pumps drain into an outfall pipe outside the Caltrans right-of-way, parallel to the northbound right-of-way fence, into the Fresno Metropolitan Flood Control Basin UU2.

Preliminary hydraulic calculations indicate that the new pump drainage area is 17.42 acres, and the preliminary recommendations are:

- Replace and upsize the pumps with 50 horsepower and 4,900 gallons per minute pumping flow rate per pump.
- Construct a new box water storage with a minimum 15,600 cubic feet storage volume. An 8-cell reinforced concrete box that is 33 feet long, 10 feet wide, and 6 feet high is recommended. The existing storage box will be impacted in the median, but as an alternative, it is possible to modify and reconstruct it.
- Replace the trunk pipe from the median with a new trunk pipe on both northbound and southbound shoulders, as shown in the drainage conceptual plans. Replace the pump outfall pipe as shown in the drainage conceptual plans.

The outfall pipe (21-inch reinforced concrete pipe) discharges the water from the pump to the Fresno Metropolitan Flood Control Basin.

Fresno Metropolitan Flood Control District Agreements

Currently, more than half of the storm drainage within the project limits flows into three of the Fresno Metropolitan Flood Control District basins, so there may be a need to revise the local cooperative agreements.

Fresno Metropolitan Flood Control District Basin RR

The Kerman Branch pumping plant drains into Basin RR, and it is proposed that the new pump continue draining to this basin. Currently, there is no need to increase the right-of-way footprint for the project, but widening the freeway will eliminate a side ditch that stores freeway stormwater. There may be a need to increase the drainage area by 2.75 additional acres. The estimated new drainage area to the basin will be 26.31 acres.

Fresno Metropolitan Flood Control District Basin UU2

As mentioned above, the Olive Avenue pumping plant drains into Basin UU2, and it is proposed that the new pump will continue draining to this basin. Preliminary plans show minor modifications to the existing right-of-way footprint for the project. Widening the freeway in this area will eliminate water storage on the freeway's non-paved side slopes; this triggers a need to increase the drainage area by 2.5 additional acres. The estimated new drainage area to the basin will be 19.93 acres.

Fresno Metropolitan Flood Control District Basin XX

Most of the northern end of the project drains into Basin XX. Caltrans and the Fresno Metropolitan Flood Control District signed Utility Agreement Number 06-1398.022 on January 30, 2017. This agreement covers the northern end of the project, and it is not expected to be revised because there is no need to

increase the right-of-way footprint. There is no additional drainage area proposed for this project.

Fresno Metropolitan Flood Control District Local Storm Drains

The construction and modification of local roads will affect existing drainage patterns. Caltrans is expected to extend some storm drainage culverts, relocate drainage inlets to the new flow lines, and perhaps construct some of the planned Fresno Metropolitan Flood Control District storm drainage pipes, as proposed in their master plan. At this time, the project is proposed to extend two storm pipes on Olive Avenue, east of State Route 99, and relocate two existing drainage inlets. On Olive Avenue, on the west side of State Route 99, the project is proposed to construct 540 feet of stormwater pipe, three sewer holes, and four drainage inlets. The recommendations for the local storm drains are based on the roundabout alternative. Similar recommendations can be assumed for the other alternative. This will require a cooperative agreement with Fresno Metropolitan Flood Control District.

No-Build Alternative

The project would not affect any existing basins, drainage inlets, or stormwater culverts within the project area. However, the existing roadway will continue to deteriorate and not meet Caltrans' traffic and operational standards.

Avoidance, Minimization, and/or Mitigation Measures

Temporary Construction Site Best Management Practices would be followed to avoid and minimize impacts on water quality and stormwater runoff.

WQ-1: Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (per the Construction General Permit Order 2009-0009-DWQ) that includes erosion-control measures and construction waste containment measures so that waters of the State are protected during and after project construction.

The Stormwater Pollution Prevention Plan would identify the sources of pollutants that may affect the quality of stormwater. It would also include Construction Site Best Management Practices to control erosion, sedimentation, and spills of chemical pollutants, provide for construction materials management, and include a schedule of routine inspections and monitoring. All construction site Best Management Practices would follow the latest edition of the Stormwater Quality Handbooks: Construction Site Best Management Practices Manual (Caltrans 2003a) to control and minimize the impacts of construction-related activities, materials, and pollutants on the watershed.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the 2003 Caltrans Stormwater Management Plan

(Caltrans 2003b) to meet water quality objectives. This plan has been revised to comply with the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ).

WQ-3: If the project disturbs one acre or more of soil, the following requirements would be required:

- A Notification of Intent is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days before the start of construction.
- A Stormwater Pollution Prevention Plan is to be prepared and implemented during construction to the satisfaction of the resident engineer.
- A Notice of Termination will be submitted to the Regional Board upon completion of construction and site stabilization. The project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

WQ-4: If the project disturbs less than 1 acre of soil, a Water Pollution Control Program is required to be prepared by the contractor per the Caltrans 2018 Standard Specifications Section 13-1—Water Pollution.

By incorporating proper and accepted engineering practices and Best Management Practices, the proposed project will not have significant impacts on water quality during construction or its operation.

2.2.2 Paleontology

Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. Several federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

- 23 U.S. Code 1.9(a) requires that the use of Federal-aid funds must conform with all federal and state laws.
- 23 U.S. Code 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 U.S. Code 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

Federal Laws and Regulation

A variety of federal statutes specifically address paleontological resources. They generally become applicable to specific projects if the project involves: 1) a federal agency license, permit, approval, or funding, and/or 2) crosses federal lands. The proposed project would be brought to fruition, in part, with federal funding, thus making federal statutes applicable to this project.

Antiquities Act of 1906

The Antiquities Act of 1906 states, in part:

“That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.”

Although there is no specific mention of natural or paleontological resources in the Act itself, or in the Act's uniform rules and regulations (Title 43 Part 3, Code of Federal Regulations), “objects of antiquity” has been interpreted to include fossils by the National Park Service, the Bureau of Land Management, the Forest Service, and other federal agencies. Permits to collect fossils on lands administered by federal agencies are authorized under this Act (see Permit Requirements of Federal Agencies). Therefore, projects involving federal lands require permits for paleontological resource evaluation and mitigation efforts.

Archaeological and Paleontological Salvage Act

The Archaeological and Paleontological Salvage Act states:

“Funds authorized to be appropriated to carry out this title to the extent approved as necessary, by the highway department of any State, may be used for archaeological and paleontological salvage in that state in compliance with the Act entitled “An Act for the preservation of American Antiquities,” approved June 8, 1906 (PL 59-209; 16 U.S. Code 431-433), and State laws where applicable.”

This statute allows funding for mitigation of paleontological resources recovered pursuant to federal-aid highway projects, provided that “excavated objects and information are to be used for public purposes without private gain to any individual or organization” (Federal Register 46(19): 9570; see Federal Highway Administration).

Federal-Aid Highway Act of 1956

Section 305 of the Federal-Aid Highway Act of 1956 (20 U.S. Code 78, 78a) gives authority to use federal funds to salvage archaeological and paleontological sites affected by highway projects.

National Environmental Policy Act of 1969

The National Environmental Policy Act (NEPA) directs federal agencies to use all practicable means to “Preserve important historic, cultural, and natural aspects of our national heritage...” (Section 101(b) (4)). Regulations for implementing the procedural provisions of NEPA are found in 40 Code of Federal Regulations Sections 1500-1508.

If the presence of a scientifically significant environmental resource is identified during the scoping process, federal agencies and their agents must consider the resource when evaluating project effects. Consideration of paleontological resources may be required under NEPA if the project involves federal lands, federal permits, licenses, agreements, or certifications or has federal funding. The level of consideration depends upon the federal agency involved.

State Laws and Regulations

Paleontological resources are protected by state law. This protection covers fossils and unique paleontological localities.

California Environmental Quality Act of 1970

The CEQA Guidelines, Article 1, Section 15002(a)(3) state that CEQA is intended to: “Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.” CEQA further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. If a project is determined to have a potentially significant environmental effect, the act requires that alternative plans and mitigation measures be considered. If paleontological resources are identified as being within the proposed Project Study Area, the sponsoring agency must consider those resources when evaluating project effects. The level of consideration may vary with the importance of the resource.

Public Resources Code Section 5097.5

This section of the California Public Resources Code states:

“No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized

footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.”

Affected Environment

Caltrans staff completed a Paleontological Evaluation Report on August 26, 2020.

The project area sits on the San Joaquin Valley floor, a fairly featureless plain that shapes gently southwesterly to the valley axis. This southeast (post mile 21.2) to northwest (post mile 24.4) trending linear project is in the central portion of Fresno County and within the City of Fresno. The project is within the Great Valley Geomorphic Province, a topographic and structural basin that is bound to the east by the Sierra Nevada and to the west by the Coast Range. The Sierra Nevada, a fault block dipping gently to the southwest, is composed of igneous and metamorphic rocks of pre-Tertiary age, which comprise the basement complex beneath the valley (California Geological Survey, 2002). The subsurface of the Great Valley is characterized by a thick sequence of unconsolidated to semi-consolidated sediments. Sediments underlying the proposed project area consist of older alluvium and dissected fan deposits attributed to the Pleistocene-age Modesto Formation (Wagner et al., 1991).

Except for three post-mile segments (approximate locations: post miles 22.0 through 22.5; post miles 22.9 through 23.1; and post miles 23.5 through 24.0), the proposed project’s roadway is already up to 20 feet below the surface elevation of the surrounding native grade. Naturally occurring sediments (excluding fill materials or previously disturbed soil related to previous construction activities) underlying the proposed project consist of Holocene alluvial fan deposits (Modesto Formation; Qf) and Pleistocene non-marine sedimentary deposits (Riverbank Formation; Qc; Matthews and Burnett, 1965).

Findings presented in a Paleontological Mitigation Report (prepared by Paleo Solutions) and two paleontological monitoring reports (prepared by Cogstone) from three nearby project areas along State Route 99 (combined project areas ranged from post mile 22.7 through post mile 28.1) documented the lithologic details of the Holocene Modesto and Pleistocene Riverbank formations as follows:

- The Modesto Formation “consisted of buff, moderately to well sorted, subangular to subrounded, moderately compacted fine- to coarse-grained sand.”

- The Riverbank Formation “consisted of gray to reddish-brown, moderately to well sorted, subangular to rounded, poorly to moderately compacted clay, silt, and very fine- to medium-grained sand, with sedimentary structures including planar laminations, ripples, channels, and bioturbation.”

While the Holocene Modesto and Pleistocene Riverbank formations were identified as sediments conducive to fossil preservation, no fossils and/or fossil fragments were observed during the construction activities within the three project areas (post miles 22.7 through 28.1). The El Dorado to Clinton Rehabilitation Project encompasses post-mile segments 21.2 through 4.4 on State Route 99.

Environmental Consequences

Build Alternative 1 and 2 Impacts

A search for paleontological records was completed using available databases, published peer-reviewed journals, and paleontological monitoring reports from past Caltrans projects that involved excavations into previously undisturbed portions of the Modesto and Riverbank Formations.

The California State University, Fresno Paleontological Sensitivity Mapping Project database (2000) lists the paleontological sensitivity of the post-mile segment as “low.” The database identifies the low-sensitivity sediments as undifferentiated Holocene fan deposits (Modesto Formation) and Pleistocene stream deposits of sand, silt, clay, gravel, and cobbles (Riverbank Formation).

Grading, excavation, and other ground disturbance activities, reaching and/or exceeding 3 feet in depth (from the original ground surface) or reaching/exceeding 2 feet below previously cut grade, within the project area have the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations.

Applicable excavations are defined as ground disturbance activities extending into previously undisturbed portions of the Modesto and Riverbank formations (not previously backfilled materials) at depths greater than 3 feet below the original grade or 2 feet below the previously cut grade.

No-Build Alternative

The proposed project would not go into construction. State Route 99 within the project limits would remain unchanged. However, the existing roadway will continue to deteriorate and not meet Caltrans’ traffic and operational standards.

Avoidance, Minimization, and/or Mitigation Measures

Using the Caltrans paleontological sensitivity scale, the Modesto and Riverbank formations have a high potential of producing scientifically significant fossils; therefore, a consultant-prepared Paleontological Mitigation

Plan encompassing select portions of the project area for spot-checking and continuous monitoring is required.

The Paleontological Mitigation Plan would be prepared for applicable excavations within the project area and would be prepared, reviewed, and approved by a qualified paleontologist and a State of California licensed Professional Geologist in accordance with the guidance provided in Caltrans' Standard Environmental References and Standard Special Provisions Section 14-7.04.

The Paleontological Mitigation Plan will be prepared by a paleontological subconsultant under a contract/task order to Caltrans.

Paleontology Mitigation Measures:

PALEO-1: Continuous Monitoring: Excavation of project areas from 3 feet below original grade to total depth and from 2 feet below cut grade to total depth: comprised of continuous field inspections of cuts, spoils piles, and graded surface, and screening of exposed sediment for fossilized macroscopic and microscopic material.

PALEO-2: If paleontological resources are discovered during earthmoving activities, the construction crew would immediately cease work within a 25-foot radius of the find and immediately notify the resident engineer.

PALEO-3: The monitor shall take bulk samples for offsite processing at a later time to recover any fossils to determine the presence of microfossils.

PALEO-4: Macro fossils (large enough to view with the unaided eye) could include tusks and other vertebrate remains. Some of these resources may be fragile and require hardening before moving, and may require encasing within a plaster jacket for later preparation and conservation in a laboratory.

PALEO-5: Recovered specimens would be prepared for identification (not exhibition) by competent qualified specialists to a point of maximum specificity. Ideally, identification is of individual specimens to element, genus, and species and stabilized for repository requirements.

PALEO-6: When construction is completed, a Paleontological Mitigation Report shall be prepared following completion of project earthmoving activities. The Paleontological Mitigation Report shall include a summary of the field and laboratory methods, site geology and stratigraphy, faunal list, and a brief statement of the significance and relationship of the site to similar fossil localities.

PALEO-6: The consultant shall maintain a complete and organized project file with records of all activities related to the project, including but not limited to meeting minutes, records of conversations, all decisions, field notes,

photographs, etc. This administrative record shall be submitted to the Caltrans Task Order Manager and become the property of the Department.

PALEO-7: Spot-Checking: Excavation of project areas from 1 foot below original grade to 3 feet below original grade and from the surface of cut grade to 2 feet below cut grade, comprised of less than 8-hour shifts and non-continuous field inspections of cuts, spoil piles, and graded surface, and screening of exposed sediment for fossilized macroscopic and microscopic material.

2.2.3 Hazardous Waste and Materials

Regulatory Setting

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

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

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

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

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

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

Affected Environment

The Central Region Hazardous Waste Branch conducted a hazardous waste evaluation for the two project Build Alternatives. An Initial Site Assessment was performed for this project to confirm hazardous waste sites in the proposed right-of-way acquisition areas. Preliminary Site Investigations were conducted on parcels identified in the Initial Site Assessment, on bridges to be modified and/or demolished, and on surface soils adjacent to State Route 99. A hazardous waste evaluation was conducted for the proposed project on State Route 99 from 0.2 mile south of the El Dorado Street Overcrossing to Clinton Avenue Overcrossing in Fresno. Figure 2-21 and Figure 2-22 display the potential acquisitions for both Build Alternatives.

Figure 2-21 Potential Impacted Properties for Alternative 1



Figure 2-22 Potential Impacted Properties for Alternative 2



Environmental Consequences

Humans and the environment could be exposed to hazardous conditions from the accidental release of hazardous materials during the construction of all four Build Alternatives. Construction would involve using heavy equipment that would involve small quantities of hazardous materials (e.g., petroleum and other chemicals used to operate and maintain construction equipment) that may result in hazardous conditions in the project area.

Yellow traffic stripes are present at various locations throughout all Build Alternatives and may contain heavy metals such as lead and chromium at concentrations above the hazardous waste thresholds established by the California Code of Regulations. Consequently, removing or disturbing any yellow traffic striping within the project area would require developing and implementing an appropriate Lead Compliance Plan.

Construction workers could be exposed to hazardous materials during ground-disturbing activities, such as grading, demolishing/replacing structures, and/or roadbed resurfacing at any of the areas known to contain hazardous materials. Older commercial and residential structures often have associated aboveground or belowground heating oil and/or motor vehicle fuel tanks. Septic tanks are also commonly associated with these types of structures. If heating oil tanks, fuel tanks, or septic tanks are (or were previously) associated with the structures, there is also the potential for late discovery of unidentified conditions. Septic and fuel tanks would be addressed if discovered during construction.

Build Alternatives 1 and 2 Impacts

An Initial Site Assessment was performed in July 2019. There are no open/active hazardous waste sites identified on the regulatory databases. However, there are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body, and food manufacturing/distribution plants within the project boundaries. The following locations were recommended for further evaluation:

- Chevron, 1459 West Olive Avenue; Existing gas station—high risk (partial take, possibly full take)
- Rally's/Fast N Easy, 1135 North Parkway Drive; Existing gas station—high risk (full take)
- Sinclair/Dave's Exxon, 1703 West Olive Avenue; Existing gas station and former leaking underground storage tank site (case closed 2011)—high risk (partial take, possibly full take)
- Valero/Amstar, 1680 West Olive Avenue; Existing gas station—high risk (partial take, possibly full take)

- Seibert's Oil, 1340 North Crystal Avenue; Underground storage tanks, aboveground storage tanks, other hazardous materials/wastes—medium risk (partial take)
- Caltrans Maintenance, 1635/1725 West Pine Avenue; aboveground tanks, other hazardous materials/wastes—low risk

Other potential hazardous waste sites within project boundaries include:

- Three gas stations at Belmont Avenue and State Route 99, two of which are closed leaking underground storage tank sites
- United Rentals at 1742 West Pine Avenue and State Route 99, which stores and handles hazardous materials and wastes
- UPS at 1601 West McKinley Avenue and State Route 99, which has underground storage tanks, aboveground storage tanks, other hazardous materials and wastes, and is a closed leaking underground storage tank site.
- M. Pris-Hansen and Company at 1724 West McKinley Avenue is a closed leaking underground storage tank site.

A Preliminary Site Investigation was performed by Stantec consultants on behalf of Caltrans in January 2020. The Preliminary Site Investigation addressed total petroleum hydrocarbons at the Chevron gas station and Seibert's Oil; asbestos-containing materials and lead-based paint on six bridges; total petroleum hydrocarbons; heavy metals in surface soils next to the Kerman Branch Union Pacific railroad crossing; and aerially deposited lead in soils next to State Route 99.

Property owners denied Caltrans staff access at Rally's, Sinclair, and Valero gas stations; therefore, soil sampling was not conducted. It is not yet known at this time when these studies will be conducted. If properties are taken by right-of-way, hazardous waste will need to deduct sampling/possible contamination from the offer.

Results From and Preliminary Site Investigation and Aerially Deposited Lead Study

Preliminary Site Investigation

Total Petroleum Hydrocarbons and Volatile Organic Compounds

Seven boreholes were drilled at Chevron: five to a depth of 7 feet below ground surface and two to a depth of 25 feet. Samples were collected at different depth intervals. A total of 26 samples were analyzed for total petroleum hydrocarbons. None of the concentrations for total petroleum hydrocarbons exceeded their respective screening levels or hazardous waste thresholds.

Asbestos-Containing Materials and Lead-Based Paint

Six bridges were surveyed for asbestos-containing material and lead-based paint. There were 82 samples collected from suspect asbestos-containing materials and 11 paint samples. Non-friable asbestos was detected at 60 percent in the shims at both the Belmont Avenue Overcrossing (North Rail-Northeast sample) and the Olive Avenue Overcrossing (Southwest sample). The shim material could be managed as non-hazardous, Category 2 non-friable asbestos-containing material.

The Federal Toxicity Characteristic Leaching Potential value of 5 milligrams per liter was not exceeded. Therefore, this paint, if stripped from the substrate, would be considered a California non-Resource Conservation and Recovery Act hazardous waste, but not a Federal Resource Conservation and Recovery Act waste.

Total Petroleum Hydrocarbons and Heavy Metals

Twelve samples were collected in surface soils next to the Kerman Branch Union Pacific Railroad. Of the metal and total petroleum hydrocarbon constituents, only lead was reported above hazardous waste thresholds. Excess soil from the southeast corner of the State Route 99 and Kerman Branch railroad crossing to a depth of 1 foot would be a California non-Resource Conservation and Recovery Act waste, but not a federal waste.

All 12 soil samples collected were also analyzed for total petroleum hydrocarbons. Results for total petroleum hydrocarbons were below the detection limit for all samples. None of the reported concentrations exceeded their respective screening levels or hazardous waste thresholds.

Aerially Deposited Lead Study

An aerially deposited lead study was completed by IT Corporation in October 2000 along the median and shoulders of State Route 99 (post miles 19.5/30.5) for a lane-increasing project. Statistical analyses were performed for samples with total lead concentrations exceeding 75 milligrams per kilogram (15 times the Soluble Threshold Limit Concentration of 5 milligrams per liter) or 5 milligrams per liter to determine the Upper Confidence Limit.

Seventy-two boreholes were drilled next to the highway. Samples were taken from each borehole at the following depth intervals: 0.5 to 1 foot, 1.5 to 2 feet, and 2.5 to 3 feet below ground surface; 216 samples were collected. The soil along the shoulders of State Route 99 from 0 to 2 feet below ground surface would be considered a regulated material per the Department of Toxic Substances Control Agreement regarding aerially deposited lead-contaminated soil (July 2016).

Total lead concentrations ranged from less than 25 milligrams/kilogram to 3,270 milligrams per kilogram, with an average of 120.2 milligrams per

kilogram and an 80 percent Upper Confidence Limit of 134.5 milligrams per kilogram. Soluble lead values ranged from 0.05 milligrams/liter (milligrams per liter) to 34 milligrams per liter.

The 80 percent Upper Confidence Limits for the soluble Waste Extraction Test were 5.22 milligrams per liter and 0.09 milligrams per liter, respectively. Toxicity Characteristic Leaching Procedure analyses for Federal Resource Conservation and Recovery Act waste hazardous waste determination were not performed.

Excess soil is expected. Soil could be managed and reused onsite per the agreement, provided all conditions are met or disposed of at a Class 1 landfill.

No-Build Alternative

The No-Build Alternative would not affect would result in no construction activities or handling of hazardous waste or materials. Therefore, the No-Build Alternative would not result in any direct effects on hazardous sites. However, the existing roadway would continue to deteriorate and not meet Caltrans' current standards; this would result in further traffic and operational issues.

Avoidance, Minimization, and/or Mitigation Measures

HW-1: Per Caltrans requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (California Code of Regulations Title 8, Section 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-impacted soil. The Lead Compliance Plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

HW-2: If obvious impacted soil conditions are encountered during construction excavations, these materials should be isolated, stockpiled, and characterized to determine appropriate soil disposal options.

HW-3: Soil from the surface to 3 feet would be considered non-regulated/non-hazardous and could be reused onsite, relinquished to the contractor, or disposed of as non-regulated soil.

HW-4: Tanks, associated piping, and dispensers should be properly removed in accordance with Fresno County Environmental Health requirements.

Applicable project Non-Standard Specifications and Standard Specifications will be edited and provided during the Plans, Specifications, and Estimates phase to be included in the construction package.

2.2.4 Air Quality

Regulatory Setting

The Federal Clean Air Act, as amended, is the primary federal law that governs air quality while the California Clean Air Act is its companion state law. These laws and related regulations by the U.S. Environmental Protection Agency and the California Air Resources Board set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards. National Ambient Air Quality Standards and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide, nitrogen dioxide, ozone, particulate matter, which is broken down for regulatory purposes into particles of 2.5 micrometers or smaller and particles of 10 micrometers and smaller, lead, and sulfur dioxide. In the rest of this document, particulate matter smaller than 2.5 micrometers and 10 micrometers will be referred to as “fine particulate matter” and “respirable particulate matter,” respectively.

In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The National Ambient Air Quality Standards and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants; some criteria pollutants are also toxic air contaminants or may include certain toxic air contaminants in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “conformity” requirement under the Federal Clean Air Act also applies.

Conformity

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to the State Implementation Plan for attaining the National Ambient Air Quality Standards. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the National Ambient Air Quality Standards, and only for the specific National Ambient Air Quality Standards that are or were violated. U.S. Environmental Protection Agency regulations in 40 Code of Federal Regulations 93 govern the conformity process. Conformity requirements do not apply in unclassifiable and attainment areas for National

Ambient Air Quality Standards and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the National Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, ozone, fine and respirable particulate matter, and in some areas (although not in California), sulfur dioxide. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except sulfur dioxide, and also has a nonattainment area for lead; however, lead is not currently required by the Federal Clean Air Act to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans and Federal Transportation Improvement Programs that include all transportation projects planned for a region over a period of at least 20 years (for the Regional Transportation Plan) and four years (for the Federal Transportation Improvement Program).

Regional Transportation Plans and Federal Transportation Improvement Program conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Federal Clean Air Act and the State Implementation Plan are met. If the conformity analysis is successful, the Metropolitan Planning Organization, Federal Highway Administration, and Federal Transit Administration make the determinations that the Regional Transportation Plan and Federal Transportation Improvement Program conform with the State Implementation Plan for achieving the goals of the Federal Clean Air Act. Otherwise, the projects in the Regional Transportation Plan and/or Federal Transportation Improvement Program must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the Regional Transportation Plan and Federal Transportation Improvement Program, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming Regional Transportation Plan and Federal Transportation Improvement Program. It is also achieved by demonstrating that the project has a design concept and scope that has not changed significantly from those in the Regional Transportation Plan and Federal Transportation Improvement Program. In this statement, “design concept” means the type of facility that is proposed, such as a freeway or arterial highway. “Design scope” refers to those aspects of the project that would clearly affect capacity and, thus, any regional emissions analysis, such as the number of lanes and the length of the project.

Project-level conformity must show that project analyses have used the latest planning assumptions and U.S. Environmental Protection Agency-approved emissions models; in particulate matter areas, the project complies with any control measures in the State Implementation Plan. Additional analyses (known as hot-spot analyses) may be required for projects located in carbon monoxide and particulate matter nonattainment or maintenance areas to examine localized air quality impacts.

The U.S. Environmental Protection Agency has delegated responsibility to air districts to establish local rules to protect air quality. Caltrans' Standard Specifications Section 14-9.02 (Caltrans, 2015) requires compliance with all applicable air quality laws and regulations, including local and air district ordinances and rules.

Caltrans' Standard Specifications Section 14-9.02 requires compliance with all applicable air quality laws and regulations, including local and air district ordinances and rules.

The project is in Fresno County, which is in attainment of Federal National Ambient Air Quality Standards for 8-hour ozone and fine and respirable particulate matter.

Pollutant-Specific Overview

Air pollutants are governed by multiple federal and state standards to regulate and mitigate health impacts. At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards have been established: carbon monoxide, lead, nitrogen dioxide, ozone, fine and respirable particulate matter, and sulfur dioxide. The U.S. Environmental Protection Agency has also identified nine priority mobile source toxic air contaminants: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. For more information, refer to https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/. In California, sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride are also regulated.

Criteria Pollutants

The Clean Air Act requires the U.S. Environmental Protection Agency to set National Ambient Air Quality Standards for six criteria air contaminants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. It also permits states to adopt additional or more protective air quality standards, if needed. California has set standards for certain pollutants. Table 2.34 summarizes the sources and health effects of the six criteria pollutants and pollutants regulated in the State of California.

Figure 2-23 Table of State and Federal Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁵	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence: Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

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Figure 2-24 Page 2 of Table of State and Federal Ambient Air Quality Standards

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Table 2.34 State and Federal Criteria Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Ozone	High concentrations irritate the lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic volatile organic compounds may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases or volatile organic compounds and nitrogen oxides in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Respirable Particulate Matter	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of respirable particulate matter.	Dust-producing and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
Fine Particulate Matter	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter is fine particulate matter. Many toxic and other aerosol and solid compounds are part of fine particulate matter.	Combustion, including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants, including nitrogen oxides, sulfur oxides, ammonia, and reactive organic gases.
Carbon Monoxide	Interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. Carbon monoxide also is a minor precursor for photochemical ozone. It is colorless and odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. Carbon monoxide is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Nitrogen Dioxide	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the nitrogen oxide group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
Sulfur Dioxide	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, and steel. Contributes to acid rain. Limits visibility.	Fuel combustion, especially coal and high-sulfur oil, chemical plants, sulfur recovery plants, metal processing, and some natural sources like active volcanoes. Limited contribution is possible from heavy-duty diesel vehicles if ultra-low sulfur fuel is not used.
Lead	Disturbs the gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also, a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Visibility-Reducing Particles	Reduces visibility. Produces haze. It is not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class 1" areas.	Sources include those previously listed. May be related more to aerosols than to solid particles.

Affected Environment

The Air Quality Report was completed on February 5, 2021. The project site is in the City of Fresno in Fresno County, which lies within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District has jurisdiction over the San Joaquin Valley Air Basin.

Fresno County's population and population growth are mostly concentrated in its cities. In particular, the Fresno metropolitan area has absorbed much of Fresno County's population growth, either through annexations or new development. Over 53 percent of the county's population now resides in the City of Fresno, and almost 11 percent resides in Clovis. According to the Fresno Department of Finance, between 2000 and 2015, the incorporated areas grew by 26.2 percent, accounting for 96.4 percent of the total growth in Fresno County.

Unincorporated parts of the county grew between 2000 and 2005, then declined between 2005 and 2010, and then grew again from 2010 to 2015; overall, between 2000 and 2015, the unincorporated population grew by 6,310, or 3.6 percent. In incorporated parts of Fresno County, the City of Fresno experienced the greatest increase in growth, increasing by 21.6 percent (92,510) from 2000 to 2015. The City of Fresno's growth mirrors the rest of Fresno County, with the same percentage growth (21.6 percent) between 2000 and 2015 and the same average annual growth rate of 1.3 percent. For the traffic study, the population for Existing Year 2019 is 557,320. By Open to Traffic Year 2029, the population will be 614,011. By Horizon Year 2049, the population will be 745,045.

Agriculture, education, and government make up the main sources of employment in Fresno County. The largest gains in job growth were seen in education and government.

Climate, Meteorology, and Topography

Meteorology (weather) and terrain can influence air quality. Certain weather parameters are highly correlated to air quality, including temperature, the amount of sunlight, and the type of winds at the surface and above the surface. Winds can transport ozone and ozone precursors from one region to another, contributing to air quality problems downwind of source regions. Mountains can act as a barrier that prevents ozone from dispersing.

The Fresno-Garland climatological station maintained by the California Air Resources Board is located 4 miles south of the project site and is representative of meteorological conditions near the project.

The climate of the project area is generally Mediterranean in character, with cool winters (average 60 degrees Fahrenheit in January) and warm, dry summers (average 90 degrees Fahrenheit in July). Temperature inversions are common, affecting localized pollutant concentrations in the winter and enhancing ozone formation in the summer. The annual average rainfall is 24 inches, mainly falling during the winter months.

Prevailing westerly winds of California are the result of the North Pacific high-pressure cell, the dominant influence of low-level wind flow of the Eastern North Pacific Ocean and

its land masses in the middle latitudes. It is a semi-permanent feature of the Northern Hemispheric large-scale atmospheric circulation pattern.

During the summer months, the Pacific high-pressure cell produces a predominantly northwesterly flow of marine air over California's coastal waters. During the winter months, the Pacific high-pressure cell is somewhat weakened and moves south, so weaker and less persistent wind conditions are the norm. The large-scale circulation pattern is further affected by differential heating between the ocean and the continental landmass. As the air approaches the California coastline, the predominant flow is enhanced during the warmer months and weakened during the colder months.

Additionally, airflow during the warmer months is predominantly onshore because the land surfaces are warmer than the Pacific Ocean. Offshore airflow during January (the coldest month) is a lesser phenomenon. Up the valley, airflow dominates during warmer months, while down the valley, airflow dominates during colder months.

On a regional basis, airflow is channeled by mountain ranges, with the predominant wind direction in a valley coinciding with the valley's longitudinal axis in one direction. The second most prevalent wind follows this pattern as well, albeit flowing in the opposite direction. California's coastal mountain ranges limit the inflow of maritime air into the interior of California. Due to subsidence inversion (discussed below), marine airflow over the mountains is stifled, and airflow is limited to breaks or low points in the coastal range. The greatest portion of maritime air reaches the Central Valley via a major break in the coastal ranges, the Carquinez Strait of San Francisco Bay.

During the day, precursor emissions from the Bay Area and the northern San Joaquin Valley Air Basin move downwind into the interior San Joaquin Valley, accumulating in a region stretching from south of Stockton to Bakersfield. Limited airflow allows an escape of some air over the Tehachapi Mountains into the Mojave Desert. At night, the wind pattern is much the same. However, cooler drainage winds at the Tehachapi Mountains force the air back northwards in a circular air pattern known as the Fresno eddy. The pollutants swirl in a counterclockwise pattern and return the air back to the polluted urban areas, where more precursors are added the next day. Nighttime winds are caused by a jet stream of fast-moving air about 1,000 feet above the valley floor, up to 30 miles per hour.

Pollutants transported to higher altitudes due to daytime heating settle downwards due to the drainage winds.

Once marine air flows into the San Joaquin Valley Air Basin, it is essentially trapped. The San Joaquin Valley Air Basin is an essentially closed basin surrounded by the coastal ranges on the west, the Tehachapi mountains to the south, and the Sierra Nevada range to the east. These conditions result in poor horizontal dispersion of pollutants, while high-pressure events also cause limited vertical pollutant dispersal, which leads to pollutant accumulation.

Inversions occur when the air temperature increases with height instead of decreasing. Pollutants will rise and disperse if they are warmer than the surrounding air.

When pollutants encounter air of the same temperature or higher, they will remain at that elevation; vertical movement is stifled, resulting in a stable atmosphere with poor vertical pollutant dispersion. As a result, air pollutant emissions build up and remain underneath inversions, sometimes for days. Radiation inversions are nocturnal cooling of the air just above the Earth's surface. When the sun rises, it begins heating the ground, which, in turn, heats the air above it, which lifts and breaks the inversion and allows pollutants to disperse. During the summer months, the radiation inversions range from 2,000 to 5,000 feet above the valley floor and even higher over the mountain ranges, which are another sizable heat source. Summertime inversions persist longer in the south San Joaquin Valley Air Basin due to a lack of marine air intrusion and result in reduced atmospheric mixing. In worst-case scenarios, the inversion may remain a few hundred feet above the ground.

Subsidence inversions are caused by downward motion in the atmosphere and are usually associated with high-pressure areas along the California coast. Descending air pushed downwards by high pressure heats up and compresses, becoming warmer than the air beneath it. Vertical mixing is limited, and warm air aloft restricts movement below.

Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types, such as tremolite and actinolite, are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the Air Resources Board in 1986. All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released into the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air.

Criteria Pollutants and Attainment Status

The San Joaquin Valley Air Basin, where the project is located, is in non-attainment for the following pollutants:

- State: 1-hour and 8-hour ozone (O₃), Particulate Matter 10 (PM₁₀), and Particulate Matter 2.5 (PM_{2.5}) standards
- Federal: 8-hour ozone (O₃), Particulate Matter–2.5 (PM_{2.5}) standards

The basin is in attainment of the federal Particulate Matter 10 and carbon monoxide standards.

The following tables (Tables 2.35 through 2.38) present the state and federal attainment status for all regulated air pollutants in the San Joaquin Valley Air Basin. The tables show air quality trends in data collected at the Fresno-Garland monitoring station for the past five years.

Figure 2-25 displays the map of the Fresno-Garland Air Quality Monitoring Station (3727 North 1st Street, Fresno, California).

Figure 2-25 Fresno-Garland Air Quality Monitoring Station (3727 North 1st Street, Fresno, California)

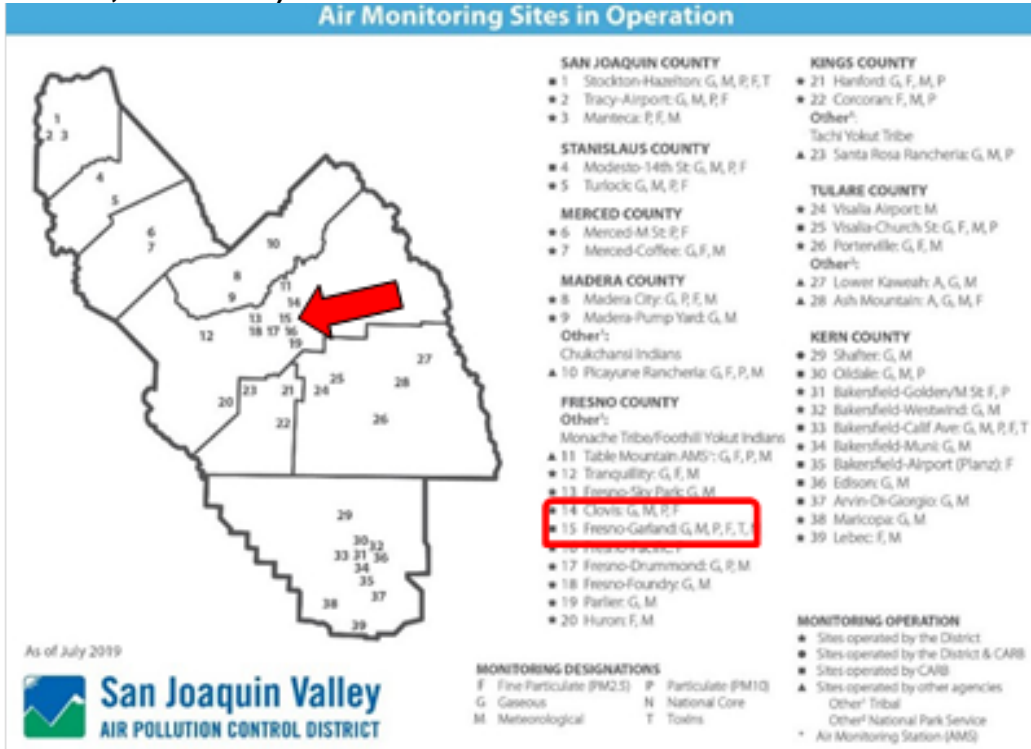


Table 2.35 State and Federal Attainment Status

Pollutant	State Attainment Status	Federal Attainment Status
1-Hour Ozone	Nonattainment/Severe	Not applicable
8-Hour Ozone (O3)	Nonattainment	Nonattainment/Extreme
Respirable Particulate Matter (PM10)	Nonattainment	Attainment/Maintenance
Fine Particulate Matter (PM2.5)	Nonattainment	Non-Attainment-Serious (1997,2006) Non-Attainment-Moderate (20112)
Carbon Monoxide (CO)	Attainment	Attainment/Unclassifiable
Nitrogen Dioxide (NO2)	Attainment	Attainment/Unclassifiable
Sulfur Dioxide (SO2)	Attainment	Attainment/Unclassifiable
Lead (Pb)	Attainment	Attainment/Unclassifiable
Visibility-Reducing Particles	Unclassified	Not applicable
Sulfates	Attainment	Not applicable
Hydrogen Sulfide	Unclassified	Not applicable
Vinyl Chloride	Not applicable	Not applicable

Source: July 2022, Air Quality Report.

Table 2.36 Ozone Concentrations for 2016 Through 2020 at the Fresno Garland Monitor

Ozone Standards	2016	2017	2018	2019	2020
Maximum 1-Hour Concentration	0.117	0.143	0.121	0.105	0.119
Number of Days Exceeded: State 0.09 ppm	15	16	8	2	10
Maximum 8-Hour Concentration	0.095	0.113	0.099	0.084	0.100
Number of Days Exceeded: State 0.070 ppm	56	68	38	18	24
Number of Days Exceeded: Federal 0.070 ppm	56	68	38	18	24

Source: July 2022, Air Quality Report.

Table 2.37 Particulate Matter 10 Concentrations for 2016 Through 2020 at the Fresno Garland Monitor

Particulate Matter 10 Standards	2016	2017	2018	2019	2020
State Maximum 24-Hour Concentration	91.9	160.1	130.4	328.2	296.4
Federal Maximum 24-Hour Concentration	91.9	160.1	130.4	328.2	296.4
Number of Days Exceeded: State: <i>50 µg/m³</i>	67.5	97.4	102.7	72.7	100.1
Number of Days Exceeded: Federal: <i>150 µg/m³</i>	0.0	1.0	0.0	3.0	14.0
State Maximum Annual Concentration	35.4	39.4	40.6	35.9	48.4
Federal Maximum Annual Concentration	34.8	39.6	41.0	35.2	48.0

Source: July 2022, Air Quality Report.

Table 2.38 Particulate Matter 2.5 Concentrations for 2016 Through 2020 at the Fresno Garland Monitor

Particulate Matter 2.5 Standards	2016	2017	2018	2019	2020
Maximum 24-Hour Concentration	52.7	86.0	95.7	51.3	163.2
Number of Days Exceeded: Federal: 35 <i>µg/m³</i>	16.0	31.1	36.0	10.0	45.0
State Maximum Annual Concentration	13.6	14.3	16.6	11.2	18.6
Federal Maximum Annual Concentration	12.7	14.9	16.2	11.1	19.2

Source: July 2022, Air Quality Report.

Existing Air Quality

The closest air quality monitoring station to the project is the Fresno-Garland monitor, which measures fine particulate matter. The monitor is about 3.7 miles northeast of Olive Avenue, the center of the project.

Environmental Consequences

NEPA Analysis Requirement

NEPA applies to all projects that receive federal funding or involve a federal action. NEPA requires that all reasonable alternatives for the project are rigorously explored and objectively evaluated. For NEPA analyses, emissions from the future year Build scenario are compared with those from the future year No-Build scenario.

Note that future Build and No-Build emissions were calculated only for morning and evening peak periods. Therefore, comparisons were only made for the peak hour emissions as the off-peak hours would not show any significant changes to emissions.

For this study, “Peak Period” refers to a time span during which traffic volume, speed, or level of service is at its most congested over a 24-hour period, whereas “Off-Peak” refers to the least congested time span of traffic volume, speed, or level of service over the same 24-hour period. Each period also has an a.m. and p.m. hour, referring to morning or evening traffic conditions.

Table 2.39 Comparison of Future Build and Future No-Build Emissions for Peak Hours

Analysis Year	Peak Fine Particulate Matter 2.5 (Pounds per Day)	Peak Respirable Particulate Matter 10 (Pounds per Day)	Peak Carbon Monoxide (Pounds per Day)	Total Peak Fine Particulate Matter 2.5 (Pounds per Day)	Total Peak Respirable Particulate Matter 10 (Pounds per Day)	Total Peak Carbon Monoxide (Pounds per Day)
Existing 2019	31	112	0.24625	11,271	40,847	90
No-Build 2029	35	156	0.12675	12,771	56,977	46
No-Build 2049	46	209	0.14650	16,827	76,249	53
Build Alternative 1 2029	37	174	0.12495	13,625	63,620	46
Build Alternative 1 2049	49	233	0.12535	17,947	85,009	46
Build Alternative 2 2029	37	174	0.12495	13,625	63,620	46
Build Alternative 2 2049	49	233	0.12535	17,947	85,009	46

Source: July 2022, Air Quality Report.

Particulate Matter 2.5 Pounds Per Day for No-Build Alternative (Existing 2019)

For Existing Year 2019, peak plus off-peak hour Particulate Matter 2.5 emissions are 31 pounds per day. The Existing Year 2019 annual total Particulate Matter 2.5 emissions are 11,271 pounds per year.

For Open to Traffic Year 2029, the No-Build Alternative peak plus off-peak hour Particulate Matter 2.5 emissions are 35 pounds per day. The Open to Traffic 2029 annual total Particulate Matter 2.5 emissions are 12,771 pounds per year.

For Design Year 2049, No-Build Alternative peak plus off-peak Particulate Matter 2.5 emissions are 46 pounds per day. The Design Year 2049 annual hour Particulate Matter 2.5 emissions are 16,827 pounds per year.

Particulate Matter 2.5 for Build Alternatives 1 and 2

For Open to Traffic Year 2029, Build Alternatives 1 and 2 peak plus off-peak Particulate Matter 2.5 emissions are 37 pounds per day. The Design Year 2029 annual emissions are 13,625 pounds per year.

For Design Year 2049, Build Alternatives 1 and 2 peak plus off-peak hour Particulate Matter 2.5 emissions are 49 pounds per day. The Design Year 2049 annual emissions are 17,947 pounds per year.

Based on the results, the No Build will have slightly lower Particulate Matter 2.5 peak period emissions when compared to the Build Alternatives.

Particulate Matter 10 Pounds Per Day for No-Build Alternative

For Existing Year 2019, peak plus off-peak hour Particulate Matter 10 emissions were 112 pounds per day. The Existing Year 2019 annual total Particulate Matter 2.5 emissions are 40,847 pounds per year.

For Open to Traffic Year 2029, the No-Build Alternative peak plus off-peak hour Particulate Matter 10 emissions are 156 pounds per day. The Open to Traffic 2029 annual total Particulate Matter 10 emissions are 56,977 pounds per year.

For Design Year 2049, No-Build Alternative peak plus off-peak Particulate Matter 10 emissions are 209 pounds per day. Annual hour Particulate Matter 10 emissions are 72,249 pounds per year in Design Year 2049.

Particulate Matter 10 for Build Alternatives 1 and 2

For Open to Traffic Year 2029, Build Alternatives 1 and 2 peak plus off-peak Particulate Matter 10 emissions are 174 pounds per day. The Design Year 2029 annual emissions are 63,620 pounds per year.

For Design Year 2049, Build Alternatives 1 and 2 peak plus off-peak hour Particulate Matter 10 emissions are 233 pounds per day. The Design Year 2049 annual emissions are 85,009 pounds per year.

Based on the results, the No-Build Alternative will have slightly lower Particulate Matter 10 peak period emission in comparison with the Build Alternatives.

Carbon Monoxide Pounds Per Day for No-Build Alternative

For Existing Year 2019, peak hour carbon monoxide emissions were 0.24625 tons per day. The Existing Year 2019 annual total carbon monoxide emissions are 90 tons per year.

For Open to Traffic Year 2029, the No-Build Alternative peak plus off-peak hour carbon monoxide emissions are 0.126754 tons per day. The Open to Traffic 2029 annual total carbon monoxide emissions are 46 tons per year.

For Design Year 2049, No-Build Alternative peak plus off-peak carbon monoxide emissions are 0.14650 pounds per day. The Design Year 2049 annual hour carbon monoxide emissions are 53 tons per year.

Carbon Monoxide for Build Alternatives 1 and 2

For Open to Traffic Year 2029, Build Alternatives 1 and 2 peak plus off-peak carbon monoxide emissions are 0.12495 tons per day. The Design Year 2029 annual carbon monoxide emissions are 46 tons per year.

For Design Year 2049, Build Alternatives 1 and 2 peak plus off-peak hour carbon monoxide emissions are 0.12535 pounds per day. The Design Year 2049 annual carbon monoxide emissions are 46 tons per day.

Based on the results, the Build Alternatives will have lower carbon monoxide peak period emissions when compared to the No-Build Alternative in the horizon year. For the open

year, the No-Build and Build Alternatives would be the same carbon monoxide emissions.

Table 2.40 Particulate Matter Emissions

Analysis/Year Alternatives	Peak Pounds per Day (Particulate Matter 2.5)	Off-Peak Pounds per Day (Particulate Matter 2.5)	Peak Plus Off-Peak Pounds per Day (Particulate Matter 2.5)	Annual Pounds per Day (Particulate Matter 2.5)	Peak Pounds per Day (Particulate Matter 10)	Off-Peak Pounds per Day (Particulate Matter 10)	Peak Plus Off-Peak Pounds per Day (Particulate Matter 10)	Annual per Year (Particulate Matter 10)
No-Build 2029	32	3	35	12,771	144	12	156	56,977
No-Build 2049	43	4	47	16,827	193	16	209	76,249
Alternative 1 2029	35	2	37	13,625	163	11	174	63,620
Alternative 1 2049	46	3	49	17,947	218	15	233	85,009
Alternative 2 2029	35	2	37	13,625	163	11	14	63,620
Alternative 2 2049	46	3	49	17,947	218	15	233	85,009

Source: July 2022, Air Quality Report.

Particulate Matter 2.5

For the 2029 No-Build Alternative, the peak plus off-peak period Particulate Matter 2.5 amounts is 35 pounds per day. The annual Particulate Matter 2.5 emissions are 12,771 pounds per year.

For the 2049 No-Build Alternative, the peak plus off-peak period Particulate Matter 2.5 amount is 47 pounds per day. The annual Particulate Matter 2.5 emissions are 16,827 pounds per year.

For both 2029 Build Alternatives 1 and 2, the peak plus off-peak period Particulate Matter 2.5 amounts is 37 pounds per day. The annual Particulate Matter 2.5 emissions are 13,625 pounds per year.

For both 2049 Build Alternatives 1 and 2, the peak plus off-peak period Particulate Matter 2.5 amounts is 36 pounds per day. The annual Particulate Matter 2.5 emissions are 17,947 pounds per year.

Particulate Matter 10

For the 2029 No-Build Alternative, the peak plus off-peak period Particulate Matter 10 amounts is 156 pounds per day. The annual Particulate Matter 10 emissions are 56,977 pounds per year.

For the 2049 No-Build Alternative, the peak plus off-peak period Particulate Matter 10 amount is 209 pounds per day. The annual Particulate Matter 10 emissions are 76,249 pounds per year.

For 2029 Build Alternatives 1 and 2, the peak plus off-peak period Particulate Matter 10 amounts are 174 pounds per day. The annual Particulate Matter 10 emissions are 63,620 pounds per year.

For 2049 Build Alternatives 1 and 2, the peak plus off-peak period Particulate Matter 10 amounts are 233 pounds per day. The annual Particulate Matter 10 emissions are 85,009 pounds per year.

The Federal Highway Administration/Federal Transportation Authority project must not cause or contribute to any new localized Carbon Monoxide, Particulate Matter 10, and/or Particulate Matter 2.5 violations, increase the frequency or severity of any existing Carbon Monoxide, Particulate Matter 10, and/or Particulate Matter 2.5 violations, or delay timely attainment of any NplusC6AAQS or any required interim emission reductions or other milestones in Carbon Monoxide, Particulate Matter 10, and Particulate Matter 2.5 nonattainment and maintenance areas. This criterion is satisfied without a hot-spot analysis in Particulate Matter 10 and Particulate Matter 2.5 attainment and maintenance areas for Federal Highway Administration/Federal Transportation Authority projects that are not identified in Section 93.123(b)(1).

This criterion is satisfied for all other Federal Highway Administration/Federal Transportation Authority projects in Carbon Monoxide, Particulate Matter 10, and Particulate Matter 2.5 nonattainment and maintenance areas if it is demonstrated that during the time frame of the transportation plan, no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project, and the project has been included in a regional emissions analysis that meets applicable Sections 93.118 and/or 93.119 requirements. The demonstration must be performed according to the consultation requirements of Section 93.105(c)(1)(i) and the methodology requirements of Section 93.123.

This section describes the results of the air quality analyses conducted for the project. The analyses conducted applied methodology and assumptions that are consistent with federal and state requirements for air quality. The analyses also used guidelines and procedures provided in applicable air quality analysis protocols, such as the Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Garza et al., 1997), Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM10 and PM2.5 Nonattainment and Maintenance Areas (U.S. Environmental Protection Agency, 2015), and the Federal Highway Administration Updated Interim Guidance on Air Toxics Analysis in NEPA Documents (Federal Highway Administration, 2016).

Key findings from the air quality study are listed below:

- **Regional Air Quality Conformity**—The project is included in the Fresno Council of Governments' 2023 Federal Transportation Implementation Plan and the 2022 Regional Transportation Plan/Sustainable Communities Strategy. It is also included in the Fresno Council of Governments' Year 2022 Regional Transportation Plan Amendment Number 4 and the corresponding Conformity Analysis.
- **Carbon Monoxide (CO)**—The project, individually, meets the carbon monoxide protocol standards to a satisfactory level, and no further analysis was required. In 1997, the San Joaquin Valley Air Basin was designated as a maintenance area for carbon monoxide (CO) by the Environmental Protection Agency, and the Valley was compelled to adhere to a 20-year maintenance plan to decrease the levels of carbon monoxide to acceptable levels. This goal was achieved on November 30, 2017.
- **Ozone (O₃)**—While the project is in a nonattainment area for the federal and state 8-hour ozone levels, when projects are listed in an approved Regional Transportation Plan with associated conformity emissions analysis, the projects are considered to be conforming to the State Implementation Plan for ozone.
- **Particulate Matter 10 (PM₁₀) Hot-Spot Analysis**—The project was submitted for interagency consultation on August 21, 2020. It was deemed

not a “Project of Air Quality Concern” by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis. Concurrence for “Not a Project of Air Quality Concern” was granted by the Environmental Protection Agency on January 28, 2021, and by the Federal Highway Administration on February 3, 2021. Please refer to Appendix H to view the submitted letters for interagency consultation.

- Mobile Source Air Toxics (MSAT)—The analysis conducted for the project, according to Federal Highway Administration guidance to assess mobile source air toxics, found the project is considered a “Project with No Meaningful Potential Mobile Source Air Toxics Effects” and best falls into the category of “Low Potential Mobile Source Air Toxics Effects.” The proposed alternatives would not increase emissions substantially above the no-build scenario. Mobile source air toxics emissions in the study area are likely to be lower in the future, in all cases, because of improved technology, according to the Environmental Protection Agency’s analysis.
- Construction Conformity—Emissions from construction equipment are expected and would include carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds, directly emitted particulate matter (PM10 and PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. However, with the implementation of Caltrans’ Standard Specifications in Section 14, as well as other measures included in the project, there would not be substantive impacts from the project (see Appendix D of this document to see all measures included in the project).
- Carbon Dioxide (CO2)—Carbon dioxide is a greenhouse gas and is discussed in Chapter 3, Section 3.3 Climate Change of this document.

Project-Level Conformity

The El Dorado to Clinton Rehabilitation project is subject to transportation air quality conformity because it is considered a regionally significant project. The project is within the San Joaquin Valley Air Basin and is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Fresno County is in nonattainment for the federal 8-Hour ozone and fine particulate matter standards, in attainment/maintenance for federal respirable particulate matter, and in attainment/unclassifiable for federal carbon monoxide standards.

Under 40 Code of Federal Regulations Section 9.109, a project-level hot-spot analysis for conformity is required. The project was submitted for Interagency Consultation on August 21, 2020, and the U.S. Environmental Protection Agency and the Federal Highway Administration concurred that the project is not a “Project of Air Quality Concern” in January 2021 and February 2021, respectively.

For project-level conformity, a project may not contribute to any new localized carbon monoxide, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any

required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

No project-level conformity requirements apply to ozone since it is considered a regional pollutant. The proposed project would not interfere with the implementation of any transportation control measures.

Regional Conformity

The proposed project is listed in the Fresno Council of Governments' 2018 financially constrained Regional Transportation Plan, which was found to conform by the Fresno Council of Governments on March 29, 2019, and the Federal Highway Administration and Federal Transportation Authority made a regional conformity determination finding on May 9, 2019. The project is also included in the Fresno Council of Governments' financially constrained 2021 Regional Transportation Improvement Program and 2018 Regional Transportation Plan Amendment Number 4, dated January 28, 2021. The Fresno Council of Governments' Federal Transportation Improvement Program was determined to conform by Federal Highway Administration and Federal Transportation Authority on April 16, 2021. The design concept and scope of the proposed project are consistent with the project description in the 2018 Regional Transportation Plan, 2021 Federal Transportation Improvement Program, and the open to traffic assumptions of the Fresno Council of Governments' regional emissions analysis.

The Fresno Council of Governments is in the process of finalizing its 2022 Regional Transportation Plan and 2023 Federal Transportation Improvement Program. The documents were approved by the Fresno Council of Governments on July 28, 2022. If the Federal Highway Administration and the Federal Transportation Authority grant their approval of the 2022 Regional Transportation Plan and 2023 Federal Transportation Improvement Program before this project is approved, the text of this conformity statement in the final environmental document will be updated to reflect those plans.

Interagency Consultation

The El Dorado to Clinton Rehabilitation project was submitted for Interagency Consultation on August 21, 2020. The project was found not to be a "Project of Air Quality Concern" by the U.S. Environmental Protection Agency on January 28, 2021, and by the Federal Highway Administration on February 3, 2021. Please refer to Appendix H to view the concurrence emails from both agencies.

The project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

Short-Term Effects (Construction Emissions) for Build Alternatives

During construction, the proposed project will generate air pollutants. The exhaust from construction equipment contains hydrocarbons, nitrogen oxides, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses.

The project is in Fresno County, which does have naturally occurring asbestos. However, the project is not located in areas of ultramafic rock formations or soils where naturally occurring asbestos is usually present.

Construction Equipment, Traffic Congestion, and Fugitive Dust

Construction greenhouse gas emissions for the project are calculated using Caltrans' Construction Emissions Tool 2021, Version 1.0. Please refer to Appendix I to view the Construction Emissions Calculation.

Project construction is expected to generate about 9,389 tons of carbon dioxide during the 1,280 working days (less than the 264 working days per one year) duration. Please view Table 2.41 to view the construction-generated pollutants for Particulate Matter 10, Particulate Matter 2.5, carbon monoxide, nitrogen oxide, and carbon dioxide.

Table 2.41 Construction-Generated Pollutants

Activity (Pounds per Day)	Particulate Matter 10	Particulate Matter 2.5	Carbon Monoxide	Nitrogen Oxide	Carbon Dioxide
Land Clearing/Grubbing	0.000	0.000	0.000	0.000	0.000
Roadway Excavation and Removal	0.891	0.704	8.842	9.022	2,128.393
Structural Excavation and Removal	0.000	0.000	0.000	0.000	0.000
Base/Subbase/Imported Borrow	0.492	0.312	3.983	3.729	859.350
Structure Concrete	0.000	0.000	0.000	0.000	0.000
Paving	0.327	0.320	1.968	4.297	895.555
Drainage/Environment/Landscaping	0.006	0.006	0.040	0.079	17.444
Traffic Signalization/Signage/Striping/Painting	0.702	0.688	9.200	11.306	5,488.385
Other Operation	0.000	0.000	0.000	0.000	0.000
Project Total	2	2	24	28	9,389

Source: California Construction Emissions Calculation 2021 V.1.0.

Table 2.42 Construction-Generated Pollutants Daily/Maximum Daily Average

Daily Activity	Particulate Matter 10	Particulate Matter 2.5	Carbon Monoxide	Nitrogen Oxide	Carbon Dioxide
Daily Average	3.778	3.173	37.551	44.427	14,671
Maximum Daily Average	5.665	5.208	27,511.00	69.864	27,511

Source: California Construction Emissions Calculation 2021 V.1.0.

Long-Term Effects (Operational Emissions) for Both Build Alternatives

Peak hours are designated as the time when a facility's maximum capacity is reached during a 24-hour period. For this study, a peak period of three hours was designated for both a morning and an evening period. The morning and evening peak period totals were combined into Table 2.39, Comparison of Future Build and Future No-Build Emissions for Peak Hours. Please note that emissions for Alternatives 1 and 2 were the same due to no changes in traffic numbers, length of travel, or average travel speeds during peak periods of travel.

The morning peak period is from 6 a.m. to 9 a.m., and the evening peak period is from 4 p.m. to 7 p.m., which roughly coincides with the morning and evening commuter rush hours. As stated previously, the No-Build condition consists of those transportation projects that are already planned for construction by or before 2019. Consequently, the No-Build conditions are the baseline against which the Build Alternatives 1 and 2 were compared to meet NEPA requirements.

Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year because of the Environmental Protection Agency's national control programs that are projected to reduce annual mobile source air toxic emissions by over 90 percent between 2010 and 2050 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in the National Environmental Policy Act Documents, Federal Highway Administration, October 12, 2016). Local conditions may differ from these national projections in terms of fleet mix and turnover, vehicle miles traveled growth rates, and local control measures. However, the magnitude of the Environmental Protection Agency-projected reductions is so great (even after accounting for vehicle miles traveled growth) that mobile source air toxic emissions in the project study area are likely to be lower in the future in nearly all cases.

General Construction Impacts for Both Build Alternatives

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment are expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly emitted particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and toxic air contaminants, such as diesel exhaust particulate matter. Ozone is a regional pollutant that comes from nitrogen oxides and volatile organic compounds in the presence of sunlight and heat. For more details on construction emissions for this project, please refer to Appendix C of the Air Quality Report in Volume 2, Technical Studies.

Site preparation and roadway construction typically involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough Particulate Matter 10, Particulate Matter 2.5, and small amounts of carbon monoxide, sulfur dioxide, nitrogen oxides, and volatile organic compounds to be of concern.

Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soil. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. Particulate matter 10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. Particulate matter 10 emissions would depend on soil moisture, silt content of the soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. In addition to dust-related particulate matter 10 emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate carbon monoxide, sulfur dioxide, nitrogen oxides, volatile organic compounds, and some soot particulate (Particulate Matter 10 and Particulate Matter 2.5) in exhaust emissions.

Cumulative, Regional, and Indirect Effects for Both Build Alternatives

Ozone and secondary fine and respirable particulate matter are normally regional issues because they are formed by photochemical and chemical reactions over time in the atmosphere. For these pollutants, localized impact analysis is not meaningful. However, emissions analyses may be required to make some comparison with baseline and No-Build conditions. The formation of ozone and secondary particulate matter are a function of volatile organic compounds and nitrogen oxide emissions; therefore, emissions analyses would concentrate on quantifying volatile organic compounds and nitrogen oxide emissions. Emissions analyses use traffic volume, speed, and fleet mix information to determine an emission “burden” using the Emissions Factor model.

Within the San Joaquin Valley Air Basin, Fresno County is a designated non-attainment area for ozone and particulate matter and must consider transportation control measures to reduce emissions to demonstrate

conformity with the State Implementation Plan for air quality to satisfy federal requirements.

The San Joaquin Valley Air Basin Control District 2016 Ozone Plan, the 2007 Particulate Matter 10 Maintenance Plan, and the 2012 Particulate Matter 2.5 Plan all document the San Joaquin Valley Air Basin Control District's plans to achieve the state ambient air quality standards, and as such, compliance with the regulations and incentives contained in the San Joaquin Valley Air Basin Control District plans results in compliance with the state ambient air quality standards.

Based on the air quality analysis documented in Section 3.4 of the Draft Programmatic Environmental Impact Report, the 2022 Regional Transportation Plan/Sustainable Communities Strategy conforms to the applicable San Joaquin Valley Air Basin Control District plans (2016 Ozone Plan, 2007 Particulate Matter 10 Maintenance Plan, and the 2012 Particulate Matter 2.5 Plan) and demonstrates progress toward attainment with the state ambient air quality standards for fine and respirable particulate matter and ozone.

As a result, implementing the 2022 Regional Transportation Plan/Sustainable Communities Strategy would result in a less than significant impact to fine and respirable particulate matter and ozone. Specifically, the 2022 Regional Transportation Plan/Sustainable Communities Strategy Programmatic Environmental Impact Report mentions that Section 4.3 of the Draft Environmental Impact Report states that criteria pollutant emissions would be lower in 2042 with the implementation of the 2022 Regional Transportation Plan/Sustainable Communities Strategy relative to baseline conditions. Therefore, impacts would be less than significant because the land use development and transportation network envisioned by this document will alter vehicle miles traveled and, thus, alter the quantity and distribution of air pollutant emissions in Fresno County.

Conclusions

Overall, the difference between emissions from the existing signals at Olive Avenue versus the proposed roundabouts is slight to mainline traffic. Differences in idling times, queue lengths, traffic conditions, traffic entering and exiting the traveled roadway, and placement of traffic control devices will determine the number of emissions from vehicles utilizing the proposed alternatives.

Short-term air quality impacts arise mainly from construction activities and are considered unavoidable. However, overall emissions arising from the El Dorado to Clinton Rehabilitation project are negligible in terms of the overall project and will not significantly impact the overall project emissions.

Long-term air quality impacts are due to the project's increase in vehicle travel due to growth in the area. The project will improve safety and operational efficiency by correcting geometric deficiencies and improving local traffic flow on and off State Route 99. In addition, merging traffic on and from State Route 99 will improve with a more standard spacing of ramps. Construction of any of the alternatives will improve travel along the state route, maximize operational efficiency, and minimize motorists' exposure to hazards that may contribute to vehicular collisions. Also, local roads adjacent to State Route 99 (mainly Olive Avenue) will operate at a higher level of efficiency with less congestion and less idling time within the project area.

Implementing mitigation measures is expected to lessen cumulative impacts, which will remain significant and unavoidable. Land use development consistent with the general plans and Sustainable Communities Strategy set forth by the Fresno Council of Governments is the responsibility of Caltrans, local jurisdictions, and other responsible agencies with jurisdiction over a project area. However, implementing and monitoring the aforementioned measures will provide the framework to avoid and reduce the identified significant impacts; these impacts will probably remain significant and unavoidable.

Avoidance, Minimization, and/or Mitigation Measures

Short-Term (Construction Impacts)

Avoidance and minimization measures for short-term construction-related emissions include:

AQ-1: Application of the most stringent available regulations or best practices, even if not required by local/state regulations at the site.

AQ-2: Possible designation of areas where construction equipment servicing and storage are not allowed (near sensitive receptors).

AQ-3: Construction staging (such as constructing a soundwall first).

AQ-4: Temporary programs to reduce detour- and construction-related traffic congestion, such as special transit programs and subsidies.

AQ-5: A construction equipment emission reduction program to encourage or require the contractor to use cleaner (newer) diesel engines or retrofit older engines.

Long-Term (Operational Impacts)

Avoidance and minimization measures for long-term operation air quality impacts include the following:

AQ-6: Add operational measures to further reduce congestion and increase average speed (but not more than about 50 miles per average, on average)

AQ-7: Use a wide paved shoulder and stabilization/landscaping of unpaved areas to minimize re-entrained dust.

AQ-8: Consider landscaping with dense, evergreen trees such as redwoods where appropriate from a climate and water use standpoint.

AQ-9: In extreme cases, consider retrofitting sensitive receptors with sealed windows and forced-air, filtered ventilation (but consider long-term liability, energy, and maintenance issues—this is probably a realistic option only for critical sites like schools or hospitals that are immediately next to the road, cannot practically be moved, and do not have large, open “play” areas also near the road).

Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control” require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017. The amount of respirable particulate matter and nitrogen oxide emissions are likely to exceed the San Joaquin Valley Air Pollution Control District’s Rule 9510/Indirect Source Review Rule. The construction contractor selected for this project will be required to comply with this rule and submit an Air Impact Analysis to San Joaquin Valley Air Pollution Control District and pay any fees if required.

Measures to reduce fugitive dust include the following:

AQ-10: Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a “no visible dust” criterion either at the point of emissions or at the right-of-way line depending on local regulations.

AQ-11: Soil binder will be spread on unpaved roads used for construction purposes and on all project construction parking areas.

AQ-12: Trucks will be washed as they leave the right-of-way as necessary to control fugitive dust emissions.

AQ-13: Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.

AQ-14: A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts on existing communities.

AQ-15: Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.

AQ-16: Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited to the extent feasible.

- **AQ-17:** Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
- **AQ-18:** All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize the emission of dust during transportation.
- **AQ-19:** Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce particulate matter emissions.
- **AQ-20:** To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- **AQ-21:** Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate matter in the area. Certain methods of mulch placement, such as straw blowing, may cause dust and visible emission issues and may require controls such as dampened straw.

A construction impact analysis will be performed later as the project moves closer to construction. Monitoring and abatement requirements of Caltrans' Standard Specifications and Standard Special Provisions will be adhered to.

Climate Change

Neither the U.S. Environmental Protection Agency nor the Federal Highway Administration has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. The Federal Highway Administration emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the CEQA chapter of this document. The CEQA analysis may be used to inform the NEPA determination for the project.

2.2.5 Noise

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on 23 Code of Federal Regulations Section 772 NEPA noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 Code of Federal Regulations Section 772

For highway transportation projects with Federal Highway Administration involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations Section 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences are lower than the noise abatement criteria for commercial areas. The following table lists the noise abatement criteria for use in the Code of Federal Regulations Section 772 NEPA analysis.

Table 2.43 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, Hourly A-Weighted Noise Level	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential. Includes undeveloped lands permitted for this activity category.
C	67 (Exterior)	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. Includes undeveloped lands permitted for this activity category.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No Noise Abatement Criteria—Reporting Only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No Noise Abatement Criteria—Reporting Only	Undeveloped lands that are not permitted.

Figure 2-26 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2-26 Noise Levels of Common Activities

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

According to the Department's Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011, a noise impact occurs when the predicted future noise level with the project substantially

exceeds the existing noise level (defined as 12 A-weighted decibels or more) or when the future noise level with the project approaches or exceeds the Noise Abatement Criteria. A noise level is considered to approach the Noise Abatement Criteria if it is within 1 A-weighted decibel of the Noise Abatement Criteria.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated into the project.

Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. The feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 decibels at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 decibels at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

Since this project is proposing to construct an auxiliary lane, it will meet the criteria as a Type 1 project per Caltrans 2020 Noise Protocol. A Noise Study Report and Noise Abatement Decision Report were completed for this project. Caltrans prepared an addendum to the Noise Study Report for this project in April 2021. An addendum was requested by the City of Fresno to reevaluate the noise levels at the seven purchased hotel properties (Days Inn Hotel, Motel 99, Welcome Inn Hotel, Parkside Inn Hotel, Valley Inn Hotel, Travel Inn Hotel, and Parkway Inn Hotel) that were converted to residential properties as part of Governor Newsom's Project Homekey program by the Fresno Housing Authority.

Field noise analyses were conducted to support the Noise Study Report and the subsequent addendum to identify land uses within the project limits and also to identify frequent human outdoor use areas in residential receptors that could be subject to traffic noise impacts and to consider the physical setting of the freeway alignment relative to those areas.

Land use around existing State Route 99 and within the designated post miles of the project is urban/industrial, with many businesses and transitional hotels/motels on both sides of State Route 99. There are also some single-family residences along the east side of State Route 99. An existing 15-foot soundwall on the east side of State Route 99, between Clinton and McKinley Avenues, currently provides noise abatement for the residences at the Three Palms Mobile Home and RV Park.

Single-family residences and multifamily residences were identified as Activity Category B land uses, active sport areas and parks as Activity Category C, and hotels/motels and businesses were identified as Activity Category E land uses. Hotels/motels that were converted to longer-term housing under Project Homekey were reassigned to Activity Category B since they are now functioning more as residences than as short-stay hotels/motels.

The Noise Study Report for the El Dorado to Clinton Rehabilitation project analyzed 15 receptor locations based on closeness to the noise source (State Route 99).

Short-Term Monitoring

The existing noise environment in the project area was characterized into two sections: 1) short-term noise monitoring and 2) long-term noise monitoring. However, based on the site conditions, it was determined that the long-term noise monitoring (24 hours) was unnecessary, and short-term noise monitoring data collected for 10 minutes during peak hours and from 9:00 a.m. to noon during non-peak hours was suitable for this study.

Initially, three measurement locations were selected:

Receptor 9 (R9): 371 North Teilman Avenue; represents a single-family residence, SFR.

Receptor 12 (R12): 325 South Thorne Avenue; represents a single-family residence, SFR.

Receptor 13 (R13): 535 South Trinity Street; represents Fink-White Park.

On March 2019, three short-term (10-minute) noise measurements were taken at three receptor locations (Short-Term Receptor 1/Receptor 9, Short-Term Receptor 2/Receptor 12, and Short-Term Receptor 3/Receptor 13).

All noise measurements were conducted using a Brüel and Kjaer model 2238 sound level meter. Traffic was counted during each short-term measurement on State Route 99 near the measurement site and classified by vehicle type (e.g., autos, medium trucks, heavy trucks). The purpose of the field noise measurements was to validate the Traffic Noise Model 2.5 model so that the prediction of future noise levels could be made more accurately.

Table 2.44 summarizes the short-term noise measurement results from the Noise Study Report.

Table 2.44 Short-Term Noise Measurement Results

Receiver Number	Street Address; City Missing below	Land Use	Noise Level Meter Distance From Right-of-Way	Date of Measurement	Start Time	Duration (Minutes)	Measurement of Energy Averaged Sound Level; Average Noise Level
ST-1, Receptor 9	371 North Teilman Avenue	Residential	45 feet	March 14, 2019	9:00 a.m.	10	67
ST-2, Receptor 12	325 South Thorne Avenue	Residential	41 feet	March 14, 2019	8:20 a.m.	10	67
ST-3, Receptor 13	535 South Trinity Avenue	Recreational	455 feet	March 14, 2019	10:10 a.m.	10	62

Source: Noise Study Report (February 2020); ST represents Short-Term Noise Measurement.

Long-Term Monitoring

Long-term monitoring was not conducted on the site visit for this project. Long-term measurements typically characterize the 24-hour distribution of sound at the measurement site and can be used to determine the peak noise hour on a project. Noise peak hour and traffic peak hour were obtained from District 6 Planning.

Table 2.45 Model Validation

Receiver Number	Street Address, City	Measured Noise Level (dBA Leq)	Modeled/Calculated Noise Level (dBA Leq)	K-factor (Decibels)
R9	371 North Teilman Avenue	67	66	1
R12	325 South Thorne Avenue	67	68	1
R13	535 South Trinity Avenue	62	59	3

As shown above, the analyzed receptors have K-factors of less than 3 A-weighted decibels. Based on the 2020 Caltrans Traffic Noise Analysis Protocol, K-factors of more than 3 A-weighted decibels should be used for validation because of the inherent uncertainties in the measurements and validation procedures. K-factors of 3 A-weighted decibels or less are not used for model validation. Therefore, the K-factors were not used to validate the noise model and modeled noise levels are considered accurate. For a full

description of the noise study methodology, see Chapter 5 of the Noise Study Report.

Noise Study Addendum

In April 2021, Caltrans staff visited converted hotel properties (Days Inn Hotel, Motel 99, Welcome Inn Hotel, Parkside Inn Hotel, Valley Inn Hotel, Travel Inn Hotel, and Parkway Inn Hotel) to reexamine the area for traffic noise impacts. Based on field observations, the following hotels were found to have no outside frequent human use areas and were, therefore, not studied for noise abatement:

1. Welcome Inn Hotel
2. Parkside Inn Hotel
3. Valley Inn Hotel
4. Travel Inn Hotel
5. Parkway Inn Hotel

Motel 99 and Days Inn Hotel properties were found to have frequent outdoor human use areas, and the analyses for those properties have been revised.

Existing Noise Levels

Figure 2-30 through Figure 2-33 show receptor locations within the project area. Below is a discussion of the analyzed receptors within the project limits.

Receptor 1 (R1)

This receptor is on the west side of southbound State Route 99 at 2141 North Parkway Drive and represents a gathering location—a swimming pool area—for the Rescue Mission facility. R1 is set back approximately 400 feet from the edge of the shoulder of southbound State Route 99. Access to the facility is restricted, and the swimming pool location is shielded by the facility building structure; therefore, the existing noise level (64 A-weighted decibels) was modeled at this location.

Receptor 2 (R2)

This receptor is on the east side of northbound State Route 99 at 1941 North Golden State Boulevard and represents the Three Palms Mobile Home Park. An existing 14-foot soundwall shields and protects 14 front-row mobile homes, including a swimming pool area, from traffic noise on State Route 99. Furthermore, the existing soundwall was extended to the east to protect more mobile homes during the traffic noise analysis performed for the State Route 99 Realignment project. Refer to the noise study for that project completed in September 2014. The existing noise level is 78 A-weighted decibels.

Receptor 3 (R3)

This receptor is on the west side of southbound State Route 99 at 1101 North Parkway Drive and represents a gathering location—a swimming pool area—for the Days Inn hotel. Noise impacts to this location were reanalyzed as part of the addendum to the Noise Study Report because the hotel is now part of Project Homekey. The swimming pool area is set back approximately 350 feet from the edge of the traveled way of the outer southbound lane of State Route 99 and separated from the highway traffic by the hotel office building and a Denny's building. The swimming pool location is converted to a dog walking area with few tables and represents the only current gathering location at this hotel. Since the sale of the property to the city, the swimming pool has been filled in and converted into a dog park and seating area, as discussed above.

The noise measurement taken at this location during the field visit in April 2021, as seen in the photo in Figure 2-27, is recorded to be 57 A-weighted decibels.

Figure 2-27 Housing Property Located at the Days Inn Hotel



Figure 2-28 Swimming Pool Location at the Days Inn Hotel



Receptor 4 (R4)

This receptor is on the east side of northbound State Route 99 at 1415 West Olive Avenue and represents a gathering location—a swimming pool area—for the Parkside Inn hotel. R4 is set back approximately 175 feet from the edge of the shoulder of northbound State Route 99. A 6-foot brick wall surrounds the swimming pool area and shields the traffic noise on State Route 99. The existing noise level (76 A-weighted decibels) was modeled rather than measured at this location because the swimming pool area is locked, and no access was allowed.

Receptor 5 (R5)

This receptor is on the west side of southbound State Route 99 at 777 North Parkway Drive and represents a gathering location—a swimming pool area—for the Welcome Inn hotel. R5 is set back approximately 95 feet from the edge of the shoulder of southbound State Route 99. The existing noise level (78 A-weighted decibels) was modeled at this location because the swimming pool is adjacent to the hotel parking lot, which produces background noise contamination from people and cars pulling in and out.

Receptor 6 (R6)

This receptor is on the west side of southbound State Route 99 at 445 North Parkway Drive and represents a gathering location—a swimming pool area—for the Motel 6 hotel. R6 is set back approximately 250 feet from the edge of the shoulder of southbound State Route 99. The existing noise level (66 A-weighted decibels) was modeled at this location because the swimming pool is adjacent to the hotel parking lot, which produces background noise contamination from people and cars pulling in and out.

Receptor 7 (R7)

This receptor is on the west side of southbound State Route 99 at 339 North Durant Way and represents the first row of single-family residences (a total of eight homes). R7 represents the backyard of the residence and is set back approximately 250 feet from the edge of the shoulder of southbound State Route 99. Background noise from barking dogs would have contaminated the noise measurement, so the noise measurement at this location was modeled (64 A-weighted decibels).

Receptor 8 (R8)

This receptor is just south of R7 on the west side of southbound State Route 99 at 302 North Durant Way and represents the first row of single-family residences (a total of three homes). R8 represents the backyard of the residence and is set back approximately 180 feet from the edge of the shoulder of southbound State Route 99. Background noise from barking dogs would have contaminated the noise measurement, so the noise measurement (73 A-weighted decibels) at this location was modeled.

Receptor 9 (R9)

This receptor is on the east side of northbound State Route 99 at 371 North Teilman Avenue and represents the first row of single-family residences (a total of four homes).

Receptor 10 (R10)

This receptor is on the east side of northbound State Route 99 at 424 North Durant Way and represents the first row of single-family residences (a total of six homes).

Receptor 11 (R11)

This receptor is on the east side of northbound State Route 99 at 465 North Durant Way and represents the first row of single-family residences (a total of two homes and a gas station).

Receptor 12 (R12)

This receptor is on the west side of southbound State Route 99 at 325 South Thorne Avenue and represents the first row of single-family residences (total

of 10 homes) that are located at 33 East El Dorado Street and 434 Trinity Street. These represented receptors belong to the City of Fresno Housing Authority.

Receiver 14 (R14)

This receiver is on the east side of northbound State Route 99 at 1742 W Pine Avenue. This receiver represents a warehouse/industrial land use, Activity Category F. According to Caltrans Noise Protocol, April 2020, there are no impact criteria for Activity Category F land uses. However, existing and future noise levels are included in this report for reporting purposes only. The existing noise level at this receiver was modeled because of limited entry access.

Receiver 15 (R15)

This receiver is on the west side of southbound State Route 99 at 1310 Crystal Avenue. This receiver represents a warehouse/industrial land use, Activity Category F. According to Caltrans Noise Protocol, April 2020, there are no impact criteria for Activity Category F land uses. However, existing and future noise levels are included in this report for reporting purposes only. The existing noise level at this receiver was modeled because of limited entry access.

Receptor 40 (R40)

This receptor is on the west side of southbound State Route 99 at 535 South Trinity Avenue and represents the Fink-White Park. Initially, this receptor was placed at the tennis court, which is approximately 400 feet from State Route 99, for validation purposes only because it is the only quiet location at the park with the least noise contamination; it was identified as Receptor 13 for short-term measurement. Other recreational areas within the park with higher traffic noise impacts and more representative traffic noise at the park were analyzed as part of the Noise Study Report. There are a total of 10 gathering locations within the Fink-White Park (two recreational courts, two mixed-use baseball fields, two playgrounds, and four seating locations). The existing noise level is 71 A-weighted decibels.

Motel 99

This property was not analyzed as a separate receptor in the Noise Study Report; however, due to the change in its residential use, it was subsequently analyzed as a separate receptor in the 2021 addendum to the Noise Study Report. This property is on the west side of State Route 99 at 1240 North Crystal Avenue. The dog park area at this property is located approximately 100 feet from the edge of the traveled way of the outer southbound lane of State Route 99. The southbound off-ramp from State Route 99 to Olive Avenue runs between Motel 6 and the mainline of State Route 99; therefore, this hotel experiences traffic noise from two sources combined. The dog park

location has a few tables and represents the only current gathering location at this hotel, as seen in Figure 2-27.

Figure 2-29 Housing Property Reparented by Motel 99



The noise measurement taken at this location during the field visit in April 2021 was recorded to be 72 A-weighted decibels. This measurement, as stated above, reflects a combined traffic noise generated from traffic volumes on State Route 99 and the southbound offramp.

The following figures (Figure 2-30 to Figure 2-34) display the existing soundwall along State Route 99 that was captured in July 2020:

Figure 2-30 South End of Existing Soundwall/North End of Chain Link Fence



Figure 2-31 North of Existing Soundwall and Chain Link Fence



Figure 2-32 North of Soundwall and Chain Link Fence



Figure 2-33 South View of State Route 99 Northbound On-Ramp/Chain Link Fence/Soundwall



Figure 2-34 Existing Soundwall Within Roeding Park



Figure 2-35 Location Map of Receptors, Sheet 1 of 4



Figure 2-36 Location Map of Receptors, Sheet 2 of 4



Figure 2-37 Location Map of Receptors, Sheet 3 of 4



Figure 2-38 Location Map of Receptors, Sheet 4 of 4



Environmental Consequences

Noise analyses were conducted to determine the future traffic noise impacts at receptors in the vicinity of the proposed project. Potential long-term noise impacts associated with project operations are solely from traffic noise. Traffic noise was evaluated for the worst-case traffic condition. The receiver locations were evaluated using the Traffic Noise Model 2.5.

Table B-1 in Appendix B of the Noise Study Report summarizes traffic noise levels for the existing 2019) and the design-year (2049) no-Build Alternative condition as well as for the design-year (2049). The 2021 addendum to the Noise Study Report contains the revised noise analyses for Motel 99 and Days Inn.

Alternatives 1 and 2 Noise Impacts

Modeling results indicate that predicted traffic noise levels (Leq[h]) for the design year with project conditions under the Build Alternatives will cause the noise levels at the studied receptors to approach or exceed the Noise Abatement Criteria for their represented land uses as follows:

- **Activity Category B (residences represented by receptors Receptor 3, Receptor 7 through Receptor 12):** The design-year build noise levels at these receptors approach or exceed the noise abatement criteria of 67 A-weighted decibels for their represented land use. Therefore, abatement must be considered to lower the noise level at these receptor locations. However, since there are no formal locations for activity gatherings at these receptors, as described above, soundwalls were studied but not recommended at these locations.

Days Inn (Receptor 3): The field noise level, as well as the existing year (2019) and design year (2049) noise levels in this area, were calculated to be 59 A-weighted decibels, 61 A-weighted decibels, and 63 A-weighted decibels, respectively, using the Federal Highway Administration-approved Traffic Noise Model 2.5. The design year noise level at this location is below the Noise Abatement Criteria of 67 A-weighted decibels designated for residences; therefore, noise abatement is not required at this location.

Motel 99: The field noise level, as well as the existing and design year (2049) noise levels at this area, were calculated to be 72 A-weighted decibels, 76 A-weighted decibels, and 77 A-weighted decibels, respectively, using Federal Highway Administration-approved Traffic Noise Model 2.5. The traffic volumes on the southbound off-ramp are estimated to generate between 60 A-weighted decibels to 65 A-weighted decibels based on decibel calculations and using a model calibration run. The design year noise level is above the Noise Abatement Criteria of 67 A-weighted decibels designated for residences; therefore, a noise

abatement in the form of a soundwall will need to be proposed for this location.

- Activity Category C (Fink-White Park represented by Receptor 13): The design year build noise levels at this park approached the noise level abatement criteria of 67 A-weighted decibels for its represented land use. Therefore, abatement must be considered to lower the noise level at this location.
- Activity Category E (hotels/motels represented by Receptor 1 through Receptor 6, excluding Receptor 3): The design year build noise levels at Receptor 2, Receptor 4, and Receptor 5 approach or exceed the noise level abatement criteria of 72 A-weighted decibels for their represented land use. Therefore, abatement must be considered to lower the noise level at these receptor locations. However, the gathering locations at these hotels and swimming pools are either out of service or have restrictions, as discussed with the hotels' managers. Therefore, soundwalls are proposed but not recommended at these locations.
- Activity Category F land use (Warehouses represented by receptors (R14 and R15): There are no noise impact criteria for land uses associated with this activity. Noise levels are reported for informational use only.

Construction Noise Impacts for Alternatives 1 and 2

Project construction is estimated to last five years (April 2025 to April 2030). Construction activities will be performed during the day and night. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area.

Night work would be expected during construction. Whenever this type of activity takes place, there will be Standard Special Provisions showing the days and times of such activities.

As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at a distance of 50 feet. The noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance.

Construction noise varies greatly depending on the construction process, the type and condition of equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable in areas immediately next to the proposed project alignment.

The noise level requirement specified herein will apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the contractor.

Vibration due to construction activities is temporary, and long-term vibration is unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility.

No-Build Alternative

The No Build alternative would not address traffic noise concerns within the project limits on State Route 99.

Avoidance, Minimization, and/or Abatement Measures

In accordance with Title 23 CFR 772, noise abatement is considered where traffic noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures identified in the protocol include the following:

- Constructing noise barriers
- Using traffic management measures to regulate types of vehicles and speeds
- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project
- Acquiring property to serve as a buffer zone
- Acoustically insulating public-use or nonprofit institutional structures.

These abatement options have been considered; however, because of the constrained configuration and urban location of the project, abatement in the form of soundwalls is the only abatement measure considered to be feasible. Noise barrier analysis was conducted by placing soundwalls at the highway mainline shoulders, on-ramp and off-ramp shoulders, and right-of-way lines.

The Caltrans acoustical design goal must also be met for a noise barrier to be considered reasonable. Costs are provided by the design team and an estimate is provided to meet this goal. The design goal is that a barrier must be predicted to provide at least 7 decibels of noise reduction at one or more receivers. Also, the estimated cost to build the noise barrier should be equal to or less than the total cost allowance of receivers calculated for the barrier to be considered reasonable from a cost perspective.

Build Alternatives 1 and 2

With the information from the Noise Study Report, a Noise Abatement Decision Report was completed to determine the soundwalls' construction cost estimates for the proposed soundwall locations. The engineer's cost

estimates were compared to the Noise Study Report “reasonable allowance” estimates and determined that none of the five soundwalls discussed earlier meet the reasonableness criteria to warrant construction.

The Noise Abatement Decision Report for the project documents a preliminary noise abatement decision based on acoustical and non-acoustical feasibility factors and the relationship between noise abatement allowances and the soundwall engineer’s cost estimate. The Noise Abatement Decision Report analyzed the reasonability of the soundwall by comparing the noise abatement allowances and the engineer’s cost estimate. Table 2.47 summarizes the reasonableness determination of Soundwall 1 through Soundwall 5.

The analysis was conducted with barrier heights ranging from 8 to 16 feet. The barrier heights and locations were evaluated first to determine if a minimum of 5 decibels of noise reduction attenuation at the outdoor frequent use areas of the representative receivers could be achieved, then second, to determine if a minimum of 7 decibels of noise reduction attenuation at one of the receivers could be achieved. The minimum barrier height required to cut the line of sight from each receiver to the exhaust stacks of heavy trucks has been calculated for all feasible barriers. These heights were evaluated through calculations performed by Traffic Noise Model 2.5.

The soundwall proposed for this project at the new location has been evaluated for feasibility based on achievable noise reduction (5 decibels or more). A reasonable cost allowance was calculated for the feasible proposed soundwall.

In determining traffic noise impacts, the primary consideration is given to residential exterior areas where frequent human use occurs that would benefit from a lowered noise level. In general, an area of frequent human use is an area where people are exposed to traffic noise for an extended period of time on a regular basis.

For this project, a total of five new soundwalls are analyzed and proposed for construction to address elevated future noise impacts at the following locations:

- One soundwall at the Fink-White Park (Soundwall 1).
- One soundwall for the residences west of State Route 99 between Thorne and Trinity Streets (Soundwall 2).

Two soundwalls for the residences south of Belmont Avenue at the following locations:

- Residences east of State Route 99 between Belmont and North Teilman Avenues (Soundwall 3).

- Residences west of State Route 99 between North Channing Way and North Durant Way (Soundwall 4).
- One soundwall for the motels west of State Route 99 between Olive and Belmont Avenues (Soundwall 5).

Soundwall 1

This soundwall (Figure 2-23, sheet 4 of 4) is proposed on the right-of-way of State Route 99 to provide noise attenuation for the 15 first-row residences on the west side of State Route 99 between Thorne and Trinity Streets, represented by Receptor 12. Soundwall 1 is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 1,434 feet along the right-of-way. Soundwall 1 will provide the required 5-decibel reduction of noise attenuation at all wall heights; however, only a maximum of eight residences will benefit from the soundwall at a maximum wall height of 16 feet. Soundwall 1, at all heights tested, will also meet the design goal by providing at least a 7-decibel reduction of noise attenuation at several locations and will break the line of sight. The estimated cost to construct a soundwall at this location is \$1,177,300. Because the estimated construction cost exceeds the \$321,000 cost allowance, the wall has been determined to not be reasonable.

Soundwall 2

This soundwall (sheet 4 of 4) is proposed on the right-of-way of State Route 99 to provide noise attenuation for the 10 field activity locations within the Fink-White Park, represented by Receptor 13. Soundwall 2 is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 1,076 feet along the right-of-way. Soundwall 2 will need to be at least 16 feet high to provide the minimum attenuation of a 5-decibel reduction for three activity locations within the park. Soundwall 2 will also meet the design goal by providing at least a 7-decibel reduction of noise attenuation for one activity location within the park and will also break the line of sight. The estimated cost to construct this soundwall at this location is \$1,005,000. Because the estimated construction cost exceeds the \$749,000 cost allowance, the soundwall has been determined to not be reasonable.

Soundwall 3

This soundwall (sheet 3 of 4) is proposed on the right-of-way of State Route 99 to provide noise attenuation for a total of 12 first-row residences on the east side of State Route 99 between Belmont and North Teilman Avenue, represented by Receptor 9, Receptor 10 and Receptor 11. Soundwall 3 is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 1,457 feet along the right-of-way. Soundwall 3 will only provide the required 5-decibel reduction of noise attenuation for the residences represented by Receptor 9 (a total of four homes) at wall heights of 12, 14, and 16 feet. Soundwall 3 will also meet the design goal by providing at least a 7-decibel reduction of noise attenuation and will also break the line

of sight. There are no formal gathering locations at the residences represented by Receptor 9, Receptor 10, and Receptor 11 that will benefit from a noise abatement. The estimated cost to construct this soundwall at this location is \$1,037,617. Because the estimated construction cost exceeds the \$642,000 cost allowance, the soundwall has been determined to not be reasonable.

Soundwall 4

This soundwall (sheet 3 of 4) is proposed on the right-of-way of State Route 99 to provide noise attenuation for a total of 12 gathering locations, including one swimming pool on the west side of State Route 99 represented by Receptor 6, eight single-family residences represented by Receptor 7, and three single-family residences represented by Receptor 8. Soundwall 4 is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 1,251 feet along the right-of-way. Soundwall 4 will provide the required 5-decibel reduction of noise attenuation for the residences represented by Receptor 7 and Receptor 8 (a total of 11 homes) at wall heights of 10, 12, 14, and 16 feet. Soundwall 4 at the above heights will also meet the design goal by providing at least a 7-decibel reduction of noise attenuation and will also break the line of sight. Therefore, Soundwall 4 is considered feasible for residences represented by Receptor 7 and Receptor 8 and only at the above heights mentioned. The estimated cost to construct a soundwall at this location is \$1,057,261. Because the estimated construction cost exceeds the \$214,000 cost allowance, the wall has been determined to not be reasonable.

Soundwall 5

This soundwall (sheet 2 of 4) is proposed on the right-of-way of State Route 99 to provide noise attenuation for a total of 7 gathering locations (swimming pools) for the hotels on the west side of State Route 99 (total of 7 hotels), represented by receptors Receptor 3 (Days Inn hotel) and Receptor 5 (Welcome Inn hotel). Soundwall 5 is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 1,797 feet along the right-of-way. Soundwall 5 will provide the required 5-decibel reduction of noise attenuation for the seven gathering locations at the studied seven hotels and represented by Receptor 3 and Receptor 5. However, Soundwall 5 will need to be at least 10 feet high to meet the design goal by providing at least 7-decibel reduction noise attenuation at a minimum of one location. Soundwall 5 will also break the line of sight at the minimum feasible wall height. These hotels are transitional, and management at most of the hotels noted that the swimming pool areas were either closed or not usable by hotel tenants. The estimated cost to construct a soundwall at this location is \$1,409,027. Because the estimated construction cost exceeds the \$428,000 cost allowance, the wall has been determined to not be reasonable.

Soundwall 6 (Existing Soundwall)

The existing soundwall (sheet 2 of 4) on northbound State Route 99 between Belmont and Olive Avenue is approximately 1,600 feet long, with a stepping height from 8 feet to 16 feet. This soundwall was built over 30 years ago, according to the dates on the as-built plans. This soundwall provides noise attenuation to the Roeding Park playground, seating area, and children's railroad track ride.

The proposed project alternatives will bring northbound traffic lanes closer to the soundwall and, therefore, will need to reinforce the strength of the soundwall by replacing the existing soundwall in-kind and constructing the entire length of the soundwall on a 3-foot barrier. The noise modeling results show Receptor 53, representing a lake receptor facing the existing chain link fence close to the Belmont Avenue overpass, will receive only a 2-decibel reduction of noise attenuation if the existing soundwall extends to Belmont Avenue. The tracks for the children's train ride next to the chain link fence were represented by Receptor 52 and Receptor 54, and these receptors received noise attenuations of a 12-decibel reduction and an 8-decibel reduction. The train track is considered one receptor, which would give an allowance of \$107,000 to build an extension to the south where the chain link fence stands at this time. The estimated cost to construct a soundwall at this location is \$1,750,000.

Soundwall 7 (Existing Soundwall)

An existing 15-foot high soundwall (Figure 2-20, sheet 1 of 4) along the right-of-way protects the first row of mobile homes facing State Route 99 at the Three Palm Mobile Home Park at 1941 North Golden State Boulevard. This soundwall was built over 30 years ago, according to the dates shown on the as-built plans. The proposed alternative will bring northbound traffic lanes closer to the soundwall and, therefore, will need to reinforce the strength of the soundwall by replacing the existing soundwall in-kind and constructing the entire length of the soundwall (1,060 feet) on a 3-foot barrier. Receptor 1, representing the first row of the mobile homes, would benefit from the proposed 15-foot soundwall replacing the existing soundwall. The mobile homes would experience an adequate noise reduction of 5-decibel reduction or higher. The estimate to construct this soundwall at this location is \$1,330,000.

The Project Development Team will reconstruct the two existing soundwalls (Soundwalls 6 and 7) within the project limits. The Federal Highway Administration requires all existing walls that it funded to remain forever regardless of current reasonable/feasible criteria. These features of the soundwall will be updated and maintained in perpetuity per the requirements of the Federal Highway Administration.

Soundwall at Motel 99

This soundwall is proposed on the right-of-way of State Route 99 and would be located at the east property line of Motel 99 and Caltrans right-of-way. This soundwall is proposed for the dog walking area at this housing development and is intended to provide noise attenuation generated from State Route 99 only for the dog walking area at the previously converted swimming pool area.

This soundwall is proposed for heights ranging between 8 feet and 16 feet and would extend for an approximate total length of 300 feet along the right-of-way. This will provide the required 5-decibel attenuation for the dog walking location at this property at a minimum wall height of 12 feet. The soundwall will break the line of sight at this height and will meet the design goal attenuation of 7 decibels.

The cost allowance per benefited receptor is \$107,000, according to the most recent update for the year 2019, as stated on Caltrans' website for Noise and Vibration. This proposed wall would benefit one receptor—Motel 99. The estimated construction cost for this soundwall based on the Noise Abatement Determination Report prepared for this project in September 2020 would be approximately \$210,000, based on an estimated cost of \$58 per square foot. Since the construction cost for this soundwall exceeds the reasonable cost allowance (\$107,000), this soundwall is not reasonable to construct.

The Noise Abatement Decision Report for the project documents a preliminary noise abatement decision based on acoustical and non-acoustical feasibility factors and the relationship between noise abatement allowances and the soundwall engineer's cost estimate. The Noise Abatement Decision Report analyzed the reasonableness of the soundwall by comparing the noise abatement allowances and the engineer's cost estimate. Table 2.46 summarizes the reasonableness determination of Soundwall 1 through Soundwall 5.

Table 2.46 Summary of Reasonableness Determination—Soundwalls 1-5

Barrier Number	Direction of Traffic on State Route 99	Location Description	Noise Barrier Height (Feet)	Noise Barrier Length (Feet)	Estimated Construction Cost	Total Reasonable Allowance	Cost of Soundwall Less Than Allowance and Meets 7-Decibel Criteria	Reasonable and Feasible
Soundwall 1	South	South of El Dorado Street on Southbound State Route 99.	16	1,076	\$1,005,000	\$321,000	No	No
Soundwall 2	South	North of El Dorado Street to Thorne Avenue on Southbound State Route 99.	14	1,435	\$1,177,500	\$749,000	No	No
Soundwall 3	North	South of Belmont Avenue to Southern Pacific Railroad Bridge on Northbound State Route 99.	12	1,457	\$1,038,000	\$642,000	No	No
Soundwall 4	South	North of Southern Pacific Railroad Bridge on Southbound State Route 99.	14	1,286	\$1,057,500	\$214,000	No	No
Soundwall 5	South	South of Olive Avenue on Southbound State Route 99.	10	1,786	\$1,409,000	\$428,000	No	No

Standard Minimization Measures

The following are procedures that would be used to minimize the potential impacts of construction vibration:

NOISE-1: Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).

NOISE-2: The owner of a building close enough to a construction vibration source that could possibly result in damage to their structure due to vibration would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.

NOISE-3: Conduct vibration monitoring during vibration-intensive activities.

NOISE-4: A combination of the techniques for equipment vibration control and administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Temporary increases in vibration would still likely occur at some locations. Based on the analysis above, the generation of excessive groundborne vibration or groundborne noise levels would be less than significant.

NOISE-5: In case of construction noise complaints by the public, the resident engineer will coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

2.2.6 Energy

Regulatory Setting

The National Environmental Policy Act (NEPA) (42 U.S. Code 4332) requires the identification of all potentially significant impacts on the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

State Route 99 is functionally classified as a principal arterial in the State of California. It runs in the north and south directions with a high percentage of truck traffic. It is part of the National Highway System as a Strategic Highway

Network route under the Federal-Aid Surface Transportation Program. State Route 99 is also on the National Truck Network for Surface Transportation Assistance Act trucks. State Route 99 has undergone several crack, seal, and overlay projects, as well as several panel replacement projects. Maintenance efforts and expenditures have increased to maintain the deteriorating pavement. One of the key project-level measures to reduce energy consumption is to reduce construction waste. Several maintenance projects contribute to higher levels of demolition waste.

CEQA Guidelines state that Environmental Impact Reports are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Reusing or recycling salvageable construction materials, such as removed rigid and flexible pavements, will be further evaluated as the project progresses to the next project phases.

This project will ensure that it will contribute to the Department's goals and mandates to reduce greenhouse gas emissions. Emission control measures will be outlined in the environmental document as part of the project climate change and air quality analysis Section 3.3, Climate Change. A memo to file was completed to discuss energy impacts and the CEQA determination on November 5, 2021.

Environmental Consequences

The proposed project is consistent with the State Route 99 Transportation Concept Report and the Fresno/Madera Urban Route 99 Corridor System Management Plan. The 2030 concept for this segment of State Route 99 is a six-lane freeway that includes auxiliary lanes. The ultimate transportation corridor within the proposed project limits is an 8-lane freeway that includes auxiliary lanes.

The Regional Transportation Plan includes transportation projects that reduce congestion, provide safe and enhanced modes of transportation within the region, and accommodate development planned for the surrounding area. The proposed project is consistent with the long-term goals of the 2022 Regional Transportation Plan for Fresno County, as well as the goals and policies of the Fresno General Plan, Active Transportation Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan, as discussed in Section 2.1.4, Growth, of this Environmental Impact Report.

The project would not result in wasteful, inefficient, or unnecessary consumption use of energy or wasteful use of energy resources.

Avoidance, Minimization, and/or Mitigation Measures

The following is a list of some items the proposed project considers reducing the energy consumption during and after construction:

EG-1: Water efficient project features or construction methodologies

EG-2: Energy efficient project features or construction methodologies

EG-3: Fuel efficient measures both for construction equipment and traffic management during delays or detours

EG-4: Considerations on reduction, reusing, and recycling of construction material wastes

EG-5: Minimizing material source hauling distance from the site

EG-6: Reducing the amount of fuel used by reducing driving

EG-7: Providing construction personnel training to provide knowledge in identifying environmental issues and construction best practice methods to minimize impacts on humans and the environment.

EG-8: Considerations on the use of construction methodologies to reduce construction windows such as, but not limited to, the accelerated bridge construction method

EG-9: Implementation of Complete Streets Elements

2.3 Biological Environment

2.3.1 Wetlands and Other Waters

Regulatory Setting

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

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

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

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

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that

proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

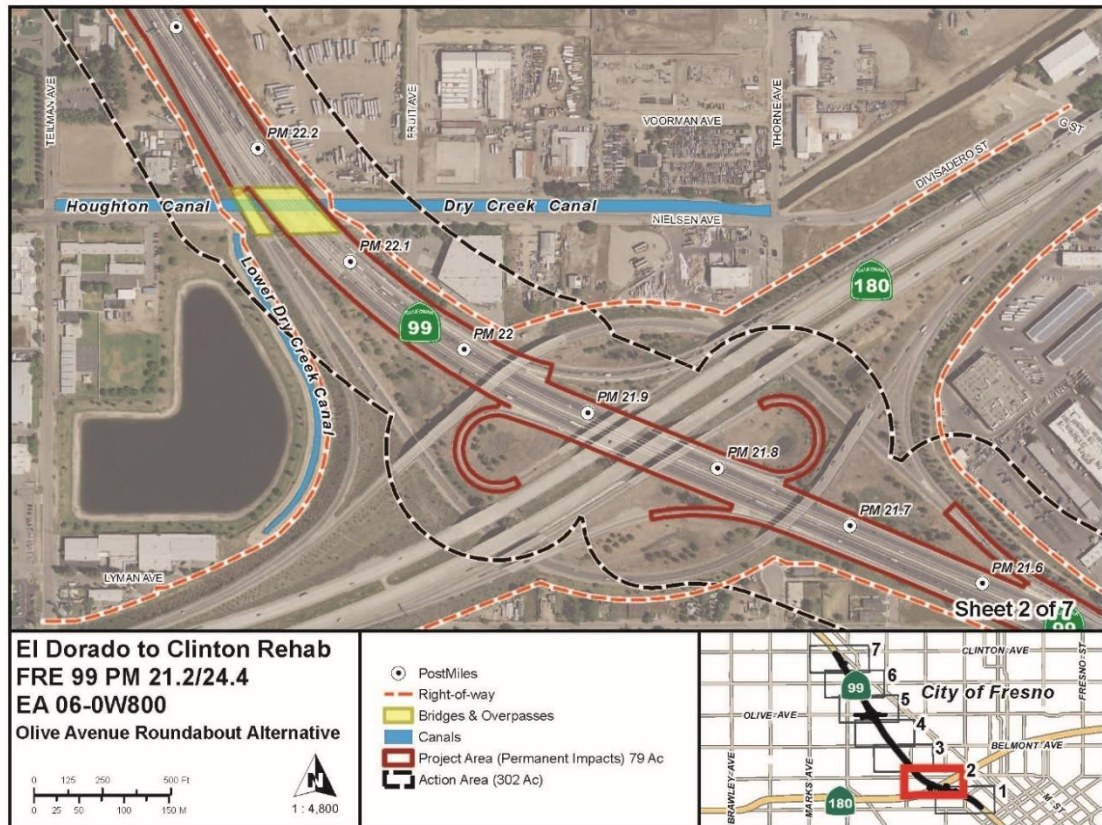
The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under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

Affected Environment

The term “Jurisdictional Wetlands” refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration enough to support, and that under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands generally include swamps, marshes, bogs, natural drainage channels, and seasonal wetlands. Jurisdictional Waters of the U.S. are defined as those waters that are currently used or were used in the past or may be susceptible to use in interstate commerce, including all waters subject to the ebb and flow of the tide and all interstate waters, including interstate wetlands.

During the autumn of 2019, Caltrans biologists delineated potentially jurisdictional waters within the action area. The Nielson Avenue Undercrossing crosses the Houghton Canal; this canal is part of the Fresno Irrigation District. The Houghton Canal is under the jurisdiction of the U.S Army Corps of Engineers. No wetlands were identified, but potential waters of the U.S. were identified within the action area. Figure 2-39 below displays the canals within the action area.

Figure 2-39 Canals Within the Action Area



Environmental Consequences

Alternatives 1 and 2

The project would permanently impact about 0.0054 acre and temporarily impact 0.0075 acre of potentially jurisdictional waters of the U.S. Best management practices would be used to minimize direct and indirect impacts, either temporary or permanent to jurisdictional waters of the U.S. The canal is represented by a concrete-lined ditch that runs below the Nielsen Avenue Bridge. The water quality is heavily degraded due to the location being in an urbanized area.

No-Build Alternative

The project would not affect any jurisdictional waters of the U.S.

Avoidance, Minimization, and/or Mitigation Measures

WET-1: There will be early consultation with the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and California Regional Water Quality Control Boards to avoid or reduce impacts to the jurisdictional water within the action area where possible. In-lieu fee credits would be purchased from the National Fish and Wildlife Foundation.

- A 1602 Streambed Alteration Agreement permit (California Department of Fish and Wildlife) would be required.
- A 404 permit from the U.S. Army Corps of Engineers would be required.

A 401 Water Quality Certification from the Regional Water Quality Control Board would be required.

2.3.2 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the California Department of Fish and Wildlife are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species and species of special concern, and U.S. Fish and Wildlife Service or the National Oceanic and Atmospheric Administration's National Marine Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

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

State laws and regulations relevant to wildlife include the following:

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

Affected Environment

A Natural Environment Study was completed on November 13, 2020, to assess project impacts. The action area was comprised of the proposed project footprint, adjacent right-of-way, and a 250-foot buffer. The proposed project footprint is defined as the area to be directly affected by project construction.

Migratory Birds

Bird species protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3511 may use the study area for roosting, nesting, and foraging year-round. Birds covered by the Migratory Bird Treaty Act are

protected from hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any bird, or any part, nest, or egg. State fully protected species (including their parts) may not be taken or possessed at any time. Migratory birds within California have an approximate breeding and nesting season from February 1 to September 30.

Swallows

Discussion of Special Concern Bat Species

California has 24 indigenous bat species throughout the state. At least 17 of the bat species are known to use human-made structures for roosting. These structures include but are not limited to buildings and bridges (Erickson 2002). Fifteen California bat species are ranked as having a rare status with state or federal agencies; 10 are California species of special concern by the California Department of Fish and Wildlife, and five are considered sensitive by federal agencies (Bureau of Land Management and U.S. Forest Service).

All bat species in California are nocturnal; they feed on insects from dusk to dawn. Bats use echolocation to locate solid objects for navigation and locating prey. Some bat species are solitary; they may pass the daytime hours by hanging among the foliage of trees, within tree cavities, or building attics, whereas other species seek daytime shelter in colonial groups in caves, mines, or bridges. The California Fish and Game Code Section 2126 states that it is unlawful for any person to take any mammal as identified by Section 2118, which includes all species of the order Chiroptera (bats). In addition, bat roosts are considered a sensitive resource by the California Department of Fish and Wildlife, where avoidance, minimization, and/or replacement of habitat should be addressed. Below are brief descriptions of the western mastiff bat species, which has the potential to occur within the action area.

Western Mastiff Bat

The western mastiff bat is a California Department of Fish and Wildlife species of special concern and a year-round resident of California that is most often found at low to middle elevations. This species' day roosts are primarily crevices in cliff faces, cracks in boulders, and occasionally buildings. They are also known to move to different roosts with the changing seasons. The chance of western mastiff bats using the proposed bridges as a roosting place is low because the average height of the bridges that are being removed or replaced is lower than the preferred "take-off" height. According to an article published in the Journal of Mammalogy, permanent roosting places [...] conditions allowing a "take-off" of 20 to 25 feet seems to be preferred (Krutzch 1955). Western mastiff bats can possibly roost in the bridges on the project footprint; however, bridge roosting has not been recorded in California and is unlikely to occur at the project site (Erickson 2002).

If it is determined that bat species are using the project bridges, bat exclusionary methods would be implemented. With the implementation of avoidance and minimization measures, no impacts to bat species are expected.

Environmental Consequences

Migratory Birds

The proposed project would include the removal of trees and shrubs that provide nesting habitats for birds protected by the Migratory Bird Treaty Act. Standard special provisions would be included in the construction contract to allow the removal of trees throughout the year if pre-survey results reveal no nesting occurring during nesting season. The nesting season is defined as February 1 to September 30.

Bird species protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3511 may use the study area for roosting, nesting, and foraging year-round. Birds covered by the Migratory Bird Treaty Act are protected from hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any bird, or any part, nest, or egg. State fully protected species (including their parts) may not be taken or possessed at any time. Migratory birds within California have an approximate breeding and nesting season from February 1 to September 30.

Swallows

The proposed project may include the temporary exclusion of swallows, which are protected under the Migratory Bird Treaty Act, from nesting under the bridge during construction. This would entail either the contractor or a separate swallow contractor installing and maintaining exclusionary measures under the bridge before February 1 of the first year of construction to prevent nesting during construction. A swallow nonstandard special provision would be included in the construction contract that would allow nest removal or application of exclusionary devices between September 30 and February 1.

Bats

The proposed project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. This would entail either the contractor or a separate bat contractor installing and maintaining exclusionary measures over the expansion joints before the construction window.

General reconnaissance surveys were conducted on September 11, 2019, and October 29, 2019, to inventory wildlife species that occur within the action area. During the surveys, several cliff swallows (*Petrochelidon pyrrhonota*) were seen on the Nielsen Avenue Undercrossing, along with several mud nests clung to the sides of the bridge.

Caltrans biologists surveyed the action area in fall 2019 for potential day and night roosting areas. The proposed project area was observed visually within the right-of-way using binoculars and while conducting windshield surveys of areas inaccessible by foot. It was concluded that the action area does contain suitable roosting habitat for bat species that would roost on bridges.

Additional surveys may be necessary within a year before construction. There were no conclusive signs of bats roosting within the bridges in the project footprint. With the implementation of avoidance and minimization measures, no impacts on bat species are expected.

Avoidance, Minimization, and/or Mitigation Measures

Migratory Birds

BIO-1: With the implementation of avoidance and minimization measures, direct and indirect impacts on migratory birds are not expected to occur because of the proposed project. A preconstruction survey for migratory birds within the study area would be conducted 30 days before the start of construction. If migratory birds are found to be nesting within the proposed project footprint, minimization efforts would be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and may include a no-work buffer zone (100 feet) around an active nest and/or having a qualified biologist monitor an active nest during construction activities within the established buffer.

BIO-2: If an active nest were detected, an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may become suspended temporarily if nesting activity cannot be prevented. Standard specifications will be included in the construction bid package to provide guidance on how to avoid impacts on migratory birds and may include nest exclusion on bridge structures.

Swallows

BIO-3: If removing cliff swallow nests or other bird species nests is deemed necessary, the removal would occur during the time of year when the nests are not used (about October 1 to January 30). A preconstruction survey for migratory birds within the study area would be conducted 30 days before the start of construction. If migratory birds are found to be nesting within the proposed project footprint, minimization efforts would be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, and may include a no-work buffer zone (100 feet) around an active nest and/or having a qualified biologist monitor an active nest during construction activities within the established buffer.

BIO-4: If an active nest were detected, an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may become suspended temporarily if nesting activity cannot be prevented. Standard specifications would be included in the construction bid package to

avoid impacts on migratory birds and may include nest exclusion on bridge structures.

Bats

BIO-5: If it is determined that bat species are using the project bridges, bat exclusionary methods would be implemented. The proposed project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. This would entail either the contractor or a separate bat contractor installing and maintaining exclusionary measures over the expansion joints before the construction window.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under the California Environmental Quality Act can be found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

Affected Environment

Cumulative impacts identified for the El Dorado to Clinton Avenue Rehabilitation project are those impacts that result from past, present, and

reasonably foreseeable future actions occurring in the project area. The study area for each of the resources potentially affected by the cumulative projects is discussed here. The affected environment for each of these resources has been previously discussed in their respective portions of Chapter 2.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development. These land use activities can degrade habitat and populations, alteration of hydrology, contamination, erosion, sedimentation, disruptions of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

To define the resource study area of a transportation system, the cumulative impact analysis must consider the impacts of resource areas in which there are significant impacts. The project would impact the following resource areas:

Resources Not Substantially Affected by Cumulative Impacts

The following resources were studied and determined not to be in poor or declining health or that the proposed project would not contribute to cumulatively considerable impacts. Impacts to the health, status, or condition of these resources as a result of past, present, and reasonably foreseeable impacts would not occur as a result of this project.

Section 2.1.1, Existing and Future Land Use

Section 2.1.1, Consistency with State, Regional and Local Plans

Section 2.1.2, Parks and Recreational Facilities

Section 2.1.3, Growth

Section 2.1.4 Community Character and Cohesion

Section 2.1.7, Utilities and Emergency Services

Section 2.1.9, Visual/Aesthetics

Section 2.1.10, Cultural Resources

Section 2.2.1, Water Quality and Stormwater Runoff

Section 2.2.2, Paleontology

Section 2.2.3, Hazardous Waste and Materials

Section 2.2.4, Air Quality

Section 2.2.5, Noise

Section 2.2.6, Energy

Section 2.3.1, Wetlands and Other Waters

Section 2.3.2, Animal Species

The cumulative impact analysis is based on known projects that are currently proposed, approved, or under construction with Caltrans, Fresno County, and the City of Fresno.

Environmental Consequences

The list of reasonably foreseeable projects is based on known projects identified by Caltrans, the City of Fresno, and Fresno County. Table 2.47 shows the reasonably foreseeable projects considered in the cumulative impact analysis for this project.

Table 2.47 Past, Present, and Reasonably Foreseeable Future Actions

Project Name or Applicant	Project Location	Project Description	Project Uses	Environmental Impacts	Project Status
High Speed Rail Realignment	Fresno County; located between Clinton Avenue and Ashlan Avenue	This project involved the realignment of State Route 99, 80 to 100 feet to the west from Clinton Avenue to Ashlan Avenue, to accommodate right-of-way for the High-Speed Train Project.	The project added three through lanes and an auxiliary lane for each direction of travel. Three at-grade onramps were permanently closed to improve traffic flow and overall safety.	A total of 42 properties needed to be acquired. parcel acquisition was delayed because eminent domain proceedings were needed on multiple parcels.	Completed in March 2020
High Speed Train Project	A 65-mile-long corridor between Merced and Fresno	The Merced to Fresno section is the location where the High-Speed Train would intersect and connect with the Bay Area and Sacramento branches of the High-Speed Train System.	The downtown Merced and downtown Fresno station areas would each occupy several blocks, including station plazas, drop-offs, a multimodal transit center, and parking structures.	This project would have disproportionately high and adverse effects due to the visual impacts of an elevated guideway along State Route 99 through Fairmead, property acquisitions, and the need to relocate individuals outside the community.	Will be completed in Phase 1 of project, set to be completed in 2033.
Veterans Boulevard Route 99 Interchange Project	Fresno County; located between Shaw Avenue and Herndon Avenue	This project added a Type L-9 Partial Cloverleaf Interchange to State Route 99 with six on- and off-ramps connecting State Route 99 and Veterans Boulevard.	This project will improve pedestrian and bicycle accessibility to State Route 99 and circulation to roads adjacent to the proposed interchange in northwest Fresno.	The project impacted 31 acres of protected farmlands, two commercial businesses, 0.23 acre of waters of the U.S., and certain threatened and endangered species.	Start of construction/ Began July 2021.
South Fresno 99 Interchange Modification	Fresno County; located on post mile 14.1 to 17.6	This project proposes to reconstruct two existing interchanges on State Route 99 between post miles 12.5 and 19.1 in the southwest area of the city of Fresno.	This project will improve State Route 99 interchanges by modifying and consolidating to increase capacity for planned growth in Fresno County to be incorporated by the city.	A total of 40 properties are potentially directly affected by the proposed improvements: eight properties on American Avenue and 32 properties on North Avenue.	Start of construction/ Begins late 2024

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

Project Name or Applicant	Project Location	Project Description	Project Uses	Environmental Impacts	Project Status
Burlington Northern Santa Fe Corporation Blackstone McKinley Grade Separation Project	Intersection of North Blackstone, East McKinley, and Burlington Northern Santa Fe Corporation Mainline	The project will eliminate two existing at-grade crossings by grade separating North Blackstone Avenue and East McKinley Avenue under the Burlington North Santa Fe Mainline Track.	The project will improve on-time service performance for the city's Bus Rapid Transit Service and remedy traffic for Fresno City College, located at the northwest quadrant of the Blackstone and McKinley intersection.	This project was approved under a statutory exemption for any railroad grade separations project, which eliminates an existing at-grade crossing as set forth in Section 21080.13 of the Public Resources Code.	Start of construction/ Begins in fall 2024.
Fulton Street Reconstruction Project	Fulton Street, Fresno California	Fulton Street featured pedestrian scrambles at key intersections, which provides traffic signal movement that temporarily stops all vehicular traffic, thereby allowing pedestrians to cross an intersection in every direction, including diagonally, at the same time. This included 11 city blocks and bicycle and pedestrian accommodations.	The City's Fulton Mall Reconstruction Project will return the Fulton Mall in downtown Fresno to a complete street by reintroducing vehicle traffic to downtown's former main street. The goal was to make the street friendly for all modes of access, vehicles, bikes, and pedestrians.	The total length of the new roadways was approximately 0.67 mile; a total of 0.74 mile of the existing Fulton Mall right-of-way was affected.	Completed in 2016.
Stockton to Fresno Subdivision Project	2650 Tulare Street, Fresno, California 93721	Capacity improvements for the eighth daily round trip will be completed shortly between Stockton and Fresno.	These improvements will also lay the groundwork for additional round trips to Sacramento, thereby enabling further expansion of the San Joaquins between Merced and Sacramento to increase connectivity to the High-Speed Rail Interim Service.	The project would result in permanent impacts on up to 70.16 acres of Urban Park areas that contain suitable habitats to support Swainson's hawk nests. Impacts will occur on 0.38 acre of potential unvegetated California Department of Fish and Wildlife streambeds within Mormon Slough. The project would convert industrial parcels for transportation use, reducing the available industrial land use in the area by 10.87 acres.	Currently in the design phase.

The long-range analysis (year 2042) assumptions for the traffic, air quality, and noise (Sections 3.1.6, 3.2.6, and 3.2.7, respectively) all reflect the growth projections approved by the Fresno Council of Governments for 2042.

Therefore, from a land use and circulation perspective, the approved long-range growth projections include the cumulative projects identified in Table 3.52. As a result, the project's long-range analysis for traffic, air quality, and noise also reflect the cumulative project impacts. An exception is that the project analysis does not assume the California High-Speed Rail project, which has been identified as a cumulative project. From a cumulative perspective, the California High-Speed Rail project could result in cumulative traffic and air quality benefits by providing an alternative mode of transportation.

If multiple projects are built during the same general time frame, it would likely result in increased localized construction-related traffic congestion and construction air emissions and noise impacts. The State Route 99 Fresno Interchange Modification and the El Dorado to Clinton Avenue Rehabilitation project have the potential to contribute to cumulative construction impacts. The City of Fresno and Caltrans would work together to ensure overlapping construction from multiple projects in the same vicinity would be managed to avoid or lessen cumulative impacts.

The analysis concludes that there may be cumulative impacts on several resources:

1. Transportation/Traffic Circulation
2. Relocations
3. Environmental Justice

Analysis of cumulative impacts for these resources is presented below. The affected environment for each of these resources has been previously discussed in its respective portion in Chapter 3; the analysis focuses on the cumulative impacts of the Build Alternatives in this section.

This section describes the social and demographic characteristics of the project area. The data were derived from the U.S. Census Bureau 2013-2017 American Community Survey Five-Year Estimates and U.S. Census Bureau 2019 American Community Survey One-Year Estimates. In addition, this project's Draft Relocation Impact Statement 2019, the Comprehensive Economic Development Strategy for Fresno County, the 2017 Fresno County 2050 Growth Projections, the Downtown Neighborhoods Community Plan, the Restore Fresno: Fiscal Year 2016 Initiatives to Restore and Revitalize the City of Fresno, the 2014 Fresno General Plan, and the 2017 General Plan Annual Progress Report were also referenced for this section. This section is the baseline evaluation of the cumulative analysis, with identification of Resource Study Areas, resource health or status, and project contribution to

cumulative effects, based on the individual evaluations provided and summarized in Table 2.48. Resource Study Areas are generally on the natural boundaries of the resource affected rather than jurisdictional boundaries. The geographic scope (or area within which projects may contribute to a specific cumulative effect) of the cumulative impact analysis varies depending on the specific environmental issue area being analyzed.

Table 2.48 Resources in the Project Study Area

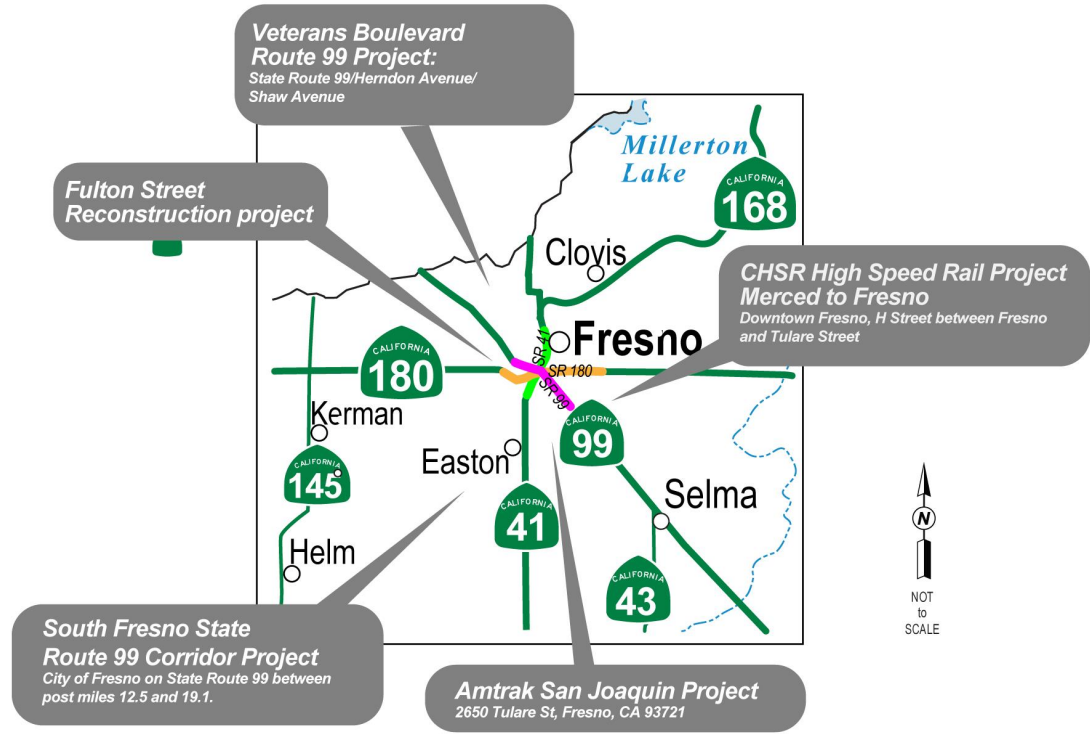
Resource Study Areas and Resource Evaluations Environmental Issue	Geographic Scope of Resource Study Area	Resource Health/Status	Project Contribution to Cumulative Impacts
Traffic and Transportation	Proposed Project Corridor	Declining	Not Considerable
Relocations	Proposed Project Corridor	Stable	Considerable
Environmental Justice	Surrounding Project Area	Declining	Considerable

Transportation/Traffic Circulation

Resource Study Area

The major freeways and highways serving the study area are State Route 99, State Route 180, and Golden State Boulevard. There are also several local roadways and bicycle and pedestrian facilities in the study area directly associated with the project; these include the El Dorado Street Overcrossing, Nielsen Avenue Undercrossing, Teilman Avenue Overcrossing, Belmont Avenue Overcrossing, Olive Avenue Overcrossing, and McKinley Avenue Undercrossing. Please refer to Figure 2-40 for the transportation projects relevant to the project area.

Figure 2-40 Traffic Impacts Within the Project Area



Current Health of Resource

Pedestrian facilities in the land use study area consist of curb ramps, sidewalks, marked and unmarked crosswalks, signage, median islands, landscaping, and lighting. Sidewalks are largely absent from the project’s socioeconomic study area. Several neighborhoods, particularly those north of State Route 180, lack a comprehensive sidewalk system.

According to the Mainline State Route 99 traffic data for the years 2029 and 2049, which provides the morning and evening peak level of service for both years, the level of service on the Mainline State Route 99 is an F. The F rating indicates that traffic is at a forced or breakdown flow during the Morning Peak and Evening Peak of the day. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required.

Indirect and Direct Project Impacts

Teilman Avenue Overcrossing Closure Traffic Impacts

The permanent closure of the Teilman Avenue Overcrossing could permanently impact local circulation for businesses, public facilities, and the Pacific Avenue community next to the overcrossing. Direct access between State Route 99 and Belmont Memorial Park, Stephens and Bean Funeral Chapel and Flower Shop, Fresno Humane Animal Services, Pershing

Continuation High School, and Pathway Community Day School will no longer be available. The nearest exit from State Route 99 is Olive Avenue and would require 2 miles of surface street travel. Alternatively, access from State Route 180 could be achieved from the Marks Avenue Interchange, requiring 1.65 miles of surface street travel. The most immediate alternate route for those living in the Pacific Avenue Neighborhood involves a 1-mile detour that uses Fruit Avenue, making pedestrian access to the cemetery and schools less feasible. However, the elimination of this overcrossing could potentially reduce the amount of traffic that this community currently experiences and could increase the Pacific Avenue community's aesthetic character and improve its level of safety.

Belmont Avenue Closure Traffic Impacts

The permanent closure of the Belmont Avenue Interchange could permanently impact local circulation for businesses, public facilities, and community members. Belmont Avenue may experience a decreased amount of traffic, while traffic volumes on nearby interchanges and surrounding surface streets may increase. The reduction in direct access to the businesses lining Belmont Avenue may have a significant effect on business vitality. Several gas stations, motels, and food establishments rely on direct access from the nearest freeway and primarily target traveling clientele. These businesses include Motel 6, Chevron, Valero, Sinclair, Triangle Drive-in, Travel Inn and Suites, Welcome Inn, Palace Inn, Villa Motel, Valley Inn, Sierra Inn, and Parkway Inn. However, these businesses will still be accessible via Olive Avenue and Parkway Drive, adding up to 0.5 mile of travel time. Also, two major employers that frequently use this interchange are Producer's Dairy Foods and La Tapatia Tortilleria. These are industrial facilities that receive a large amount of truck traffic for shipments on a regular basis.

Therefore, surface streets may experience an increase in truck circulation because of these ramp closures. Trucks may access and depart the area in several ways postconstruction. One way would be to travel eastbound on Belmont Avenue and merge onto State Route 180 at the Fulton Avenue Interchange. Two other options involve using Weber Avenue to reach the State Route 99 Interchanges at either Olive Avenue or Clinton Avenue. This additional traffic on any of these surface streets could intensify wear and damage on these local roadways and impact the vitality of these facilities. Lastly, access to public facilities, cemeteries, chapels, and schools in the area will be less direct from State Route 99, and interchanges further from Belmont Avenue may have to be used.

Olive Avenue Interchange Traffic Impacts

The interchange improvements at Olive Avenue will likely have permanent circulation and access impacts on businesses, public facilities, and community members in the area. Both Build Alternatives will shift the Parkway

Drive connection to Olive Avenue westward. This change would provide permanent changes in access for PB Liquor and Park View Mobile Home Park. Additionally, as the Olive Avenue Interchange may have traffic redirected from the McKinley Avenue and Belmont Avenue Interchanges, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. This increased amount of traffic has the potential to boost revenue for businesses, especially for businesses that provide convenience services to traveling clientele. There is also a possibility that the increase in traffic volumes could attract future businesses to the area. These acquisitions would be minor in nature and are not likely to impact the operations of the businesses.

Belmont and McKinley Avenue Ramp Removal Traffic Impacts

Removing ramps at the Belmont Avenue and McKinley Avenue Interchanges would balance the travel load of the mainline traffic on State Route 99 and provide adequate spacing for weaving between interchanges.

However, the permanent closure of the McKinley Avenue Partial Interchange could permanently impact local circulation for businesses, public facilities, and community members; this could potentially restrict access and complicate circulation to Addams Elementary School. Alternate routes may add to travel time, and traffic conditions on the other surface streets surrounding the school may become congested, especially during school pick-up and drop-off times. The UPS Customer Center is a major employer that also frequently uses this interchange. Delivery vehicles, trucks, and clientele may access and depart the area in several ways postconstruction, either via northbound Motel Drive to the Clinton Avenue Interchange or southbound Motel Drive to the Olive Avenue Interchange. These interchanges lie about 1 mile away from the UPS customer center.

Past and Foreseeable Future Projects

New development in the metropolitan Fresno area will lead to changes in transportation and an increase in development projects in the area. Planned roadway and infrastructure projects would also influence transportation as a more developed roadway system is built. Roadway and infrastructure projects that require right-of-way acquisition could also lead to potential demolition and displacement.

South Fresno State Route 99 Corridor Project

The South Fresno project southern border of the City of Fresno in Fresno County on State Route 99 is near the El Dorado to Clinton Rehabilitation project. There are two existing half interchanges at either end of the project location, one at American Avenue and the other at North Avenue. The project proposes to reconstruct these two half interchanges by expanding them to full interchanges and bringing them up to current Caltrans design standards.

California High-Speed Rail Project: Merced to Fresno Section

Construction of any of the Central Valley Wye alternatives would affect major roadways through temporary and permanent road closures and relocations that would result in the diversion of traffic onto other roadways. Design features would limit temporary traffic interruptions from road closures by providing temporary signage, advanced detour notification, provisions for safe pedestrian and bicycle passage, and other standard measures to minimize temporary traffic increases in traffic volumes. Permanent road closures would predominantly affect local roads and would change vehicle movements. Grade-separated interchanges proposed as part of the Central Valley Wye alternatives would provide a benefit by reducing traffic delays at current at-grade intersections and improving the safety of intersections for motorists, bicyclists, and pedestrians compared to existing conditions.

Construction and operation of the Central Valley Wye alternatives could result in temporary and permanent adverse effects and beneficial effects on low-income and minority populations. Construction of the Central Valley Wye alternatives would require the acquisition of right-of-way and would result in the displacement of residents, commercial and industrial businesses, and agricultural operations.

The loss of agricultural land could reduce employment opportunities for farm workers who could be negatively affected if the acquisition results in permanent job losses or if the workers are unable to find work on another farm or industry in the region. The estimated job loss associated with the amount and type of agricultural lands conversion for construction of the Central Valley Wye alternatives is from 74 jobs under the State Route 152 (North) to Road 13 Wye Alternative to 85 jobs under the State Route 152 (North) to Road 11 Wye Alternative.

The High-Speed Rail project would improve connectivity while facilitating new access to employment and educational opportunities and creating job opportunities across many sectors of the economy in the San Joaquin Valley (Kantor 2008). Overall, employment growth is expected to be a net benefit for the San Joaquin Valley as a whole. The Authority estimates operations associated with the High-Speed Rail system would create about 1,200 jobs within the San Joaquin Valley, an estimate that would be the same for any of the Central Valley Wye alternatives.

Veterans Boulevard Route 99 Interchange Project

The Veterans Boulevard project resulted in the construction of a six-lane arterial roadway in northwest Fresno, a freeway interchange at State Route 99, grade separations over the Union Pacific Railroad, High-Speed Rail line, and Golden State Boulevard, and improvements to roadways surrounding the project. The Veterans Boulevard Route 99 Interchange Project provides

additional access to the State Route 99 mainline and enhances the local circulation network. Construction was completed in December 2020.

Burlington Northern Santa Fe Corporation Blackstone McKinley Grade Separation Project

The City of Fresno Burlington Northern Santa Fe Corporation Blackstone McKinley Grade Separation project will eliminate two existing at-grade crossings by grade separating North Blackstone Avenue and East McKinley Avenue under the Burlington Northern Santa Fe Corporation Mainline Track. The project is compatible and complementary to the “Better Blackstone” Initiative and the South Blackstone Smart Mobility Strategy. The project will improve on-time service performance for the City’s Bus Rapid Transit Service and remedy traffic for Fresno City College, located at the northwest quadrant of the Blackstone and McKinley intersection. Design for the project is expected to be complete by spring 2024; construction should start in fall 2024, with expected completion by fall 2027.

Fulton Street Reconstruction Project

The City of Fresno reconstructed the Fulton corridor by reintroducing a narrow two-lane street with parking while maintaining a pedestrian-friendly commercial streetscape as well as the original large-scale public artwork and water features, maintaining much of the ambiance of the original Fulton Mall while restoring access to the businesses along the corridor. There are approximately 666 residential units in the downtown area, with more being planned and constructed. Additional retail, amenities, and restaurants will further establish the area as a destination.

Stockton Diamond Grade Separation Project

The proposed project would construct a grade separation of the Burlington North Santa Fe and Underpass rail lines to reduce rail congestion and allow passenger and freight rail traffic to flow uninterrupted through the crossing. The reduction in rail congestion would reduce delays for passenger and freight rail providers and improve freight mobility, which may lead to lower costs for freight shipping and reduce travel times for motor vehicles, bicyclists, and pedestrian traffic. The reduction in train congestion and motor vehicle wait times at these roadway-rail grade crossings would reduce locomotive and automobile idling and air emissions.

Potential Cumulative Impacts

The reduction in direct access to businesses may have a significant effect on business vitality. Several gas stations, motels, and food establishments rely on direct access from the nearest freeway and primarily target traveling clientele. Traffic volumes and congestion may increase at existing interchanges, which could impact local circulation.

With the following improvements either having been completed or currently planned, it is evident that transportation improvements are occurring to improve transit services, traffic commute times and increase business vitality within the surrounding project corridor. These improvements to traffic and pedestrian services would offer Complete Streets for pedestrian access, biking, and public transit. As a result, cumulative impacts from this project are not considerable.

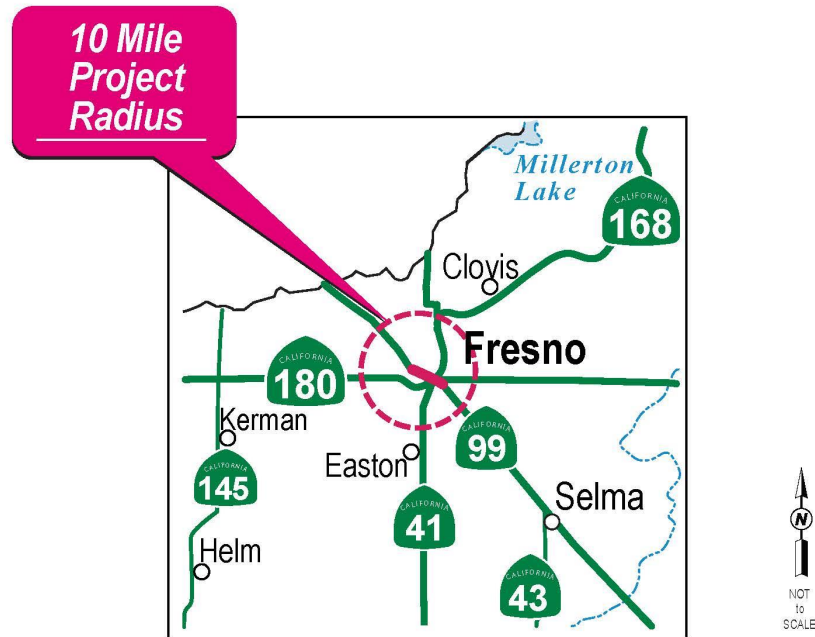
Relocations

Resource Study Area

The project may affect approximately 189 businesses that occur in the project's socioeconomic study area. A large portion of the businesses is classified as industrial. However, the commercial businesses that do exist in the area are generally classified as motels, gas stations, and food establishments. There are also a few commercial office buildings, municipal service centers, and small businesses, most of which are not directly next to the project.

In the long term, the project would improve the operational efficiency of State Route 99, and it would relieve traffic congestion from area roadways in the resource study area, which would have a positive effect on residents living nearby. The impact of project implementation would be beneficial on a cumulative basis. Please refer to Figure 2-41.

Figure 2-41 Relocation Impact Map



10 Mile Project Radius

Indirect and Direct Project Impacts

Changes to population, employment, and income characteristics are not expected to occur from this project because major employers are not expected to be displaced. However, smaller businesses would be displaced. Alternative 1 would result in six commercial displacements. Alternative 2 would result in 12 commercial displacements. Some businesses displaced by the project will likely be relocated within the community or region. Convenience services, such as gas stations, fast-food establishments, and lodging, are likely to be relocated northward or along State Route 99, where there is a greater abundance of vacant land available for development near State Route 99. Other displaced businesses are likely to be relocated within the region. There are vacant lands and buildings in several areas throughout the project area that could potentially host relocated businesses and facilities.

Past and Foreseeable Future Projects

The long-range growth forecast identifies substantial growth in the area to provide replacement opportunities. The timing of the property acquisition process for the El Dorado to Clinton Rehabilitation and California High-Speed Rail projects would be important in phasing the impact on replacement housing. Job losses associated with the business displacement are not expected because most businesses would likely be relocated to an area within the City of Fresno. However, linguistically isolated households, elderly

populations, and the unemployed may require special relocation needs. These relocation displacements for the proposed project, along with the surrounding projects, are cumulatively considerable.

California High-Speed Rail: Merced to Fresno Section

Construction of the Central Valley Wye alternatives would require the acquisition of right-of-way and would result in the displacement of residents, commercial and industrial businesses, and agricultural operations. The estimated residential units displaced would be 96 units under the State Route 152 (North) to Road 13 Wye Alternative, 119 units under the State Route 152 (North) to Road 19 Wye Alternative, 65 units under the Avenue 21 to Road 13 Wye Alternative, and 62 units under the State Route 152 (North) to Road 11 Wye Alternative. These displaced units consist of single-family residences and mobile/manufactured homes.

Overall, the Burlington Northern Santa Fe Corporation Alternative has the potential to require the acquisition of the most land, ranging from 2,688 to 2,963 acres. The Hybrid Alternative (Preferred Alternative) would require the acquisition of 2,513 to 2,739 acres. The Union Pacific Railroad/State Route 99 Alternative would require the acquisition of 2,398 to 2,459 acres. Under the Union Pacific Railroad/State Route 99 Alternative, most residential impacts would occur in Madera County and the cities of Madera and Fresno. The Burlington Northern Santa Fe Corporation Alternative would require the most agricultural and agricultural/residential acquisitions, with impacts ranging between 1,580 and 1,881 acres. The Hybrid Alternative would affect the same portion of the City of Madera as the Burlington Northern Santa Fe Corporation Alternative (Madera Acres).

South Fresno State Route 99 Corridor Project:

Eight properties were studied at American Avenue due to their proximity to the existing interchange and the two proposed Build Alternatives. Alternative 1 would require a total of 21.72 acres from seven properties; alternative 2 would require a total of 14.91 acres from seven properties.

Veterans Boulevard Interchange Project

Based on preliminary engineering, 45 parcels would be bought. Two of the 45 parcels contain businesses needing relocation assistance. Of these 45 parcels, four would require complete acquisition. The remaining 41 would need partial acquisitions. No residents would be displaced. Two of the four parcels requiring complete acquisition contain nonresidential light-industrial operations: a machinery service and repair facility and construction management, storage, and maintenance facility.

Stockton Diamond Grade Separation Project

The proposed project would result in nine full acquisitions, two partial acquisitions, and one temporary construction easement between East Weber

Avenue and South of East Church Street. All relocation impacts associated with these displaced businesses would conform with the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

Potential Cumulative Impacts

Access and circulation may also change for the remaining businesses, leading to an eventual change in local employment. Access to Roeding Park may impact future business development on Olive Avenue and Belmont Avenue. Traffic will likely be focused on accessing the park from the north, where the nearest State Route 99 Interchange will be located at Olive Avenue.

This increased traffic may attract future establishments and employers with a focus on visitor-friendly services along Olive Avenue. Belmont Avenue may shift into a more neighborhood-serving business location or attract businesses that will likely be sought out by local clientele. Substantial effects on local employment and income for this project are not expected to occur. However, the proposed project, along with projects from the surrounding area, would cause nonresidential impacts on commercial/retail establishments, warehouse and distribution centers, manufacturing facilities, public and private parks, and local city and county public agencies. The project also would cause residential impacts on mobile homes, housing facilities, and single-family and multifamily residences. As a result, cumulative relocation impacts from this project are considerable.

Environmental Justice

Resource Study Area

The study area for socioeconomic analysis of population and housing is defined as Census Tracts 2, 7, 20, 21, and 37.01, all of which border the project. These Census Tracts were chosen because they overlap with a buffered range along the project area. A buffer range of 0.25 mile was used around the El Dorado Street Overcrossing, the Teilman Avenue Overcrossing, and the Belmont Avenue, Olive Avenue, and McKinley Avenue Interchanges. Figure 2-42 displays four zip codes that are within the project area: 93705, 93728, 93706, and 93722.

Current Health of Resource

In 1875, the Central California Colony was established south of Fresno, which set the model for a system of development that was used throughout the San Joaquin Valley.

The socioeconomic study area for this project is primarily within the greater downtown area. The greater downtown area is primarily composed of multifamily buildings and mixed-density neighborhoods south of State Route 180. North of State Route 180, there is a large portion of single-family homes, with some mixed-density neighborhoods near Roeding Park. In 1957, State

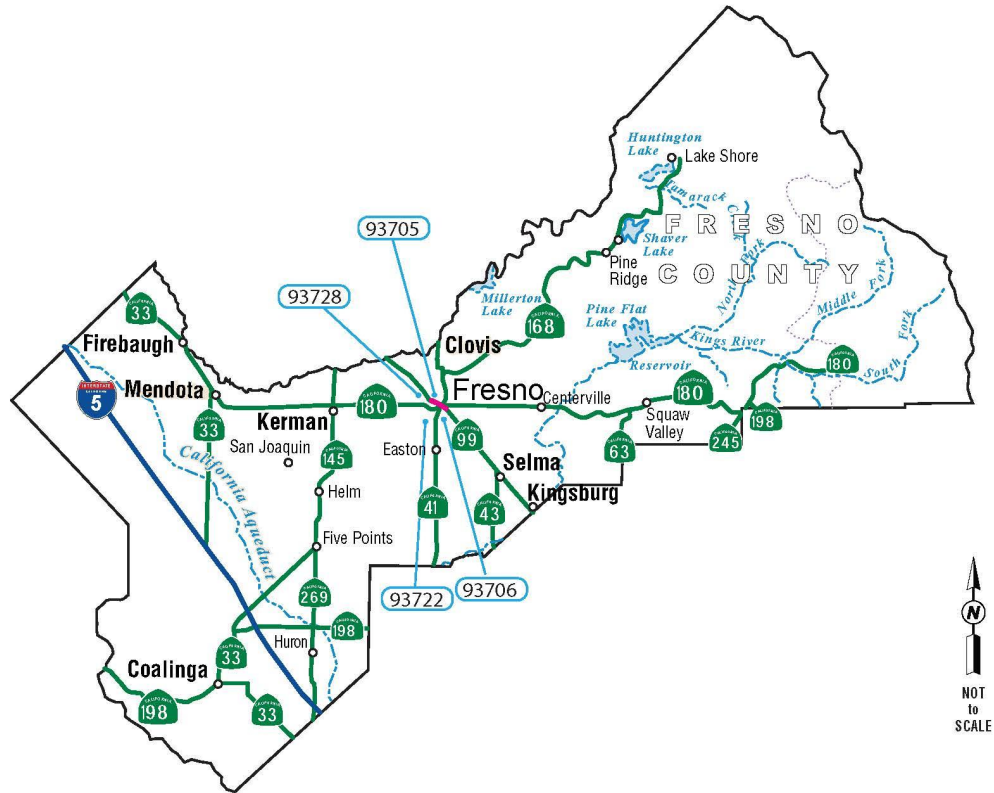
Routes 99, 41, and 180 were constructed to form a freeway loop around downtown Fresno, which divided formerly unified neighborhoods without surface crossings. Despite the redevelopment efforts of the 1960s, the Downtown and its nearby neighborhoods continued to decline through the 1970s and 1980s. Its retail shops, commercial businesses, and institutions of all kinds joined the suburban exodus.

Today, Downtown is characterized by the concentration of commercial, retail, and office buildings and uses. Less housing is available than in other neighborhoods, although several pioneering residential developments have emerged in recent years. In the Community Plan Area's industrial districts, manufacturing, agricultural processing, warehousing, and industrial buildings dominate the surrounding uses.

The process of suburbanization throughout the post-World War 2 period has resulted in several unintended consequences, including the deterioration of Downtown and the gradual abandonment of the late 19th and early 20th-century Downtown neighborhoods. Both have contributed to a process of increasing disinvestment in the heart of Fresno that is challenging the entire city's well-being.

Downtown Fresno, specifically where the project area is located, is separated from the rest of the city by freeways and railroad tracks, hampering vehicular and pedestrian connectivity. The freeways also encourage motorists to bypass Downtown altogether. In general, Downtown streets are wide and often absent of street trees, bike lanes, and pedestrian traffic-supporting amenities.

Figure 2-42 Environmental Justice Map



Zip Codes

Indirect and Direct Impacts

The project work could potentially impact the quality of life for residents of the Downtown Community Area and other transitional residences in the area. Closing and removing existing interchanges and ramps may reduce access to State Route 99, which could increase commute times. However, with the additional Parkway Drive connection to Belmont Avenue, along with improvements along Parkway Drive, communities may experience minimal increases in traffic volumes and congestion on surrounding surface streets. It is unlikely that these project impacts will influence the level of cohesion in these communities.

Project-related changes that may have the potential to impact community facilities include changes in noise and air quality levels, visual changes, and traffic congestion. Additionally, work on roadways in the area could alter access to community facilities, amenities, or services.

Overcrossing alterations at the El Dorado Overcrossing or the Nielsen Avenue Undercrossing will not likely result in any long-term impacts on community facilities.

Permanently removing the Teilman Avenue Overcrossing will likely have permanent impacts on community facilities in the area. This closure will separate the Teilman Avenue community from Belmont Memorial Park, Stephens and Bean Funeral Chapel, Fresno Humane Animal Services, Pershing Continuation High School, and Pathway Community Day School. A 0.5-mile to 1-mile permanent detour would have to be used for this neighborhood to gain access to these facilities after construction. This detour would use Franklin Avenue, Fruit Avenue, and Neilson Avenue and would likely not accommodate pedestrian access.

The permanent interchange ramp closures at Belmont Avenue may impact community facilities. The access to the cemeteries and chapels in the area will be less direct, and interchanges further from Belmont Avenue would have to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180. These locations are typically destination facilities, and the surrounding community does not necessarily need to be nearby for the community to continue accessing the facilities. People will most likely seek out the locations, regardless of the ease of access, based on their established loyalty to that location; this also applies to the Veterans of Foreign Wars establishment. Finally, there is a preschool called Fresno EOC Head Start Ramacher School, and it is likely that the families who use this facility reside in the surrounding area and are unlikely to commute to this location for preschool services. However, if families use the State Route 99 and Belmont Avenue Interchange, an alternative interchange would need to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180; this could add 1 to 2 miles to their commute.

For both Build Alternatives, public facilities at the Olive Avenue Interchange may be affected. Access alterations may also occur for the Central Valley Yemeni Association, which lies near the interchange. Lastly, an increased amount of traffic on Olive Avenue due to the closure of the McKinley Avenue and Belmont Avenue Interchanges may occur near the Department of Motor Vehicles.

As the Olive Avenue Interchange may have increased traffic redirected from the McKinley Avenue and Belmont Avenue Interchanges, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. This could increase commuting times for community residents and decrease the aesthetic character of the communities. However, improvements to local roads are planned for this project to accommodate traffic increases, including Hughes Avenue between Olive Avenue and McKinley Avenue.

Past and Foreseeable Future Projects

Regarding relevant projects within the area, the Burlington Northern Santa Fe Corporation Blackstone McKinley Grade Separation project will contribute to

the “Better Blackstone” Initiative and the South Blackstone Smart Mobility Strategy, which serves in conjunction with the California High-Speed Rail.

In addition, the California High-Speed Rail Merced to Fresno connection will improve on-time service performance for the city’s Bus Rapid Transit Service and remedy traffic for Fresno City College by moving vehicle traffic to an underpass below the Burlington Northern Santa Fe Corporation tracks. As a result, several roadway improvement objectives would be accomplished, including increasing capacity, decreasing traffic flow interruptions, improving safety, decreasing vehicle-pedestrian conflicts, and reducing vehicle-train conflicts and delays. The average delay will be reduced at the intersection, improving traffic operations, reducing traffic congestion, and lowering motor vehicle emissions. The separation will improve emergency service response times, eliminate train horns, and increase railroad operational efficiency.

California High-Speed Rail Project: Merced to Fresno Section

The Merced to Fresno Section of the High-Speed Rail system would result in disproportionately high project effects on Fairmead under the Merced to Fresno: Union Pacific Railroad/State Route 99 Alternative and the Merced to Fresno: Hybrid Alternative because of the visual impacts of an elevated guideway along State Route 99 through Fairmead, as well as property acquisitions and the resultant need to relocate individuals outside of the community.

South Fresno Corridor State Route 99 Interchange Project

No environmental justice populations have been identified within the project area and, therefore, would not be affected by the proposed improvements. No minority or low-income populations were identified in the project area. There were only industrial and commercial businesses in the project area, with the closest residential neighborhoods over 2 miles away.

Veterans Boulevard Interchange Project

The project did not cause a disproportionately adverse effect on any minority or low-income population, as outlined in Executive Order 12898 regarding environmental justice.

Stockton Diamond Grade Separation Project

The proposed project would benefit low-income and minority populations that constitute the reference community. These benefits would include improvements in safety and mobility of residents across Underpass Subdivision tracks, air quality improvements, and improvements in transportation access to employment, recreational, shopping, educational, and community resource opportunities. With the incorporation of these mitigation measures, the proposed project would not result in disproportionately high and adverse effects on minority or low-income populations.

Potential Cumulative Impacts

The project work could alter access to community facilities, amenities, or services. Impacts on community character and cohesion include impacts on access and circulation, changes in quality of life, and increasing urbanization or isolation. Construction-related impacts are typically temporary and can change as construction progresses. Temporary impacts would be the same for each alternative. For more details on community impacts, please refer to Chapter 2, Section 2.1.5, *Community Character and Cohesion*. As a result, the cumulative impacts of this project are considerable.

Avoidance and Minimization Measures

Traffic and Transportation/Pedestrian and Bicycle Facilities

TRA-1: The proposed project is expected to be constructed in multiple stages to accommodate the traffic operational needs. Per the District Office of Traffic Operations, three lanes of traffic in each direction on the State Route 99 mainline will be maintained except as permitted by the lane closure requirement chart. A decision to use a single phase or multiple phases on bridge constructions is yet to be determined by the project team. Local traffic and non-motorist access east and west of State Route 99 are also being planned.

TRA-2: Installing safety barrier systems and construction area signs will help direct traffic and provide protection to the traveling public and construction personnel. Other roadway features such as but not limited to roadside signs, overhead signs, electrical systems, Intelligent Traffic System elements, drainage systems, pumping plants, storage boxes, soundwalls, and irrigation systems will be constructed in sequential stages. Implementing Early Work Scope to shorten the project construction window may affect the sequencing of the proposed construction staging.

TRA-3: A Traffic Management Plan would be developed and implemented before and during project construction to notify the public and minimize any potential temporary impacts to traffic circulation on the mainline and/or local streets and railroads in and near the project area.

Elements of this plan may include the following:

- Public Awareness Campaign
- Highway Advisory Radio
- Portable changeable message signs
- Temporary loop sensor/signals
- Bus or Shuttle Service
- Construction Zone Enhanced Enforcement Program

For this project, the Traffic Management Plan estimates that the number of working days requiring lane, shoulder, ramp, and highway closures is 900, and a total of 1,280 working days to construct the project. Brochures, mailers, traffic radio announcements, ground-mounted detour signs, and media alerts will be provided to the public.

Real Property and Relocation Acquisition

RE-1: Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced because of the acquisition of real property for public use in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

The Uniform Act allows for two broad categories of payment for displaced businesses: (1) an actual move payment derived from a commercial bid process for the disconnection, move, and relocation of personal property, machinery, and equipment, and a reestablishment payment not to exceed \$25,000 for specific expenses actually incurred through the reestablishment of the business; and (2) a small business displacee may be eligible to choose a fixed payment “in-lieu” of the payments for actual moving and related expenses, and actual reasonable reestablishment expenses. The In-Lieu payment of the actual move and reestablishment payments is based on tax returns with a minimum payment of \$1,000 and a maximum of \$40,000.

RE-2: All displacees will be contacted by a relocation agent, who will ensure that eligible displacees receive their full relocation benefits, including advisory assistance, and that all activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displacees free of discrimination.

At the time of the first written offer to purchase, owner-occupants would be given a detailed explanation of Caltrans’ “Relocation Program and Services.” Tenant occupants of properties to be acquired are contacted soon after the first written offer to purchase and are given a detailed explanation of Caltrans’ “Relocation Program and Services.” In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced because of the acquisition of real property for public use.

Regarding both alternatives, replacement resources would provide adequate facilities for each business impacted by this project. Businesses affected by this project appear to have the financial ability to replace themselves along with relocation and acquisition monies that will be paid for the displacement.

RE-3: Last Housing Resort payments would help to minimize the financial impact of relocation, as well as relocation advisory assistance. Based on the

research of the community, there will be enough multifamily or single-family residences that are equal to or better than the displacement properties available for rent or purchase. If there are households, or individuals, who fall below the poverty level, last resort housing benefits will be made available to those individuals who qualify for this benefit under the Relocation Assistance Program.

Environmental Justice

EJ-1: Provide shoulders to accommodate bike lanes on El Dorado Street.

EJ-2: Provide safer pedestrian crossings at Belmont Avenue and McKinley Avenue by removing six ramp crossings, enhanced pedestrian pathways, and shoulders to accommodate bicycle lanes.

EJ-3: Safer pathways would be provided to Jane Addams Elementary School due to reduced traffic from the ramp removals and improved pathways from east of State Route 99.

EJ-4: Olive Interchange Roundabout pedestrian/bicycle crossings would provide for safer passage.

EJ-5: Improve or add pedestrian facilities such as crosswalks, sidewalks, and traffic calming devices (the roundabouts will calm and slow traffic down).

EJ-6: Improve or add bicycle lanes that were not present.

EJ-7: Signalize and unsignalize intersections (creating a safer pathway to cross the street).

EJ-8: Add Complete Streets elements, such as benches at bus stops, lighting where there isn't any present, and/or bus shelters (keeping bus patrons out of direct sunlight or rain).

EJ-9: To alleviate temporary project impacts, the following temporary pedestrian bridges will be added at Olive Avenue, Belmont Avenue, and El Dorado Street. These temporary bridges will be greatly beneficial for those who rely on pedestrian access during construction. Please refer to Chapter 2, Section 2.1.4, *Community Character and Cohesion, Avoidance and Minimization Measures*, for more details on these temporary pedestrian bridges.

EJ-10: Minimize excessive fossil fuel emissions that contribute to climate change as a result of the large trucks and vehicles not needing to idle as frequently on the improved pathway.

EJ-11: Removing the Kerman Branch Underpass railroad crossing at Teilman/Pacific Avenue will provide safer conditions for pedestrians.

EJ-12: Improved infrastructure, highway landscaping, and soundwall aesthetics along the roadway will enhance the visual appeal for commuters and outside visitors.

EJ-13: All pull boxes and electric service enclosures will be secured to reduce the occurrence of wire theft.

EJ-14: The local communities could also experience temporary benefits from the construction project. This includes the generation of regional construction industry jobs and the revenue that will likely be generated directly from the construction workers in the local community. This local revenue and job generation could benefit the local minority and low-income populations.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

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

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

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

3.2 CEQA Environmental 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 Impact 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 on 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 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 before any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

3.2.1 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—According to the Visual Impact Assessment discussed in Section 2.1.10, the project would have no substantial adverse effect on a scenic vista. There are no official scenic vistas or scenic resources within the project area.

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

No Impact—California Streets and Highway Code Division 1, Chapter 2, Article 2.5 identifies State Highways that make up the State Scenic Highway System. The proposed project is not on a highway that is listed as a State Scenic Highway; therefore, a Scenic Resource Evaluation does not apply to this project.

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?

Less Than Significant Impact With Mitigation Incorporated—The overall visual impact of the proposed project is expected to be moderate to moderately low. Moderate and moderately low impacts can be addressed using conventional practices, as stated in the Visual Impact Assessment.

No-Build Alternative

The No-Build Alternative would result in no change to the project corridor. The No-Build Alternative would also result in more traffic congestion because the population would continue to grow, and the associated number of highway travelers would continue to increase, which would reduce the visual character and quality of the area. If the auxiliary lanes are not constructed, there will be no need for retaining walls.

The existing large, mature highway planting that provides a visual screen will remain intact. If the bridges are not replaced, the visual disparity between the new bridges and the old bridges within the State Route 99 Corridor will continue.

Build Alternatives 1 and 2

The project will require the removal of trees and shrubs that currently provide a visual screen between the freeway and adjacent land uses. Funding for replacement planting is included with the project to replace the screening effect at all interchanges and along the freeway corridor where planting is removed. All disturbed soil areas will be treated with either permanent vegetation, wood mulch, or a native or drought-tolerant erosion control seed mix to visually blend disturbed slopes with the adjacent landscape and prevent soil erosion.

Caltrans has been in direct coordination with the Fresno Council of Governments to ensure that project work meets the goals of Fresno County General Plans and Policies 2000, Association for the Beautification of Highway 99, Highway 99 Beautification Master Plan 2016, and the Great Valley Center Route 99 Corridor Enhancement Master Plan. The following measures to avoid, minimize, or mitigate visual impacts can be incorporated into the project:

1. Remove only those trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses such as construction staging areas or temporary stormwater conveyance systems.

2. Avoid mass grading the project site. Avoid removal and grading areas where existing vegetation provides screening of adjacent properties.

Impact

Although the Build Alternatives result in impacts, such impacts would be reduced to less than significant with the mitigation measures discussed above.

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

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, because no construction activities would occur, new sources of light or glare would not be introduced into the project area.

Build Alternatives 1 and 2

Visual impacts due to the contractor's operations, such as night lighting, dust, temporary structures, hauling materials, contractor yards, or detours, are not expected to be unusual for a roadway construction area. Temporary lighting during construction could affect sensitive receptors due to excessive brightness and additional light pollution.

Impacts

Temporary construction visual impacts are expected to be low. The construction of the new soundwalls will require removing existing vegetation in front of the wall from the driver's perspective. The project would also include replacement planting. As the new vegetation matures, the change in visual character will only be temporary. Based on the Build Alternative impacts discussed above, these impacts would be less than significant.

3.2.2 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—There is no designated Prime Farmland, Unique Farmland, and/or Farmland of Statewide Importance within or near the project limits.

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

No Impact—There is no designated or zoned Williamson Act contract land within or near the project limits.

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—There is no designated or zoned timberland within or near the project limits.

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

No Impact—There are no designated or zoned forest lands within or near the project limits. There would be no loss of forest land or conversion of forest land to non-forest use.

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

No Impact—The project would not result in the conversion of any Farmland or forest land to non-agricultural use. There are no Farmlands or forest lands within the project limits.

3.2.3 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?

No Impact—The proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. Therefore, there is no impact.

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—

Build Alternatives 1 and 2

Fresno County is in nonattainment for the federal 8-hour ozone and fine particulate matter standards. The El Dorado to Clinton Rehabilitation project was submitted for Interagency Consultation on August 21, 2020. The 2022 Regional Transportation Plan/Sustainable Communities Strategy conforms to the applicable San Joaquin Valley Air Pollution Control District plans (2016 Ozone Plan, 2007 Particulate Matter 10 Maintenance Plan, and the 2012 Particulate Matter 2.5 Plan) and demonstrates progress toward attainment with the state ambient air quality standards for Particulate Matter 10, Particulate Matter 2.5, and Ozone.

The El Dorado to Clinton Rehabilitation Project is included in the Fresno Council of Governments' 2021 Federal Transportation Implementation Plan. It is also included in the Fresno Council of Governments' 2022 Regional Transportation Plan/Sustainable Communities Strategy plan. Also, the El Dorado to Clinton Rehabilitation Project best falls into the category of low potential mobile source toxic air contaminants effects.

As a result, implementing the 2022 Regional Transportation Plan/Sustainable Communities Strategy would result in a less than significant impact to Particulate Matter 10, Particulate Matter 2.5, and Ozone. Specifically, the 2022 Regional Transportation Plan/Sustainable Communities Strategy Programmatic Environmental Impact states that criteria pollutant emissions would be lower in 2042 with the implementation of the 2022 Regional Transportation Plan/Sustainable Communities Strategy relative to baseline conditions. Therefore, impacts would be less than significant because the

land use development and transportation network envisioned by this document will alter Vehicle Miles Traveled and, thus, alter the quantity and distribution of air pollutant emissions in Fresno County.

The project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay the timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

Impacts

As discussed above, the plan is in conformity; therefore, the individual projects contained in the plan are conforming projects and will have air quality impacts consistent with those identified in the State Implementation Plans for achieving the National Ambient Air Quality Standards.

The project would result in a less than significant increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact—For sensitive receptors, the zone of greatest concern is within 500 feet (or 150 meters) of roadways. No sensitive receptors have been identified within 500 feet of this project.

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

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, since no construction activities would occur, no impacts would occur to air quality in the project area beyond those due to the existing facility.

Build Alternatives 1 and 2

There will be air quality impacts due to construction under all Build Alternatives.

Short Term Effects (Construction Emissions)

During construction, the proposed project will generate emissions of air pollutants. The exhaust from construction equipment contains hydrocarbons, nitrogen oxides, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction

progresses. Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively control emission impacts during construction.

The provisions of Caltrans Standard Specifications, Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control,” require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.

Overall, the project will not result in other emissions, such as odors, adversely affecting a substantial number of people. The project is currently within a transportation corridor of a major highway.

Long Term Effects

Long-term air quality impacts are due to the project’s increase in vehicle travel due to growth in the area. The project will improve safety and operational efficiency by correcting geometric deficiencies and improving local traffic flow on and off State Route 99. In addition, merging traffic on and off State Route 99 will improve with a more standard spacing of ramps.

Construction of any of the alternatives will improve travel along the state route, maximize operational efficiency, and minimize motorists’ exposure to hazards that may contribute to vehicular accidents. Also, local roads next to State Route 99 will operate at a higher level of efficiency with less congestion and less idling time within the project area.

Standard Minimization Measures

Build Alternatives 1 and 2

Caltrans will implement the minimization measures discussed in section 2.2.5. Also, Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction to less than significant when compared to surrounding agricultural practices.

The provisions of Caltrans Standard Specifications, Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control,” require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017. The amount of respirable particulate matter and Oxides of Nitrogen emissions are likely to exceed the San Joaquin Valley Air Pollution Control District’s Rule 9510/Indirect Source Review Rule.

The construction contractor selected for this project will be required to comply with this rule, submit an Air Impact Analysis to San Joaquin Valley Air Pollution Control District, and pay any fees if required. As a result, no

substantial increases in air quality effects are expected as a result of the construction and operation of the project.

Impacts

With the implementation of the listed standardized minimization measures identified above, project emissions impacts will be less than significant.

3.2.4 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 Wildlife or U.S. Fish and Wildlife Service?

No Impact—

No-Build Alternative

Under the No-Build Alternative, since no construction activities would occur, no impacts of any kind would occur to animal species in the project area.

Build Alternatives 1 and 2

The project would not have an effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Swallows

The proposed project may include the temporary exclusion of swallows, which are protected under the Migratory Bird Treaty Act, from nesting under the bridge during construction. This would entail either the contractor or a separate swallow contractor installing and maintaining exclusionary measures under the bridge before February 1 of the first year of construction to prevent nesting during construction. A swallow nonstandard special provision would be included in the construction contract that would allow nest removal or application of exclusionary devices between September 30 and February 1.

Bats

The proposed project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. This would entail either the contractor or a separate bat contractor installing and maintaining exclusionary measures over the expansion joints before the construction window.

The action area is highly disturbed with marginally suitable habitat for three special-status species. No designated critical habitat for federally listed species exists within the action area. As part of the environmental study of the action area, reconnaissance surveys and the review of electronic species lists from the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, National Marine Fishery Services, and California Nature Plant Society. Impacts on special-status species are not anticipated.

Impacts

With the implementation of the minimization measures identified above, project impacts to these species will be less than significant.

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

No Impact—The project would not affect any riparian habitat or other sensitive natural communities. No habitat or natural communities of special concern occur within or near the action area.

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?

Less Than Significant Impact With Mitigation Incorporated—

No-Build Alternative

Under the No-Build Alternative, no impacts to waters of the U.S. or State are expected because no construction would occur, and the existing condition of water features in the project area would remain unchanged.

Build Alternatives 1 and 2

The project would permanently impact about 0.0054 acre and temporarily impact 0.0075 acre of potentially jurisdictional waters of the U.S. Caltrans biologists delineated potentially jurisdictional waters within the action area.

The Nielson Avenue Undercrossing crosses the Houghton Canal; this canal is part of the Fresno Irrigation District and is under the jurisdiction of the U.S. Army Corps of Engineers.

Mitigation Measures

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 U.S. Code 1344), is the primary law regulating wetlands and surface waters. At the state level, wetlands and waters are regulated primarily by the State Water Resources

Control Board, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife. Caltrans will obtain the following permits for impacts to wetlands and other waters of the U.S. before the start of construction:

- An individual 404 permit from the Army Corps of Engineers
- A 401 permit from the Regional Water Quality Control Board
- A 1602 permit from the California Department of Fish and Wildlife

There will be early consultation with the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and California Regional Water Quality Boards to avoid or reduce impacts to the jurisdictional water within the action area, where possible.

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 project would not impact the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Essential fish habitat does not occur within or near the project area; therefore, consultation with the National Marine Fishery Services is not required. A special provision for migratory birds would be included in the construction contract to ensure that no potential nesting migratory birds are affected during construction. No direct or indirect impacts to the individual species, their breeding, or their habitats are expected.

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

No Impact—The project work would not interfere with any local ordinance regarding the protection of biological resources. The Natural Environment Study did not identify any species that may warrant consideration based on local significance or recent biological information.

The action area is within Caltrans' right-of-way, which is in accordance with the California Environmental Quality Act and the National Environmental Policy Act.

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

No Impact—The project would not conflict with any adopted conservation plans or any other local or regional conservation plans. The project is not within the boundaries of any approved or draft Habitat Conservation Plan,

Natural Community Conservation Plan, or other adopted City of Fresno General Plan.

3.2.5 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 Section 15064.5?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, because no construction activities would occur, no effects would occur to historic resources within the project area.

Build Alternatives 1 and 2, Historic Architectural Resources Within the Project Study Area

There would be no substantial adverse change in the significance of an archaeological resource. No prehistoric archaeological resources or archaeological historic artifacts were found within the project limits.

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity, which are summarized in Section 3.2.5. However, this project will not “use” those properties, as defined by Section 4(f). Please see Appendix A under the heading “Resources Evaluated Relative to the Requirements of Section 4(f)” for additional details.

The Historical Resources Evaluation Report identified 24 historic-era properties within the Area of Potential Effects.

Two of the properties, Southern Pacific/Central Pacific Railroad and the Houghton Canal, were assumed eligible for the purposes of this project only from the National Register of Historic Places:

- P-10-003930—The Southern Pacific/Central Pacific Railroad that crosses State Route 99 at post mile 22.42. The linear feature of the railroad was considered eligible for inclusion in the National Register of Historic Places. This resource is not state-owned.
- P-10-007097—Houghton Canal is on Nielson Avenue. It consists of an earthen- and concrete-lined canal with a possible construction date of 1891. State Route 99 sits off the ground, above the canal. The linear feature of the canal was considered eligible for inclusion in the National Register of Historic Places. This resource is not state-owned.

Caltrans requested concurrence from the State Historic Preservation Office for a No Adverse Effect without Standard Conditions in December of 2021. A request for concurrence was sent on February 11, 2022. The Finding of Adverse Effect was concurred upon by the State Historic Preservation Officer and received on May 18, 2022. The two historic properties (the Southern Pacific/Central Pacific Railroad and the Houghton Canal) will be minimally impacted by project activities. The letter of concurrence can be found in Appendix F.

Implementation of the following minimization measures would reduce any impacts caused by construction:

CR-1: A principal architectural historian would review construction plans as developed and monitor construction activities associated with the two properties.

CR-2: The State Historic Preservation Officer would be notified immediately if any significant changes are made to the construction plans or during construction activities that have the potential to adversely impact the properties or any of its contributors.

Impacts

Based on the analysis above, impacts to the Houghton Canal and Southern Pacific Railroad are less than significant.

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

No Impact—The project would not cause a substantial adverse change in the significance of a historical resource.

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

No Impact—The project is not expected to disturb any human remains. In the unexpected event that human remains are discovered within the project area, California law dictates the standard process that Caltrans will follow. California Health and Safety Code Section 7050.5 states that further disturbances and activities will stop in any area or nearby area suspected to overlie remains, and the county coroner will be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, which, pursuant to Public Resources Code Section 5097.98, will then notify the Most Likely Descendant.

At that time, the person who discovered the remains will contact the District 6 Native American Coordinator so that the coordinator can work with the Most Likely Descendant on the respectful treatment and disposition of the remains.

Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

3.2.6 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?

No Impact—The project would not result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Caltrans would apply Best Management Practices to ensure that energy resources are used efficiently. Caltrans promotes measures, practices, and business operations to minimize greenhouse gas emissions.

Caltrans is required to meet an extensive array of requirements during construction to conserve, reuse, and recycle materials and to require conservation practices during operation and construction activities, as overseen by agencies with regulatory oversight responsibility.

These requirements can be found in detail in the 2018 Caltrans Standard Plans and Specifications, as amended. Please refer to Section 2.2.8 for more information on energy reduction measures.

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

No Impact—The project would not obstruct or conflict with any state or local plan for energy efficiency or renewable energy. Caltrans uses Best Management Practices to reduce the consumption of non-renewable energy resources by requiring conservation measures.

3.2.7 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 project is not near any fault zones; there is no substantial evidence of a known fault in the project area (California Geological Survey, California Department of Conservation 2018).

ii) Strong seismic ground shaking?

No Impact—The project area has not historically had strong seismic ground shaking. According to the Earthquake Shaking Potential for California map from the California Department of Conservation, the project area is distant from known active faults and experiences lower levels of shaking less frequently. Therefore, strong seismic ground shaking is not anticipated within the project limits.

iii) Seismic-related ground failure, including liquefaction?

No Impact—Seismic activity in Fresno County is low; therefore, seismic-related ground failure and liquefaction risk are also low. There are no major topographic or geologic features or faults within or near the project area. The area does not support conditions for liquefaction (U.S. Geological Survey U.S. Quaternary Faults interactive map accessed October 2020).

iv) Landslides?

No Impact—The project would not cause landslides because it is not near sloped surfaces. The project is not within a Landslide Zone (California Geological Survey, California Department of Conservation 2018).

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

No Impact—The project would not result in substantial erosion or the loss of topsoil, according to the Archaeological Survey Report.

Land disturbance activities, such as grading and excavation during construction, will loosen the soil and may remove the protective cover of vegetation, reducing the natural soil resistance to rainfall impact erosion. The project design would include permanent erosion control elements to ensure that stormwater runoff does not cause soil erosion.

All projects that create any amount of disturbed soil area are required to include the appropriate Design Pollution Prevention Best Management Practices. The project work would consider the previous area's soil conditions, slope, and other pertinent factors to ensure that Design Pollution Prevention Best Management Practices guidelines are followed accordingly.

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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact—The project area is not on a geologic unit that is unstable and would not become unstable as a result of the project work.

The project area is 8 miles south of the San Joaquin River, with soils consisting of Pleistocene alluvial fan deposits during and after the Sierran glaciation (Deocamp2007:3). The surface conditions of the existing soil during the pedestrian survey were fair in most of the project area, with visibility ranging from 80 to 90 percent. The project is not in a landslide zone, liquefaction zone, or earthquake fault zone, and it would not result in the collapse or lateral spreading of the project area (California Geological Survey, California Department of Conservation 2018).

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 project site is not located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994). The buried soil horizon sensitivity range from sensitive at post mile 22.7 to 23.1, with the remaining area consisting of very low sensitivity; therefore, the project will not result in a risk to life or property.

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

No Impact—The project would not generate wastewater; therefore, it is irrelevant whether the soil is capable of supporting the use of a septic tank or alternative wastewater disposal system. Additionally, the project is in an urbanized area within the City of Fresno, where sewers are available. The soils in the project area are capable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. A wastewater disposal system is not needed for this project.

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

Less Than Significant Impact With Mitigation Incorporated—

No-Build Alternative

The No-Build Alternative will not result in the construction of any of the proposed improvements and, therefore, will not impact paleontological resources because no construction excavation or grading would occur.

Build Alternatives 1 and 2

Grading, excavation, and other ground disturbance activities, reaching and/or exceeding 3 feet in depth (from the original ground surface) or reaching/exceeding 2 feet below previously cut grade, within the project area, have the potential to impact scientifically significant non-renewable fossil resources of the underlying Modesto and Riverbank Formations for both Build Alternatives.

A Paleontological Mitigation Plan shall be prepared for applicable excavations within the project area; this document will be prepared, reviewed, and approved by a qualified paleontologist and a State of California licensed professional geologist in accordance with the guidance provided in Caltrans' Standard Environmental Reference and Standard Special Provisions Section 14-7.04.

Applicable excavations are defined as ground disturbance activities extending into previously undisturbed portions of the Modesto and Riverbank Formations (i.e., not previously backfilled materials) at depths greater than 3 feet below the original grade or 2 feet below the previously cut grade. The Paleontological Mitigation Plan will be prepared by a paleontological subconsultant under contract/task order to Caltrans.

Based on these mitigation measures, Paleo-1 through Paleo-7, as described in Section 2.2.2, would be implemented to mitigate impacts on sensitive paleontological resources discovered and reduce the impact to less than significant.

Impacts

Based on the analysis above, potentially significant impacts are less than significant with mitigation incorporated.

3.2.8 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?

Less Than Significant Impact—

No-Build Alternative

The project would not generate greenhouse gas emissions because construction would not occur.

Build Alternatives 1 and 2

Project construction is expected to generate approximately 11,208 tons of carbon dioxide during 1,280 working days (less than the 264 working days per year). Measures to reduce construction-related greenhouse gas emissions must be included in all projects. While the project will result in greenhouse gas emissions during construction, the project is not expected to increase operational greenhouse gas emissions compared to both existing (2019) conditions and the no-Build Alternative.

There are specific measures that the Caltrans Project Team uses to mitigate greenhouse gas emissions. Caltrans implements these measures by incorporating climate change mitigation, adaptation, and energy efficiency strategies into the design and maintenance of our transportation system.

The following measures will be implemented in this project to reduce greenhouse gas emissions and potential climate change impacts from the project:

- Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- Construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Schedule truck trips outside of peak morning and evening commute hours.
- Reduce construction waste and maximize the use of recycled materials (reduces the consumption of raw materials, reduces landfill waste, and encourages cost savings).
- Incorporate measures to reduce consumption of potable water.
- Provide Construction Environmental Training: Supplement existing training with information regarding methods to reduce greenhouse gas emissions related to construction.
- Maximize the use of recycled materials (e.g., tire rubber).
- Balance earthwork: Reduce the need to transport earthen materials by balancing cut and fill quantities.
- Reduce the need for electric lighting by using ultra-reflective sign materials that are illuminated by headlights.

Use measures that consider incorporation of Best Available Control Technology during the design, construction, and operation of projects to minimize greenhouse gas emissions, including but not limited to:

- Use energy- and fuel-efficient vehicles and equipment.

- Deploy zero and/or near-zero emission technologies as defined by the California Air Resources Board.
- Use lighting systems that are energy efficient, such as LED technology.
- Use cement blended with the maximum feasible amount of fly ash or other materials that reduce greenhouse gas emissions from cement production.

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

No Impact—The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases and would ensure that the reduction of greenhouse gases is incorporated into the construction plan, which complies with applicable plans and regulations adopted to combat climate change.

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 the California Air Resources Board emission reduction regulations.

3.2.9 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—

No-Build Alternative

Construction will not take place under the No-Build Alternative, and, therefore, there would be no hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Build Alternatives 1 and 2

The project improves an existing transportation facility and would not increase the routine transport, use, or disposal of hazardous materials for both Build Alternatives. During construction, some temporary disturbance of hazardous materials may occur.

Soil along the shoulders of State Route 99, from 0 to 2 feet below ground surface, would be considered a regulated material per the Department of Toxic Substances Control Agreement regarding Aerially Deposited Lead-Contaminated Soil. Soil could be managed and reused onsite per the

agreement, provided all conditions are met, or disposed of at a Class 1 landfill.

Impacts

Following avoidance and minimization measures HW-1 through HW-4, as summarized in Section 2.2.3, exposure to hazardous wastes and materials would be less than significant.

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—

No-Build Alternative

The No-Build Alternative would not require any construction activities and would therefore have no chance of exposing hazardous materials to the environment. Existing hazardous materials, should they occur in the project area, would not be identified or remediated and could cause environmental impacts in the future not related to the project.

Build Alternatives 1 and 2

An Initial Site Assessment was performed in July 2019. There are no open/active hazardous waste sites identified on the regulatory databases. However, there are closed leaking underground storage tank sites, existing gas stations, petroleum/oil distribution, auto repair/body shops, and food manufacturing/distribution plants within the project boundaries. Further investigation will need to be performed on the other sites before project construction. These sites, however, should not be impacted. The project would create a less than significant impact to the public or the environment regarding the release of hazardous materials.

Stantec consultants performed a Preliminary Site Investigation on behalf of Caltrans in January 2020. The Preliminary Site Investigation addressed total petroleum hydrocarbons at the Chevron gas station and Seibert's Oil, asbestos-containing materials and lead-based paint on six bridges, Total Petroleum Hydrocarbons and heavy metals in surface soils adjacent to the Kerman Branch Underpass railroad crossing, and aeri ally deposited lead in soils adjacent to State Route 99. None of the concentrations for Total Petroleum Hydrocarbons exceeded their respective screening levels or hazardous waste thresholds.

Twelve samples were collected in surface soils adjacent to the Kerman Branch Underpass Railroad; of the metal and Total Petroleum Hydrocarbons constituents, only lead was reported above hazardous waste thresholds.

Excess soil from the southeast corner of State Route 99/Kerman Branch railroad to a depth of one foot would be a California non-Resource Conservation and Recovery Act waste, but not a Federal waste. None of the reported concentrations exceeded their respective screening levels or hazardous waste thresholds. Soil from the surface to 3 feet, if handled, would be considered non-regulated/non-hazardous and could be reused onsite, relinquished to the contractor, or disposed of as non-regulated soil.

Impacts

Based on the analysis above, with the implementation of the minimization measures identified above, project impacts associated with the release of hazardous materials into the environment will be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact—The project would not emit hazardous emissions or substances within 0.25 mile of an existing or proposed school. The project is not within 0.25 mile of an existing or proposed school.

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

No Impact—

No-Build Alternative

The No-Build Alternative would not require any construction activities and would therefore have no chance of exposing hazardous materials to the public or the environment.

Build Alternatives 1 and 2

The Preliminary Site Investigation addressed total petroleum hydrocarbons at the Chevron gas station and Seibert's Oil; asbestos-containing materials and lead-based paint on six bridges; total petroleum hydrocarbons; heavy metals in surface soils next to the Kerman Branch Union Pacific railroad crossing; and aerially deposited lead in soils next to State Route 99. Seven boreholes were drilled at Chevron: five to a depth of 7 feet below ground surface and two to a depth of 25 feet. A total of 26 samples were analyzed for total petroleum hydrocarbons. None of the concentrations for total petroleum hydrocarbons exceeded their respective screening levels or hazardous waste thresholds.

Six bridges were surveyed for asbestos-containing material and lead-based paint. There were 82 samples collected from suspect asbestos-containing materials and 11 paint samples. The Federal Toxicity Characteristic Leaching

Potential value of 5 milligrams per liter was not exceeded. Therefore, this paint, if stripped from the substrate, would be considered a California non-Resource Conservation and Recovery Act hazardous waste, but not a Federal Resource Conservation and Recovery Act waste.

Twelve samples were collected in surface soils next to the Kerman Branch Union Pacific Railroad. Results for total petroleum hydrocarbons were below the detection limit for all samples. None of the reported concentrations exceeded their respective screening levels or hazardous waste thresholds.

Seventy-two boreholes were drilled next to the highway. The soil along the shoulders of State Route 99 from 0 to 2 feet below ground surface would be considered a regulated material per the Department of Toxic Substances Control Agreement regarding aerially deposited lead-contaminated soil (July 2016).

Impacts

Based on these results from the preliminary investigation, the project work would not pose a significant hazard risk to the environment. Project construction would not create a significant hazard to the public or environment and constitutes a less than significant impact.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact—The project would not result in a safety hazard or contribute to excessive noise within an airport land use plan. The project is located within the Fresno Chandler Executive Airport Land Use Compatibility plan; however, the project would not result in a safety hazard or excessive noise for people residing or working near the project area.

According to the Airport Land Use Compatibility Plan from the Fresno County General Plan, new development should not create safety hazards, such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, fuel storage, or from wildlife, in violation of adopted safety standards. The plan also includes minimizing adverse environmental impacts associated with these facilities. The project would not impact these safety standards and would comply with the local aviation plan standards set by Fresno County.

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

Less Than Significant Impact—

No-Build Alternative

No interference would take place with an adopted emergency response plan or emergency evacuation plan because no construction would occur.

Build Alternatives 1 and 2

The project work would cause temporary construction lane closures that could impede emergency services during an emergency. Emergency response personnel would be contacted in case of road closures during construction. However, once construction is complete, the additional lanes and elimination of the Belmont Avenue Interchange will greatly improve the flow of traffic and should improve the delivery of emergency services to the area.

According to the 2019 Fresno County General Plan, the county intends to improve Emergency Vehicle Access along transportation pathways, which includes providing points of emergency vehicle access within the path and trail corridors, service roads, emergency access gates in fencing, and firebreaks.

The City of Fresno does have an adopted Emergency Operations Plan. A key component of this plan requires that there is adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance. The project would improve the transportation corridor by incorporating nonstandard roadway widths and vertical clearances, improving interchange spacings, and increasing the efficiency of daily commutes.

Impacts

Based on the analysis above, the impacts would be temporary and less than significant.

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

No Impact—According to the 2007 California Department of Forestry and Fire Protection Fire Hazard Severity Zones in the Local Responsibility Area Map for Fresno County, the project area does not lie in a severity zone. There would not be a significant risk of loss, injury, or death involving wildland fires.

3.2.10 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 water or groundwater quality?

Less Than Significant Impact—

No-Build Alternative

The No-Build Alternative would not violate any water quality standards or waste discharge requirements since construction would not occur.

Build Alternatives 1 and 2

The modification of the existing interchanges and other project activities are not anticipated to require major realignments on canals, which could cause long-term impacts on water quality in the vicinity of the proposed project limits. Nonetheless, this project has the potential to impact water quality standards and/or waste discharge requirements during construction.

With the implementation of the Caltrans Statewide Stormwater Program, the project would not violate water quality standards, waste discharge requirements, or degrade surface water or groundwater quality. The project would comply with and follow the State Water Resources Control Board-Order Number 99-06-DWQ, NPDES Number CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Stormwater Permit and Waste Discharge Requirements for Caltrans.

Impacts

Based on the analysis above, the impacts would be temporary and less than significant.

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

Less Than Significant Impact—

No-Build Alternative

This alternative would not decrease groundwater supplies or interfere substantially with groundwater recharge since construction would not occur.

Build Alternatives 1 and 2

The project would impact the operation of surface water and groundwater. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Three general sources of potential short-term construction-related stormwater pollution associated with the proposed project are 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving

activities which, when not controlled, may generate soil erosion, and transportation, via storm runoff or mechanical equipment.

The project has the potential to temporarily impact water quality standards and/or waste discharge requirements during construction and operation on surface water and groundwater. However, the project work would not decrease groundwater supplies or interfere substantially with groundwater recharge.

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 onsite or offsite;

Less Than Significant Impact—

No-Build Alternative

This alternative would not violate any water quality standards or waste discharge requirements since construction would not occur.

Build Alternatives 1 and 2

The project work would not result in substantial erosion or siltation onsite or offsite. The project intends to preserve as much of the existing vegetation as possible. Retaining walls will be designed to allow for minimal disturbance to roadside vegetation. Areas of existing vegetation to remain will be identified during the design phase and will be preserved during construction.

The project area is in the urbanized area of the City of Fresno, which operates under the General Permit for Discharges from Municipal Separate Storm Sewer System. Per the National Pollutant Discharge Elimination System Stormwater Program, the project will be required to comply with existing regulatory requirements to prepare a Stormwater Pollution Prevention Plan designed to control erosion and the loss of topsoil to the extent practicable using Best Management Practices that the Regional Water Quality Control Board has deemed effective in controlling erosion, sedimentation, and runoff during construction activities. The specific controls are subject to review and approval by the Regional Water Quality Control Board and are an existing regulatory requirement.

Any potential impacts (erosion and disruption to natural drainage) must be addressed, eliminated, or minimized to the maximum extent practicable during the design and construction phases of the project by incorporating the appropriate permanent and temporary Best Management Practices into the project.

Following construction, permanent erosion control will be provided to disturbed soil areas by applying wood mulch or a seed mix of grasses and forbs as appropriate.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, no construction would take place, and there would be no changes to the existing drainage system. Consequently, there would be no improvements to the storm drainage system.

Build Alternatives 1 and 2

According to the Fresno Metropolitan Flood Control District's October 2020 Annual Progress Report, the regional stormwater basin system captures 92 percent of annual rainfall, of which 70 to 85 percent of the captured stormwater runoff is recharged into the local groundwater aquifer.

The stormwater basins also remove 50 to 80 percent of the typical stormwater pollutants. Grading, excavation, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation; however, the project would not substantially increase the amount of runoff that would cause flooding.

Impacts

Potential impacts associated with increased surface runoff for the Build Alternatives would be less than significant because drainage facilities would be designed to handle all volumes originating from the new highway during extreme events. The drainage facilities would mimic existing drainage patterns and systems and would avoid flooding onsite or offsite.

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

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, project construction or changes to the existing drainage system would not occur. Consequently, there would be no improvements to the storm drainage system that would result in additional sources of polluted runoff.

Build Alternatives 1 and 2

There are several Caltrans drainage basins within the project limits; one is at the Clinton Interchange, and six others are in the vicinity of the State Route 99 and State Route 180 junction. These basins can handle the additional freeway runoff. However, the capacity of the basins should not be decreased with the widening of the freeway.

Basins 1 and 2 receive the runoff of the area between the southern limits of the project at the State Route 99 and State Route 180 Interchange. Preliminary design plans indicate that Basin 1 may be affected by the widening. To protect the hydraulic capacity of the basin, there may be a need to shave the basin side slopes and construct a concrete barrier (about 500 feet) along the northbound lanes between the freeway and the basin. Otherwise, an alternative would be to buy right-of-way for a new basin; if this occurs, an additional environmental analysis will be required for a new basin.

The project work would not contribute to excessive runoff of any existing stormwater drainage systems. Stormwater would be discharged to the Fresno Metropolitan Flood Control District, which is an approved Municipal Separate Storm Sewer System.

The Fresno Metropolitan Flood Control District has sufficient capacity to accept the stormwater runoff and is required to treat and monitor the water discharged to their basins. Routine safety precautions for handling and storing construction materials may effectively address the potential pollution of stormwater by these materials. Caltrans has a comprehensive program for preventing water pollution during construction activities on the state highway system.

Caltrans water pollution control manuals direct how to prepare a Stormwater Pollution Prevention Plan and Water Pollution Control Program. Caltrans has also developed and obtained the State Water Resources Control Board's approval of numerous Best Management Practices for preventing water pollution.

Caltrans will require Water Pollution Control managers who perform tasks, such as inspection, repair, and maintenance practices, collecting water quality samples, and recording water quality data to complete the stormwater management training, as specified in Section 13-1.01D(3), "Training" and Section 13-1.01D(4)(b), "Qualifications," of the 2018 Revised Standard Specifications.

Impacts

With the construction of these drainages discussed above and in Section 2.2.1, project impacts contributing to runoff pollution would be less than significant for the project area and remain within the state right-of-way.

iv) Impede or redirect flood flows?

No Impact—The project work would not impede or redirect any flood flows. The floodplain will not be impacted. The project is outside the limits of the 100-year flood. Most of the project area is within the limit of the 500-year flood. Firm Map 06019C21100H labels the area “Zone X,” and it is defined as “Other Flood Areas,” with 0.2 percent annual/flood, areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.

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

No Impact—The project is not in a flood hazard, tsunami, or seiche zone. The project would not risk the release of pollutants due to project inundation because it does not lie in an inundation zone (California Geological Survey, California Department of Conservation 2018).

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

No Impact—The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The project area is in the urbanized area of the City of Fresno, which operates under the General Permit for Discharges from Municipal Separate Storm Sewer Systems.

The Fresno Irrigation District operates and controls the water distribution to the municipal, industrial and agricultural water users through these irrigation canals in Fresno County. Waters of Dry Creek Canal are periodically monitored by the Fresno Irrigation District to ensure water quality standards are acceptable within the county limits. The Central Valley Regional Water Quality Control Board conducts planning, permitting, and enforcement activities and regulates water quality in the Central Valley area under its Water Quality Control Plan (Basin Plan).

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

Significant and Unavoidable Impact—

No-Build Alternative

This alternative would not contribute to the isolation of any community or conflict with established community facilities.

Build Alternatives 1 and 2

The project would physically divide an established community because the project involves rehabilitating an existing facility for an established community. Project-related changes that may have the potential to impact community facilities include changes in noise and air quality levels, visual changes, and traffic congestion.

El Dorado Street Overcrossing/Nielson Avenue Undercrossing Alterations

Alterations to the El Dorado Street Overcrossing and the Nielson Avenue Undercrossing are not expected to impact the community cohesion or character of any community in the project area.

Teilman Avenue Overcrossing Closure

The permanent closure of the Teilman Avenue Overcrossing could permanently impact the Teilman Avenue community just north of the overcrossing. Direct access to Belmont Memorial Park, Stephens and Bean Funeral Chapel, Pershing Continuation High School, and Pathway Community Day School will no longer be available.

Community members would no longer be able to access this overcrossing to access these facilities. The most immediate alternate route involves a 1-mile detour that uses Fruit Avenue. Eliminating this overcrossing could potentially reduce the amount of traffic this community currently experiences and could increase the community's aesthetic character and improve its level of safety. However, community members who rely on this overcrossing to reach their destinations would be impacted by its closure. A 1-mile detour would add 2 miles for those who use this overcrossing to and from their destination. This closure will separate the Teilman Avenue community from Belmont Memorial Park, Stephens and Bean Funeral Chapel, Fresno Humane Animal Services, Pershing Continuation High School, and Pathway Community Day School. A 0.5-mile to 1-mile permanent detour would have to be used for this neighborhood to gain access to these facilities after construction. This detour would use Franklin Avenue, Fruit Avenue, and Neilson Avenue and would likely not accommodate pedestrian access.

Belmont Avenue Interchange Closure

The permanent closure of the Belmont Avenue Interchange would potentially impact the quality of life for residents of the Dudley Avenue community, the Park View Mobile Home Park, the Channing Way community, and the transitional residencies in the area. For those living near the interchange, the reduction in access to State Route 99 could increase commute times. However, with the additional Parkway Drive connection to Belmont Avenue

along with improvements along Parkway Drive, communities may experience minimal increases in traffic volumes and congestion on surrounding surface streets.

The access to the cemeteries and chapels in the area will be less direct, and interchanges further from Belmont Avenue would have to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180. These locations are typically destination facilities, and the surrounding community does not necessarily need to be nearby for the community to continue accessing the facilities. People will most likely seek out the locations, regardless of the ease of access, based on their established loyalty to that location; this also applies to the Veterans of Foreign Wars establishment. Finally, there is a preschool called Fresno EOC Head Start Ramacher School, and the families who use this facility likely reside in the surrounding area. However, if families use the State Route 99 and Belmont Avenue Interchange, an alternative interchange would need to be used, such as Olive Avenue from State Route 99 or Marks Avenue from State Route 180; this could add 1 to 2 miles to their commute.

Olive Avenue Interchange Improvements

Both Alternatives planned for the Olive Avenue Interchange improvements will likely have permanent impacts on the Dudley Avenue community, the Park View Mobile Home Park, the San Joaquin Estates, the Lafayette Avenue community, the Fresno Mobile Home and RV Park, and the transitional residencies in the area. Nearby residents may need to take alternate routes to use facilities that were directly accessible before construction. Public facilities at the Olive Avenue Interchange may be affected by both Build Alternatives. Access alterations may also occur for the Central Valley Yemeni Association, which lies near the interchange. Lastly, an increased amount of traffic on Olive Avenue due to the closure of the McKinley Avenue and Belmont Avenue Interchanges may occur near the Department of Motor Vehicles.

McKinley Avenue Partial Interchange Closure

As the Olive Avenue Interchange may have increased traffic redirected from the McKinley Avenue and Belmont Avenue Interchanges, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. This could increase commuting times for community residents and decrease the aesthetic character of the communities. However, improvements to local roads are expected for this project to accommodate traffic increases, including Hughes Avenue between Olive Avenue and McKinley Avenue. Figure 2-9 displays the McKinley Avenue Removal.

The permanent closure of the McKinley Avenue Partial Interchange may impact the surrounding apartment complex communities, the Carmen Avenue community, the Three Palms Mobile Home and RV Park, and the Villa Fresno Mobile Home Park. For those living near the interchange, the reduction in

access to State Route 99 could increase commute times. As residents travel to the nearest interchanges at Olive Avenue and Clinton Avenue, communities could experience increased traffic and congestion on the surrounding surface streets. It is unlikely that these impacts will influence the level of cohesion in the surrounding communities. After construction, the acreage of the Three Palms Mobile Home and RV Park would be reduced, but the project is not expected to displace any homes. Therefore, the long-term cohesion of this community is not expected to be impacted by the project.

The interchange will accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movements; it will also include the El Dorado, Belmont, and McKinley Overcrossings. El Dorado Street would be converted to three lanes (including a two-way, left-turn lane and a Class 2 bike lane with standard sidewalks on each side, per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.

Impacts

As discussed in the Community Character and Cohesion section in Chapter 2, Section 2.1.4 and as discussed above, the proposed project would alter access to community facilities, amenities, or services. Though much of the surrounding community is dealing with nonstandard roadways that are in deteriorating condition and a lack of Americans with Disabilities Act curbs and pedestrian crossings, impacts would be significant and unavoidable. Overall, Build Alternatives 1 and 2 meet the purpose and need of the project. Previous alternatives did not support the transportation system and would greatly interfere with State Route 99 traffic operations. Also, there were no modal or mass transit alternatives identified to replace or relieve the people or goods movements provided by State Route 99.

Avoidance, minimization, and/or mitigation measures have been proposed in Section 2.1.4. Including aesthetic features, temporary pedestrian overcrossings, improved interchange spacing, upgraded pavement, and benefited operational efficiencies along the roadway in the project design can help generate public acceptance of the project; however, there would still be impacts on community facilities and services as a result of the project work.

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 project would not cause a significant environmental impact or conflict with any land use plan, policy, or regulations. The proposed project is being coordinated with the City of Fresno and will conform with City of Fresno planning documents, such as the Fresno General Plan, Active Transportation Plan, Fulton Corridor Specific Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan.

The proposed project is being coordinated with the Fresno Council of Governments' Regional Transportation Plan. The Regional Transportation Plan continues to provide necessary mobility to keep its community moving through the year 2042.

The Fresno Council of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Fresno County citizens.

3.2.12 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 project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state because it is not at or near a mineral resource deposit, according to the U.S. Mineral Resources Database.

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—According to the California Geological Survey Information Warehouse: Mineral Land Classification Database, there are no locally important mineral resource recovery sites on local, specific, or land use plans within the study area.

3.2.13 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 With Mitigation Incorporated—

No-Build Alternative

There would be no temporary or permanent increase in ambient noise levels in the vicinity because no project would take place.

Build Alternatives 1 and 2

Construction activities will be performed during the day and night. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area. There will be night work anticipated during construction.

During construction, Caltrans follows the guidelines in the Standard Specifications Section 14-8, which monitors and controls noise resulting from work activities. Equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at a distance of 50 feet.

Noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance. This specification also emphasizes that the project work would not exceed a maximum sound level of 86 average noise decibels at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. Caltrans is not required to comply with local ordinances.

Impacts

As mentioned in Section 2.2.5, *Noise*, potential long-term noise impacts associated with project operations are solely from traffic noise. No substantial noise effects are expected as a result of the construction and operation of the proposed project.

In response to the region's increasing traffic volumes and worsening traffic congestion, the inefficiencies related to the movement of goods and services, and the increasingly constrained interregional circulation on existing State Route 99, Caltrans and partners propose the construction of the El Dorado to Clinton Rehabilitation project.

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

Less Than Significant Impact—

No-Build Alternative

There would be no groundborne vibration or groundborne noise levels because no project work would take place.

Build Alternatives 1 and 2

Construction activities would generate vibration, which is a temporary impact. Certain construction activities could cause intermittent localized concerns from vibration in the project area. During certain construction phases, processes, such as earth moving with bulldozers, using vibratory compaction rollers, demolitions, or pavement braking, may cause construction-related vibration impacts, such as human annoyance or, in some cases, building damages.

Long-term vibration is unlikely to occur because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even near the facility.

Standard Minimization Measures

The following are procedures that would be used to minimize the potential impacts of construction vibration:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that could possibly result in damage to their structure due to vibration would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

A combination of the techniques for equipment vibration control and administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Temporary increases in vibration would still likely occur at some locations.

Impacts

Based on the analysis above, the generation of excessive groundborne vibration or groundborne noise levels would be less than significant.

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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact—The project is not within the vicinity of a private airstrip or airport land use plan that would expose people residing or working in the project area to excessive noise levels.

3.2.14 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 project would not induce substantial unplanned population growth in the area. Because project work would improve the existing highway and replace an interchange, the project would not involve the extension of new roads or infrastructure. Also, the project would not propose new homes or businesses in the area. These interchange improvements could indirectly lead to growth in the area after the improvements are made but would not increase population growth substantially. These improvements would benefit the surrounding population by enhancing existing roadway features and improving safety.

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

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, partial or full property acquisitions would not be required. Residents or businesses will not require relocation advisory assistance.

Build Alternatives 1 and 2

Alternative 1

Alternative 1 would replace the existing interchange at Olive Avenue with a double roundabout design. This alternative would impact six commercial businesses; the Belmont Chevron, Amstar Gas Station, Arco Gas Station, Fast N Easy Store, Rally's, and Mario's Smog/Auto Repair Shop.

Additional right-of-way may also be acquired from surrounding businesses. These businesses include but are not limited to Executive Inn, Denny's, PB Liquor Store, Amstar Gas Station, and Roadway Inn. These acquisitions would be minor in nature and are not likely to impact the operations of the businesses. Minor access changes may also be made to PB Liquor Store to accommodate traffic flow between Parkway Drive, Crystal Avenue, and Olive Avenue.

Alternative 2

Alternative 2 would replace the existing interchange at Olive Avenue with a diverging diamond design. This alternative would impact 12 commercial businesses. Businesses that would be impacted by Alternative 2 with potential relocation benefits include Bruce's Auto Supply, Donut Queen, Dino Mart, Sinclair Gas Station, Mario's Smog/Auto Shop, Arco Gas Station, Fast N Easy Store, Rally's Restaurant, Chevron Gas Station, Extra Mile Store, Amstar Gas Station, and Roadway Inn.

Additional right-of-way may also be acquired from surrounding businesses. These businesses include but are not limited to Denny's, PB Liquor Store,

Amstar Gas Station, California Green Hydroponics, Seibert Oil, Busseto Foods Inc., and Jack in the Box. These acquisitions would be minor in nature and are not likely to impact the operations of the businesses. Minor access changes may also be made to PB Liquor Store to accommodate traffic flow between Parkway Drive, Crystal Avenue, and Olive Avenue.

Both alternatives may impact residential single-family residences that may need to be acquired for the project. Alternative 2 would impact Roadway Inn. Based on a field review of the Roadway Inn, there are approximately 100 rooms available to rent. It is estimated that a time frame of 18 to 28 months will be sufficient to relocate residences and businesses that may be impacted by this project.

Mitigation Measures

Application of the Uniform Relocation Assistance and Real Property Acquisition Policies Act would assist residents in relocating and finding replacement housing resulting from project displacements.

Impacts

Based on the analysis above, impacts to displaced residents and housing would be less than significant.

3.2.15 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?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to fire protection in the area.

Build Alternatives 1 and 2

It is possible, though unlikely, that temporary lane closures during construction would temporarily impede fire responses to emergencies via State Route 99 or emergencies on State Route 99.

Three fire stations will continue to serve the areas east and west of the project area without encountering detours, lane closures, or access restrictions to overcrossings. Caltrans will notify public services when detours are necessary to improve temporary access. And once completed, the project will improve access for fire services throughout the project area.

Impacts

Based on the analysis above, impacts to fire protection would be less than significant.

Police protection?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to police protection in the area.

Build Alternatives 1 and 2

Emergency services, including police response times, may be disrupted during project construction. Temporary lane closures during construction may impede police, fire, and ambulance responses to emergencies via State Route 99 or emergencies on State Route 99. Once construction is completed, however, the new auxiliary lanes, widening of the median on State Route 99, and interchange improvements will greatly improve the flow of traffic and would improve the delivery of emergency services to the area.

Impacts

Based on the analysis above, impacts to police protection would be less than significant.

Schools?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to school access in the area.

Build Alternatives 1 and 2

Eight schools are within 0.5 mile of the project, including high schools, elementary schools, preschools, and day care. These include Columbia Elementary School, Big Picture High School, Pathway Community Day School, Pershing Continuation High School, Fresno Economic Opportunities Commission Head Start Ramacher School, Addams Elementary/Preschool, Fresno Economic Opportunities Commission Head Start Brooks School, and

Fremont Elementary School. The permanent closure of the Teilman Avenue Overcrossing, McKinley Avenue Partial Interchange, and the Belmont Interchange could permanently impact local circulation for schools. Direct access between State Route 99 to Pershing Continuation High School and Pathway Community Day School will no longer be available.

Addams Elementary School's arrival and departure times maintain a routine structure; these restrictions could increase traffic volumes for surface streets surrounding these schools that do not normally receive such traffic volumes at certain times. Alternate routes may add to travel times; traffic conditions on the other surface streets surrounding the school may become congested, especially during school pick-up and drop-off times.

The most immediate alternate route for those living in the Pacific Avenue Neighborhood involves a 1-mile detour that uses Fruit Avenue, making pedestrian access to the cemetery and schools less feasible. However, eliminating this overcrossing could potentially reduce the amount of traffic this community currently experiences and could increase the Pacific Avenue community's aesthetic character and improve its level of safety.

Impacts

Based on the analysis above, impacts to schools would be less than significant.

Parks?

Less Than Significant Impact With Mitigation Incorporated—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to any parks in the area.

Build Alternatives 1 and 2

Fink-White Park and Basin XX

The project would not impact Fink-White Park or Basin XX.

Roeding Park

Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location. This option also proposes to extend the southern edge of the soundwall 300 feet.

The new soundwall would be constructed on a 3-foot safety barrier. This would provide enough space for a standard 10-foot outside shoulder, but it would require obtaining about 650 square feet of right-of-way from Roeding

Park. This design option would need a 2-foot-wide and 1,900-foot-long temporary construction easement in Roeding Park.

Impacts

Based on the analysis discussed in Chapter 2, Section 2.1.2, *Parks and Recreational Facilities*, Caltrans would provide Roeding Park with a reasonable allowance after discussing replacement aesthetic features. Avoidance and minimization measures are available to mitigate the project work's impacts to less than significant.

Other public facilities?

Significant and Unavoidable Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to any public facilities in the area.

Build Alternatives 1 and 2

The project would likely have permanent circulation and access impacts to businesses, public facilities, and community members in the area. However, there is potential for the surrounding streets and neighborhoods to experience increased traffic volumes. Project-related changes that may have the potential to impact community facilities include changes in noise and air quality levels, visual changes, and traffic congestion. Additionally, work on roadways in the area could alter access and/or parking for community facilities, amenities, or services. For a more detailed discussion of all permanent and temporary impacts on public facilities, please visit Section 2.1.4, Community Character and Cohesion, Environmental Consequences.

Comparison of Alternatives 1 and 2

Under Alternative 1, the Park View Mobile Home Park would continue to have direct access to the interchange and the surrounding facilities after construction, but the changes in traffic volumes and flow may impact the ease with which they access surrounding facilities in the future. Alternative 1 would not permanently impact community facilities within the socioeconomic study area.

These construction impacts could reduce the aesthetic character of the park temporarily, which could potentially lead to a decrease in community interaction with neighbors or other community members temporarily. Residents may also be concerned about a decreased sense of privacy within their community, which could disrupt their sense of comfort and safety and interrupt their daily routines.

Under Alternative 2, Park View Mobile Home Park residents would no longer have direct access to Olive Avenue, and the changes in traffic volumes and

flow would impact the ease with which they access surrounding facilities in the future. Alternative 2 would permanently impact surrounding community facilities as a result of the partial interchange ramp closures at the McKinley Avenue Interchange. Addams Elementary School, Addams Preschool, and Fresno Economic Opportunities Commission Head Start Brooks School are all located on McKinley Avenue.

People who use State Route 99 to access these facilities will most likely use the interchange at Olive Avenue to accommodate the permanent ramp closures at McKinley Avenue. These facilities will likely retain their use during the project and are unlikely to experience significant decreases in use after the project is complete despite the reduction in direct access for commuters.

3.2.16 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 project would not cause an increase in use or lead to physical deterioration of any existing neighborhood or regional park due to the project work. Though Fink-White Park and Basin XX are in the area, the project would not impact the parks in any way.

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 project would not include the construction or expansion of any recreational facilities.

3.2.17 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, and bicycle and pedestrian facilities?

No-Impact—The project would not conflict with any program, plan, policy, or ordinance. Caltrans works directly with local agencies, including the City of Fresno, the Fresno Council of Governments, and the Fresno County Transportation Authority.

The Build Alternatives meet the purpose of the project, which states, "the project will improve mobility and improve circulation for regional movement of traffic and circulation of local routes." Therefore, the project would not conflict with any program plan, ordinance, or policy addressing the circulation system.

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

No Impact—The project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways.

This project is considered "a project type that is unaffected by the use of vehicle miles traveled" as a measure of transportation impacts because it "is assumed to not lead to measurable and substantial increases in vehicle travel. The proposed project would not increase the vehicle capacity of the mainline; however, auxiliary lanes would increase capacity between ramps to reduce mainline congestion and permit more efficient and safer operation.

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 project work would not substantially increase hazards due to geometric design features. The geometric design of new facilities and reconstruction projects should typically be based on estimated traffic 20 years after completion of construction. Geometric design features, such as alignment, grade, sight distance, weaving, or merging distance, are all applicable to project construction.

Caltrans prepares geometric designs of the transit loading facilities to make cost estimates and determine the feasibility of providing the facilities. Transit loading facilities must be approved by the district director with concurrence from the project delivery coordinator. Although the project may incorporate some nonstandard design features for the project Build Alternatives, none of the work would contribute to dangerous intersections or roadways.

d) Result in inadequate emergency access?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to emergency access locations within the area.

Build Alternatives 1 and 2

Emergency services should not be disrupted after project construction. Fire Station Number 19 and Fire Station Number 9 are on either side of the project at about equal distances from State Route 99. These services will continue to serve the areas east and west of the project area without needing to use detours or access restrictions to overcrossings. Fire Department Number 3 lies south of the project and can cross into the east and west sides of the project area without intercepting construction. The Southwest District Police Station occurs near Fire Station Number 3 and would be able to access the east and west sides of State Route 99 easily throughout construction.

Temporary-lane closures during construction may slightly impede emergency services from accessing emergencies via State Route 99 or on State Route 99. However, once construction is completed, the additional lanes and the elimination of the Belmont Avenue Interchange will greatly improve the flow of traffic and should improve the delivery of emergency services to the area.

Impacts

Based on the discussion above, the impacts would be less than significant.

3.2.18 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—A Sacred Lands File records search and Native American contact lists were requested from the California Native American Heritage Commission on May 2019. A letter response received on June 10, 2019, stated that the Sacred Lands File records search resulted in negative findings.

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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No Impact—Per Section 2.1.10 of this document, there were no tribal cultural resources present within the immediate project area. No Native American tribal resources were identified within the project area. If buried cultural materials are unexpectedly encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the discovery.

3.2.19 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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact—

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to any water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities within the area.

Build Alternatives 1 and 2

Existing utility facilities (underground and overhead), storm drain systems, sewer systems, and water systems would be impacted by the proposed project, according to the Central Region Utility Engineering Workgroup District 6 Branch, which actively coordinates with utility owners. It is assumed that both project alternatives would have the same utility impacts.

Utilities would need to be relocated temporarily or permanently, as needed, and access rights or temporary construction easements may be necessary. The project would also remove existing drainage systems because they have reached their design life expectancy; new drainage systems would be built to accompany the widening of the freeway and reconstruction of lanes.

New pumping plants will be required, and current design criteria will be used. Caltrans is expected to extend some storm drainage culverts, relocate drainage inlets to the new flow lines, and construct some of the planned Fresno Metropolitan Flood Control Basin storm drainage pipes to comply with its master plan.

Impacts

Based on the analysis above, the impacts associated with building new stormwater drainage facilities would be less than significant.

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 work would not involve additional water supplies, and it would not lead to the need for additional water supplies. Water supplies are expected to be sufficient to serve the project during construction and provide sufficient water supplies for future developments.

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 project work would not contribute to additional wastewater or require a determination from a wastewater treatment provider.

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—The project work would not generate excess waste of state or local standards. Caltrans would ensure that excess waste is not generated by reusing or recycling salvageable construction materials such as removed rigid and flexible pavements; this process will be further evaluated as the project progresses to the next project phases.

As the project progresses or changes to the project scope occurs, additional utility conflicts may be involved. The utilities listed below may be relocated temporarily or permanently as needed, and access rights or temporary construction easements may be necessary. Until the extent of the conflicts is determined and property rights information is received from utility companies, initial relocations are calculated at 100 percent state liability. Data sheets also include preliminary railroad engineering cost estimates.

The Water Pollution Control Manager shall oversee and enforce proper solid waste procedures and practices:

- Instruct employees and subcontractors on the identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings and tailgate sessions).
- Require that employees and subcontractors follow solid waste handling and storage procedures.

- Prohibit littering by employees, subcontractors, and visitors.
- Wherever possible, minimize the production of solid waste materials. Must comply with Standard Specifications Section 14-10 Solid Waste Disposal and Recycling and Section 13-4 Job Site Handling.

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

No Impact—The project would comply with federal, state, and local regulations regarding the management and reduction of solid waste. Caltrans would use Best Management Practices to ensure proper disposal of all waste. Remove and dispose of deposited solids from sediment traps under Standard Specifications Section 14-10 Solid Waste Disposal and Recycling unless another method is authorized.

This Best Management Practice may be implemented on a project-by-project basis with other Best Management Practices when determined necessary and feasible by the resident engineer.

3.2.20 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 project is not in or near a high fire hazard area.

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 project is not in or near a high fire hazard area.

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 on the environment?

No Impact—The project is not in or near a high fire hazard area.

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

No Impact—The project is not in or near a high fire hazard area.

3.2.21 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?

Less Than Significant Impact With Mitigation Incorporated—The project would not 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. Caltrans would use Best Management Practices, use avoidance and minimization measures, and follow standard specifications to ensure that the project would not substantially impact the environment.

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.)

Significant and Unavoidable Impact—The project has been evaluated for cumulative impacts as described in Section 2.4.1. The proposed improvements maintain an existing facility in a highly urbanized transportation corridor with very small, if any, potential negative environmental impact. Today, the land use in the project area represents this history and land use decisions made by Fresno County and the City of Fresno, which are generally to support businesses that would use the existing transportation corridor to improve the local economy and provide jobs.

Access and circulation may change for the remaining businesses, leading to an eventual change in local employment. Access to Roeding Park may impact future business development on both Olive Avenue and Belmont Avenue. Traffic will likely be focused on accessing the park from the north, where the nearest State Route 99 Interchange will be located at Olive Avenue.

This increased traffic may attract future establishments and employers with a focus on visitor-friendly services along Olive Avenue. Belmont Avenue may shift into a more neighborhood-serving business location or attract businesses that will likely be sought out by local clientele. Substantial effects on local employment and income for this project are not expected to occur. However, the proposed project, along with projects in the surrounding area, would cause nonresidential impacts on commercial/retail establishments, warehouse and distribution centers, manufacturing facilities, public and private parks, and local city and county public agencies. The project also would cause residential impacts on mobile homes, housing facilities, and single-family and multifamily residences.

The City of Fresno and Caltrans would work together to ensure overlapping construction from multiple projects in the same vicinity would be managed to avoid or lessen cumulative impacts. Potential Cumulative Impacts

The project work could alter access to community facilities, amenities, or services. Impacts on community character and cohesion include impacts on access and circulation, changes in quality of life, and increasing urbanization or isolation. Construction-related impacts are typically temporary and can change as construction progresses. Temporary impacts would be the same for each alternative. For more details on community impacts, please refer to Chapter 2, Section 2.1.5, Community Character and Cohesion. As a result, the cumulative impacts of this project are considerable.

The project would have considerable impacts, which were discussed further in Chapter 2, Section 2.4 Cumulative Impacts.

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

Significant and Unavoidable Impact—As described in Chapter 2, even with mitigation, the project would have unavoidable impacts on Community Character and Cohesion, Relocations, and Environmental Justice. Impacts on these resources would indirectly and/or directly affect human beings within the project limits. Therefore, these impacts are significant and cannot be fully mitigated.

There are communities within the project area and within approximately 1.5 miles away from either interchange. Alternative 1 would impact six commercial businesses and cause three residential displacements. Alternative 2 would impact 12 commercial businesses, and cause 79 residential displacements, and one motel displacement. Business owners would be eligible for services from Caltrans' Relocation Assistance Program designed to reduce impacts on affected property owners. Businesses in the project area would benefit from the improved access and interchange dimensions, especially large trucks.

Caltrans Right-of-Way Department indicates there are comparable properties in the project vicinity to relocate affected businesses. Project impacts in the socioeconomic study area would occur from increased air pollutants, noise, decreased economic vitality for businesses located near ramp closures, permanent and temporary employment effects, displacements/relocations, decreased accessibility to State Route 99 and community facilities, increased local traffic congestion, altering circulation routes for emergency services, and impacts related to construction activities.

The project would disrupt access to jobs and community services from or within the minority and low-income communities. The project would remove traffic and potential customers from local businesses along Belmont Avenue and McKinley Avenue.

Access and circulation may change for the remaining businesses, leading to an eventual change in local employment. Access to Roeding Park would impact the future business development on both Olive Avenue and Belmont Avenue. Traffic will likely be focused on accessing the park from the north, where the nearest State Route 99 Interchange will be located at Olive Avenue.

The project includes features and measures that reduce greenhouse gas emissions, such as Complete Streets elements with landscaping that facilitate bicycle and pedestrian use, which encourages active transportation overuse of vehicles, thereby reducing emissions. Installing Intelligent Transportation System elements is designed to improve traffic efficiency and reduce congestion on roadways, which lowers vehicle emissions. Caltrans applies a long list of standard measures on most, if not all, projects during construction that require practices and restrict equipment reducing dust and equipment emissions.

3.3 Wildfire

Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the “CEQA Checklist” for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these very high fire hazard severity zones.

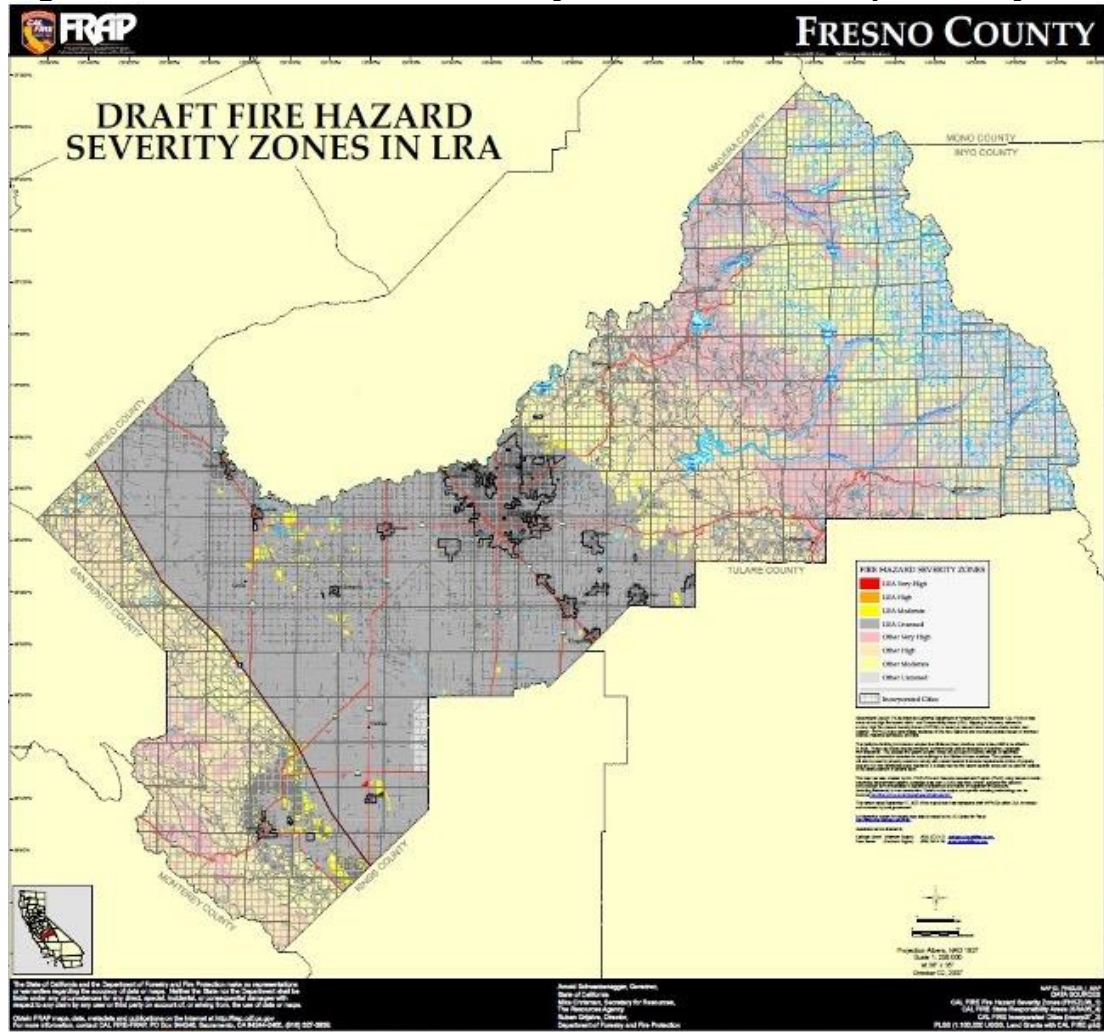
Affected Environment

According to the Fresno County Local Responsibility Area map from the California Department of Forestry and Fire Protection, the project is not within

or near a very high fire hazard severity zone (California Department of Forestry and Fire Protection, 2007).

As such, the Wildfire section is addressed at the beginning of Chapter 2. See Figure 3-1 below.

Figure 3-1 Draft Fire Hazard Severity Zones in Local Responsibility Area



3.4 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 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 by the

United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gases generated by human activity, including carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. Carbon dioxide is the most abundant greenhouse gas; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated carbon dioxide.

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 greenhouse gas 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.

3.4.1 Regulatory Setting

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

Federal

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

The National Environmental Policy Act (NEPA) (42 U.S. Code Part 4332) requires federal agencies to assess the environmental effects of their proposed actions before deciding on the action or project.

The Federal Highway Administration 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. The Federal Highway Administration, 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 were the Energy Policy and Conservation Act of 1975 (42 U.S. Code Section 6201) and Corporate Average Fuel Economy Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy 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. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration is responsible for setting greenhouse gas 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 greenhouse gas emissions.

State

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

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

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: Assembly Bill 32 codified the 2020 greenhouse gas emissions reduction goals outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used

to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The California Air Resources Board re-adopted the low carbon fuel standard 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 greenhouse gas reduction goals.

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

Senate Bill 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 Assembly Bill 32.

Executive Order B-16-12 (March 2012) orders state entities under the direction of the governor, including the California Air Resources Board, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions in greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. Greenhouse gases differ in how much heat each trap in the atmosphere (global warming potential). Carbon dioxide is the most important greenhouse gas, so amounts of other gases are expressed relative to carbon dioxide, using a metric called "carbon dioxide equivalent." The global warming potential of carbon dioxide is assigned a value of 1, and the global warming potential of other gases is

assessed as multiples of carbon dioxide. Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every three years and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016, codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

Senate Bill 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."

Assembly Bill 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.

Senate Bill 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 traveled, 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.

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the California Air Resources Board to prepare a report that assesses progress made by each metropolitan planning organization in meeting its established regional greenhouse gas emission reduction targets.

Executive Order 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 greenhouse gas emissions.

Executive Order 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 greenhouse gas emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This Executive Order also directs the California Air Resources Board 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.

3.4.2 Environmental Setting

The project sits along State Route 99 in Fresno County. State Route 99 is functionally classified as a principal arterial in the State of California. It runs in the north and south directions with a high percentage of truck traffic. Within the project limits, State Route 99 is an urban six-lane freeway that traverses the densely developed city near downtown Fresno. Analysis of level of service on the mainline under existing conditions indicates congested conditions during morning and evening peak hours. Adjacent land uses include commercial, industrial, residential, recreational, and institutional. The Fresno Council of Governments guides transportation development in the project area.

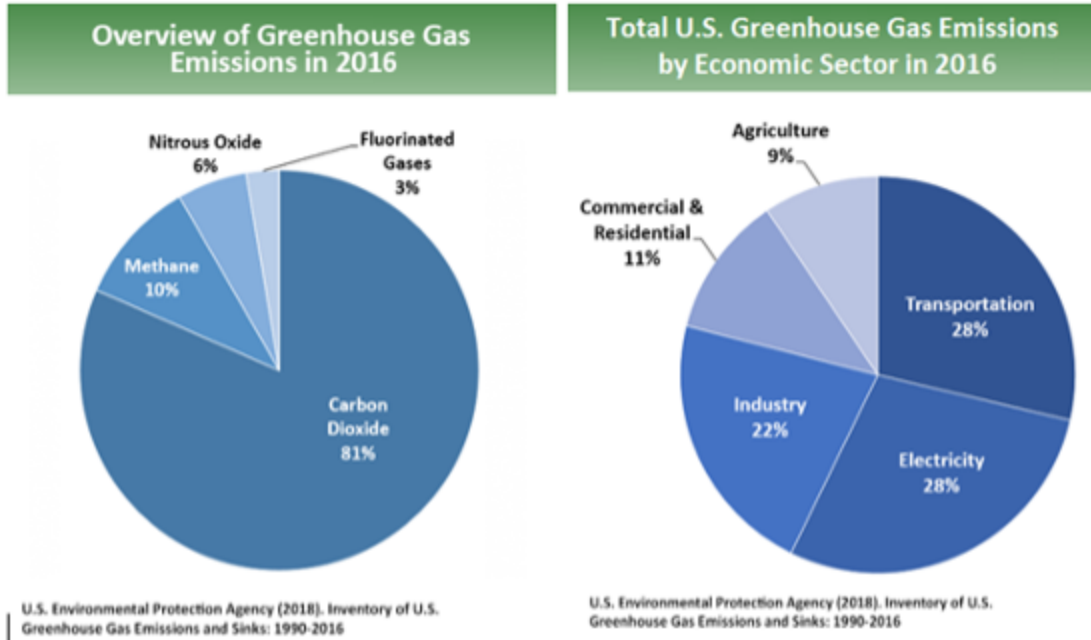
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board does so for the state, as required by Health and Safety Code Section 39607.4.

National Greenhouse Gas Inventory

The U.S. Environmental Protection Agency prepares a national greenhouse gas 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 greenhouse gases in the United States, reporting emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It also accounts for emissions of carbon dioxide that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store carbon dioxide (carbon sequestration).

The 1990-2016 inventory found that of 6,511 million metric tons of carbon dioxide equivalent greenhouse gas emissions in 2016, 81 percent consist of carbon dioxide, 10 percent are methane, and six percent are nitrous oxide; the balance consists of fluorinated gases (Environmental Protection Agency 2018a). In 2016, greenhouse gas emissions from the transportation sector accounted for nearly 28.5 percent of U.S. greenhouse gas emissions. See Figure 3-2.

Figure 3-2 U.S. 2016 Greenhouse Gas Emissions



State Greenhouse Gas Inventory

The California Air Resources Board collects greenhouse gas 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 greenhouse gas reduction goals. The 2019 edition of the greenhouse gas emissions inventory found total California emissions of 424.1 million metric tons of carbon dioxide equivalent for 2017, with the transportation sector responsible for 41 percent of total greenhouse gases. It also found that overall statewide greenhouse gas emissions declined from 2000 to 2017 despite growth in population and state economic output (Air Resources Board 2019a). See Figures 3-3 and 3-4.

Figure 3-3 California 2016 Greenhouse Gas Emissions

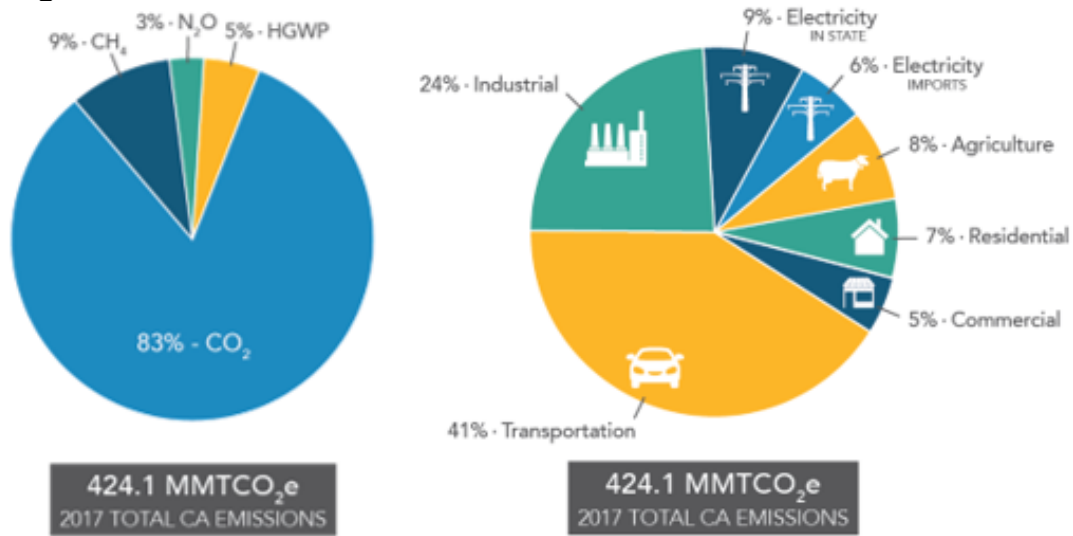
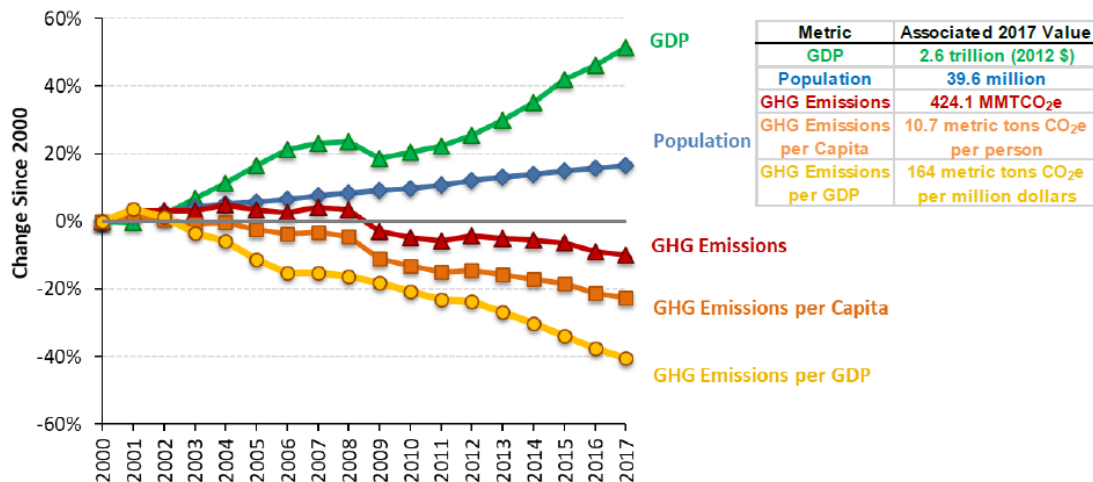


Figure 3-4 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000



Assembly Bill 32 required the California Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020 and to update it every five years. The California Air Resources Board 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 Executive Order B-30-15 and Senate Bill 32. The Assembly Bill 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce greenhouse gas emissions.

Regional Plans

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation

Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The proposed project is within the jurisdiction of the Fresno Council of Governments. The regional reduction target for the Fresno Council of Governments is 6 percent by 2020 and 13 percent by 2035 (Air Resources Board 2019c).

The proposed project is included in the Fresno Council of Governments' Regional Transportation Plan/Sustainable Communities Strategy. The 2022 Regional Transportation Plan reflects transportation planning for Fresno County through the year 2042. The 2022 Regional Transportation Plan goal is to have a multimodal regional transportation network compatible with adopted land use plans and consistent with the intent of Senate Bill 375 (Senate Bill 375, also known as the Sustainable Communities Protection Act of 2008). Objectives for this goal include the development of a regional transportation network that is environmentally sensitive, fosters sustainable regional growth, and helps reduce greenhouse gas emissions wherever possible. The Regional Transportation Plan includes transportation projects that reduce congestion, provide safe and enhanced modes of transportation within the region, and accommodate development planned for the surrounding area. The proposed project is consistent with the long-term goals of the 2022 Regional Transportation Plan for Fresno County, as well as the goals and policies of the Fresno General Plan, Active Transportation Plan, Downtown Neighborhood Community Plan, and Highway 99 Beautification Master Plan, as discussed in Section 2.1.4, Growth, in this environmental impact report.

3.4.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during the operation of the state highway system and those produced during construction. The primary greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions is 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 (Public Resources Code, Section 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 Association 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.

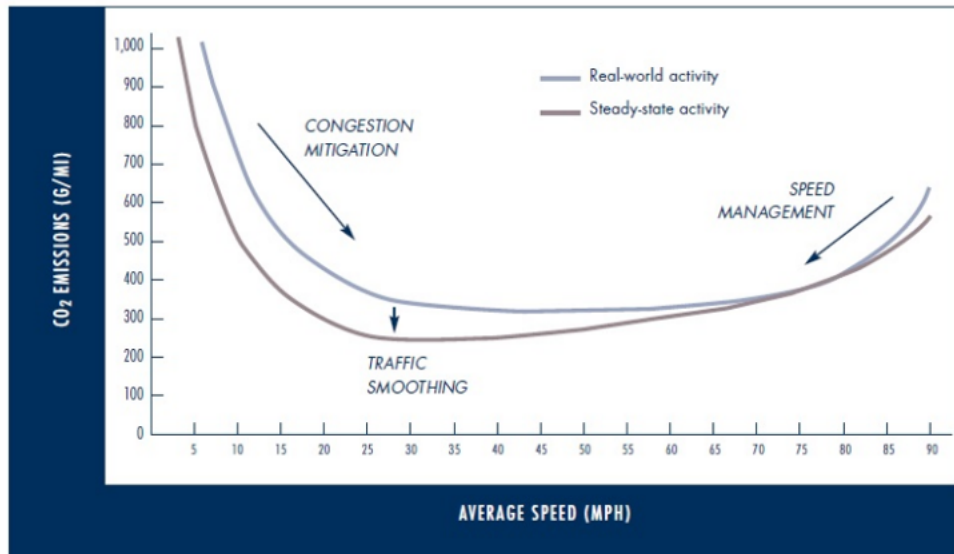
Operational Analysis

Carbon dioxide accounts for 95 percent of transportation greenhouse gas emissions in the U.S. The largest sources of transportation-related greenhouse gas emissions are passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. These sources account for over half of the emissions from the sector. The remainder of greenhouse gas emissions comes from other modes of transportation, including freight trucks, commercial aircraft, ships, boats, and trains, as well as pipelines and lubricants. Because carbon dioxide emissions represent the greatest percentage of greenhouse gas emissions, it has been selected as a proxy within the following analysis for potential climate change impacts generally expected to occur.

The highest levels of carbon dioxide from mobile sources such as automobiles occur at stop-and-go speeds (0 to 25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0 to 25 miles per hour (see Figure 3-5). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, greenhouse gas emissions, particularly carbon dioxide, may be reduced.

Four primary strategies can reduce greenhouse gas emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower greenhouse gas-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued concurrently.

Figure 3-5 Possible Use of Traffic Operation Strategies in Reducing On-Road Carbon Dioxide Emissions (Source: Barth and Boriboonsomsin 2010)



The proposed project is included in the Fresno Council of Governments' Year 2022 Regional Transportation Plan Amendment Number 4 and the 2021 Federal Transportation Improvement Plan. As such, the project is consistent with the Regional Transportation Plan and part of the area's overall strategy for providing mobility, congestion relief, and reducing transportation-related air pollution in support of efforts to attain federal air quality standards for the region. Compared to 2005 levels, the 2022 Regional Transportation Plan/Sustainable Communities Strategy will result in a 5 percent reduction in greenhouse gas emissions per capita by 2020 and a 10 percent reduction by 2035, helping the state to meet its Senate Bill 375 goals and placing it on track to meet the goals of the San Joaquin Blueprint to which the Fresno Council of Governments was a party (Fresno Council of Governments 2022: pages A-10, A-12). The proposed project supports the goals and objectives of the Regional Transportation Plan, such as "Achieve a safe transportation system for all motorized and non-motorized users on all public roads in Fresno County" and "Maintain highways, roads, and bridges in a state of good repair for all users." The purpose of the proposed project is to rehabilitate the pavement on the roadway and adjacent corridor streets and reconstruct several overpasses and one underpass to reduce maintenance labor and expenditures and bring the roadway pavement and vertical clearances to standard conditions. The proposed project would not increase the vehicle capacity of the mainline, but auxiliary lanes would increase capacity between ramps to reduce mainline congestion and permit more efficient and safer operation. The project would, however, change circulation patterns in ways that could restrict access for some businesses, public facilities, and community residents and require additional travel, including more truck travel,

on surface streets, increasing local congestion. These impacts are detailed in Section 2.1.9, Traffic and Transportation.

Quantitative Analysis

Carbon dioxide emissions for the El Dorado Street to Clinton Avenue Rehabilitation project were analyzed using Caltrans-Emissions Factor 2017. Results are summarized in Table 3.1 below.

Table 3.1 Caltrans Emission Factor Modeled Carbon Dioxide Emissions

Alternative	Carbon Dioxide Emissions (Tons per Year)	Annual Vehicle Miles Traveled
Existing/Baseline 2019	97,631	176,440,552
Open to Traffic 2029 No-Build	92,744	214,949,669
Open to Traffic 2029 Build Alternative 1	85,517	202,424,748
Open to Traffic 2029 Build Alternative 2	85,517	202,424,748
20-Year Horizon/Design Year 2049 No-Build Alternative	100,394	277,948,609
20-Year Horizon/Design Year 2049 Build Alternative 1	94,662	264,924,991
20-Year Horizon/Design Year 2049 Build Alternative 2	94,662	264,924,991

Source: EMFAC or CT EMFAC (2017)

Existing/Baseline Carbon Dioxide Emissions

The Existing/Baseline Year 2019 emissions are 97,631 tons per year.

2029 Carbon Dioxide Emissions

The No-Build Year 2029 carbon dioxide emissions would be 92,744 tons per year; this is 4,887 tons less than the Existing/Baseline carbon dioxide emissions.

For Alternatives 1 and 2, year 2029 carbon dioxide emissions would be 85,517 tons per year; this is 12,114 tons less than the Existing/Baseline carbon dioxide emissions and 7,227 tons less than under the no-Build Alternative.

2049 Carbon Dioxide Emissions

The No-Build Year 2049 carbon dioxide emissions would be 100,394 tons per year; this is 2,763 tons more than the Existing/Baseline carbon dioxide emissions.

For Alternatives 1 and 2, year 2049 carbon dioxide emissions would be 94,662 tons per year; this is 2,969 tons less than the Existing/Baseline Carbon Dioxide emissions and 5,732 tons less than under the no-Build Alternative.

Analysis

No-Build Versus Existing Year 2019

The Existing/Baseline Year 2019 emissions are 97,631 tons per year. If no project alternative is built, carbon dioxide emissions would decrease from existing by 4,887 tons per year by 2029 but will increase by 2,763 tons per year by 2049. In addition to the increase in future carbon dioxide, the loss of operational efficiency and the resulting potential for vehicular accidents on current roadways within the area may not be acceptable.

Build Alternatives—Open to Traffic Year 2029 and Design Year 2049

For both Build Alternatives, the modeling shows a decrease in the amount of carbon dioxide emissions relative to the Existing/Baseline Year 2019. Furthermore, Alternatives 1 and 2 would both have lower carbon dioxide emissions when compared to the no-build in both years 2029 and 2049. Forecasted growth within Fresno County and surrounding areas is anticipated to cause growth in vehicle miles traveled over time. Nevertheless, even with some changes in traffic patterns on surface streets, the general project vicinity would operate at a higher level of service and operate with more efficiency with the Build Alternatives when compared to the no-Build Alternative, resulting in lower carbon dioxide emissions.

Construction Emissions

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

In addition, with innovations, such as longer pavement lives, improved Traffic Management Plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions for the project are calculated using Caltrans' Construction Emissions Tool CAL-CET v1.1.

Project construction is expected to generate approximately 9,389 tons of carbon dioxide during the 1,280 working days (less than the 264 working days per year) duration. Measures to reduce construction-related greenhouse gas emissions must be included in all projects.

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 the California Air Resources Board 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 greenhouse gas emissions.

CEQA Conclusion

While the proposed project will result in greenhouse gas emissions during construction, the project is not expected to increase operational greenhouse gas emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases. With the implementation of construction greenhouse gas-reduction measures, the impact would be less than significant.

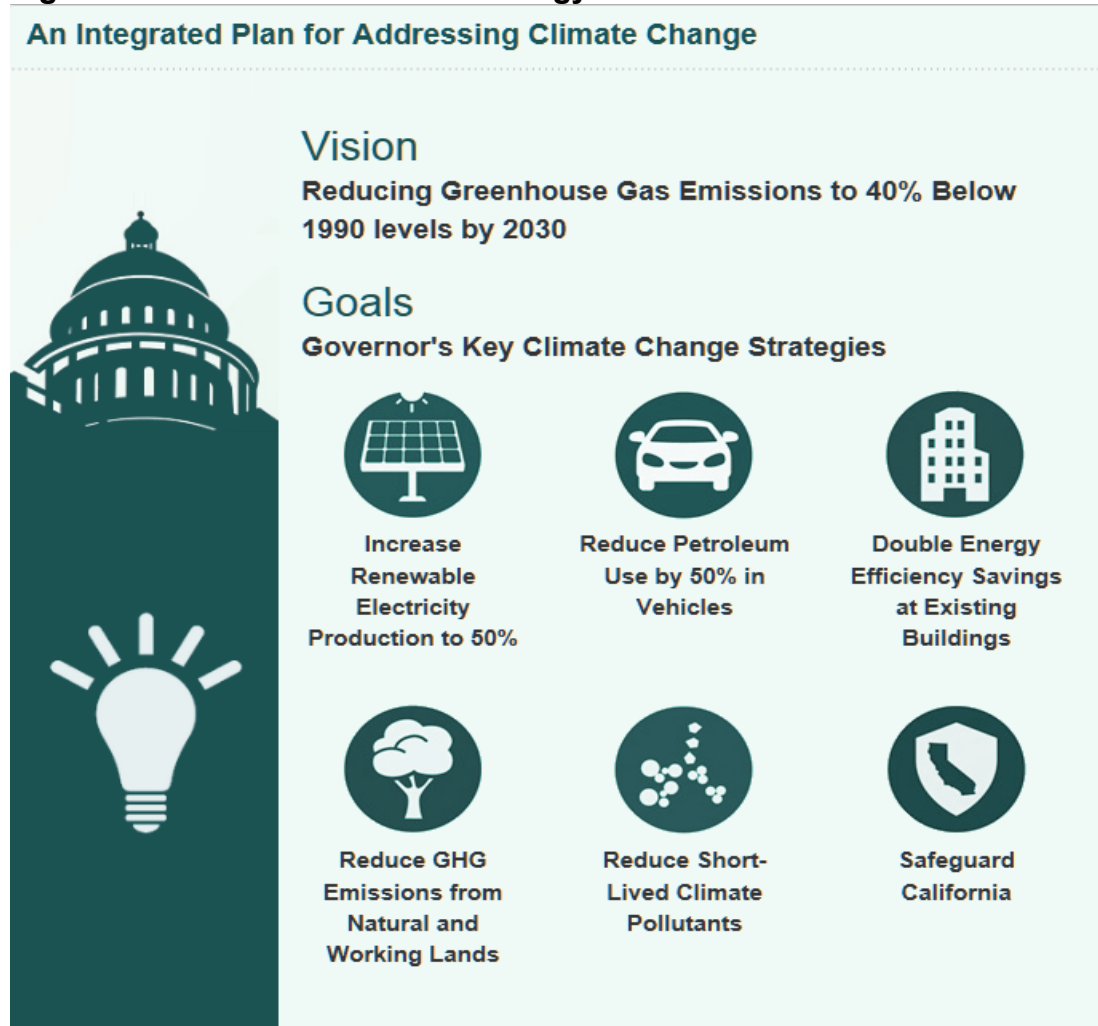
Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

3.4.4 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 greenhouse gas emissions targets. Former Governor Edmund G. Brown promoted greenhouse gas 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. See Figure 3-6.

Figure 3-6 California Climate Strategy



The transportation sector is integral to the people and economy of California. To achieve greenhouse gas emission reduction goals, it is vital that the state builds on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and a reduction in vehicle miles traveled. A key state goal for reducing greenhouse gas 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, Senate Bill 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 aboveground and belowground matter.

Caltrans Activities

Caltrans continues to be involved in the governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15, issued in April 2015, and Senate Bill 32 (2016), set an interim target to cut greenhouse gas 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 is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with carbon dioxide 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 develop a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

Senate Bill 391 (Liu 2009) requires the California Transportation Plan to meet California's climate change goals under Assembly Bill 32. Accordingly, the California Transportation Plan 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce greenhouse gas emissions, California Transportation Plan 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 greenhouse gas emissions, among other goals. Specific performance targets in the plan that will help to reduce greenhouse gas emissions include:

- Increasing percentage of non-auto mode share
- Reducing vehicle miles traveled
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce greenhouse gas 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 Regional Transportation Plan/Sustainable Communities Strategy; contribute to the state's greenhouse gas reduction targets, advance transportation-related greenhouse gas 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 greenhouse gas emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

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

- Limit idling to five minutes for delivery and dump trucks and other diesel-powered equipment.
- Schedule truck trips outside of peak morning and evening commute hours.
- Reduce construction waste and maximize the use of recycled materials (reduces the consumption of raw materials, reduces landfill waste, and encourages cost savings).
- Incorporate measures to reduce consumption of potable water.
- Encourage Improved fuel efficiency from construction equipment (examples provided below):
- Construction Environmental Training: Supplement existing training with information regarding methods to reduce greenhouse gas emissions related to construction.
- Encourage the use of alternative bridge construction (reduce construction windows, use more precast elements that, in turn, reduce the need for additional falsework, forms, bracing, etc.)
- Maximize the use of recycled materials (e.g., tire rubber).
- Salvage large removed trees for lumber or similar onsite beneficial uses other than standard wood-chipping (e.g., use in roadside landscape projects or green infrastructure components).

- Select pavement materials that reduce the rolling resistance of highway surfaces as much as possible while still maintaining design and safety standards.
- Earthwork Balance: Reduces the need for transporting earthen materials by balancing cut and fill quantities.
- Reduce the need for electric lighting by using ultra-reflective sign materials that are illuminated by headlights.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
- Implement a construction transportation management plan to reduce detour- and construction-related traffic congestion.
- A construction equipment emission reduction program to encourage or require the contractor to use cleaner (newer) diesel engines or retrofit older engines.
- Install new and upgraded Intelligent Transportation System elements to smooth traffic flow and increase system efficiency.

3.4.5 Adaptation

Reducing greenhouse gas 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 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. Wildfires 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 Federal Highway Administration NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every four years, in accordance with the Global Change Research Act of 1990 (15 U.S. Code Chapter 56A Section 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. Department of Transportation 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 the U.S. Department of Transportation 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. Department of Transportation 2011).

Federal Highway Administration order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established Federal Highway Administration policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration 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.

Executive Order 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.

Executive Order 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 a new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This Executive Order recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of Executive Order 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.

Assembly Bill 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 guides 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 the analysis of at-risk assets and the 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 provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

Sea Level Rise

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

Floodplains Analysis

A Hydraulics Recommendation was prepared on November 12, 2019. The project is outside the limits of the 100-year flood. Most of the project area is within the limit of the 500-year flood; Firm Map 06019C21100H labels the area “Zone X,” and it is defined as “Other Flood Areas, areas of 0.2 percent annual/flood, areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.” The Dry Creek Canal and the Houghton Canal cross State Route 99, but these canals will not impact the project or flood the freeway.

With climate change, precipitation patterns are expected to change from past conditions, with rain coming in potentially fewer but more-intense events. Annual rainfall in the project area averages 24 inches and occurs mainly during the winter months. The Caltrans Climate Change Vulnerability Assessment for District 6 mapped predicted changes in 100-year storm precipitation depth. Storm precipitation depth is a metric commonly used in the design of transportation assets. In the project area, the 100-year storm is expected to increase by less than 5 percent under a conservative (RCP 8.5, business-as-usual) greenhouse gas emissions scenario through 2085.

The existing culverts and drainage systems are reaching their design life expectancy. Some of the recently constructed drainage inlets between McKinley Avenue and Clinton Avenue will be modified as needed. The existing older drainage systems will be removed or abandoned, and new drainage systems will be constructed. Considering these drainage improvements, the project’s location outside a 100-year floodplain, and relatively small changes in storm precipitation depth, the project is expected to be resilient to impacts of climate change related to changes in storm precipitation.

Wildfire

The proposed project is not in a very high fire hazard severity zone (California Department of Forestry and Fire Protection, 2007). Caltrans 2018 revised Standard Specification 7-1.02M (2) mandates fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction.

Climate Change References

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Chapter 4 **Comments and Coordination**

Native American consultation was initiated through letters to tribal representatives on January 24, 2019. Written correspondence with the Native American Heritage Commission began in May 2019. The Native American Heritage Commission responded to Caltrans' request on June 10, 2019, stating that the Sacred Lands File records search resulted in negative findings.

The Native American Heritage Commission also provided the names of representatives who might be interested in the proposed undertaking or able to provide information regarding Native American resources in the project vicinity. These representatives are listed below:

- Robert Ledger Sr., Chairperson, Dumna Wo-Wah Tribal Government
- Rueben Barrios Sr., Chairperson, Santa Rosa Rancheria Tachi Yokut Tribe
- Leanne Walker-Grant, Chairperson, Table Mountain Rancheria
- Bob Pennell, Cultural Resources Director, Table Mountain Rancheria
- Kenneth Woodrow, Chairperson, Wuksache Indian Tribe/Eshom Valley Band
- Elizabeth Kipp, Chairperson, Big Sandy Rancheria of Mono Indians
- Carol Bill, Chairperson, Cold Springs Rancheria of Mono Indians
- Judie Fink, Chairperson, North Fork Mono Rancheria
- Christina McDonald, Environmental, North Fork Mono Rancheria
- Ron Goode, Chairperson, North Fork Mono Tribe
- Jennifer Ruiz, Chairperson, Picayune Rancheria
- Heather Airey, THPO, Picayune Rancheria
- Neil Peyron, Chairperson, Tule River Indian Tribe
- Kerri Vera, EPA, Tule River Indian Tribe
- Jerry Brown, Chairperson, Chaushilla Yokuts
- Lorrie Planas, Choinumni Tribe
- Ben Charley Jr., Chairperson, Dunlap Band of Mono Indians
- Dirk Charley, Tribal Secretary, Dunlap Band of Mono Indians
- Stan Alec, Chairperson, Kings River Choinumni Farm Tribe

Project notification letters to tribal representatives listed for Assembly Bill 52 and the Native American Heritage Commission were mailed on July 22, 2019,

by Christina Gaddis, Lead Archaeological Surveyor. The correspondence was an invitation to consult under Public Resources Code 21080.3.1 and Chapter 532 of Statute 2014 (i.e., Assembly Bill 52).

Second project notification letters included project updates on the diverging diamond and roundabout interchange. Letters were mailed on July 22, 2019, and follow-up phone calls/emails were made on August 27, 2019.

A third consultation letter was mailed out in April 2020 to update tribal representatives on the asphalt concrete pavement overlay for Fruit Avenue. There has been no response as of November 20, 2020. A Caltrans Project Development Team has worked directly with the City of Fresno Public Works Department to discuss critical components of the project since mid-2017. Key decisions made include the 2019 agreement to close the Belmont Avenue ramps and the 2020 decision to close the McKinley Avenue ramps.

Public Meetings and Community Outreach

Other meetings have also been held to discuss the Olive Avenue Interchange enhancements, in which the design has been heavily influenced by feedback from the City of Fresno, local businesses, and residents. Both Build Alternatives would incorporate Complete Streets elements by providing a pedestrian and bicycle crossing pathway on Olive Avenue, just west of State Route 99 near the interchange. The proposed project will also accommodate Complete Streets elements for safe and efficient pedestrian and bicycle movements for the El Dorado Street, Belmont Avenue, and McKinley Avenue crossings. El Dorado Street would be converted into three lanes—a two-way, left-turn lane and a Class 2 bike lane with standard sidewalks on each side, per the Fulton Corridor Specific Plan and Downtown Neighborhood Community Plan.

The Caltrans Project Development Team has prepared the presentations for the following businesses, organizations, and councilmembers:

1. Fresno Chaffee Zoo: February 1, 2022, included a project presentation to Fresno Chaffee Zoo staff and Councilmember Miguel Arias.
2. Caltrans Central Region Landscape Architecture Branch: A meeting was held on June 11, 2020; a subsequent meeting was held on August 6, 2020, which focused on the aesthetic treatment of the existing Roeding Park soundwall.
3. Producers Dairy: November 3, 2022, and February 3, 2022, included a project presentation and meeting.
4. La Tapatia Tortilleria: February 28, 2022, included a project presentation.
5. Councilmember Miguel Arias: November 17, 2020, included a project presentation and the plans for the Roeding Park soundwall.

6. AB617 Air Board Committee and Leadership Council for Justice and Accountability: February 9, 2022, included a project presentation and the efforts being made to engage the community.

Numerous meetings have also taken place at Three Palms Mobile Home Park, Park View Mobile Home Park, Addams Elementary, UPS, Belmont Memorial Park, and other local businesses, including motels, gas stations, and convenience stores. All emails, phone calls, and letters have been documented.

Public Meeting at Addams Elementary School: McKinley Avenue Ramp Closures

A meeting between Caltrans Design Team and Addams Elementary took place on September 23, 2020, to discuss the Olive Avenue Interchange and closure of McKinley Avenue ramps. Project Manager Scott Friesen provided a presentation for the El Dorado to Clinton Pavement Rehabilitation Project and focused on the possibility of McKinley Avenue ramp closures. Alex Belanger, the Chief Executive of Operations for Fresno Unified School District, attended this meeting.

According to Belanger, many students at this school include older children who accompany their younger siblings, and it is difficult to safely cross the on-ramps and off-ramps at McKinley Avenue. Large trucks travel by this school due to the existing on-ramps and off-ramps to and from State Route 99, contributing to air pollution and traffic congestion. Heavy vehicles and trucks traveling on Hughes Avenue to McKinley Avenue ramps are deteriorating the roads and increasing smog for students. Belanger stated that road repairs are needed, in addition to more stop signs to slow down traffic.

Currently, school faculty are used as crossing guards. Beth Doyle, Principal of Addams Elementary, stated that buses park on McKinley Avenue, and it is concerning for students crossing the street. Additional bussing from Three Palms Mobile Home Park and the Sands Motel was requested due to the inadequate walking path. Sidewalks are missing at locations on McKinley Avenue from Marks Avenue, along Golden State Boulevard, and on Hughes Avenue. Sidewalks on Golden State Boulevard, adjacent to UPS property, were removed and not replaced. Sidewalks are also non-existent on Hughes Avenue, on the opposite side of Addams Elementary.

When the school's main office and student drop-off/pick-up is relocated to Hughes Avenue, most of Hughes Avenue traffic will be headed toward the Olive Avenue Interchange. The Fresno Unified School District would prefer diverting traffic from Hughes Avenue and more traffic controls, especially for truck traffic.

Public Scoping Meeting

A public scoping meeting was advertised and held on September 18, 2019. A Spanish interpreter and information sheets in Spanish were available at this public meeting. The meeting took place on October 10, 2019, from 6:00 p.m. to 8:00 p.m. at The Verdi Club in Fresno, California. The goal of the public scoping meeting was to provide the public with information about the project scope and to receive feedback about the proposed project. The public notice was advertised in *The Fresno Bee* newspaper on September 26, 2019. The public notice was also published in the Spanish newspaper *Vida En El Valle* on October 2, 2019. The public notice was posted on the Caltrans District 6 Facebook and Twitter pages on October 8, 2019, at 4:12 p.m. and October 10, 2019, at 2:33 p.m.

A sign-in table was set up at the entrance of the event center. Attendees were greeted by a Caltrans representative who guided them through the sign-in process. Every attendee was given a project information sheet and comment card. Attendees were encouraged to fill out the comment card. The comment cards could be placed in the comment box at the meeting or brought home to fill out and mailed to the office. A court reporter was available to take verbal comments. A station was set up for attendees to sit with the court reporter and give their comments. Interpreters were present at the meeting to help translate Spanish for non-English speakers. Attendees were asked to sign in so that Caltrans staff could maintain an attendance record and ensure that all interested parties were added to the project mailing list. Caltrans staff gave each attendee information sheets stating the project description, purpose, background, cost, funding source, timeline, and contact name for those interested in obtaining more information. An information sheet also contained a map showing the project locations.

This board explained the research and analysis being done by the Caltrans environmental studies branches: noise impact studies, community impact assessment, visual impact assessment, architectural history study, cultural resources evaluation, biological studies, hazardous waste study, air and water quality studies, and a farmland analysis, among others. Caltrans would proceed with the environmental studies to determine the potential impacts of the project, and all public comments would be taken into consideration in the alternatives proposed. In addition, the board noted that further public input would be requested when the draft environmental document is released.

Community Survey

Additional outreach includes an online community survey that was provided to Jane Addams Elementary School, Columbia Elementary School, and Pershing Continuation High School on February 23, 2021. The purpose of this survey was to gain a better understanding of the existing community profile within the project area. An online community survey that contained a link and QR code was provided on a Caltrans flyer, which was distributed to a media

representative for each school. Each media representative was contacted individually by the generalist, Gabriella Bedrossian, by phone and email. Peachjar was used as a form of media to promote this flyer to the public. The deadline to receive comments was March 10, 2021. No comments were received on this community survey.

Current design alternatives are the result of public input from community members and stakeholder agencies. Comments and concerns received in response to the Notice of Preparation/Notice of Intent and during the scoping meeting have been considered and implemented into the design to increase beneficial impacts to the community.

Chapter 5 **List of Preparers**

This document was prepared by the following Caltrans Central Region staff:

Allam Alhabaly, Transportation Engineer. B.S., California State University, Fresno, School of Engineering; 18 years of experience in environmental technical studies, with emphasis on noise studies. Contribution: Noise Abatement Decision Report.

Myles Barker, Editorial Specialist. B.A., Mass Communication and Journalism, California State University, Fresno; 6 years of editing experience. Contribution: Technical Editor.

Gabriella Bedrossian, Associate Environmental Planner. B.S., Environmental Studies, Concentration in Environmental Impact Assessment, San Jose State University; 4 years of environmental conservation and recycling coordination experience. Contribution: Environmental Impact Report/Environmental Assessment and coordinated the environmental process for the project.

Jon L. Brady, Associate Environmental Planner. M.A., History, California State University, Fresno; B.A., Political Science and Anthropology, California State University, Fresno; 41 years of experience in environmental planning (archaeology and architectural history). Contribution: Historic Property Survey Reports, Historic Resource Evaluation Reports, Findings of Effects documents.

Ezekiel Currier, Associate Environmental Planner (Natural Sciences). B.S., Biology (Ecology and Biodiversity), California State Polytechnic University, Humboldt; 7 years of botany and biology experience. Contribution: Biological Studies and Required Permits.

Christina Gaddis, Associate Environmental Planner, Archaeologist. M.A., Theological Studies, Vanguard University of Southern California, Costa Mesa; B.A., Anthropology, Vanguard University of Southern California; 16 years of both archaeological and cultural resource management experience. Contribution: Archaeological Survey Report.

Maya Hildebrand, Associate Environmental Planner (Air Quality Coordinator). B.S., Geology, Utah State University; 6 years of air quality analysis and 5 years of combined geological/environmental hazards experience. Contribution: Air Quality Analysis/Report Writing.

Rogério Leong, Engineering Geologist. B.S., Geology, University of Sao Paulo, Brazil; 18 years of environmental site assessment and investigation experience. Contribution: Water Quality Study Report.

Mandy Macias, Associate Environmental Planner (Archaeology). B.A., Anthropology, California State University, Fresno; more than 20 years of California and Great Basin archaeology and cultural resources management experience. Contribution: Prehistoric Archaeology, Native American Consultation.

Deanna McNurlan, Associate Environmental Planner. B.S., Environmental Science and Management, University of California, Davis; 3 years of environmental planning experience. Contribution: Environmental Impact Report/Environmental Assessment and coordinated the environmental process for the project.

David Meyers, Audio Visual Specialist. B.A., Fine Arts/Music, California State University, Fresno; A.A., Liberal Studies, College of the Sequoias, Visalia; more than 25 years of visual design, public participation, multimedia, and fine arts/music experience. Contribution: Graphics and public outreach materials.

G. William "Trais" Norris, III, Senior Environmental Planner. B.S., Urban Regional Planning, California State Polytechnic University, Pomona; 21 years of land use, housing, redevelopment, and environmental planning experience. Document review of CEQA and NEPA documents; including Caltrans Web Accessibility for All (CWAA) requirements. Contribution: Environmental Impact Report/Environmental Assessment guidance and review of report.

Lea Spann, Engineering Geologist. B.A., Environmental Studies, University of California, Santa Barbara; over 20 years of hazardous waste/materials experience and 6 years of environmental planning experience. Contribution: Initial Site Assessment/Report Writing.

Chelsea Starr, Associate Environmental Planner. B.S., Biology, University of Washington; 2 years of environmental planning experience. Contribution: Community Impact Assessment and Field Research, Chapter 4 and 5 Report Writing and Research.

Richard C. Stewart, Engineering Geologist, P.G. B.S., Geology, California State University, Fresno; more than 30 years of hazardous waste and water quality experience; 18 years of paleontology/geology experience. Contribution: Paleontological Evaluation Report.

Jennifer H. Taylor, Environmental Office Chief. Double Bachelor of Arts in Political Studies and Organizational Sciences, Pitzer College; more than 30 years of experience in environmental and land use planning. Contribution: Oversight review of the environmental document.

Juergen Vespermann, Senior Environmental Planner. Civil Engineering Degree, Fachhochschule Muenster, Germany; more than 20 years of

experience in transportation planning/environmental planning.
Contribution: Oversight review of the environmental document.

Chapter 6 Distribution List

Businesses/Property Owners

San Joaquin Valley Railroad Co. 221 North F. Street, P.O. Box 937, Exeter, California 93221

David La Plante, Senior Manager, Union Pacific, 1400 Douglas Street, STOP 1690, Omaha, NE 68179

Park View Mobile Home Park, LLC 50 Woodside Plaza #231, Redwood City, California 94061

Belmont Memorial Park Corporation, 201 N Teilman Avenue, Fresno, California 93706

UPS Customer Center, 1601 West McKinley Avenue, Fresno, CA 93728

Three Palms MH Park, LLC 3511 Del Paso Road, Sacramento, CA 95835

AR Transmission, Randy Aaronian, 1910 West McKinley Avenue, Fresno, California 93728

ARJ Corporation, 445 N Parkway Drive, Fresno, California 93706

aul and Simerjit Riar, 1155 Belmont Avenue, Fresno, California 93706

AP Gill Inc., 1035 West Belmont Avenue, Fresno, California 93728

Valero, 1280 West Belmont Avenue, Fresno, California 93728

Monarch Properties, LLC 10728 North Bunkerhill Drive, Fresno, California 93730

TBS Holdings, LLC 4917 Genesta Avenue, Encino, California 91316

Akshar Inc., 777 North Parkway Drive, Fresno, California 93728

Rosenbalm Rockery, Inc., 1745 Hughes Avenue, Fresno, California 93705

Dellavalle Laboratory, Inc., 1910 W McKinley Avenue #110, Fresno, California 93728

Rajendra N. and Jagrati Bhakta, 1087 North Parkway Drive, Fresno, California 93728

Dev and Sunita Sagar, 44816 South Grimmer Boulevard, Fremont, CA, 94538

Days Inn of Fresno Partnership, 1101 North Parkway Drive, Fresno, California 93728

Vinay Vohra, 2297 East Turnberry Avenue, Fresno, California 93730

Bruin Corporation, 1737 West Olive Avenue, Fresno, California 93728

Adinath Hospitality, 265 South Randolph Avenue Suite 190, Brea, California 92821

Bruce Dennie, 1215 West Alluvial Avenue, Fresno, California 93711

JHS Family LP and DBH Family, LP5917 West Elowin Drive, Visalia, California 93291

Shaileshkumar and Kalpanaben Patel, 1804 West Olive Avenue, Fresno, California 93728

McDonalds Corporation, P.O. Box 182571 Columbus, Ohio 43218

Dale Jackson and In Suk Price 1120 North Crystal Avenue, Fresno, California 93728

Park View Mobile Home Park, Manager 1719 West Olive Avenue, Fresno, California 93728

Three Palms Mobile Home and RV Park, Three Palms RV Park, Manager, 1941 North Golden State Boulevard, Fresno, California 93705

Triangle Drive In, Manager, 1310 West Belmont Avenue, Fresno, California 93728

RJ Auto Body and Paint, Manager, 1410 Belmont Avenue, Fresno, California 93728

Chapel of the Light, Michael Rabara, General Manager, 1620 West Belmont Avenue, Fresno, California 93728

Ararat Armenian Cemetery Association, General Manager, 1925 West Belmont Avenue, Fresno, California 93728

A&T Trans & Auto Repair, General Manager, 1708 West Belmont Avenue
Fresno, California 93728

Derrel's Mini Storage, General Manager, 1800 West Belmont Avenue,
Fresno, California 93728

Pacific Fresh Seafood Company , General Manager, 1906 West Belmont Avenue, Fresno, California 93728

San Joaquin Filter Recycling, Manager, 1922 West Belmont Avenue, Fresno, California 93728

Super Roots Hydroponics Manager, 1922 West Belmont Avenue, Fresno, California 93728

West Park Baptist Church, 1920 West Dudley Avenue, Fresno, California 93728

Trinity Church of Good In Christ, 46 O'Neill Avenue, Fresno, California 93706

Church of Jesus Christ, 111 West Whitesbridge Avenue, Fresno, California 93722

Refinery West McKinley, 3014 West McKinley Avenue, Fresno, California 93722

A&M Mini Market, Manager, 2104 West Belmont Avenue, Fresno, California 93728

Church on the Rock, 3014 West McKinley Avenue, Fresno, California 93722

Aldo's Nightclub, 617 West Belmont Avenue, Fresno, California 93728

El Prado, Manager, 275 Belmont Avenue, Fresno, California 93728

Parkside Market, Manager, 705 West Belmont Avenue, Fresno, California 93728

Brown's Floral, Manager, 909 West Belmont Avenue. Fresno, California 93728

Parkway Liquor, Manager, 545 North Parkway Drive. Fresno, California 93728

Veterans of Foreign Wars, VFW Post 5057530, North Parkway Drive. Fresno, California 93728

Goodman Auto Group, Manager, 1454 West Belmont Avenue. Fresno, California 93827

Hotel Shirigi Inc. Owner, 777 North Parkway Drive. Fresno, California 93728

Jagarati and Pratike Bhakta, Palace Inn, Owner, 797 North Parkway Drive Fresno, California 93728

Rick Patel Villa Motel, Owner 817 North Parkway Drive Fresno, California 93728

Valley Inn, Naresh and Ragini Patel, Owner, 933 North Parkway Drive, Fresno, California 93728

Sierra Inn, Aevinal Bhakta, Owner, 949 North Parkway Drive, Fresno, California 93728

Daljit and Surinder Kaur Singh, Hotel Owner, 959 North Parkway Drive, Fresno, California 93728

Lambo Yip and Hui Zhong Li, Hotel Owner, 428 West Loyola Avenue, Clovis, California 93619

Shoobies Tire and Auto Repair, Owner, 2344 West Belmont Avenue, Fresno, California 93728

Ainsworth Automotive, Owner, 2346 West Belmont Avenue, Fresno, California 93728

The Glass Shack, Owner, 2424 West Belmont Avenue, Fresno, California 93728

Sunrise Truck Driving School, Owner, 2301 West Belmont Avenue, Fresno, California 93728

Torees Auto Body, Owner, 2345 West Belmont Avenue, Fresno, California 93728

Punjab Auto Repair, Owner, 2508 West Belmont Avenue, Fresno, California 93728

Dhillon's Alignment Clinic, Owner, 2347 West Belmont Avenue, Fresno, California 93728

IT Transmission Exchange & Automotive Repair, Owner, 2540 West Belmont Avenue, Suite #D Fresno, California 93728

Westside Self Service Auto Dismantling, Owner, 2641 West Belmont Avenue, Fresno, California 93728

SK Truck Driving School, Owner, 2301 West Belmont Avenue, Fresno, California 93728

Todd's Trailer Park, Owner, 2706 West Belmont Avenue, Suite #15, Fresno, California 93728

Beth Ramacher, Development Center, 710 North Hughes Avenue, Fresno, California 93728

Ray Brothers Transportation, Owner, 1848 North Woodson Avenue, Fresno, California 93705

Villa Fresno Mobile Home Park, Owner, 2533 West McKinley Avenue, Fresno, California 93728

San Joaquin Estates, Owner, 2740 West Olive Avenue, Fresno, California 93728

Fresno Mobile Home and RV Park, Owner, 1632 North Hughes Avenue, Fresno, California 93728

Pioneer Village Apartments, Owner, 2072 North Marks Avenue, Fresno, California 93722

Golden Gardens Owner, 2130 North Marks Avenue, Fresno, California 93722

Villa Martinez Apartments, Owner, 2212 North Marks Avenue, Fresno, California 93722

Westmarc Apartments, Owner, 2264 North Marks Avenue, Fresno, California 93722

Plaza Mendoza Apartments, Owner, 1725 North Marks Avenue, Fresno, California 93722

North Marks Apartments, Owner, 1262 North Marks Avenue, Fresno, California 93722

Shady Acres Mobile Home and RV Park, Owner, 2807 West Dudley Avenue, Fresno, California 93728

Stumpf & Company, Ron Stumpf, Owner, 2045 East Ashlan Avenue, Suite 102, Fresno, California 93726

Craig and Douglas, Seibert Owner, P.O. Box 9543, Fresno, California 93793

Busseto Foods, Inc., Owner, P.O. Box 12403, Fresno, California 93777

American Steamway, Inc. Owner, 2240 West Belmont Avenue Suite #C, Fresno, California 93728

Goldenstate XP Inc., Owner, 6953 West Oswego Avenue, Fresno, California 93723

West Coast Enterprises Truck and Trailer Sales Inc., Owner, 1464 North Hughes Avenue, Fresno, California 93728

David Merritt, 1941 North Golden State Boulevard, SP #98, Fresno, California 93705

Mountain View Cemetery, Mariagane Smith, Manager, 1411 West Belmont Avenue, Fresno, California 93728

Brandon Smith, 1837 West Homan Avenue, Fresno, California 93705

Local Officials

Jerry Dyer, Mayor, City of Fresno, 2600 Fresno Street, Room 2075, Fresno, California 93721

Brian Pacheco, Supervisor Fresno County-Board of Supervisors, District 12281 Tulare Street, Room #301, Fresno, California 93721

Sal Quintero, Supervisor, Fresno County-Board of Supervisors, District 3, 2281 Tulare Street, Room #301, Fresno. California 93721

Esmeralda Soria, Councilmember, Fresno City Council-District 12600 Fresno Street, Room 2097, Fresno, California 93721

Miguel Arias, Council Vice-President, Fresno City Council-District 32600 Fresno Street, Room 2097, Fresno, California 93721

Brandi L. Orth, Fresno County Clerk/Registrar of Voters, 2221 Kern Street, Fresno, California 93721

Steven E. White, Director-Department of Public Works and Planning, Tulare Street, Suite A 2220 Tula Fresno County, Fresno, California 93721

Moses Stites, General Manager, Fresno County Rural Transit Agency2035 Tulare Street, Suite 201, Fresno, California 93721

Mike Leonardo, Executive Director, Fresno County Transportation Authority, 2220 Tulare Street, Suite 411, Fresno, CA 93721

David Luchini, Director, Fresno County Department of Public Health, 1221 Fulton Street, Third Floor, PO Box 11867, Fresno, California 93775

Tony Boren, Executive Director, Fresno Council of Governments, 2035 Tulare Street, Suite 201, Fresno, California 93721

Scott Mozier, PE, Director, City of Fresno, Department of Public Works, 2600 Fresno Street, Room 4016, Fresno, California 93721

T.J. Miller, Director, PARCS Administration, 1515 East Divisadero, Fresno, California 93721

Joe Vargas, Director, City of Fresno, Department of Transportation, 2223 G Street, Fresno, California 93706

Larry Westerlund, Director, City of Fresno, Economic Development, 2601 Fresno Street, Room 2075, Fresno, California 93721

Jennifer Clark, Director, City of Fresno, Department of Development and Planning, 2600 Fresno Street, Room 3065, Fresno, California 93721

Michael Carbajal, Director, City of Fresno, Department of Public Utilities, 2600 Fresno Street, Fresno, California 93721

Brandi L. Orth, Fresno County Clerk and Registrar of Voters, 2221 Kern Street, Fresno, California 93721

Mark Johnson, Unit Fire Chief, Fresno County Fire, 210 South Academy, Sanger, California 93657

Paco Balderrama, City of Fresno, Police Department, 2323 Mariposa Street, Room 2075, Fresno, California 93721

Kerri Donis, Fire Chief, City of Fresno, Fire Department, 911 H Street, Fresno, California 93721

Margaret Mims, Sherriff, Fresno County Sherriff, 220 Fresno Street, Fresno, California 93721

Samir Sheikh, Executive Director/San Joaquin Valley Air Pollution Control District, 1990 East Gettysburg Avenue, Fresno, California 93726

Alan Hofmann, Fresno Metropolitan Flood Control District, General Manager, 5469 East Olive Avenue, Fresno, California 93727

Bill Stretch, PE, General Manager, Fresno Irrigation District, 2907 South Maple Avenue, Fresno, California 93725

Kyle Kirkland, Chairman, Fresno Chaffee Zoo, 894 West Belmont Avenue, Fresno, California 93728

John Forrest-Dohlin, Director of Chaffee Zoo, 894 West Belmont Avenue, Fresno, California 93728

Brenda Critzer, Director of Events and Marketing Fresno Storyland, 890 West Belmont Avenue, Fresno, California 93728

School Officials

Ketti Davis, Superintendent, Central Unified School District, 4605 North Polk Avenue, Fresno, California 93722

Bob Nelson, Superintendent, Fresno Unified School District, 2309 Tulare Street, Fresno, California 93721

Beth Doyle, Principal, Addams Elementary School, 2117 West McKinley Fresno, California 93728

Jill Young, Principal, Pershing Continuation High School, 855 West Nielsen Avenue, Fresno, California 93706

Mike Rivard, Principal, Columbia Elementary School, 1025 South Trinity, Fresno California 93706

Courtney Curtis, Principal, Gaston Middle School, 1100 East Church Avenue, Fresno, California 93706

State Officials

Patrick Pulupa, Executive Officer, Central Valley Regional Water Quality Control Board, 11020 Sun Center Drive, Suite 200, Rancho Cordova, California 95670

Encanta Engleby, Senior Environmental Planner, California Transportation Commission, 1120 North Street, Sacramento, California 95814

Nesamani Kalandiyur, California Air Resources Board – Transportation Projects, 1001 I Street, PTSDAQTPB, Sacramento, California 95814

Scott Morgan, Director, State Clearinghouse, 1400 Tenth Street, Sacramento, California 95814

Julie Vance, Regional Manager, California Department of Fish and Wildlife, 1234 East Shaw Avenue, Fresno, California 93710

CEQA Coordinator – Housing Policy Division, Housing and Community Development, 1800 Third Street, Room 430, Sacramento, California 95814

Mathew Cerventes, CEQA Coordinator, California Utilities Commission, RailRoad Engineering Branch, 320 West 4th Street, Suite 500, Los Angeles, California 90013

Amanda Ray, Assistant Commissioner, Staff, California Highway Patrol, 601 North 7th Street, Sacramento, California 95811

Lenny Mendonca, Chairperson, California High-Speed Rail Authority, 770 L Street, Sacramento, California 95814

Adam Sriro, Chairperson, California Office of State Historic Preservation,
1725 23rd Street, Suite 100, Sacramento, California 95816

Local Organizations:

Desiree Torosian, Unit Director, Boys and Girls Club of Fresno County - Fink
White Club, 535 South Trinity Street, Fresno, California 93706

Boys and Girls Club of Fresno County, 540 North Augusta Street, Fresno,
California 93701

Sandra Celedon, President/CEO, Fresno Building Healthy Communities, P.O.
Box 7694, Fresno, California 93747

Artie Padilla, Executive Director, Every Neighborhood Partnership, 2044 E
Nees Avenue, Fresno, California 93720

Ashley Werner, Attorney, Leadership Counsel for Justice and Accountability,
764 P Street, Suite 12, Fresno, California 93721

Belinda Fonseca, Center Operations Director, Concentra Urgent Care, 2555
South East Avenue, Fresno, California 93706

Federal Officials

David Ray, District Commander, U.S. Army Corps of Engineers, Sacramento
District, 1325 J Street, Room 1513, Sacramento, California 95814

Vacant, Director, Planning and Environment, 650 Capitol Mall, Suite 4-100,
Sacramento California 95814

Leo Mirando-Castro, Regional Administrator, U.S. Environmental Protection
Agency-Region 9, 75 Hawthorne Street, San Francisco, California 91405

Paul Souza, Regional Director, Pacific Southwest Region, U.S. Fish and
Wildlife Service, 2800 Cottage Way, Sacramento, California 9825

Debbie Treadway, Native American Heritage Commission, 1556 Harbor
Boulevard, West Sacramento, California 95691

Appendix A Section 4(f)

This section of the document discusses de minimis impact determinations under Section 4(f). Section 6009(a) of the Safe Accountable Flexible Efficient Transportation Equity Act-Legacy for Users amended Section 4(f) legislation at 23 U.S. Code 138 and 49 U.S. Code 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This amendment provides that once the U.S. Department of Transportation determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete. The Federal Highway Administration's final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations Sections 774.3 and 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 U.S. Code 326 and 327, including de minimis impact determinations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

A 'use' of a Section 4(f) property...

23 CFR 774.17 defines "use" in three ways:

1. When land from a Section 4(f) resource is permanently incorporated into a transportation facility or project (actual use);
2. When there is a temporary occupancy of Section 4(f) resource that does not meet the five criteria of temporary use; and,
3. When there is constructive use of the Section 4(f) resource.

There are two Section 4(f) resources present in the project area that would require the use of the resource, Fink-White Park and Roeding Park.

Roeding Park: Preliminary De Minimis Determination

Description of Resource

Roeding Park, located in the Jane Addams neighborhood, is one of Fresno's three regional city parks. It is home to the Chaffee Zoological Gardens and the Storyland and Playland amusement parks. Roeding Park is both a recreational resource and an eligible historic resource as a historic district. This preliminary de minimis is for its recreational aspects. Please see "Resources Evaluated Relative to Section 4(f)" for a discussion of the historic aspects.

Within the Community Plan Area, the quantity of parks and open space is generally limited. Roeding Park, located in the Jane Addams neighborhood, is one of Fresno's three regional city parks. It is home to the Chaffee Zoological Gardens and the Storyland and Playland amusement parks. Roeding Park is a 159-acre regional park on Belmont Avenue next to State Route 99 and attracts 600,000 visitors annually. This park includes a lake, several ponds, and groves of ash, cedar, pine, eucalyptus, maple, and redwood trees. There are numerous children's playgrounds, 96 picnic tables, and five picnic shelters scattered throughout the park.

The project's noise study analyzed impacts on an existing soundwall adjacent to Roeding Park (northbound direction between Belmont and Olive Avenue). This wall was built in 1988 and seems to be in fair condition, even though the wall on the freeway side has been vandalized by graffiti and repainted several times. Small spalls in masonry blocks were also noted.

A visual inspection of the Roeding Park soundwall was conducted on July 19, 2020. The existing horizontal clearance of the wall to the proposed edge of the traveled way will be decreased, and a north portion of the wall will not satisfy the requirement for minimum clear recovery zone width of 30 feet. This portion of the wall would need to be protected by a concrete barrier or reconstructed with a safety-shape barrier type per Caltrans' current standards. A section of the wall approaching the northbound off-ramp to Olive Avenue would also yield to a nonstandard shoulder width (approximately 7 feet to 9 feet). To achieve a standard shoulder width, a portion of the Roeding Park right-of-way at approximately 650 square feet would need to be acquired.

A traffic noise study was conducted for this project by the Central Region Environmental Engineering Branch to determine the future traffic noise impacts. The proposed improvements under the project Build Alternatives include an analysis of the Roeding Park soundwall.

Proposed Use

Caltrans proposes to replace the existing 1,600-foot-long soundwall along State Route 99 and Roeding Park. About 1,200 feet would be constructed in the same location as the original soundwall, and about 400 feet of the soundwall would be relocated about 3 feet east of its original location. This option also proposes to extend the southern edge of the soundwall 300 feet. The new soundwall would be constructed on a 3-foot safety barrier. This would provide enough space for a standard 10-foot outside shoulder, but it would require obtaining about 650 square feet of right-of-way from Roeding Park.

This design option would need a 2-foot-wide and 1,900-foot-long temporary construction easement in Roeding Park.

It has been preliminarily determined that the proposed use of the park associated with the reconstructed soundwall is de minimis because the permanent incorporation needed for the soundwall and the area needed for its construction are not within areas of the park that are actively used for recreation. The areas of use are along the perimeter of the park and directly within or adjacent to the footprint of the existing soundwall.

Caltrans will provide art on the Roeding Park soundwall that shows the local scene and instills pride in the Fresno community. This process is being coordinated with the District 6 Landscape Architect team. While these aesthetic treatments are part of the project, the preliminary de minimis determination is not based on those measures.

Coordination

Fresno County is the official with jurisdiction over the recreational aspects of the park. Coordination with Fresno County is ongoing and Caltrans, as assigned by the Federal Highway Administration, will seek the County's formal concurrence in the de minimis determination as part of the final environmental document.

Resources Evaluated Relative to the Requirement of Section 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project would not permanently use the property and would not hinder the preservation of the property.

Recreational Resources

As discussed in Chapter 2 of the Environmental Assessment, Fink-White Park and Basin XX are adjacent to the proposed project. While they are publicly owned and open to the public, the project will not permanently incorporate any land from those properties. As discussed in Section 2.1.3, there would be construction impacts at these properties due to air quality and noise; however, these impacts would be temporary and, therefore, would not rise to the level of substantial impairment and therefore would not result in constructive use.

There are Boys and Girls Clubs adjacent to the project, but they are not publicly owned and therefore are not protected by Section 4(f).

Historic Architectural Resources

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 within the project vicinity. However, this project will not "use" those properties, as defined by Section 4(f). The project would not permanently incorporate any land from Houghton Canal or the Southern

Pacific/Central Pacific Railroad. There are no proximity impacts to those properties that would rise to the level of substantial impairment as evidenced by the State Historic Preservation Officer's concurrence in a Finding of No Adverse Effect.

There is no use of the Roeding Park Historic District because the existing soundwall and the area for the construction easement are not contributing elements to the district and therefore do not trigger Section 4(f) protection.

In 2009, Roeding Park was found eligible for listing in the National Register of Historic Places as a historic district in the Roeding Park and Fresno Chaffee Zoo Facility Master Plans Draft Environmental Impact Report (Page and Turnbull). Three years later, the Historic Architectural Survey Report Final: Merced to Fresno Section High-Speed Train Project EIR/EIS (AECOM 2012) also evaluated the eligibility of Roeding Park. This study agreed with the eligibility and extended the period of significance to include Storyland and Playland. This document received concurrence from the State Historic Preservation Officer on March 13, 2012 (FRA100524A). The Roeding Park Historic District contains 29 contributing resources, including Playland, constructed in 1955, and Storyland in 1962. The property is eligible under criteria A and C, and the period of significance is 1903 to 1962. The Roeding Park Historic American Landscapes Survey documentation completed in 2010 by PGAdesign Landscape Architects did not include Playland and Storyland because the 2009 eligibility finding did not include those areas as contributing resources.

Based on the review of the previous studies, the soundwall is not a contributing feature of the Roeding Park Historic District. Replacing the soundwall will not affect the eligibility of Storyland and Playland, two contributing resources to the Roeding Park Historic District. Removing the soundwall will only impact architectural or engineering resources that are exempt from evaluation.

Lastly, no archaeological resources within the project area are eligible for the National Register of Historic Places, and that warranted preservation in place.

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Govin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



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September 2021

NON-DISCRIMINATION POLICY STATEMENT

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

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

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

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

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A handwritten signature in blue ink, appearing to read 'Toks Omishakin'.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

Declaration of Policy

“The purpose of this title is to establish a uniform policy for fair and equitable treatment of persons displaced as a result of federal and federally assisted programs in order that such persons shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and financial benefits, as discussed below.

Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require the Department to provide a person with a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully used and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid

loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchasing or renting a replacement property without first contacting a Caltrans relocation advisor.

Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Department will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. The Department will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe, and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, or national origin and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state-assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe, and sanitary” replacement dwelling, available on the market, is offered to them by the Department.

Residential Relocation Financial Benefits

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as described below.

Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Appendix D Avoidance, Minimization and/or Mitigation Summary

To ensure that all environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record that follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained before implementing the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Because the following Environmental Commitments Record is a draft, some fields have not been completed; they will be filled out as each of the measures is implemented.

Parks and Recreational Facilities

Caltrans would provide Roeding Park a reasonable allowance after discussing replacement aesthetic features: The Caltrans Division of Engineering Services has proposed future wall proposal concepts:

- Incorporate approximately six rectangular columns decorated with zoo-related depictions, including decorative patterns on the wall and vines.
- Incorporate free-standing background murals with Roeding Park to replace existing backgrounds.
- Continue to work with Roeding Park on soundwall aesthetics for exterior and interior walls.
- Propose improvements to textured walls and pilasters to enhance the view from inside of the park.
- Extending the soundwall to Belmont is an improvement in terms of noise abatement.
- Consider form liner designs on parkside pilasters, also where visible.

Community Character and Cohesion

To avoid, minimize, or mitigate long-term impacts related to community character or cohesion, approved measures identified for related resource topics would be incorporated into the Build Alternatives.

Identified measures that would also serve to minimize short-term construction community character and cohesion effects include:

COM-1: Notifying the contractor who will work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.

COM-2: Good public relations will be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities will be provided. A construction noise monitoring program to track sound levels and limit the impacts will be implemented. The following measures are recommended to minimize any adverse economic effects on local businesses in the study area:

COM-3: Minimizing congestion through speed limit reduction, ground-mounted detour signs, traffic radio announcements, media alerts, night work, brochures, public meetings, a planned lane closure website, and Construction Zone Enhanced Enforcement Program.

COM-4: Use the posting of advisory speeds on warning signs to advise the public what speed is considered appropriate at specific locations, such as points of curvature or traffic diversion. The selected speed should be what a driver exercising due care would drive in normal conditions of light and weather.

COM-5: Keep pedestrian facilities clear of obstructions. Traffic control devices, equipment, and other construction materials and features should not protrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facilities.

COM-6: To alleviate temporary project impacts, the following temporary pedestrian bridges will be added at Olive Avenue, Belmont Avenue, and El Dorado Street. These temporary bridges will benefit those who rely on pedestrian access during construction.

Environmental Justice

EJ-1: Provide shoulders to accommodate bike lanes on El Dorado Street.

EJ-2: Provide safer pedestrian crossings at Belmont Avenue and McKinley Avenue by removing six ramp crossings, enhanced pedestrian pathways, and shoulders to accommodate bicycle lanes.

EJ-3: Safer pathways would be provided to Jane Addams Elementary School due to reduced traffic from the ramp removals and improved pathways from east of State Route 99.

EJ-4: Olive Interchange Roundabout pedestrian/bicycle crossings would provide a safer passage.

EJ-5: Improve or add pedestrian facilities such as crosswalks, sidewalks, and traffic calming devices (the roundabouts will calm and slow traffic down).

EJ-6: Improve or add bicycle lanes that were not present.

EJ-7: Signalize and unsignalize intersections (creating a safer pathway to cross the street).

EJ-8: Add Complete Streets elements, such as benches at bus stops, lighting where there isn't any present, and/or bus shelters (keeping bus patrons out of direct sunlight or rain).

EJ-9: To alleviate temporary project impacts, the following temporary pedestrian bridges will be added at Olive Avenue, Belmont Avenue, and El Dorado Street. These temporary bridges will benefit those who rely on pedestrian access during construction. Please refer to Chapter 2, Section 2.1.4, *Community Character and Cohesion, Avoidance and Minimization Measures*, for more details on these temporary pedestrian bridges.

EJ-10: Minimize excessive fossil fuel emissions that contribute to climate change, as a result of the large trucks and vehicles not needing to idle as frequently on the improved pathway.

EJ-11: Removing the Kerman Branch Underpass railroad crossing at Teilman/Pacific Avenue will provide safer conditions for pedestrians.

EJ-12: Improved infrastructure, highway landscaping, and soundwall aesthetics along the roadway will enhance the visual appeal for commuters and outside visitors.

EJ-13: All pull boxes and electric service enclosures will be secured to reduce the occurrence of wire theft.

EJ-14: The local communities could also experience temporary benefits from the construction project, such as the generation of regional construction industry jobs and the revenue that will likely be generated directly from the construction workers in the local community. This local revenue and job generation could benefit the local minority and low-income populations.

Utilities and Emergency Services

UT-1: A Traffic Management Plan has been prepared to minimize congestion due to construction activities. Elements of the plan may include but are not limited to speed limit reduction, ground-mounted detour signs, traffic radio announcements, media alerts, night work, brochures, public meetings, a planned lane closure website, and Construction Zone Enhanced Enforcement Program.

Traffic and Transportation/Pedestrian and Bicycle Facilities

TRA-1: The project would convert Parkway Drive to a truck route between Belmont and Olive Avenues and re-routing Parkway Drive for a more direct connection to Belmont Avenue.

TRA-2: Per the District Office of Traffic Operations, three lanes of traffic in each direction on the State Route 99 mainline will be maintained except as permitted by the lane closure requirement chart. A decision to use a single phase or multiple phases on bridge constructions is yet to be determined by the project team.

Elements of this plan may include the following:

- Public Awareness Campaign
- Highway Advisory Radio
- Portable changeable message signs
- Temporary loop sensor/signals
- Bus or Shuttle Service
- Construction Zone Enhanced Enforcement Program

For this project, the Traffic Management Plan estimates that the number of working days requiring lane, shoulder, ramp, freeway, and highway closures is 900 working days, and a total of 1,280 working days to construct the project. Brochures, mailers, traffic radio announcements, ground-mounted detour signs, and media alerts will be provided to the public

TRA-3: Local traffic and non-motorists' access east and west of State Route 99 is also being planned. The installation of safety barrier systems and construction area signs will help to direct traffic and provide protection to the traveling public and construction personnel.

TRA-4: Other roadway features such as but not limited to roadside signs, overhead signs, electrical systems, Intelligent Traffic System elements, drainage systems, pumping plant storage boxes, soundwalls, and irrigation systems will be constructed in sequential stages. Implementation of Early Work Scope to shorten the project construction window may affect the sequencing of the proposed construction staging.

TRA-5: A Traffic Management Plan would be developed and implemented before and during project construction to notify the public and minimize any potential temporary impacts to traffic circulation on the mainline and/or local streets and railroads in and near the project area.

TRA-6: The construction engineer is responsible for confirming that traffic moves through the work zone according to traffic control plans. If a change

order modifies the plans, construction engineers should take the steps necessary to verify that the modified plans are adequate to provide the highest level of traffic safety and service consistent with the conditions actually encountered. All traffic control devices should conform to Section 12, “Temporary Traffic Control,” of the Standard Specifications. For their application, review the current California Manual on Uniform Traffic Control Devices.

Visual/Aesthetics

VIS-1: Minimize tree removal. Remove only those trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses such as construction staging areas or temporary stormwater conveyance systems.

VIS-2: Avoid mass grading. Where feasible, avoid mass grading the project site. Avoid removal and grading areas where existing vegetation provides screening of adjacent properties.

Cultural Resources

CR-1: A principal architectural historian would review construction plans as developed and monitor construction activities associated with the two properties.

CR-2: The State Historic Preservation Officer would be notified immediately if any significant changes are made to the construction plans or during construction activities that have the potential to adversely impact the properties or any of its contributors.

Water Quality and Storm Runoff

WQ-1: Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (per the Construction General Permit Order 2009-0009-DWQ) that includes erosion-control measures and construction waste containment measures so that waters of the State are protected during and after project construction.

The Stormwater Pollution Prevention Plan would identify the sources of pollutants that may affect the quality of stormwater, as well as include construction site Best Management Practices to control erosion and sedimentation, and spills of chemical pollutants; provide for construction materials management, and include a schedule of routine inspections and monitoring. All construction site Best Management Practices would follow the latest edition of the Stormwater Quality Handbooks: Construction Site Best Management Practices Manual (Caltrans 2003a) to control and minimize the impacts of construction-related activities, materials, and pollutants on the watershed.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the 2003 Caltrans Stormwater Management Plan (Caltrans 2003b) to meet water quality objectives. This plan has been revised to comply with the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ).

WQ-3: If the project disturbs one acre or more of soil, the following requirements would be required:

- A Notification of Intent is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days before the start of construction.
- A Stormwater Pollution Prevention Plan is to be prepared and implemented during construction to the satisfaction of the resident engineer.
- A Notice of Termination will be submitted to the Regional Board upon completion of construction and site stabilization. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

WQ-4: If the project disturbs less than one acre of soil, a Water Pollution Control Program is required to be prepared by the contractor per the Caltrans 2018 Standard Specification Section 13-1—Water Pollution.

Paleontology

PALEO-1: Continuous Monitoring: Excavation of project areas from 3 feet below original grade to total depth and from 2 feet below cut grade to total depth: comprised of continuous field inspections of cuts, spoils piles, and graded surface, and screening of exposed sediment for fossilized macroscopic and microscopic material.

PALEO-2: If paleontological resources are discovered during earthmoving activities, the construction crew would immediately cease work within a 25-foot radius of the find and immediately notify the resident engineer.

PALEO-3: The monitor shall take bulk samples for offsite processing at a later time to recover any fossils to determine the presence of microfossils.

PALEO-4: Macro fossils (large enough to view with the unaided eye) could include tusks and other vertebrate remains. Some of these resources may be fragile and require hardening before moving, and may require encasing within a plaster jacket for later preparation and conservation in a laboratory.

PALEO-5: Recovered specimens would be prepared for identification (not exhibition) by competent qualified specialists to a point of maximum

specificity. Ideally, identification is of individual specimens to element, genus, and species and stabilized for repository requirements.

PALEO-6: When construction is completed, a Paleontological Mitigation Report shall be prepared following completion of project earthmoving activities. The Paleontological Mitigation Report shall include a summary of the field and laboratory methods, site geology and stratigraphy, faunal list, and a brief statement of the significance and relationship of the site to similar fossil localities.

PALEO-6: The Consultant shall maintain a complete and organized project file with records of all activities related to the project, including but not limited to, meeting minutes, records of conversations, all decisions, field notes, photographs, etc. This administrative record shall be submitted to the Caltrans Task Order Manager and become the property of the Department.

PALEO-7: Spot Checking: Excavating project areas from 1 foot below original grade to 3 feet below original grade and from the surface of cut grade to 2 feet below cut grade comprised of less than 8-hour shifts and non-continuous field inspections of cuts, spoils piles, and graded surface, and screening of exposed sediment for fossilized macroscopic and microscopic material.

Hazards and Hazardous Materials

HW-1: Per Caltrans requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (California Code of Regulations Title 8, Section 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-impacted soil. The Lead Compliance Plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

HW-2: If obvious impacted soil conditions are encountered during construction excavations, these materials should be isolated, stockpiled, and characterized to determine appropriate soil disposal options.

HW-3: Soil from the surface to 3 feet would be considered non-regulated/non-hazardous and could be reused onsite, relinquished to the contractor, or disposed of as non-regulated soil.

HW-4: Tanks, associated piping, and dispensers should be properly removed in accordance with Fresno County Environmental Health requirements.

Applicable project Non-Standard Specifications and Standard Specifications will be edited and provided during the Plans, Specifications, and Estimates phase to be included in the construction package.

Air Quality

Short-Term (Construction Impacts)

Avoidance and minimization measures for short-term construction-related emissions include:

AQ-1: Application of the most stringent available regulations or best practices, even if not required by local/state regulations at the site.

AQ-2: Possible designation of areas where construction equipment servicing and storage are not allowed (near sensitive receptors).

AQ-3: Construction staging (such as constructing a soundwall first).

AQ-4: Temporary programs to reduce detour- and construction-related traffic congestion, such as special transit programs and subsidies.

AQ-5: A construction equipment emission reduction program to encourage or require the contractor to use cleaner (newer) diesel engines or retrofit older engines.

Long-Term (Operational Impacts)

Avoidance and minimization measures for long-term operation air quality impacts include the following:

AQ-6: Add operational measures to further reduce congestion and increase average speed (but not to more than about 50 miles per average, on average).

AQ-7: Use a wide paved shoulder and stabilization/landscaping of unpaved areas to minimize re-entrained dust.

AQ-8: Consider landscaping with dense, evergreen trees such as redwoods where appropriate from a climate and water use standpoint.

AQ-9: In extreme cases, consider retrofitting sensitive receptors with sealed windows and forced-air, filtered ventilation (but consider long-term liability, energy, and maintenance issues—this is probably a realistic option only for critical sites like schools or hospitals that are immediately next to the road, cannot practically be moved, and do not have large open “play” areas also near the road).

Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control,” require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes

that apply to work performed under the contract, including those provided in Government Code Section 11017. The amount of respirable particulate matter and nitrogen oxide emissions are likely to exceed the San Joaquin Valley Air Pollution Control District's Rule 9510/Indirect Source Review Rule. The construction contractor selected for this project will be required to comply with this rule and submit an Air Impact Analysis to San Joaquin Valley Air Pollution Control District and pay any fees if required.

Measures to reduce fugitive dust include the following:

AQ-10: Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion either at the point of emissions or at the right-of-way line depending on local regulations.

AQ-11: Soil binder will be spread on unpaved roads used for construction purposes and on all project construction parking areas.

AQ-12: Trucks will be washed as they leave the right-of-way as necessary to control fugitive dust emissions.

AQ-13: Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.

AQ-14: A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.

AQ-15: Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.

AQ-16: Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited to the extent feasible.

- **AQ-17:** Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
- **AQ-18:** All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize the emission of dust during transportation.
- **AQ-19:** Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce particulate matter emissions.

- **AQ-20:** To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- **AQ-21:** Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate matter in the area. Certain methods of mulch placement, such as straw blowing, may, themselves, cause dust and visible emission issues and may require controls such as dampened straw.

A construction impact analysis will be performed later as the project moves closer to construction. Monitoring and abatement requirements of Caltrans' Standard Specifications and Standard Special Provisions will be adhered to.

Noise

Standard Minimization Measures

The following are procedures that would be used to minimize the potential impacts of construction vibration:

NOISE-1: Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).

NOISE-2: The owner of a building close enough to a construction vibration source that could possibly result in damage to their structure due to vibration would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.

NOISE-3: Conduct vibration monitoring during vibration-intensive activities.

NOISE-4: A combination of the techniques for equipment vibration control and administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Temporary increases in vibration would still likely occur at some locations. Based on the analysis above, the generation of excessive groundborne vibration or groundborne noise levels would be less than significant.

NOISE-5: In case of construction noise complaints by the public, the resident engineer will coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

Energy

The following is a list of some items the proposed project considers reducing the energy consumption during and after construction:

EG-1: Water efficient project features or construction methodologies

EG-2: Energy efficient project features or construction methodologies

EG-3: Fuel efficient measures both for construction equipment and traffic management during delays or detours

EG-4: Considerations on reduction, reusing, and recycling of construction material wastes

EG-5: Minimizing material source hauling distance from the site

EG-6: Reducing the amount of fuel used by reducing driving

EG-7: Providing construction personnel training to provide knowledge in identifying environmental issues and construction best practice methods to minimize impacts to humans and the environment

EG-8: Considerations on the use of construction methodologies to reduce construction windows such as, but not limited to, the accelerated bridge construction method

EG-9: Implementation of Complete Streets Elements

Wetlands and Other Waters

WET-1: There will be early consultation with the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and California Regional Water Quality Boards to avoid or reduce impacts to the jurisdictional water within the action area., where possible. In-lieu fee credits would be purchased from the National Fish and Wildlife Foundation.

- A 1602 Streambed Alteration Agreement permit (California Department of Fish and Wildlife) would be required.
- A 404 permit from the U.S. Army Corps of Engineers would be required.

A 401 Water Quality Certification from the Regional Water Quality Control Board would be required.

Animal Species

Migratory Birds

BIO-1: With the implementation of avoidance and minimization measures, direct and indirect impacts to migratory birds are not expected to occur because of the proposed project. A preconstruction survey for migratory birds within the study area would be conducted 30 days before the start of construction. If migratory birds are found to be nesting within the proposed project footprint, minimization efforts would be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and may

include a no-work buffer zone (100 feet) around an active nest and/or having a qualified biologist monitor an active nest during construction activities within the established buffer.

BIO-2: If an active nest were detected, an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may become suspended temporarily if nesting activity cannot be prevented. Standard specifications will be included in the construction bid package to guide how to avoid impacts to migratory birds and may include nest exclusion on bridge structures.

Swallows

BIO-3: If removing cliff swallows or other bird species' nests is deemed necessary, the removal would occur during the time of year when the nests are not used (about October 1 to January 30). A preconstruction survey for migratory birds within the study area would be conducted 30 days before the start of construction. If migratory birds are found to be nesting within the proposed project footprint, minimization efforts would be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, and may include a no-work buffer zone (100 feet) around an active nest and/or having a qualified biologist monitor an active nest during construction activities within the established buffer.

BIO-4: If an active nest were detected, an Environmentally Sensitive Area around the nest site may be established to prevent nesting disturbance. Work may become suspended temporarily if nesting activity cannot be prevented. Standard specifications would be included in the construction bid package to avoid impacts to migratory birds and may include nest exclusion on bridge structures.

Bats

BIO-5: If it is determined that bat species are using the project bridges, bat exclusionary methods would be implemented. The proposed project may include the temporary exclusion of bats from roosting in the bridge's expansion joints during construction. This would entail either the contractor or a separate bat contractor installing and maintaining exclusionary measures over the expansion joints before the construction window.

Appendix E Notice of Preparation

Notice of Preparation of a Draft Environmental Impact Report for the El Dorado to Clinton Rehabilitation Project

The California Department of Transportation (Caltrans), the Lead Agency, is preparing an environmental document to address impacts associated with the proposed structural, pavement, and facility improvements on State Route 99 in Fresno, California. The document will be prepared as a joint document pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

Caltrans will be preparing an Environmental Impact Report/Environmental Assessment (EIR/EA) for the project, which is known as the El Dorado to Clinton Rehabilitation project. As required by CEQA, Caltrans is distributing this Notice of Preparation and requesting comments from responsible and trustee agencies regarding the significant environmental issues, reasonable alternatives, and reasonable mitigation measures that will be discussed in the EIR/EA. An Initial Study has not been prepared for this project and therefore, not attached to this Notice of Preparation.

Project Location

The project sits along State Route (SR) 99 from post miles 21.2 to 24.4 in Fresno County. The project would rehabilitate about 3.2 miles of SR 99 in the City of Fresno from 0.2 mile south of the El Dorado Street overcrossing to the Clinton Avenue overcrossing. See Figure 1 for a Regional Location Map and Figure 2 for a Local Vicinity Map of the project area.

Project Description

The project would remove the existing six 12-foot-wide lanes within the project limits on SR 99 and replace them with six 12-foot-wide lanes with continuously reinforced concrete pavement (CRCP). Constructing the new lanes with CRCP would reduce the number of ongoing pavement repairs and maintenance costs within the project limits. The project would also construct a 46-foot-wide paved median and 10-foot-wide outside shoulders.

In addition, the project would construct auxiliary lanes on the northbound and southbound sides of State Route 99 from the State Route 99/ State Route 180 junction to Clinton Avenue. Construction of the auxiliary lanes help with project staging, traffic control, and constructability of the project. During construction, three lanes in each direction on State Route 99 within the project limits would be open at all times to motorists. Use of the auxiliary lanes would allow the inner lanes to be constructed on while the outside lanes are open to the public. Without the auxiliary lanes, the project would take significantly longer to construct.

Most of the existing vegetation and soil would be removed up to the existing Caltrans right-of-way line to make room for the median and the auxiliary lanes. The project would construct retaining walls on the existing Caltrans right of way line to prevent the soil erosion onto the highway. Soundwalls may be also built on the existing Caltrans right of way line at various locations, if warranted.

The project would also construct a pumping plant near the Kerman Branch underpass and another at the Olive Avenue overcrossing. Because the existing freeway is below original ground level, the pumping plants would mechanically drain excess water from the freeway.

Lastly, the existing traffic control systems, traffic signals, loop detectors, and other electrical elements within the project limits would be upgraded.

The project involves the following work at or near the existing bridges within the project limits:

- El Dorado Street overcrossing at post mile 21.46: Remove the existing 4-lane bridge and replace it with a 2-lane bridge.
- Nielsen Avenue undercrossing at post mile 22.13: Widen the existing bridge to construct a new auxiliary lane on the northbound and southbound sides of State Route 99.
- Pacific Avenue overcrossing at post mile 22.39: Remove the existing bridge and construct two cul-de-sacs on Teilman Avenue. A cul-de sac would be constructed near the existing Belmont Memorial Park; the other cul-de-sac would be constructed north of where Teilman Avenue and San Joaquin Valley Railroad intersect.
- Kerman Branch underpass at post mile 22.43: Remove and replace the existing structure. The San Joaquin Valley Railroad crosses over State Route 99 through the Kerman Branch underpass. A shoo-fly structure may be constructed south of the existing Kerman Branch underpass. San Joaquin Valley Railroad would use the shoo-fly while the new underpass is being constructed.
- Belmont Avenue overcrossing at post mile 22.74: Remove and replace the existing structure. The on- and off-ramps at the Belmont Avenue interchange would be removed.
- Olive Avenue interchange at post mile 23.30: Remove the existing structure and replace it with a double roundabout interchange or diverging diamond interchange. See the 'Project Alternatives' section below for information on these interchanges.
- McKinley Avenue undercrossing at post mile 23.90: Widen the existing structure to construct a new auxiliary lane on the northbound and southbound sides of State Route 99. The on- and off-ramps at the McKinley Avenue interchange may be removed. See the 'Project Alternatives' section below for a detailed discussion on this.

At each overcrossing and underpass within the project limits, the project would lower the profile of SR 99, raise the profile of the bridges, or a combination of both to achieve the standard minimum vertical clearance of 16 ½ feet over the freeway.

Project Alternatives

Alternative 1a

The existing Olive Avenue interchange would be removed and replaced with a double roundabout interchange. A roundabout would be constructed at the east and west intersections of the Olive Avenue interchange. The existing on- and off-ramps at the interchange would be reconstructed to current design standards. See Figure 3.

The southbound on-ramp and northbound off-ramp at the McKinley Avenue interchange would be removed, which would increase the spacing distance between the remaining interchanges.

Alternative 1b

The existing Olive Avenue interchange would be removed and replaced with a double roundabout interchange. A roundabout would be constructed at the east and west intersections of the Olive Avenue interchange. The existing on- and off-ramps at the interchange would be reconstructed to current design standards. See Figure 3.

At the McKinley Avenue interchange, the southbound on-ramp would remain in its existing location; the northbound off-ramp would be removed and relocated about 530 feet north of its existing location. In the new location, the northbound off-ramp would be constructed in a jug-handle design.

Alternative 2a

The existing Olive Avenue interchange would be removed and replaced with a diverging diamond interchange. The existing on- and off-ramps at the interchange would be reconstructed to current design standards. See Figure 4.

The southbound on-ramp and northbound off-ramp at the McKinley Avenue interchange would be removed, which would increase the spacing distance between the remaining interchanges.

Alternative 2b

The existing Olive Avenue interchange would be removed and replaced with a diverging diamond interchange. The existing on- and off-ramps at the interchange would be reconstructed to current design standards. See Figure 4.

At the McKinley Avenue interchange, the southbound on-ramp would remain in its existing location; the northbound off-ramp would be removed and relocated about 530 feet north of its existing location. In the new location, the northbound off-ramp would be constructed in a jug-handle design.

Parkway Drive Realignment – Common to all the Build Alternatives

Constructing the proposed interchanges at Olive Avenue would require the existing local roads southwest of the interchange to be modified. The project would modify Parkway Drive and Crystal Avenue the same way for each build alternative. The existing access point between Olive Avenue and Parkway Drive would be removed and relocated about 400 feet west. A portion of the existing Parkway Drive, from the existing access point to about 400 feet south of the access point, would be realigned and constructed as a frontage road.

The realigned Parkway Drive would construct two driveways to provide access to the following businesses: Super 8 Inn, Days Inn, and Denny's. A third driveway would be constructed on Parkway Drive to provide access to the Park View Mobile Home Park.

The Parkway Drive realignment would relocate several businesses and homes. The purpose of the realignment is to provide an alternative route for trucks to access the Olive Avenue interchange. The realignment would also provide room to construct the proposed Olive Avenue interchange to current design standards. Depending on the existing traffic volumes, the project

may construct a cul-de-sac just south of the existing access point between Olive Avenue and Crystal Avenue.

Alternative 3 (No-Build Alternative)

Alternative 3 is the no-build alternative. Per the California Environmental Quality Act and the National Environmental Policy Act, projects are required to compare a no-build alternative to the proposed build alternatives. The no-build alternative would not construct any improvements. The existing facility and its features would not change.

Potential Environmental Effects

Based on preliminary surveys and information, Caltrans has identified the following subject areas for analysis in the Environmental Impact Report:

- Aesthetics
- Air Quality
- Geology and Soils
- Greenhouse Gas Emissions
- Hazard Waste and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Cumulative Effects

Public Scoping Process

In addition to distributing this Notice of Preparation, Caltrans will conduct a public scoping meeting for the project. The meeting will be held on October 10, 2019 from 6:00 p.m. to 8:00 p.m. at Verdi Club at 2532 North Marks Avenue in Fresno.

Information on the project will be available at the meeting. The public is encouraged to attend the public scoping meeting and submit comments on the proposed project.

Figures

Figure 1: Regional Location Map

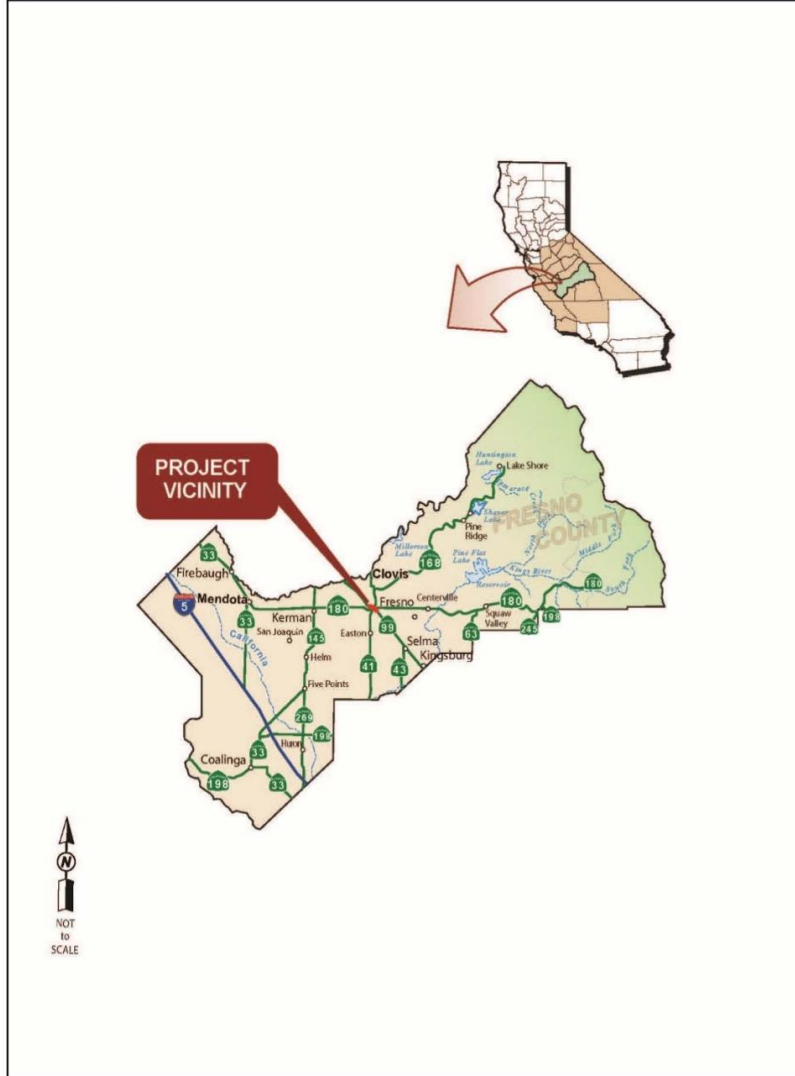


Figure 2: Local Vicinity Map

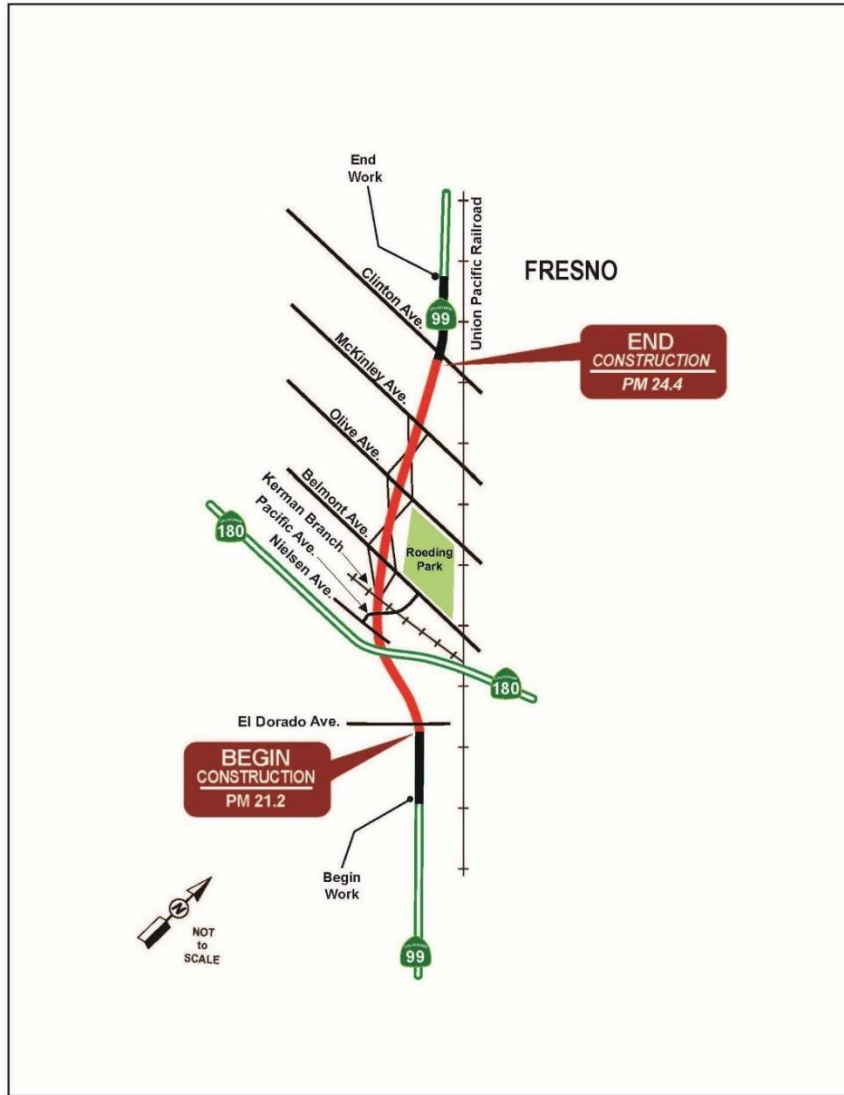


Figure 3: Double Roundabout Interchange

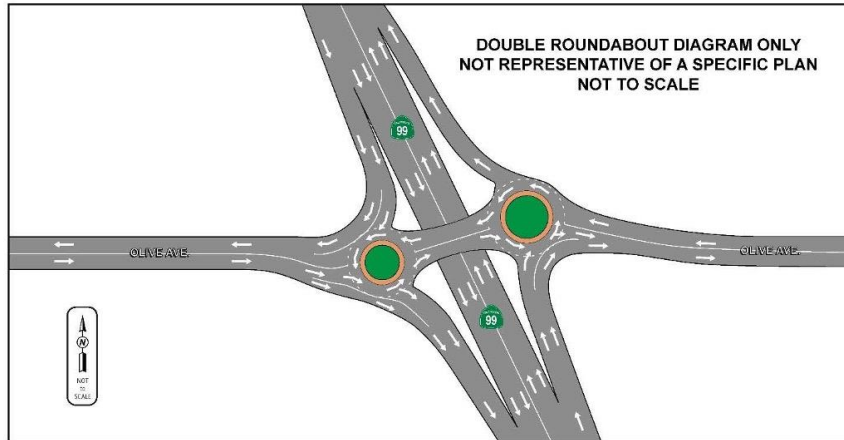
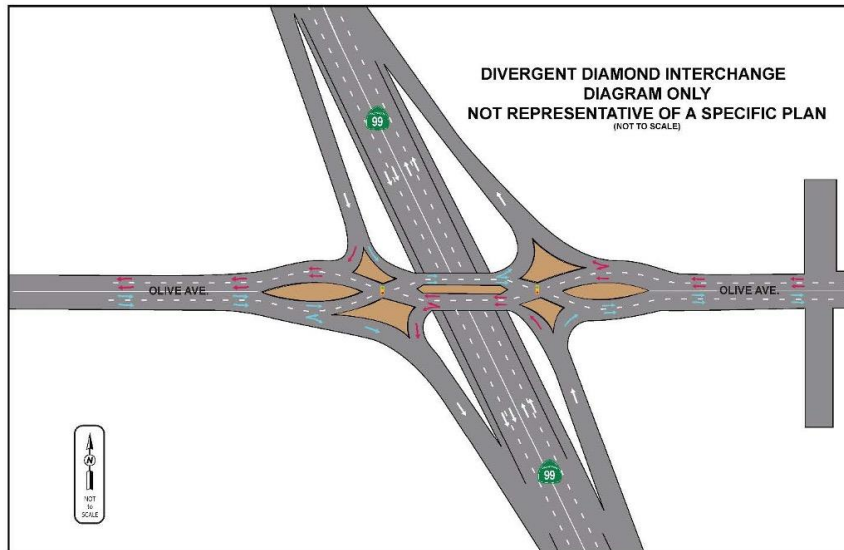


Figure 4: Diverging Diamond Interchange



2019090216

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: El Dorado to Clinton Rehab
Lead Agency: California Department of Transportation **Contact Person:** Richard Puffer
Mailing Address: 855 M Street, Suite 200 **Phone:** 559-445-5286
City: Fresno **Zip:** 93721 **County:** Fresno

Project Location: County: Fresno City/Nearest Community: Fresno
 Cross Streets: State Route 99 (between 0.2 mile south of the El Dorado overcrossing to the Clinton Avenue overcrossing) Zip Code: 93706

Longitude/Latitude (degrees, minutes and seconds): 36 ° 44 ' 9.9 " N / 119 ° 48 ' 17.0 " W Total Acres: _____
 Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____
 Within 2 Miles: State Hwy #: 99 Waterways: 0
 Airports: Fresno Chandler Executive Airport Railways: 2 Schools: 5

Document Type:
 CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document
 Early Cons Supplement/Subsequent EIR EA Final Document
 Neg Dec (Prior SCH No.) _____ Draft EIS Other: _____
 Mit Neg Dec Other: _____ FONSI

Local Action Type:
 General Plan Update Specific Plan Rezone Annexation
 General Plan Amendment Master Plan Prezone Redevelopment
 General Plan Element Planned Unit Development Use Permit Coastal Permit
 Community Plan Site Plan Land Division (Subdivision, etc.) Other: _____

Development Type:
 Residential: Units _____ Acres _____ Transportation: Type Pavement, Structural, and Facility Rehab
 Office: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Power: Type _____ MW
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Waste Treatment: Type _____ MGD
 Educational: _____ Hazardous Waste: Type _____
 Recreational: _____ Other: _____
 Water Facilities: Type _____ MGD _____

Project Issues Discussed in Document:
 Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Soil Erosion/Compaction/Grading Growth Inducement
 Coastal Zone Noise Solid Waste Land Use
 Drainage/Absorption Population/Housing Balance Toxic/Hazardous Cumulative Effects
 Economic/Jobs Public Services/Facilities Traffic/Circulation Other: _____

Present Land Use/Zoning/General Plan Designation:
 Surrounding the project area: Industrial and Commercial; Broader study area: Residential and Industrial

Project Description: (please use a separate page if necessary)
 California Department of Transportation (Caltrans) proposes to rehabilitate about 3.2 miles on State Route (SR) 99 from Post Mile (PM) 21.2 to PM 24.4. The project proposes two alternatives that would either construct a diverging diamond interchange or two roundabouts at the Olive Avenue interchange. Each alternative proposes to retain or remove the on and off ramps at the McKinley Avenue interchange. Both include the following features: remove and construct six 12-foot lanes with continuously reinforced concrete pavement, construct a 46-foot paved median and 10-foot outside shoulders, remove the on and off ramps at the Belmont Avenue interchange, upgrade the vertical clearances under each bridge to standard, replace all the overcrossings and underpasses within the project limits except one overcrossing, remove the Pacific Avenue overcrossing, re-align Parkway Drive as frontage road, widen the bridge deck at two bridges, add auxiliary lanes, construct retaining and soundwalls at various locations, and upgrade the existing electrical elements.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in. Revised 2010

Appendix E • Notice of Preparation

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X". If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|--|
| <input checked="" type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input checked="" type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> Caltrans District # 6 | <input checked="" type="checkbox"/> Public Utilities Commission |
| <input type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB # 5 |
| <input type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region # 4 | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input checked="" type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | |
| <input type="checkbox"/> Health Services, Department of | Other: _____ |
| <input checked="" type="checkbox"/> Housing & Community Development | Other: _____ |
| <input checked="" type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)
 Starting Date 9/10/2019 Ending Date 10/11/2019

Lead Agency (Complete if applicable):

Consulting Firm: _____	Applicant: _____
Address: _____	Address: _____
City/State/Zip: _____	City/State/Zip: _____
Contact: _____	Phone: _____
Phone: _____	

Signature of Lead Agency Representative: Richard Patton **Date:** 9/9/19

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Revised 2010

Appendix F State Historic Preservation Officer Letters



State of California • Natural Resources Agency

Gavin Newsom, Governor

**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

January 29, 2021

VIA EMAIL

In reply refer to: FHWA_2020_1211_002

Ms. Aubrie Morlet
Southern San Joaquin Valley Cultural Resources Branch
Caltrans District 6
855 M Street, Suite 200
Fresno, CA 93721-2716

Subject: Determinations of Eligibility for the Proposed State Route 99 El Dorado to Clinton Rehab Project, City of Fresno, Fresno County, California

Dear Ms. Morlet:

Caltrans is initiating consultation regarding the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*. As part of your documentation, Caltrans submitted a Historic Property Survey Report (HPSR), Historic Resources Evaluation Report and Archaeological Survey Report for the proposed project.

The California Department of Transportation, in cooperation with the City of Fresno, proposes to rehabilitate approximately 3.2 miles of roadway on State Route (SR) 99 within the city limits of Fresno, California between post miles (PM) 21.2 and 24.4. The project extends just south of the El Dorado Street Overcrossing to the Clinton Avenue Overcrossing. The project proposes two build alternatives and one no-build alternative. The two built alternatives propose to rehabilitate SR 99, which includes Alternative (1) Diverging Diamond interchange and Alternative (2) Double Roundabout interchange. A full description and depiction of the Area of Potential Effects (APE) can be found on pages one through two and Figure 3 of the HPSR.

Pursuant to Stipulation VIII.C.4. of the PA Caltrans is assuming that two linear features, the Southern Pacific Spur Line and the Houghton Canal are eligible for the National Register of Historic Places (NRHP) for the purposes of this undertaking only.

Ms. Morlet
January 29, 2021
Page 2 of 2

FHWA_2020_1211_002

Pursuant to Stipulation VIII.C.6 of the PA, Caltrans determined that the following properties are not eligible for the NRHP:

- 1915 W Olive
- 1907 W Olive
- 1839 W Olive
- 1805 W Olive
- 1117 N Crystal
- 1047 N Crystal
- 1037 N Crystal
- 1027 N Crystal
- 1007/1009 N Crystal
- 993/995/997 N Crystal
- 985 N Crystal
- 1046 N Crystal
- 1102 N Crystal
- 1114 N Crystal
- 1120 N Crystal
- 1128 N Crystal
- 1136 N Crystal
- 1733/1735/1737 W Olive
- 1719 W Olive
- 1703 W Olive
- 1415 W Olive
- 1333 W Olive
- 1125/1127 N West
- 1049 N West

Based on review of the submitted documentation, I concur with the above determinations.

If you have any questions, please contact Natalie Lindquist at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



State of California • Natural Resources Agency

Gavin Newsom, Governor

**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

May 18, 2022

VIA EMAIL

In reply refer to: FHWA_2020_1211_002

David Price, Section 106 Coordinator
Cultural Studies Office
Division of Environmental Analysis
1120 N Street, PO Box 942873, MS-27
Sacramento, CA 94273-0001

Subject: Finding of Effect for the Proposed State Route 99 El Dorado to Clinton Rehabilitation Project, Fresno County, California

Dear Mr. Price:

Caltrans is continuing consultation regarding the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (106 PA). As part of your documentation, Caltrans submitted a Finding of Effect (FOE) for the proposed project.

Caltrans proposes to rehabilitate approximately 3.2 miles of roadway on SR 99 within the city limits of Fresno, California between post miles 21.2 and 24.4. The project extends from just south of the El Dorado Street Overcrossing, north to the Clinton Avenue Overcrossing. The project proposes two build alternatives and one no-build alternative. The two build alternatives propose to rehabilitate SR 99, which includes options (a) and (b) within each build alternative. For a complete description of the proposed project, please refer to pages 1-3 of the attached Findings of Effects document.

Caltrans identified two historic properties in the Area of Potential Effects: the Kerman Branch Spur Line of the Southern Pacific Railroad and the Houghton Canal. Caltrans has assumed both to be eligible for the purposes of the current undertaking, pursuant to Stipulation VIII.C.4 of the Section 106 PA.

Caltrans has applied the Criteria of Adverse Effect as defined in 36 CFR 800.5(a)(1) and has determined that the Undertaking will not adversely affect

Mr. Price
May 18, 2022
Page 2 of 2

FHWA_2020_1211_002

historic properties. While the project will minimally affect both resources, they will be minor effects to the two linear features.

Based on my review of the submitted documentation, I have no objections to Caltrans' finding of no adverse effect for this undertaking.

If you have any questions, please contact Natalie Lindquist at natalie.lindquist@parks.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julianne Polanco', with a long horizontal line extending to the right.

Julianne Polanco
State Historic Preservation Officer

Appendix G Regional Transportation Plan and Transportation Improvement Program Listings

FRESNO COUNCIL OF GOVERNMENTS
 FORMAL FTIP AMENDMENT NO. 6 TO THE 2021 FTIP
 CHANGE REPORT AS OF 8/6/2021 in (\$1000)

LEAD AGENCY	PROJECT ID	PROJECT TITLE	PROJECT DESCRIPTION	PCT	COST	COST BEFORE		COST	NARRATIVE	AMENDMENT NOTES
				CHANGE	DIFFERENCE		REVISED			
Caltrans	FRE210001	HWY 99 Roadway Rehabilitation: El Dorado to Clinton	On Highway 99 in the City of Fresno, from south of El Dorado St to Clinton Ave. Rehabilitate roadway, repair / replace culverts, construct pumping plants, remove / replace bridges, remove Belmont and McKinley ramps, and add roundabouts at Olive Interchange. This is a Construction Manager/General Contractor (CMGC) project. (G13 Contingency)	0%	\$0	\$367,300	\$367,300	\$367,300	Change Reason: Revise Project Description Change Project Description: Add "remove Belmont and McKinley ramps" and "add roundabouts at Olive Interchange" for project clarification Total project cost remains the same at \$367,300	Revise project description
Caltrans	FRE130072	Grouped Projects for Emergency Repair - SHOPP Emergency Response Program	Projects are consistent with 40 CFR Part 95.126 Exempt Tables 2 categories - Repair damage caused by natural disasters, civil unrest, or terrorist acts. This applies to damages that do not qualify for Federal Emergency Relief funds or to damages that qualify for federal Emergency Relief funds but extend beyond the Federally declared disaster period		\$62,271	\$0	\$62,271	\$62,271	SHOPP Emergency Response - Total project cost increased from \$0 to \$62,271	New grouped project listing with 2 projects added to the back-up listing
TOTALS:					\$62,271	\$367,300	\$429,571			

Fresno Council of Governments
 2021 Federal Transportation Improvement Program
 Fresno County Region

Lead Agency: Caltrans

FRE210001		AMENDMENT: 20-06						
Project Title: HWY 99 Roadway Rehabilitation: El Dorado to Clinton		CTIPS_ID: 6949,						
Project Description: On Highway 99 in the City of Fresno, from south of El Dorado St to Clinton Ave. Rehabilitate roadway, repair / replace culverts, construct pumping plants, remove / replace bridges, remove Belmont and McKinley ramps, and add roundabouts at Olive Interchange		EA_NUMBER: DW800,						
This is a Construction Manager/General Contractor (CMGC) project.		PPNO: 6949, STATE						
(G13 Contingency)		PROJECT ID: 0617000306						
Sys: State Hwy : Rt: 99 TCM: No : Model #: : Cl:N : Exempt Category: Non-Exempt								
		Cost Difference: \$0		Est Total Cost: \$367,300,000		Open to Traffic: 2029		
	Phase	PRIOR	2021	2102	2203	2304	2425 BEYOND	TOTAL
SHOPP (including Augmentation)	PE							
	RW							
	CON					\$291,500,000		\$291,500,000
	TOTAL					\$291,500,000		\$291,500,000
SHOPP - Roadway Preservation - SHOPP Advance Construction (AC)	PE	\$20,000,000	\$18,000,000					\$38,000,000
	RW		\$1,800,000		\$34,000,000			\$35,800,000
	CON							
	TOTAL	\$20,000,000	\$19,800,000		\$34,000,000			\$73,800,000
	TOTAL PE	\$20,000,000	\$0	\$18,000,000	\$0	\$0	\$0	\$38,000,000
	TOTAL RW	\$0	\$0	\$1,800,000	\$0	\$34,000,000	\$0	\$35,800,000
	TOTAL CON	\$0	\$0	\$0	\$0	\$0	\$291,500,000	\$291,500,000
	TOTAL TOTAL	\$20,000,000	\$0	\$19,800,000	\$34,000,000	\$291,500,000		\$367,300,000

Appendix G • Regional Transportation Plan and Transportation Improvement Program Listings

FRESNO COUNCIL OF GOVERNMENTS
2018 REGIONAL TRANSPORTATION PLAN
FINANCIALLY CONSTRAINED PROJECT LISTING (In \$1,000) - Updated 1/28/2021

AGENCY	PROJECT ID	PROJECT TITLE	PROJECT DESCRIPTION	PROJECT TYPE	ESTIMATED OPEN TO TRAFFIC	ESTIMATED TOTAL COST (\$1,000)
Caltrans	FRE090000	Grouped Projects for Safety Improvements, Shoulder Improvements, Pavement Resurfacing and/or Rehabilitation-Minor Program	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories- Railroad/highway crossing, Safer non-Federal-aid system road, Shoulder improvements, traffic control devices and operating assistance other than signalization projects, intersection signalization projects at individual intersections, Pavement marking demonstration, Truck climbing lanes outside the urbanized area, Lighting improvements, Emergency truck pullovers, pavement resurfacing and/or rehabilitation, Emergency relief (23 U.S.C. 125), widening narrow pavements or reconstructing bridges (no additional travel lanes)	Streets & Roads-Maintenance	n/a	\$865
Caltrans	FRE130072	Grouped Projects for Emergency Repair - SHOPP Emergency Response Program	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 categories - Repair damage caused by natural disasters, civil unrest, or terrorist acts. This applies to damages that do not qualify for Federal Emergency Relief funds or to damages that qualify for federal Emergency Relief funds but extend beyond the Federally declared disaster period	Streets & Roads-Maintenance		\$2,295
Caltrans	FRE210001	HWY 99 Roadway Rehabilitation: El Dorado to Clinton	On Highway 99 in the City of Fresno, from south of El Dorado St to Clinton Ave. Rehabilitate roadway, repair or replace culverts, construct pumping plants, and remove or replace bridges.	Streets & Roads-Maintenance	2029	\$367,300
Clovis	FRE130064	Grouped Projects for Pavement Resurfacing and/or Rehabilitation (Clovis)	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 Categories-Pavement Resurfacing	Streets & Roads-Maintenance	n/a	\$4,184
Clovis	FRE111375	Minnewawa, Barstow-Bullard	Grind and overlay existing pavement, including concrete sidewalk, ADA improvements, traffic loops, asphalt concrete grinding and utility relocations.	Streets & Roads-Maintenance	2021	\$310
Clovis	FRE111373	Replace Bridge #42C0494-N Leonard Ave. over Enterprise Canal, 0.16 MI South of Bullard	Bridge No. 42C0494, N Leonard Ave over Enterprise Canal, 0.16 MI South of Bullard. Replace 2 lane bridge with 4 lane bridge.	Streets & Roads-Maintenance	2022	\$1,075
Clovis	FRE111371	Road Rehabilitation on Shaw from Armstrong-Temperance	Road Rehabilitation on Shaw, from Armstrong-Temperance	Streets & Roads-Maintenance	2021	\$640
Coalinga	FRE170017	Coalinga Alley Paving in Various Locations	Alley #29 between Forest and Elm, Alley #30-33 between Glenn and Hawthorne and Alley #34-35 between Pleasant and Houston; Pave seven dirt/gravel alleyways.	Streets & Roads-Maintenance	n/a	\$530
Fresno	FRE090611	Grouped Projects for Pavement Resurfacing and/or Rehabilitation-AC Overlays (City of Fresno)	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 Categories-Pavement Resurfacing	Streets & Roads-Maintenance	n/a	\$11,919
Fresno	FRE020617	Grouped Projects for Pavement Resurfacing and/or Rehabilitation-AC Overlays (Fresno)	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 Categories-Pavement Resurfacing	Streets & Roads-Maintenance	n/a	\$1,510

Appendix G • Regional Transportation Plan and Transportation Improvement Program Listings

Regionally Significant Project Listing

Jurisdiction / Agency	TIP/RTP Project ID	CTIPs Project ID	Description			Estimated Cost	Conformity Analysis Year (project open to traffic)											
			Facility Name/Route	Type of Improvement	Project Limits		2021	2022	2023	2024	2025	2026	2029	2031	2037	2042		
Caltrans	FRE150055	10300000340	41	Widen from 2-Lane to 4-lane expressway [Excelsior]	From: Kings County Line To Elkhorn Ave	\$68,000,000									X	X	X	X
Caltrans	FRE500516		41	Add NB Auxiliary Lanes		O Street to Shields	\$19,500,000											X
Caltrans	FRE500570		41	SR 41-Ashlan to Shaw: Add 1 NB Auxiliary Lane	Ashlan to Shaw	\$7,000,000											X	X
Caltrans	FRE500759		41	SR 41: El Paso to Friant: Add 1 SB Auxiliary Lane	El Paso to Friant	\$13,970,000									X	X	X	X
Caltrans	FRE500767		41	SR 41-Tulare to O Street: Widen Auxiliary Lane/Improve Ramps (Project J in the Measure C Urban Regional Program)	Tulare Ave to O Street	\$4,900,000	X	X	X	X	X	X	X	X	X	X	X	X
Fresno	FRE500145		41	Widen Off Ramp at Shaw	Interchange Crossstreets:SR 41 Off Ramp & Shaw	\$246,000	X	X	X	X	X	X	X	X	X	X	X	X
Fresno	FRE500146		41	Auxiliary Lane	From: Gettysburg Overcross To: Shaw Exit Ramp	\$1,271,000										X	X	X
Caltrans	FRE190013		99	Improve Interchange (Measure C Project AA in the Rural Regional Program - Tier 2)	Central/Chestnut	\$47,141,000									X	X	X	X
Caltrans	FRE210001		99	On Highway 99 in the City of Fresno, from south of El Dorado St to Clinton Ave. Rehabilitate roadway, repair or replace culverts, construct pumping plants, and remove or replace bridges.	From: El Dorado To: Clinton	\$367,300,000									X	X	X	X
Huron	FRE500805		269	New Roundabout	From: N/A To: N/A	\$3,000,000	X	X	X	X	X	X	X	X	X	X	X	X
Huron	FRE500806		269	Lassen Ave & Palmer Ave Intersection Improvements	From: Lassen To: Palmer	\$1,600,000										X	X	X
Huron	FRE500807		269	Lassen Ave & Palmer Ave Intersection Improvements	From: Lassen To: Tornado	\$1,600,000					X	X	X	X	X	X	X	X
Caltrans	FRE111351	20300000748	<interchange>	Interchange Improvements	Interchange Cross Streets: S & SR 19B	\$18,236,000										X	X	X
Caltrans	FRE111352	20300000752	<interchange>	American Ave @ SR 99-Interchange Improvements	Interchange Cross Streets: American Ave & SR 99	\$61,950,000									X	X	X	X
Caltrans	FRE111355	20300000756	<interchange>	North/Cedar/SR 99-Improve Interchange (Measure C Project M in the Urban Regional Program - South Fresno Interchange Project on CTIPs)	North Ave to Cedar	\$87,163,000									X	X	X	X
Caltrans	FRE500520		<interchange>	Replace bridge structures and widen Floral	Interchange Cross Streets: SR 99 & SR 43	\$13,000,000											X	X
Caltrans	FRE500521		<interchange>	Improve interchange	Interchange Cross Streets: SR 99 & Shaw	\$86,000,000											X	X

Appendix H Interagency Consultation Approval

Hildebrand, Maya@DOT

From: OConnor, Karina <OConnor.Karina@epa.gov>
Sent: Thursday, January 28, 2021 9:24 AM
To: Hildebrand, Maya@DOT; Alex Marcucci; Bagde, Abhjit J@DOT; Ahron Hakimi (ahakimi@kerncog.org); Arellano, Alexis@DOT; Andrew Chesley (chesley@sjcog.org); Lee, Anita; Mahaney, Ann@DOT; Anna Myers; Antonio Johnson; Becky Napier (bnapier@kemcog.org); Ben Giuliani (BGiuliani@tularecog.org); Ben Raymond; De Terra, Bruce W@DOT; Knecht, Carey@ARB; Chris Jasper; Christopher Xiong; Crystal Yunker; Deel, David@DOT; Cheser, Dawn@CATC; Debbie Trujillo; Derek Winning; Diane Nguyen (nguyen@sjcog.org); Dylan Stone (dylan@maderact.org); Ed Flickinger; Edith Robles; Elisabeth Hahr; Elizabeth Wright (EWright@tularecog.org); Thompson, Erin M@DOT; Gabriel Gutierrez (ggutierrez@tularecog.org); Valencia, Gilbert@DOT; King, Heather@ARB; External, IOJeda@DOT; Kahrs, Jacqueline J@DOT; Gentry, Jamaica@DOT; Perrault, James R@DOT; Jasmine Amanin; Jeff Findley (Jeff@maderact.org); Jennifer Soliz; Jessica Coria; Joseph Stramaglia (jstramaglia@kerncog.org); Joseph Vaughn (Joseph.Vaughn@dot.gov); Swearingen, Joshua B@DOT; Kai Han (khan@fresnocog.org); Kasia Poleszcuk; Romero, Ken J@DOT; Mariant, Kevin B@DOT; Kevin Wing; Vu, Khanh D@DOT; Kim Kloeb (kloeb@sjcog.org); Kristine Cai (kcai@fresnocog.org); Lang Yu; Carr, Laura@ARB; Lawrence, Laura; Kimura, Leslie@ARB; Huy, Lima A@DOT; Mendibles, Lorena@DOT; Sanchez, Lucas@DOT; Evans, Marcus B@DOT; Mark Hays; Matt Fell; Navaro, Michael@DOT; Ajabiry, Muhaned M@DOT; Kalandiyur, Nesamani@ARB; Fung, Nicholas@DOT; Isla, Nicholas@DOT; Patricia Taylor (patricia@maderact.org); Patrick Pittenger; Marquez, Paul Albert@DOT; Ramirez, Pedro@DOT; Martinez-Velez, Priscilla@DOT; Raquel Pacheco (rpacheco@kerncog.org); Rob Ball (rball@kerncog.org); Robert Phipps; Roberto Brady (RBrady@tularecog.org); Rochelle Irvina; Tavitas, Rodney A@DOT; Mays, Rory; Rosa Park (rpark@stancog.org); Ryan Niblock (niblock@sjcog.org); Yazdi, Sadeqh@DOT; Scherr, Sandra L@DOT; Santosh Bhattarai; Christian, Shalanda M@DOT; Martinez, Steven R@DOT; Suzanne Martinez; Vanderspek, Sylvia@ARB; Tashia Clemons; Ted Matley (Ted.Matley@fta.dot.gov); Ted Smalley (tsmalley@tularecog.org); Teri King (teri.king@co.kings.ca.us); Dumas, Thomas A@DOT; tom.jordan@valleyair.org; Tony Borer; Tray Wadsworth; Ty Phimmason (ty.phimmason@mcagov.org); Vincent Liu (vliu@kerncog.org); Tasat, Webster@ARB; Choi, Yoojoong@DOT; Braden Duran
Subject: RE: Caltrans project - SR 99 El Dorado to Clinton Rehab project - additional information

EXTERNAL EMAIL. Links/attachments may not be safe.

EPA concurs that this project is not a project of air quality concern.

Thanks, Karina

Karina OConnor
Air Planning Office
US EPA Region 9 (AIR-2)
75 Hawthorne St.
San Francisco, CA 94105
(775) 434-8176
oconnor.karina@epa.gov

Hildebrand, Maya@DOT

From: Vaughn, Joseph (FHWA) <Joseph.Vaughn@dot.gov>
Sent: Wednesday, February 3, 2021 4:28 PM
To: Hildebrand, Maya@DOT; Alex Marcucci; Bagde, Abhijit J@DOT; Ahron Hakimi (ahakimi@kerncog.org); Arellano, Alexis@DOT; chesley sjcog.org; Anita Lee; Mahaney, Ann@DOT; Anna Myers; Johnson, Antonio (FHWA); Becky Napier (bnapier@kerncog.org); Ben Giuliani (BGiuliani@tularecog.org); Ben Raymond; De Terra, Bruce W@DOT; Knecht, Carey@ARB; Chris Jasper; Christopher Xiong; Crystal Yunker; Deel, David@DOT; Cheser, Dawn@CATC; Debbie Trujillo; Derek Winning; Diane Nguyen (nguyen@sjcog.org); Dylan Stone (dylan@maderact.org); Ed Flickinger; Edith Robles; Elisabeth Hahn; Elizabeth Wright (EWright@tularecog.org); Thompson, Erin M@DOT; Gabriel Gutierrez (ggutierrez@tularecog.org); Valencia, Gilbert@DOT; King, Heather@ARB; External, IDjeda@DOT; Kahrs, Jacqueline J@DOT; Gentry, Jamaica@DOT; Perrault, James R@DOT; Amanin, Jasmine (FHWA); Jeff Findley (Jeff@maderact.org); Jennifer Soliz; Jessica Coria; Joseph Stramaglia (jstramaglia@kerncog.org); Swearingen, Joshua B@DOT; Kai Han (khan@fresnocog.org); Karina O'Connor (OConnor.Karina@epamail.epa.gov); Kasia Poleszouk; Romero, Ken J@DOT; Mariani, Kevin B@DOT; Kevin Wing; Vu, Khanh D@DOT; Kim Kloeb (kloeb@sjcog.org); Kristine Cai (kcai@fresnocog.org); Lang Yu; Carr, Laura@ARB; Laura Lawrence; Kimura, Leslie@ARB; Huy, Lima A@DOT; Mendibles, Lorena@DOT; Sanchez, Lucas@DOT; Evans, Marcus B@DOT; Mark Hays; Matt Fell; Navarro, Michael@DOT; Aljabiry, Muhaned M@DOT; Kalandiyur, Nesamani@ARB; Fung, Nicholas@DOT; Isla, Nicholas@DOT; patricia.maderact.org; Pittenger, Patrick (FHWA); Marquez, Paul Albert@DOT; Ramirez, Pedro@DOT; Martinez-Velez, Priscilla@DOT; Raquel Pacheco (rpacheco@kerncog.org); Rob Bail (rbail@kerncog.org); Robert Phipps; Roberto Brady (RBrady@tularecog.org); Rochelle Irvina; Tavitaz, Rodney A@DOT; Rory Mays; Rosa Park (rpark@stancog.org); Ryan Niblock (niblock@sjcog.org); Yazdi, Sadeqh@DOT; Scherr, Sandra L@DOT; Santosh Bhattarai; Christian, Shalanda M@DOT; Martinez, Steven R@DOT; Suzanne Martinez; Vanderspek, Sylvia@ARB; Clemons, Tashia (FHWA); Matley, Ted (FTA); Ted Smalley (tsmallley@tularecog.org); terri.king.co.kings.ca.us; Dumas, Thomas A@DOT; Tom Jordan; Tony Borer; Tray Wadsworth; Ty Phimmason (ty.phimmason@mcagov.org); Vincent Liu (vliu@kerncog.org); Tasat, Webster@ARB; Choi, Yoojoong@DOT; Braden Duran
Subject: RE: Caltrans project - SR 99 El Dorado to Clinton Rehab project - additional information

EXTERNAL EMAIL. Links/attachments may not be safe.

FHWA concurs that this project is not a project of air quality concern. Thanks.

Joseph Vaughn
Environmental Specialist
FHWA, CA Division
(916) 498-5346

From: Hildebrand, Maya@DOT [mailto:Maya.Hildebrand@dot.ca.gov]
Sent: Friday, January 22, 2021 1:13 PM
To: Alex Marcucci <AMarcucci@trinityconsultants.com>; Bagde, Abhijit J@DOT <abhijit.bagde@dot.ca.gov>; Ahron Hakimi (ahakimi@kerncog.org) <ahakimi@kerncog.org>; Arellano, Alexis@DOT <Lexie.Arellano@dot.ca.gov>; chesley sjcog.org <chesley@sjcog.org>; Anita Lee <Lee.Anita@epa.gov>; Mahaney, Ann@DOT <ann.mahaney@dot.ca.gov>; Anna Myers <Anna.Myers@valleyair.org>; Johnson, Antonio (FHWA) <antonio.johnson@dot.gov>; Becky Napier

Appendix I Construction Emissions Calculation (CALCET)

Construction Emissions Inputs

Project Name/EA:

Submitted by:

Date:

Estimated Begin Construction (month, year)

Road Type: Highway Freeway City & County Road

Project Length (Miles)

Project Type (Pick One):

- | | |
|--|---|
| <input type="checkbox"/> Mainline Improvements | <input type="checkbox"/> Bridge Construction & Preservation |
| <input type="checkbox"/> Roadside Improvements | <input type="checkbox"/> Traffic Safety & Operations |
| <input type="checkbox"/> Pavement Preservation | <input type="checkbox"/> Storm Water and Drainage |
| <input type="checkbox"/> Landscaping | |

Construction Costs (Millions)

Number of Project Working Days

List of Technical Studies Bound Separately

Draft Relocation Statement: November 2020

Air Quality Report: February 2021

Community Impact Assessment: May 2021

Noise Study Report: February 2020

Noise Abatement Decision Report: September 2020

Noise Study Report Addendum: April 2021

Water Quality Report: August 2020

Natural Environment Study: November 2020

Location Hydraulic Study: November 2019

Cultural Studies:

Historic Property Survey Report: May 2021

- Historic Resource Evaluation Report: November 2020
- Finding of No Adverse Effect Document: May 2022

Archaeological Survey Report: November 2020

Hazardous Waste Reports:

- Initial Site Assessment: July 2019
- Preliminary Site Investigation (Geophysical Survey): April 2020

Scenic Resource Evaluation/Visual Assessment: October 2020

Paleontological Study Report: August 2020

Traffic Operations Analysis Report: September 2020

To obtain a copy of one or more of these technical studies/reports or the Environmental Impact Report/Environmental Assessment, please send your request to:

Trais Norris
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100, Fresno, California 93726

Or send your request via email to: trais.norris@dot.ca.gov
Or call: 209-601-3521

Please provide the following information in your request:

Project title: El Dorado to Clinton Rehabilitation

General location information: On State Route 99 between 0.2 mile south of El Dorado Street and the Clinton Avenue Overcrossing

District number-county code-route-post mile: 06-FRE-99-PM 21.2-24.4

Project ID number: 0617000306