Highway 59 Phase 1 Widening and Widening Over Black Rascal Creek

On State Route 59 in Merced County
10-MER-59-PM 15.4-16.6
Project ID Number 1020000121

Initial Study
with Proposed Mitigated Negative Declaration

Volume 1 of 2

Prepared by the
State of California Department of Transportation

August 2023

Caltrans

General Information About This Document

What's in this document:
The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Merced County in California. 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, potential impacts of each of the alternatives, and 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 10 office from 8 a.m. to 5 p.m. at 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205 and the City of Merced Civic Center at 678 West 18th Street, Merced, California 95340.

- Attend the public information meeting held between 6 p.m. and 8 p.m. on Tuesday, October 10, 2023, at the City of Merced Civic Center – Council Chamber, located at 678 West 18th Street, second floor, Merced, California 95340.

- Tell us what you think. If you have any comments regarding the proposed project, please attend the public information meeting on Tuesday, October 10, 2023, and/or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: C. Scott Guidi, District 10 Environmental Division, California Department of Transportation, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205. Submit comments via email to: scott.guidi@dot.ca.gov.

- Submit comments by the deadline: Thursday, October 26, 2023.

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

Accessibility Assistance
Caltrans makes every attempt to ensure our documents are accessible. Due to variances between assistive technologies, there may be portions of this document that are not accessible. Where documents cannot be made accessible, we are committed to providing alternative access to the content. Should you need additional assistance, please contact us at the phone number in the box below.

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: C. Scott Guidi, District 10 Environmental Division, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839 (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.

10-MER-59-PM 15.4-16.6
Project ID Number 1020000121

Widen and improve State Route 59 from post mile 15.4 to post mile 16.6
in Merced County

INITIAL STUDY
with Proposed Mitigated Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation
and
City of Merced
Responsible Agency: California Transportation Commission

C. Scott Guidi
C. Scott Guidi
Environmental Office Chief, District 10
California Department of Transportation
CEQA Lead Agency

08/14/2023
Date

The following individual can be contacted for more information about this document:

C. Scott Guidi, Environmental Office Chief, District 10, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839; scott.guidi@dot.ca.gov

This Page Intentionally Left Blank

DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: [pending]

District-County-Route-Post Mile: 10-MER-59-PM 15.4-16.6

EA/Project Number: EA 10-1M140 and Project ID Number 1020000121

Project Description

The California Department of Transportation (Caltrans) and the City of Merced proposes to widen and improve State Route 59 from a two-lane roadway to four lanes from the 16th Street intersection to about 600 feet south of Buena Vista Drive. The Highway 59 Phase 1 Widening and Widening Over Black Rascal Creek project also proposes to replace the Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge. Additional project features include standard shoulders, intersection improvements, Class 2 bicycle lanes, a striped two-way left-turn lane and median, and sidewalks.

Determination

An Initial Study has been prepared by Caltrans District 10. On the basis of this study, it is determined that the proposed action with the incorporation of the identified mitigation measures would not have a significant effect on the environment for the following reasons:

- The project would have no impact on agriculture and forest resources, land use and planning, mineral resources, and population and housing.

- The project would have a less than significant impact on aesthetics, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, tribal cultural resources, utilities and service systems, and wildfire.

- With the following mitigation measures incorporated, the proposed project would have less than significant effects on biological resources, transportation, public services, and recreation:

    - **BIO-8:** All temporary impact areas within Black Rascal Creek, eucalyptus riparian habitat, and annual grasslands would be regraded to preconstruction contours, cleaned of any trash or debris, and seeded with a native seed mix specific to that habitat type. This would allow natural habitats to return to preconstruction conditions.

    - **BIO-9:** Permanent impacts to waters of the U.S/waters of the State (Black Rascal Creek) would be mitigated via the payment of an In-Lieu Fee or other

U.S. Army Corps of Engineers-approved compensation method for waters of the U.S/waters of the State, at a 1-to-1 ratio. The final mitigation method would satisfy the requirements of the California Department of Fish and Wildlife, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers and would be finalized during the permitting phase of the project.

- **BIO-24:** Pile driving activities within Black Rascal Creek would be limited to June 1 through October 1 during the summer low-flow period, when salmonids are not expected to occur within the project area due to high water temperatures and low channel flow downstream.

- **BIO-25:** Before construction, the contractor would prepare a water diversion and fish exclusion plan. The water diversion and fish exclusion plan would be either developed or approved by a biologist with knowledge of the life history of salmonid fish. The water diversion and fish exclusion plan would include measures to exclude fish from Black Rascal Creek within the action area before water diversion. The National Marine Fisheries Service would approve the water diversion and fish exclusion plan before construction.

- **BIO-26:** Permanent effects on stream channel habitat would be mitigated via the purchase of salmonid-specific mitigation credits through an in-lieu fee program, such as San Joaquin Aquatic Resource credits from the National Fish and Wildlife Foundation's Sacramento District California In-Lieu Fee Program.

- **BIO-27**: Riparian shade trees that must be removed due to construction activities would be mitigated by planting native tree species onsite at a 3-to-1 ratio to ensure a 1-to-1 replacement ratio. Should it be determined that onsite mitigation is infeasible, an offsite mitigation option would also be considered.

- **BIO-36:** Before cutting, trimming, or removing any trees, permission must be obtained from the City of Merced, per municipal code 14.12.040. Mitigation for removing any trees would be determined through a permit approval process and may be accomplished through onsite planting, offsite planting, or payment through an in-lieu fee program.

- **REC-1:** Users of the Rascal/Michael O'Sullivan Bike Paths would be temporarily detoured to the Loughborough neighborhood during the reconstruction of the trail or during times when construction activities are preventing the safe use of the Rascal/Michael O'Sullivan Bike Paths.

- **REC-2:** By project completion, the portions of the Rascal/Michael O'Sullivan Bike Paths impacted by construction would be actively restored along a new alignment, using as many portions of the original as feasible to maintain the activities, features, and attributes of the trail.

- **REC-3:** Access to the Rascal/Michael O'Sullivan Bike Paths outside the construction zone would remain open during normal business hours.

- **TRA-2:** A lane reduction (road diet) mitigation strategy would be implemented within two roadways in the City of Merced to offset impacts to vehicle miles

traveled. A future cooperative agreement detailing the mitigation strategy and time frame for implementation would be executed.

_____

C. Scott Guidi
Environmental Office Chief, District 10
California Department of Transportation

_____

Date

This Page Intentionally Left Blank

Table of Contents

Chapter 1 Proposed Project

1.1 Introduction

This document is an Initial Study with Proposed Mitigated Negative Declaration and focuses on the potential environmental effects associated with project construction in the City of Merced. Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines, this Initial Study has been conducted to determine whether the proposed project would have a significant effect on the environment. The Initial Study Checklist in Chapter 2 found that while there are potentially significant environmental impacts that may result from the proposed project, they could be mitigated to a less than significant level with the incorporation of the mitigation measures proposed in this document.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to:

- Build a roadway to meet existing and forecasted traffic demand.
- Improve access to all modes of travel, including bicycles and pedestrians.
- Reduce the number of collisions.
- Reduce flooding occurrences on the roadway during high flows in Black Rascal Creek.

1.2.2 Need

The project is needed because:

- The existing two-lane roadway cannot meet existing and forecasted traffic demand.
- The current collision rates are significantly higher than the state average for similar facilities.
- Existing pedestrian and bicycle facilities are inconsistent with gaps between constructed improvements.

- The existing Black Rascal Creek Bridge does not meet current freeboard requirements within the floodway for the Central Valley Flood Protection Board.

1.3 Project Description

The City of Merced proposes to widen and improve State Route 59 from a two-lane roadway to four lanes from the 16th Street intersection to approximately 600 feet south of Buena Vista Drive and to replace the Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge (see Figure 1 for the Project Vicinity Map and Figure 2 for the Project Location Map). Additional project features include standard shoulders, intersection improvements, Class 2 bicycle lanes, a striped two-way left-turn lane and median, and sidewalks (see Figure 3 Project Features).

Figure 1 Project Vicinity Map

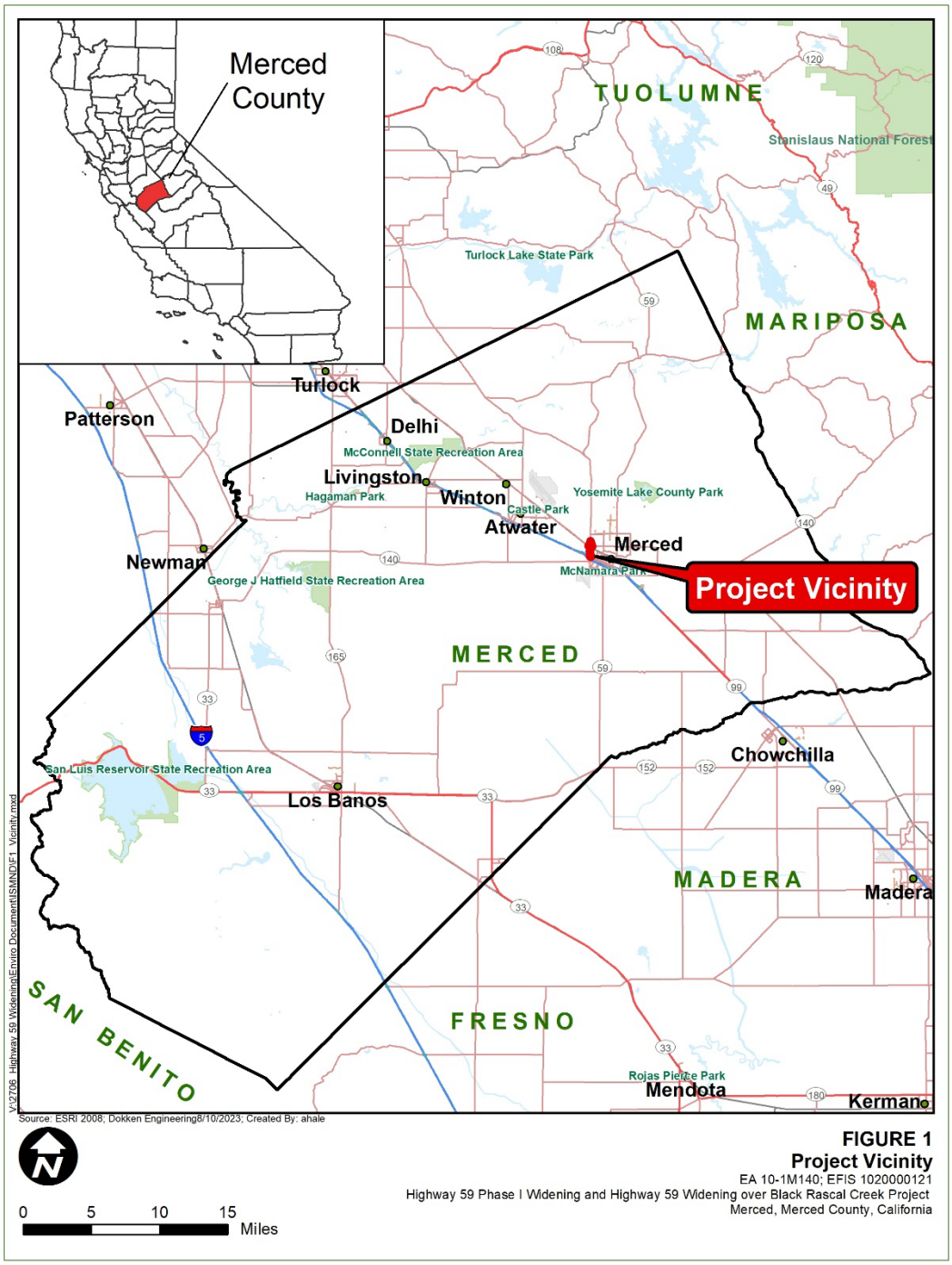


Figure 2 Project Location Map

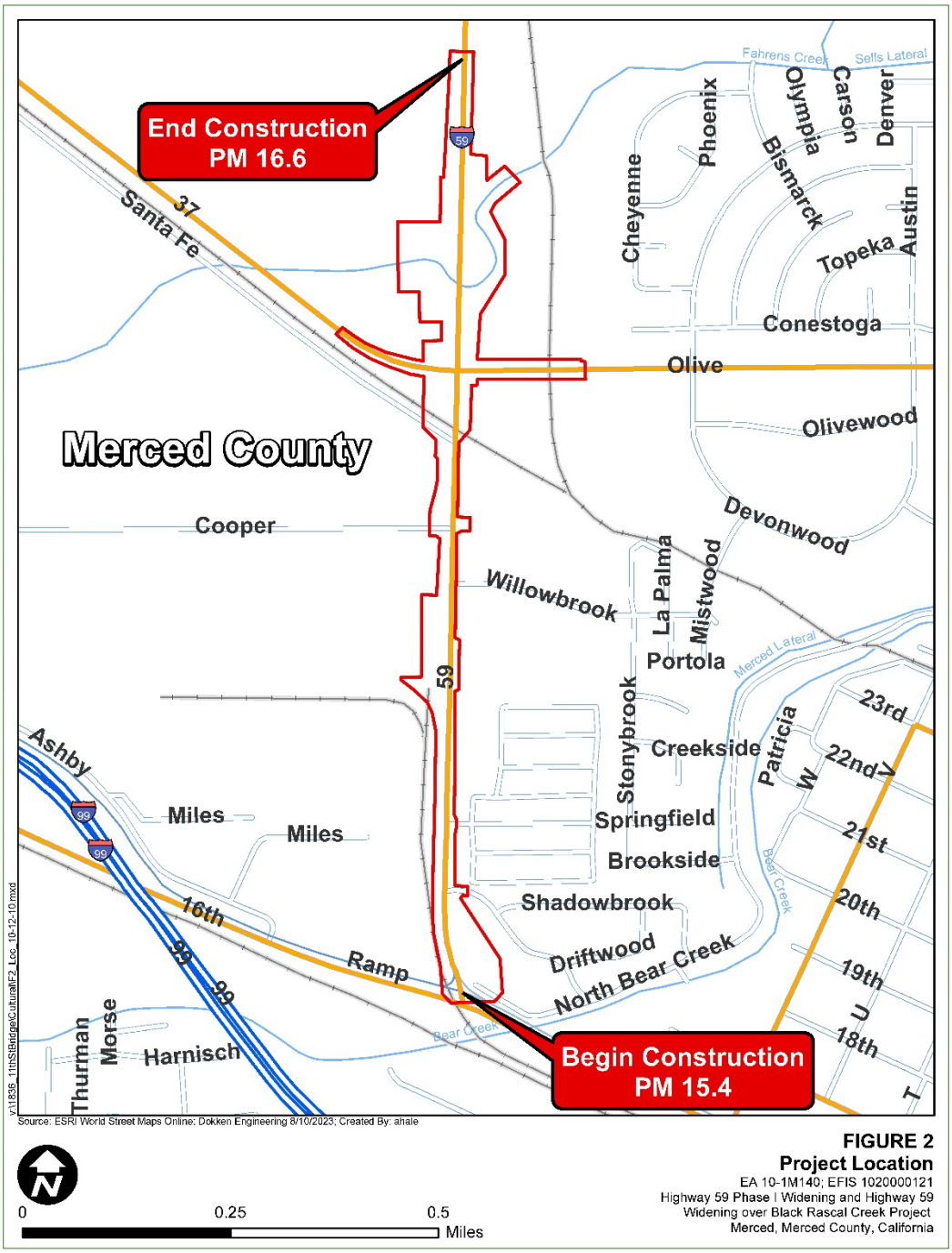


FIGURE 2
Project Location
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Figure 3 Project Features

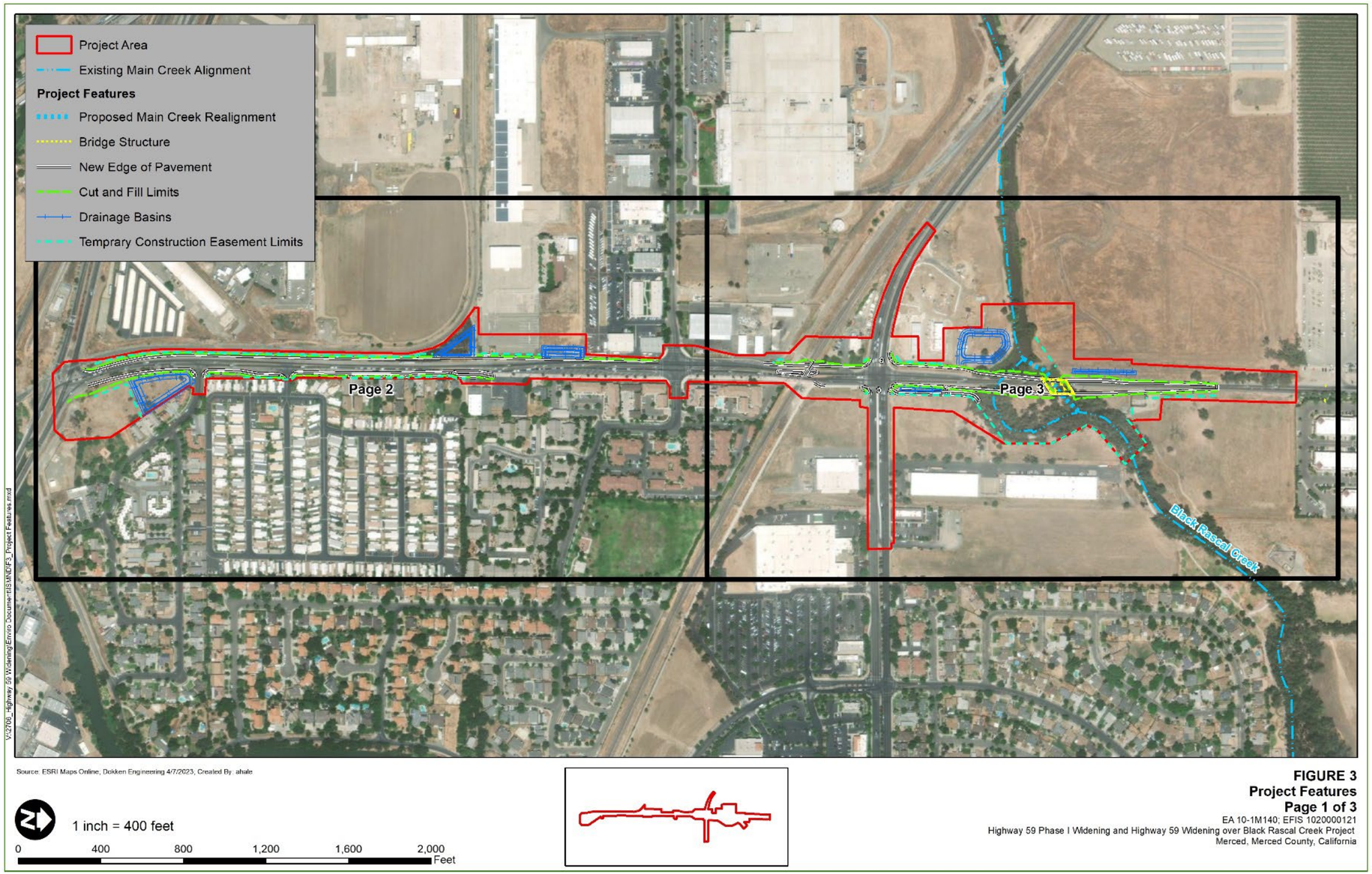


FIGURE 3
Project Features
Page 1 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

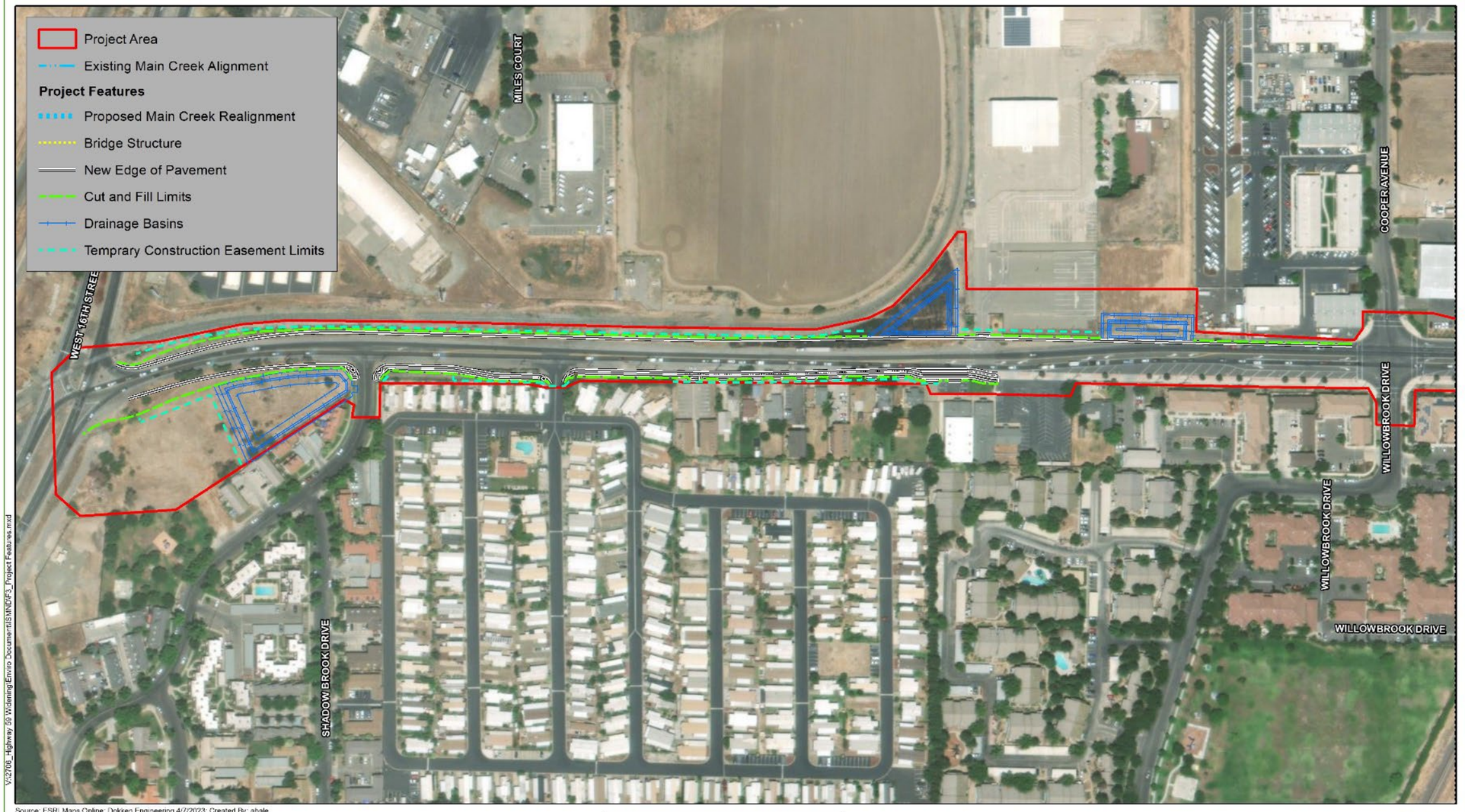


FIGURE 3
Project Features
Page 2 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

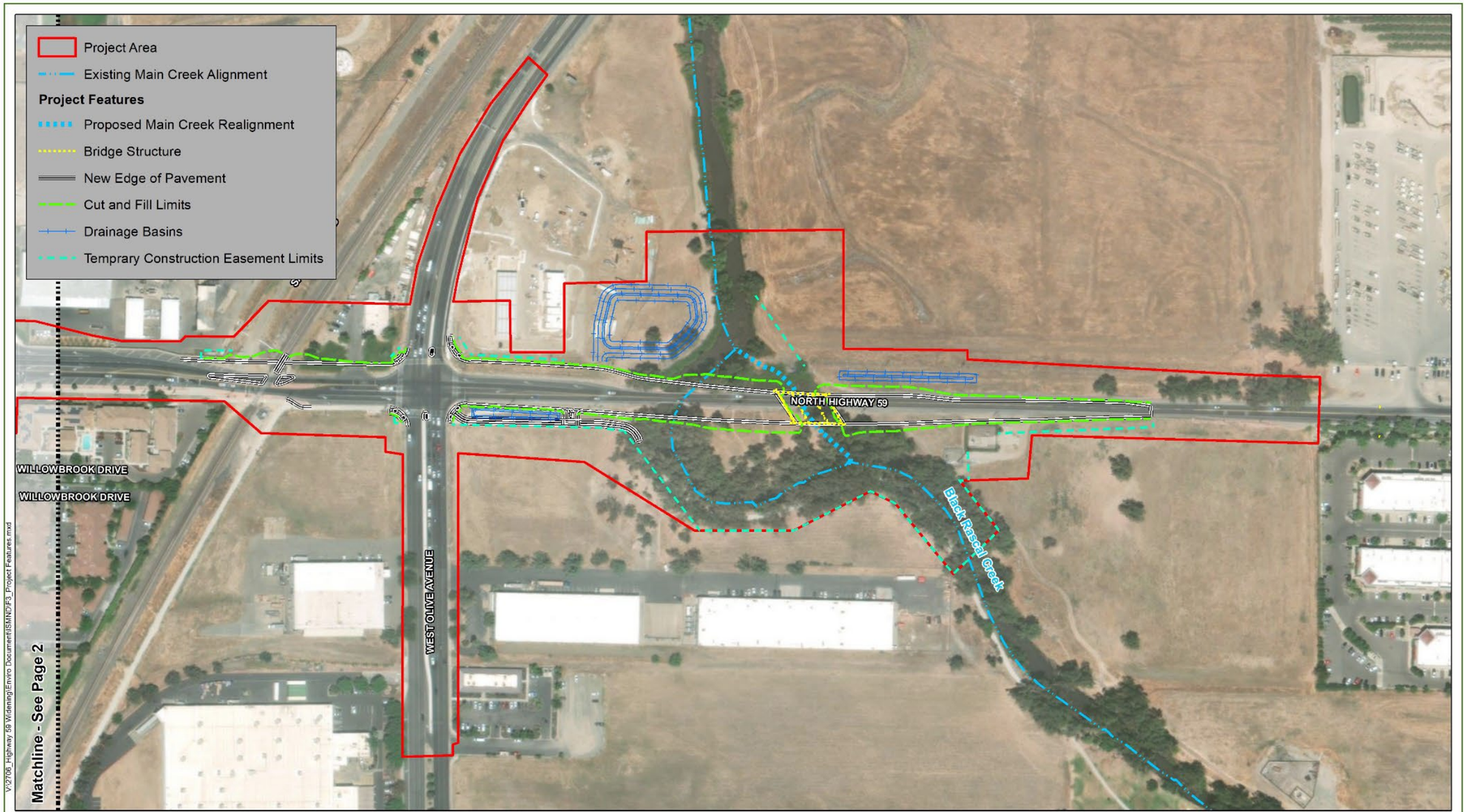


FIGURE 3
Project Features
Page 3 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

1.4 Project Alternatives

Two alternatives are being considered: a Build Alternative and a No-Build Alternative.

1.4.1 Build Alternatives

The City of Merced proposes to widen and improve State Route 59 from a two-lane roadway to four lanes from the 16th Street intersection to approximately 600 feet south of Buena Vista Drive (see Figure 1 for the Project Vicinity Map and Figure 2 for the Project Location Map). The project also proposes to replace the Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge. Additional project features include standard shoulders, intersection improvements, Class 2 bicycle lanes, a striped two-way left-turn lane and median, and sidewalks (see Figure 3 Project Features).

State Route 59 is primarily a two-lane conventional highway with localized widening to four lanes at the Cooper Avenue/Willowbrook Drive intersection. The project would include widening the segment of State Route 59 from West 16th Street to approximately 600 feet south of Buena Vista Drive to a four-lane facility. The proposed widening would also require widening the existing at-grade crossing through the Burlington Northern Santa Fe Railway right-of-way.

To accommodate the four-lane facility, the Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge would be replaced. Both bridge structures are within the regulatory floodway of Black Rascal Creek and are overtopped in large storm events. To correct this overtopping and improve the hydraulics, the main creek channel would be realigned to flow beneath the Black Rascal Creek Bridge crossing. The existing South Fork Black Rascal Creek Bridge would be replaced with culverts, which would then serve to allow for continued water flow and function as an emergency bypass during heavy creek flows.

The existing Black Rascal Creek Bridge would be replaced with a four-lane, three-span, cast-in-place, reinforced concrete flat slab bridge. To facilitate the creek flow from the realigned channel, the replacement bridge would be lengthened and raised approximately 2 to 3 feet to provide the 2 feet of freeboard over the 100-year storm event, as required by the Central Valley Flood Protection Board. The Black Rascal Creek Bridge replacement would also include upgrades to meet current safety and performance standards, including increased load capacity, standard barrier railings, improved width and cross-slope, and resistance to channel scour.

Minimal right-of-way acquisition would be required to accommodate the widened roadway and may also be needed for potential utility relocations.

Temporary construction easements and encroachment permits would also be required to accommodate project construction. The project would be built in stages to maintain traffic flow through the area. A detour may be required for several days to accommodate the widening at the intersection of State Route 59 and the Burlington Northern Santa Fe Railway.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are listed later in this chapter under “Standard Measures and Best Management Practices Included in All Build Alternatives.”

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, State Route 59 would not be widened to a four-lane facility, and the existing Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge would not be replaced. The existing roadways would continue to be insufficient to meet existing and forecasted traffic demand and would continue to experience flooding during high-flow events.

1.5 Standard Measures and Best Management Practices Included in All Build Alternatives

VIS-1: Areas that would require ground disturbance by removing vegetation should be restored and rectified, respectively, before project construction is complete. Any vegetation that is removed would need to be replaced with appropriate vegetation that is native to the area.

VIS-2: Existing vegetation would be protected in place where feasible to provide an effective form of erosion and sediment control.

VIS-3: Vegetation removal would be limited to the extent necessary to build the project.

VIS-4: All disturbed areas, including access roads, would be regraded to their preconstruction profiles and contours.

AQ-1: Implement San Joaquin Valley Air Pollution Control District Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.

The implementing agency would require, as a standard or specification of their contract, the construction contractor(s) to implement basic control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the San Joaquin Valley Air Pollution Control District’s CEQA guidelines, they are required for the entirety of the

construction area. The implementing agency would ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

Regulation VIII Control Measures for Construction Emissions of Particulate Matter 10

- All disturbed areas, including storage piles, which are not actively being used for construction purposes would be effectively stabilized of dust emissions using water, a chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

- All onsite unpaved roads and offsite unpaved access roads would be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant.

- Activities such as land clearing, grubbing, scraping, excavating, land leveling, grading, cut and fill, and demolition would be effectively controlled of fugitive dust emissions by using water or by presoaking.

- When materials are transported offsite, all materials would be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container would be maintained.

- All operations would limit or expeditiously remove the accumulation of mud or dirt from nearby public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles would be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant.

- Within urban areas, trackout would be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

- An owner/operator of any site with 150 or more vehicle trips per day or 20 or more vehicle trips per day by vehicles with three or more axles would implement measures to prevent carryout and trackout.

    - Carryout and trackout: Any and all materials that adhere to and agglomerates on vehicles, haul trucks, and/or equipment (including trailers, tires, etc.) and fall onto a paved public road or the paved shoulder of a paved public road.

Enhanced Control Measures for Construction Emissions of Particulate Matter 10

- Post speed limit signs on unpaved roads limiting traffic to no more than 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.

Additional Control Measures for Construction Emissions of Particulate Matter 10

- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.
- Construct and maintain wind barriers sufficient to limit visible dust to 20 percent opacity.
- Suspend excavation and grading activities when winds exceed 20 miles per hour.

Limit the size of areas subject to excavation, grading, and other construction activity occurring at any one time.

BIO-1: Best Management Practices: Construction Best Management Practices that are consistent with Caltrans' most recent manuals would be developed for the water quality and introducing construction-related contaminants and sediment. Best management practices would address soil stabilization, sediment control, wind erosion control, stormwater management, and waste management practices. City/Caltrans personnel and/or the contractor would perform routine inspections of the construction area to verify that the Best Management Practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector would inspect the site before and after a rain event to ensure that stormwater practices are adequate.

- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities, such as traffic and grading activities.

- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.

- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered as feasible.

- All erosion control measures and stormwater control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented.

- All disturbed areas would be restored to preconstruction contours and revegetated, where applicable, either through hydroseeding or other means, with weed-free native plant seed mix.

- All construction materials would be hauled offsite after completion of construction.

- To avoid entangling the giant garter snake and other wildlife, erosion control methods would not use monofilament plastic mesh, line or jute netting, tightly woven fiber netting, or similar materials. Appropriate alternatives include materials like burlap-wrapped fiber rolls, coconut coir matting, sediment fencing, and tackified hydroseeding compounds.

- All concrete curing activities would minimize spray drift to prevent compounds from entering the waterways.

BIO-3: Refueling or maintaining equipment without secondary containment would not be allowed to occur within 100 feet of Black Rascal Creek. All refueling and maintenance that must occur within 100 feet of the creek must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-4: Equipment would be checked daily for leaks and would be well maintained to prevent lubricants and any other harmful materials from entering Black Rascal Creek and the associated riparian area.

BIO-5: Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitats and delineated with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.

BIO-6: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-7: Secondary containment consisting of plastic sheeting or other impermeable sheeting would be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or spilling directly into Black Rascal Creek. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-12: Before the start of work/ground disturbance, a qualified biologist would conduct worker environmental awareness training for all construction personnel, including contractors, subcontractors, and contractors' representatives, covering the status of the species, how to identify the species and its habitat, the importance of avoiding impacts to the species, the laws that protect it, and what to do if an individual is encountered during construction. New construction personnel who are added to the project after the training is first conducted would also be required to take the training. Documentation of the training, including sign-in sheets, would be kept on file and made available to the U.S. Fish and Wildlife Service upon request.

BIO-28: Before arriving at the project site and before leaving the project site, construction equipment that may contain invasive plants and/or seeds would be cleaned to reduce the spreading of noxious weeds.

BIO-29: Following the completion of construction, temporarily disturbed areas within the project footprint would be decompacted and regraded to return the areas to preconstruction contours and conditions. These areas would be hydroseeded using a weed-free native plant seed mix.

BIO-32: All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed, secured containers and removed daily from the project site to reduce the potential for attracting predator species.

BIO-33: No rodenticides or herbicides would be used on the project site during construction.

CR-1: If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. An additional archaeological survey would be needed if project limits are extended beyond the present survey limits.

CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains, and grave goods, regardless of age, and provide a method and means for the appropriate handling of such remains. If human remains are encountered, work should stop in that vicinity, and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage

Commission within 24 hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.

HAZ-1: Pursuant to Caltrans' Standard Special Provisions and in accordance with the California Department of Toxic Substances Control and Caltrans' Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils ("The Agreement"), soil sampling for the presence of aerially deposited lead would be performed in unpaved locations of the project before construction activities start. Should aerially deposited lead be detected in the soil samples, a lead compliance plan would be prepared before the start of construction activities. Additionally, the soil would be managed pursuant to Caltrans' Standard Specifications and Standard Special Provisions and in accordance with The Agreement.

HAZ-2: Soil sampling in the vicinity of each railroad would be performed before construction activities start.

HAZ-3: Various natural gas transmission pipelines and other utilities run parallel to or cross the project area, indicating a potential hazard during construction. Coordination with local utility companies to avoid potential impacts is recommended before the start of construction activities.

HAZ-4: Soil sampling for the presence of pesticides and herbicides would be conducted before construction.

HAZ-5: An asbestos-containing materials/lead-based paint survey would be performed in conformance with the U.S. Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations Part 61, Subpart M, and California Department of Public Health guidelines.

HAZ-6: Yellow striping was observed on roadway centerlines throughout the site, and testing of the yellow traffic striping/markings is required. Removal of the yellow traffic striping/markings, and other colors of paint, would be performed in accordance with Caltrans' Standard Specifications and Standard Special Provisions.

HAZ- 7: Shallow soil sampling would be performed at the base of poles in areas of observed staining. In addition, should utility pole or transformer removal be required as part of the project, the local utility company would be notified for proper testing and removal.

HAZ-8: The potential exists for treated wood waste to be present associated with signs or guardrail posts within the project area. Treated wood waste would be handled in accordance with Caltrans' Standard Special Provisions.

HAZ- 9: Although not expected in other areas of the project, should impacted soil (as evidenced by staining and/or odors) be encountered during

construction activities, the resident engineer overseeing construction would stop work until a hazardous waste specialist can assess the soil for proper handling.

WQ-1: The project would implement all feasible Low Impact Development Best Management Practices and follow the Central Valley Region Phase 2 Small Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System General Permit of stormwater associated with construction activities (Construction General Permit 2012-0006-Division of Water Quality).

WQ-2: To conform with water quality requirements in the Construction General Permit, the following would be implemented during construction:

- Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must be a minimum of 50 feet from surface waters. Any necessary equipment washing must occur where the water cannot flow into surface waters.

- The project specifications would require the contractor to operate under an approved spill prevention and cleanup plan.

- Construction equipment would not be operated in flowing water.

- Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to surface waters.

- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life must be prevented from contaminating the soil or entering surface waters.

- Equipment used in and around surface waters must be in good working order and free of dripping or leaking contaminants.

- Any concrete rubble, asphalt, or other debris from construction must be taken to an approved disposal site.

WQ-3: Before the start of construction activities, the project limits, in proximity to jurisdictional waters, must be delineated with high-visibility Environmentally Sensitive Area fencing or stakes to ensure construction would not further encroach into jurisdictional waters.

WQ-4: Contract specifications would include the following Best Management Practices, where applicable, to reduce erosion during construction:

Existing vegetation would be protected in place where feasible to provide an effective form of erosion and sediment control.

As a permanent Best Management Practice, slope roughening by equipment tracking would be implemented to create unevenness on bare soil. Surface roughening reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing water infiltration.

NOI-1: To minimize construction-generated noise, abatement measures from Standard Specifications Section 14-8.02 “Noise Control” must be followed:

- Do not exceed 86 A-weighted decibels at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m.

TRA-1: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a Traffic Management Plan.

1.6 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, has been prepared in accordance with the National Environmental Policy Act (NEPA). When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.7 Permits and Approvals Needed

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

Table 1 Permits and Approvals Needed

Agency	Permit/Approval	Status
Central Valley Flood Protection Board	Flood Encroachment Permit	To be obtained before construction starts
Central Valley Regional Water Quality Control Board	Section 401 Certification	To be obtained before construction starts
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained before construction starts
National Marine Fisheries Service	Letter of Concurrence for the California Central Valley Steelhead	A Letter of Concurrence was obtained on November 1, 2022.
U.S. Army Corps of Engineers	Section 404 Permit	To be obtained before construction starts
U.S. Fish and Wildlife Service	Letter of Concurrence for the Giant Garter Snake	Letter of Concurrence obtained on February 15, 2023.
City of Merced	Tree Ordinance Permit	To be obtained before construction starts

This Page Intentionally Left Blank

Chapter 2 CEQA Evaluation

2.1 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 would indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. 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 prior to any significance determinations documented below.

“No Impact” determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information in the Visual Impact Assessment dated June 2022, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**No Impact**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**No Impact**
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**
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**

Affected Environment

The project is in an urbanized area. Zoning within the project study area is a mixture of low-density residential, high-density residential, light industrial district, and heavy industrial district. The project footprint would be similar to the existing roadway and bridge structure and would not change zoning within the project area.

Environmental Consequences

c) **Less Than Significant Impact.** The project would include the removal of about 44 trees in the Black Rascal Creek area. This is a small percentage of trees in the project area. Additionally, the project footprint would be similar to the existing roadway and bridge structure, resulting in minimal change in visual character or quality. Therefore, the overall visual resource change as a result of the project is expected to be moderately low because the visual character and quality would change minimally from the existing conditions. Additionally, group viewer responses to changes within the project area were

determined to be moderately low. Based on these conclusions, visual impacts are expected to be moderately low and would not substantially degrade the existing visual quality of the project area's character. Implementation of measures VIS-1 through VIS-6 would further reduce impacts to visual character and quality; therefore, a less than significant impact is expected.

d) **Less Than Significant Impact.** The project would not substantially affect light and glare. Construction work is expected to take place during nighttime hours, which would temporarily introduce new lighting in the area. However, once construction is over, nighttime lighting would stop. Additionally, no new lighting is proposed as part of the project. The project would not result in substantial additional light or glare that would adversely affect day or nighttime views in the project area; therefore, potential impacts from project development are considered less than significant.

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. Additionally, the following avoidance and minimization measures are included in most, if not all, Caltrans projects and would be applied to the project and would further reduce aesthetic impacts to a less than significant level.

VIS-1: Areas that would require ground disturbance by removing vegetation should be restored and rectified before project construction is complete. Any vegetation that is removed would need to be replaced with appropriate vegetation that is native to the area.

VIS-2: Existing vegetation would be protected in place where feasible to provide an effective form of erosion and sediment control.

VIS-3: Vegetation removal would be limited to the extent necessary to build the project.

VIS-4: All disturbed areas, including access roads, would be regraded to their preconstruction profiles and contours.

VIS-5: Special care would be given to any work that is done near any stream channel, and any vegetation that is removed would be replaced with native or approved non-invasive exotic species.

VIS-6: Drainage work, including the construction of new bridges, new culverts, extensions of existing culverts, and ditch relocation, may require some channel restoration work. This would require Best Management Practices and soil stabilization. This work would be conducted under the guidance of the district landscape architect.

2.1.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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.

Considering the information in the Community Impact Assessment dated August 2022, the City of Merced General Plan dated 2012, and the Merced County General Plan dated 2013, the following significance determinations have been made:

Question—Would the project:	**CEQA Significance Determinations for Agriculture and Forestry Resources**
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**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**No Impact**
c) Conflict with existing zoning, 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**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forestry Resources
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**

2.1.3 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.

Considering the information in the Air Quality Report dated May 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**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**
c) Expose sensitive receptors to substantial pollutant concentrations?	**Less Than Significant Impact**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**Less Than Significant Impact**

Affected Environment

The project is in the City of Merced, which falls within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Basin includes Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties, and a portion of Kern County. Air quality regulation in the San Joaquin Valley Air Basin is administered by San Joaquin Valley Air Pollution Control District.

The California Air Resources Board is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment”

designation indicates that a pollutant concentration violated the standard at least once within a calendar year. The state and federal attainment status for Merced County is shown below in Table 2 National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status. The project area is in a state and federal non-attainment designation for 8-hour Ozone, a state non-attainment designation for particulate matter 10, and a federal non-attainment designation for particulate matter 2.5. The project area is within attainment or is unclassified for all other pollutants.

Table 2 Merced County National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status

Pollutant	Designation/Classification for State Attainment Status	Designation/Classification for Federal Attainment Status
Ozone – 1 Hour	Nonattainment/Severe	No Federal Standard
Ozone – 8 Hour	Nonattainment	Nonattainment
Particulate Matter 10	Nonattainment	Attainment
Particulate Matter 2.5	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Attainment/Unclassified
Lead	Attainment	No Designation/Classification
Visibility Reducing Particles	Unclassified	No Federal Standard
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Vinyl Chloride	Attainment	No Federal Standard

Environmental Consequences

b) **Less Than Significant Impact**

Construction Emissions

Site preparation and roadway construction would involve improving existing roadways and sidewalks, installing a traffic signal, and paving roadway surfaces. During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly emitted particulate matter 10 and particulate matter 2.5, and toxic air contaminants such as diesel exhaust particulate matter. Construction activities are expected to slightly increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated using the latest Sacramento Metropolitan Air Quality Management District's Road Construction Model Version 9.0.0 (http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools). Construction-related emissions for the project are presented below in Table 3 Construction Emissions for Roadways. The results of the construction emission calculations are included in Appendix B. The emissions presented are based on the best information available at the time of calculations. The emissions represent the peak daily construction emissions that would be generated by project construction. The Roadway Construction Emissions Model results are compared with the San Joaquin Valley Air Pollution Control District Air Quality Significance Thresholds in Table 4.

Table 3 Construction Emissions for Roadways

Project Phases	Particulate Matter 10 (Pounds per Day)	Particulate Matter 2.5 (Pounds per Day)	Carbon Monoxide (Pounds per Day)	Nitrogen Oxides (Pounds per Day)	Carbon Dioxide (Pounds per Phase)
Grubbing/ Land Clearing	10.37	2.40	10.25	8.27	2,486.65
Grading/ Excavation	11.51	3.38	29.76	36.79	9,447.72
Drainage/Utilities/ Sub-Grade	10.97	2.95	25.51	24.01	5,843.46
Paving	0.39	0.32	11.31	7.94	2,390.83
Maximum daily (Pounds per Day)	11.51	3.38	29.76	36.79	9,447.72
Project Total (Tons/Construction Project)	2.52	0.71	6.22	6.64	1,697.94

Table 4 San Joaquin Valley Air Pollution Control District Air Quality Thresholds of Significance–Criteria Pollutants

Pollutant/ Precursor	Construction Emissions	Operational Emissions for Permitted Equipment and Activities	Operational Emissions for Unpermitted Equipment and Activities
Carbon Monoxide	100 tons per year (approximately 540 pounds per day)	100 tons per year (approximately 540 pounds per day)	100 tons per year (approximately 540 pounds per day)
Nitrogen Oxides	10 tons per year (approximately 54 pounds per day)	10 tons per year (approximately 54 pounds per day)	10 tons per year (approximately 54 pounds per day)
Reactive Organic Gases	10 tons per year (approximately 54 pounds per day)	10 tons per year (approximately 54 pounds per day)	10 tons per year (approximately 54 pounds per day)
Sulfur Oxides	27 tons per year (approximately 145 pounds per day)	27 tons per year (approximately 145 pounds per day)	27 tons per year (approximately 145 pounds per day)
Particulate Matter 10	15 tons per year (approximately 81 pounds per day)	15 tons per year (approximately 81 pounds per day)	15 tons per year (approximately 81 pounds per day)
Particulate Matter 2.5	15 tons per year (approximately 81 pounds per day)	15 tons per year (approximately 81 pounds per day)	15 tons per year (approximately 81 pounds per day)

Source: San Joaquin Valley Air Pollution Control District (2015).

As shown in Tables 3 and 4, construction activities would not exceed emissions thresholds established by the San Joaquin Valley Air Pollution Control District. Implementation of the measure AQ-1 would further reduce air

quality impacts resulting from construction activities. Although this measure is expected to reduce construction-related emissions, these reductions cannot be quantified at this time. Impacts are expected to be less than significant.

Operational Emissions

Operational emissions take into account long-term changes in emissions due to the project (excluding the construction phase). The operational emissions analysis compares forecasted emissions for existing/baseline, No-Build, and all Build alternatives (proposed project). Table 5 contains a summary of all long-term operational emissions associated with the project. Caltrans Emission FACtors emissions modeling was used to obtain data in Table 5 and in the analysis that follows.

Table 5 Summary of Comparative Emissions Analysis During Peak Hour Opening Year

Scenario/ Analysis Year	Carbon Monoxide (Pounds)	Particulate Matter 10 (Pounds)	Particulate Matter 2.5 (Pounds)	Nitrogen Oxides (Surrogate for Nitrogen Dioxide) (Pounds)	Carbon Dioxide (Pounds)
Baseline (Existing Conditions) 2021	138	7	3	35	44,405
No Build Opening Year (2025)	106	7	3	23	40,479
Opening Year (2025)	117	8	3	25	40,406
No Build Future (2045)	64	8	3	9	35,707
Future Plus Project (2045)	88	11	4	13	49,192

Source: Caltrans Emission FACtors 2014.

Carbon Monoxide Analysis

Carbon monoxide emissions during peak hour would decrease in the design year when compared to existing peak hour carbon monoxide emissions. Carbon monoxide emissions would decrease by 53 percent by the design year under No-Build conditions, while a decrease of 36 percent would occur under Build conditions. Carbon monoxide emissions in the project's design year would be 36 percent higher than No-Build conditions. However, as

carbon monoxide emissions with the project would be less than existing conditions, impacts related to carbon monoxide would be less than significant.

Particulate Matter Analysis

Particulate matter 10 emissions during peak hour would increase in the design year when compared to existing peak hour particulate matter 10 emissions. Particulate matter 10 emissions would increase by 14 percent by the design year under No-Build conditions, while an increase of 57 percent would occur under Build conditions. Particulate Matter 10 emissions in the design year with the project would be 38 percent higher than No-Build conditions.

Particulate matter 2.5 emissions during peak hour in the design year would be comparable under No-Build conditions when compared to existing peak hour particulate matter 2.5 emissions. An increase of 33 percent would occur under Build conditions when compared to existing or design year No-Build conditions.

The project is subject to particulate matter conformity analysis because it is within a particulate matter 2.5 non-attainment area.

As the first step in demonstrating particulate matter 2.5/particulate matter 10 conformity, the Merced County Association of Governments completed an Interagency Consultation to determine if it is a Project of Air Quality Concern as defined in 40 Code of Federal Regulations 93.116 and 93.123 and U.S. Environmental Protection Agency's Hot-Spot Guidance. Merced County Association of Governments obtained concurrence from the Environmental Protection Agency and the Federal Highway Administration that the project is not a Project of Air Quality Concern on March 22, 2022, and April 12, 2022, respectively.

Ozone Analysis

Ozone is a regional pollutant with indirect impacts, and it is infeasible to model project-level impacts on ozone due to its photochemical nature. A precursor emissions burden analysis with Caltrans Emission FACtors includes quantitative estimates for nitrogen oxides and volatile organic compounds (Table 5). Nitrogen oxides emissions during peak hour would decrease in the design year when compared to existing peak hour nitrogen oxides emissions. Nitrogen oxides emissions would decrease by 74 percent by the design year under No-Build conditions, while a decrease of 63 percent would occur under Build conditions. Nitrogen oxides emissions in the design year with the project would be 44 percent higher than No-Build conditions. However, because nitrogen oxides emissions with the project would be less than existing conditions, impacts related to nitrogen oxides would be less than significant.

As discussed in the Final Program Environmental Impact Report for the Merced County Association of Governments' 2018 Regional Transportation Plan/Sustainable Communities Strategy, the forecasted emissions for each pollutant with the implementation of the Regional Transportation Plan are within the emissions budgets, as established in the applicable San Joaquin Valley Air Pollution Control District Plan. The 2018 Merced County Association of Governments' Regional Transportation Plan contributes to positive progress toward attaining state ambient air quality standards and is consistent with the San Joaquin Valley Air Pollution Control District plans, including its regulations and incentives relative to motor vehicle emissions budgets. As a project identified in the 2018 Merced County Association of Governments' Regional Transportation Plan that is intended to provide congestion relief on State Route 59 and meet existing and future traffic demand, the project would contribute to the 2018 Merced County Association of Governments' positive progress toward cumulative/regional/indirect effects on air quality standards. Long-term operational emissions would have a less than significant impact and would not violate air quality standards or contribute substantially to an existing or projected air quality violation.

c) **Less Than Significant Impact.** Sensitive receptors include residential areas, schools, hospitals, other health care facilities, child/day care facilities, parks, and playgrounds. Land uses within the zone of greatest concern (delineated by a 500-foot buffer from the project area) include areas designated for residential, commercial, parks and open space, and public services land use. No other sensitive receptors, such as hospitals, day care facilities, or schools, occur within the 500-foot buffer of the project area.

As discussed above and shown in Table 5, operational emissions from the project would be less than significant. Furthermore, as discussed above and shown in Tables 3 and 4, construction activities from the project would not exceed emission thresholds established by the San Joaquin Valley Air Pollution Control District. Adherence to measure AQ-1 would be sufficient to ensure sensitive receptors would not be exposed to substantial pollutant concentrations and that impacts are less than significant.

D) **Less Than Significant Impact.** The project could generate emissions resulting in objectionable odors from construction, vehicles, and/or equipment exhaust from volatile organic compounds, ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, disulfides, dust, or other pollutants during project construction or operation. Such exposure would be in trace amounts, localized in the immediate area, temporary, and would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction or operation would be considered less than significant.

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. Additionally, the following avoidance and minimization measures are included in most, if not all, Caltrans projects within the San Joaquin Valley Air Pollution Control District's jurisdiction and would be applied to the project and would further reduce short-term construction-related air quality emissions.

AQ-1: Implement San Joaquin Valley Air Pollution Control District Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.

The implementing agency would require, as a standard or specification of its contract, the construction contractor(s) to implement basic control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the San Joaquin Valley Air Pollution Control District's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency would ensure, through contract provisions and specifications, that the contractor adheres to the avoidance and minimization measures before and during construction and documents compliance with the adopted avoidance and minimization measures.

Regulation 8 Control Measures for Construction Emissions of Particulate Matter 10

- All disturbed areas, including storage piles, that are not being used for construction purposes would be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or covered with a tarp or other suitable cover or vegetative ground cover.

- All onsite unpaved roads and offsite unpaved access roads would be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant.

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities would be effectively controlled of fugitive dust emissions by applying water or by presoaking.

- When materials are transported offsite, all materials would be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container would be maintained.

- All operations would limit or expeditiously remove the accumulation of mud or dirt from nearby public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions). (Using blower devices is expressly forbidden).

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles would be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant.

- Within urban areas, trackout would be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

- An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles, would implement measures to prevent carryout and trackout.

    - Carryout and trackout: Any and all materials that adhere to and agglomerates on vehicles, haul trucks, and/or equipment (including trailers, tires, etc.) and fall onto a paved public road or the paved shoulder of a paved public road.

Enhanced Control Measures for Construction Emissions of Particulate Matter 10

- Post speed limit signs on unpaved roads limiting traffic to no more than 15 miles per hour.

- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.

Additional Control Measures for Construction Emissions of Particulate Matter 10

- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.

- Construct and maintain wind barriers sufficient to limit visible dust to 20 percent opacity.

- Suspend excavation and grading activities when winds exceed 20 miles per hour.

- Limit the size of areas subject to excavation, grading, and other construction activities occurring at any one time.

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated August 2022 and Biological Assessment dated August 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?	**Less Than Significant Impact With Mitigation Incorporated**
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?	**Less Than Significant Impact With Mitigation Incorporated**
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**No Impact**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	**Less Than Significant Impact With Mitigation Incorporated**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**Less Than Significant Impact With Mitigation Incorporated**
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**

Affected Environment

The project is in Merced County, California, within the San Joaquin Valley geographic subdivision of the California Floristic Province (Jepson 2021). This region is also part of the Great Valley Section of the California Dry Steppe ecological province (U.S. Department of Agriculture 2007). The area experiences hot, dry summers and cool, wet winters, typical of a Mediterranean climate. Average summer highs range from 90 degrees Fahrenheit to 96 degrees Fahrenheit, and average winter lows range from 37

degrees Fahrenheit to 43 degrees Fahrenheit. The average annual precipitation is approximately 13 inches in the form of rain (U.S. Climate Data 2021).

A Biological Study Area was defined for biological studies of the project area and includes all areas necessary for project construction, access, and staging, as well as an approximate 50-foot buffer to record all biological features and to account for changes to the project design. The Biological Study Area is approximately 57.9 acres in area.

The Biological Study Area is heavily disturbed by human activity because it is located along the busy State Route 59, and the area is surrounded by residential and commercial properties. Roadways, roadsides, parking lots, businesses, and homes are all within the Biological Study Area. The road shoulders, nearby fields, and Black Rascal Creek provide areas that biological resources inhabit. These areas are either small in area due to surrounding buildings and paved surfaces, disturbed by human activity, trash, and noise, or actively being developed. The northern area of the project is most likely to support plant and wildlife species due to the presence of the natural communities of Black Rascal Creek, its associated wetland and riparian areas, and nearby annual grassland fields. These natural areas were identified and described based on the composition of plant species within them. The plant communities and land cover types defined within the Biological Study Area include urban/barren, ruderal, disturbed annual grassland, eucalyptus riparian, seasonal wetland, and stream channel (see Figure 4 Waters, Vegetation Communities, and Land Cover Types Within the Biological Study Area).

Figure 4 Waters, Vegetation Communities, and Land Cover Types Within the Biological Study Area

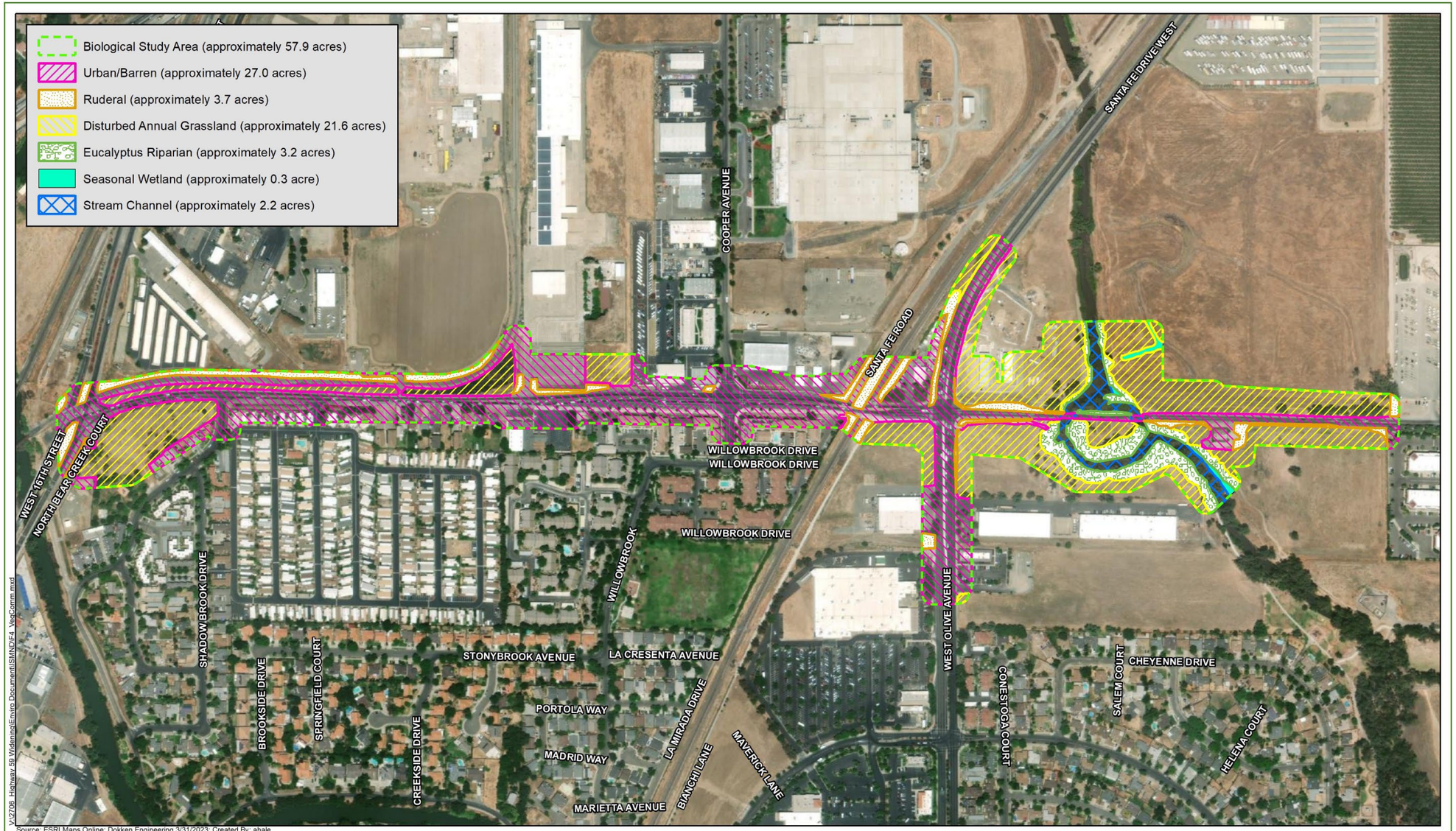


Figure 4
Waters, Vegetation Communities, and Land Cover Types within the Biological Study Area
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Vegetation Communities and Land Cover Types

Urban/Barren

Urban/barren land is defined as paved or unpaved surfaces that are otherwise void of plant species, including roadways, road shoulders, existing buildings and structures, and other anthropogenic items that do not support robust plant communities. Within the Biological Study Area, urban/barren land makes up approximately 27.0 acres (approximately47 percent of the Biological Study Area).

Ruderal

Ruderal vegetation occurs along urban and barren areas within the Biological Study Area, often as a transition between annual grassland and urban land cover. Ruderal vegetation consists of invasive, non-native, or escaped ornamental grasses and forbs that live in margins between natural communities and anthropogenic disturbances. This land cover type often does not provide suitable habitat for wildlife species. Ruderal plants within the Biological Study Area include species such as Jimsonweed *(Datura stramonium)* and cheeseweed *(Malva parviflora).* The species within ruderal vegetation areas may overlap with those found in annual grassland; the two communities are distinguished from one another by the percent ground cover of vegetation. Ruderal vegetation does not typically form dense stands or dominate the ground cover in an area. Ruderal vegetation makes up about 3.7 acres (approximately 6 percent) of the Biological Study Area.

Disturbed Annual Grassland

Annual grassland occurs within the open manufacturing industrial land of the Biological Study Area. Much of this habitat occurs on properties in the northwest section of the Biological Study Area. During biological surveys conducted in November 2020, it was noted that much of this land had been recently disced and was highly disturbed by development activities, transient settlements, and the presence of trash and debris. This vegetation community is dominated by invasive, non-native grass species, such as ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), and wild oat (*Avena fatua*). Other prevalent species include grassland-associated forb species, such as blessed milk thistle (*Silybum marianum*), Italian thistle (*Carduus pycnocephalus*), and wild radish *(Raphanus raphanistrum).* Many species found within annual grassland in the Biological Study Area are non-native or characteristic of disturbed areas. Scattered trees, either ornamental or escaped invasives, are found throughout this community. Disturbed annual grassland encompasses approximately 21.6 acres (approximately 37 percent) of the Biological Study Area.

Eucalyptus Riparian

The riparian corridor within the Biological Study Area is dominated by the invasive blue gum (*Eucalyptus globulus*) and red gum (*Eucalyptus camaldulensis)*. Many of the eucalyptus trees within the stand found in the Biological Study Area are very large, with the diameter at standard height measuring over 30 inches. The stand has a moderately

dense canopy and shades much of the floor of the riparian corridor below. Additionally, the understory is composed of species such as Fremont cottonwood (*Populus fremontii*), Chinese pistache (*Pistacia chinensis*), and Himalayan blackberry (*Rubus armeniacus*). Many of the dominant species in this vegetation community are non-native or invasive, and trash and debris litter the area, particularly by the roadway and the paved trail that follows Black Rascal Creek. Eucalyptus riparian habitat encompasses approximately 3.2 acres (approximately 6 percent) of the Biological Study Area.

Seasonal Wetland

Seasonal wetlands occur in the northernmost portion of the Biological Study Area as a part of the hydrologic system of Black Rascal Creek. During November 2020 biological surveys, three seasonal wetlands were delineated by Dokken Engineering biologists within the Biological Study Area. Seasonal wetlands were determined to have the three key characteristics of wetland features—hydrophytic vegetation, hydric soils, and wetland hydrology. Vegetation within the seasonal wetlands in the Biological Study Area includes pale spikerush (*Eleocharis macrostachya*), Mexican rush (*Juncus mexicanus*), Mediterranean barley (*Hordeum marinum ssp. Gussoneanum*), and beardless wild rye (*Elymus triticoides*). Seasonal wetland composes approximately 0.3 acre (approximately 0.5 percent) of the Biological Study Area.

Stream Channel - Black Rascal Creek

Black Rascal Creek is a jurisdictional water of the U.S. and water of the state, which runs through the Biological Study Area and creates a stream channel habitat that encompasses approximately 2.2 acres (approximately 4 percent) of the Biological Study Area. Black Rascal Creek is a tributary to Bear Creek, and the confluence of the two creeks occurs approximately 1 mile southwest of the Biological Study Area. Within the Biological Study Area, Black Rascal Creek is polluted by anthropogenic wastes, litter, and debris, particularly on the eastern side of State Route 59, where the creek runs next to a paved trail. The stream channel supports a robust eucalyptus riparian system and provides habitat opportunities for many local wildlife species.

Special-Status Species

A literature review, habitat assessment, and field surveys determined that five special-status species have the potential to occur within or next to the project area. Swainson's hawk (*Buteo swainsoni*) has a high potential to occur, and Sanford's arrowhead (*Sagittaria sanfordii*), western red bat (*Lasiurus blossevillii*), giant garter snake (*Thamnophis gigas*) and Steelhead - California Central Valley Distinct Population Segment *(Oncorhynchus mykiss irideus pop. 11)* have a low-to-moderate potential to occur.

Sanford's Arrowhead

Sanford's arrowhead is a perennial rhizomatous herb that is associated with marsh and swamp habitat types. It can be found in freshwater ponds and ditches. The species is not state or federally listed but is a California Native Plant Society rare plant with a rare

plant rank of 1B.2, meaning that it is fairly endangered in California and may be rare or endangered elsewhere. It is known from 126 occurrences in California, 79 of which have been observed in the last 20 years. The species has been eliminated from Southern California and portions of the Central Valley and is threatened by development, such as road widening and channel alternation, among other stressors (California Native Plant Society 2021).

Swainson's Hawk

The Swainson's hawk is a raptor species that is listed as threatened under the California Endangered Species Act. The species was once abundant in California but now occupies a more limited range in part due to the loss of nesting and foraging habitat that has occurred with the urbanization of California, particularly within the Central Valley. The species typically nests in stands of tall trees next to foraging habitats, such as grasslands, livestock pastures, or grain and alfalfa fields. Nesting trees are often found in riparian areas or oak savannahs. Suitable foraging habitats must be able to support populations of prey species, such as small rodents, large arthropods, amphibians, reptiles, and small birds. The species breeds in California from approximately March through October, after which it migrates great distances—as far as Central and South America—to winter (Zeiner 1988-1990).

Western Red Bat

The western red bat is not a state or federally listed species but is considered by the California Department of Fish and Wildlife to be a Species of Special Concern. The species roosts in a variety of forest and woodland habitats, primarily in trees that are located in edge habitats next to streams or fields. Suitable roosting trees have large leaves, cavities, or exfoliating bark, which provide cover from above and openings below. The western red bat can also be found in and next to urban areas. While the western red bat is not abundant throughout all of California, it may be locally common in certain parts of its range (Zeiner 1988-1990).

Giant Garter Snake

The giant garter snake is state and federally listed as threatened. This is a highly aquatic reptile species that lives in marshes, swamps, wetlands (including agricultural wetlands), sloughs, ponds, rice fields, and stream/canal habitats. During the species' active season, from April through November, giant garter snakes use nearby upland habitats for basking and emergent, herbaceous wetland vegetation for cover and foraging. The species also requires adequate flowing water during this time. Outside of the active season, mammal burrows are used for estivation—when animals are dormant because weather conditions are very hot and dry. The giant garter snake has been eliminated from a large part of its former range, particularly in the San Joaquin Valley. Habitat loss and introduced predatory fish are cited as substantial causes of decline.

Steelhead - California Central Valley Distinct Population Segment

The steelhead - California Central Valley Distinct Population Segment is federally listed as threatened. This distinct population segment includes naturally spawned anadromous steelhead that originates below impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries. Spawning occurs in small freshwater streams and tributaries from January through March, where cool, well-oxygenated water is available. Factors that have contributed to the decline of the species include overfishing, loss of freshwater habitat, hydropower development, and hatchery practices.

Black Rascal Creek may serve as a freshwater aquatic habitat for the species because it is a tributary to Bear Creek and, ultimately, the San Joaquin River. There are no physical barriers to fish migration between the San Joaquin River and the Biological Study Area on Black Rascal Creek; therefore, the species has the potential to access the Biological Study Area. Despite physical accessibility, there have been no California Natural Diversity Database occurrences of the species within Black Rascal Creek, and the potential migration path through Bear Creek contains several stretches of a channel that lacks riparian vegetation or deep water flow for part of the year. Due to this, access to the Biological Study Area is expected to be limited to certain times of the year or not at all based on migration habitat conditions. Furthermore, downstream connecting waterways (Bear Creek, San Joaquin River) in this region have a documented daily maximum temperature of approximately 85 degrees Fahrenheit which is a temperature that may be unsuitable for the species (USGS 2022); therefore, the species has a low potential to occur within the project area.

Environmental Consequences

a) **Less Than Significant Impact With Mitigation Incorporated.** The project would have a less than significant impact with mitigation incorporated on special-status species. Five special-status species have the potential to occur within or next to the project area. Swainson’s hawk has a high potential to occur, and Sanford’s arrowhead, western red bat, giant garter snake, and Steelhead - California Central Valley Distinct Population Segment have a low-to-moderate potential to occur. Project impacts on each of these species are discussed below.

Project Impacts to Swainson’s Hawks

The project has the potential to indirectly impact Swainson’s hawks due to the loss of potential nesting habitat. To widen State Route 59 and to redirect Black Rascal Creek channel flows, several riparian trees would be removed from the riparian corridor. Approximately 44 eucalyptus trees are expected to be removed, although the final number of trees would not be determined until the final design. With the incorporation of the following avoidance and minimization measures, BIO-12 through BIO-14, take of Swainson’s hawk is not expected, and an Incidental Take Permit would not be required.

Project Impacts to Western Red Bats

Project activities could directly impact western red bats during the removal of riparian trees, which is required for road widening. Bats may be harmed if they are roosting in trees that would be removed. In addition, the species could be indirectly impacted by temporary or permanent habitat loss within the Biological Study Area. With the incorporation of BIO-15, direct impacts to western red bats are not expected, and compensatory mitigation specific to the species is not required.

Project Impacts to Giant Garter Snakes

The project would permanently impact about 0.28 acre of giant garter snake aquatic habitat and about 0.26 acre of giant garter snake upland habitat (eucalyptus riparian habitat). Permanent habitat loss would include the removal of eucalyptus riparian and stream channel habitat required for the roadway widening, bridge widening, placement of a culvert at the southern crossing of Black Rascal Creek, and the sidewalk realignment. Permanent habitat loss would decrease the value of the suitable habitat present within the Biological Study Area and potentially expose the species to losses in sheltering, foraging, basking, and breeding opportunities. Furthermore, the project would temporarily impact about 1.23 acres of aquatic habitat and 1.97 acres of upland habitat due to equipment access, movement needs, and water diversion efforts during construction.

Because giant garter snakes have a low-to-moderate potential to occur within the Biological Study Area, take of the species as a result of project construction is not expected. With the incorporation of avoidance and minimization measures BIO-1, BIO-12, and BIO-16 through BIO-23, giant garter snakes would be excluded from the impact area and would not likely be encountered during construction. Direct impacts would be avoided, and an Incidental Take Permit would not be required. As such, the project is *Not Likely to Adversely Affect* the species. On September 8, 2022, an informal Section 7 Consultation with the U.S. Fish and Wildlife Service was initiated. On February 15, 2023, the U.S. Fish and Wildlife Service agreed with the *Not Likely to Adversely Affect* determination by issuing a letter of concurrence.

Project Impacts to Steelhead - California Central Valley Distinct Population Segment

The project would permanently impact about 0.28 acre of Steelhead - California Central Valley Distinct Population Segment habitat and temporarily impact about 1.23 acres of steelhead habitat. Temporary habitat loss would be due to equipment access, movement needs, and water diversion efforts during construction. Permanent habitat loss would include the removal of eucalyptus riparian and stream channel habitat required for the roadway widening, bridge widening, placement of a culvert at the southern crossing of Black Rascal Creek, and the sidewalk realignment. Loss of eucalyptus riparian and stream channel habitat could result in decreased vegetative cover and protection from predation for steelheads. These impacts could potentially decrease Steelhead - California Central Valley Distinct Population Segment migration habitat, although these effects would be minimal and would not restrict fish passage or

impede future fish migration. The species would be expected to use Black Rascal Creek to the same extent following project completion.

Additionally, the project may use impact pile driving to install bridge piers. Pile driving may be completed using vibratory pile driving, impact hammer pile driving, or a combination of both methods. Impact hammer pile driving is a potential stressor to fish, such as Steelhead – California Central Valley Distinct Population Segment. Impact hammer pile driving can generally cause auditory tissue damage, rupture of swim bladders, and capillary rupture. These effects may occur when fish of certain masses are near impact hammer pile driving. However, pile driving required for the project would be minimized and limited to the low-flow period, when steelheads are not expected to use the project area. Further, due to poor migratory habitat conditions, including a lack of cover vegetation, high water temperatures, and low water levels during the dry season, the species has a very low potential to access the project area during construction. Because the species is unlikely to occur and would be excluded with a water diversion and fish exclusion plan, potential hydroacoustic stressors related to pile driving are not expected to affect steelheads.

With the incorporation of avoidance, minimization, and/or mitigation measures BIO-12, BIO-24 through BIO-27, and BIO-37, Steelhead - California Central Valley Distinct Population Segment would not likely be encountered during construction, and the project is *Not Likely to Adversely Affect* the species. On September 8, 2022, an informal Section 7 Consultation with the National Marine Fisheries Service was initiated. On November 1, 2022, the National Marine Fisheries Service agreed with the *Not Likely to Adversely Affect* determination by issuing a letter of concurrence.

Project Impacts to Sanford's Arrowheads

While Sanford's arrowheads were not seen within the Biological Study Area at the time of the biological surveys, the species may still occur within project impact areas, and the species has the potential to be directly impacted by project activities, such as the road widening, channel redirection, and the establishment of staging and access areas. All these activities would infringe upon existing suitable habitats for Sanford's arrowheads. However, with the incorporation of avoidance and minimization measure BIO-11, project impacts on Sanford's arrowheads would be negligible, if not nonexistent.

b) **Less Than Significant Impact With Mitigation Incorporated.** Habitats are considered to be of special concern based on federal, state, or local laws regulating their development, limited distributions, and/or the habitat requirements of special-status plants or animals occurring onsite. Wetlands and waters of the U.S. are also considered sensitive by both federal and state agencies. The natural communities of special concern within the Biological Study Area were identified as Black Rascal Creek, eucalyptus riparian corridor, and seasonal wetland.

Project Impacts to Black Rascal Creek

The project would have several impacts to Black Rascal Creek, particularly due to the channel realignment, which would function to correct the overtopping of the creek during

large storm events and to improve the hydraulics of the system. The project would direct the main flow channel to the northern crossing and replace the southern bridge with culverts that would function as an emergency bypass during very heavy creek flows. In total, about 0.28 acre of Black Rascal Creek would be permanently impacted due to the relocation of the channel and the widening of State Route 59. About 1.23 acres of Black Rascal Creek would be temporarily impacted during construction due to equipment access, movement needs, and water diversion efforts. Figure 5 Impacts to Giant Garter Snake and Steelhead – California Central Valley Distinct Population Segment Habitat and Table 7 Jurisdictional Waters and Impact Quantities outline these impacts, along with impacts to other jurisdictional features within the Biological Study Area. Minimization measures BIO-1 through BIO-7 would reduce indirect impacts to Black Rascal Creek, such as those that have the potential to occur due to construction-related erosion and discharge of pollutants or other materials. Additionally, mitigation measures BIO-8 and BIO-9 would be implemented to mitigate the permanent and temporary loss of Black Rascal Creek.

Project Impacts to the Eucalyptus Riparian Corridor

The project would permanently impact about 0.26 acre of the eucalyptus riparian corridor due to the widening of Black Rascal Creek. The project would temporarily impact about 1.97 acres of the eucalyptus riparian corridor due to equipment access and movement needs during construction. Within these impact areas, the project would require the removal of about 44 non-native eucalyptus riparian trees; however, this number is subject to change depending on the final design. Removing non-native eucalyptus riparian trees would benefit the riparian corridor and reduce the spread of non-native species in the watershed.

The project would remain compliant by obtaining a tree removal permit before any tree removal work per the City of Merced's tree ordinance (Chapter 14.12 - Trees, Shrubs, and Plants). With the incorporation of avoidance and minimization measures BIO-1 through BIO-8, negative impacts to the riparian corridor would be minimized to the extent feasible. Implementation of mitigation measures BIO-27 and BIO-36 would ensure that impacts to trees would be reduced to a less than significant level. Temporary and permanent impacts from the removal of non-native eucalyptus riparian trees would benefit the riparian corridor. As such, compensatory mitigation for eucalyptus riparian habitat is not proposed. Please see Figure 5, Impacts to Giant Garter Snake and Steelhead – California Central Valley Distinct Population Segment Habitat, and Table 6 Jurisdictional Waters Impact Quantities.

Project Impacts to Seasonal Wetlands

Seasonal wetlands delineated during survey efforts are jurisdictional under the U.S. Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Wildlife. The project is not expected to impact seasonal wetlands. Work within Black Rascal Creek and its associated riparian corridor would occur outside of delineated wetland boundaries. Furthermore, avoidance and

minimization measures, specifically BIO-10, would be implemented to avoid encroachment onto wetland areas.

Figure 5 Impacts to Giant Garter Snake and Steelhead - California Central Valley Distinct Population Segment Habitat

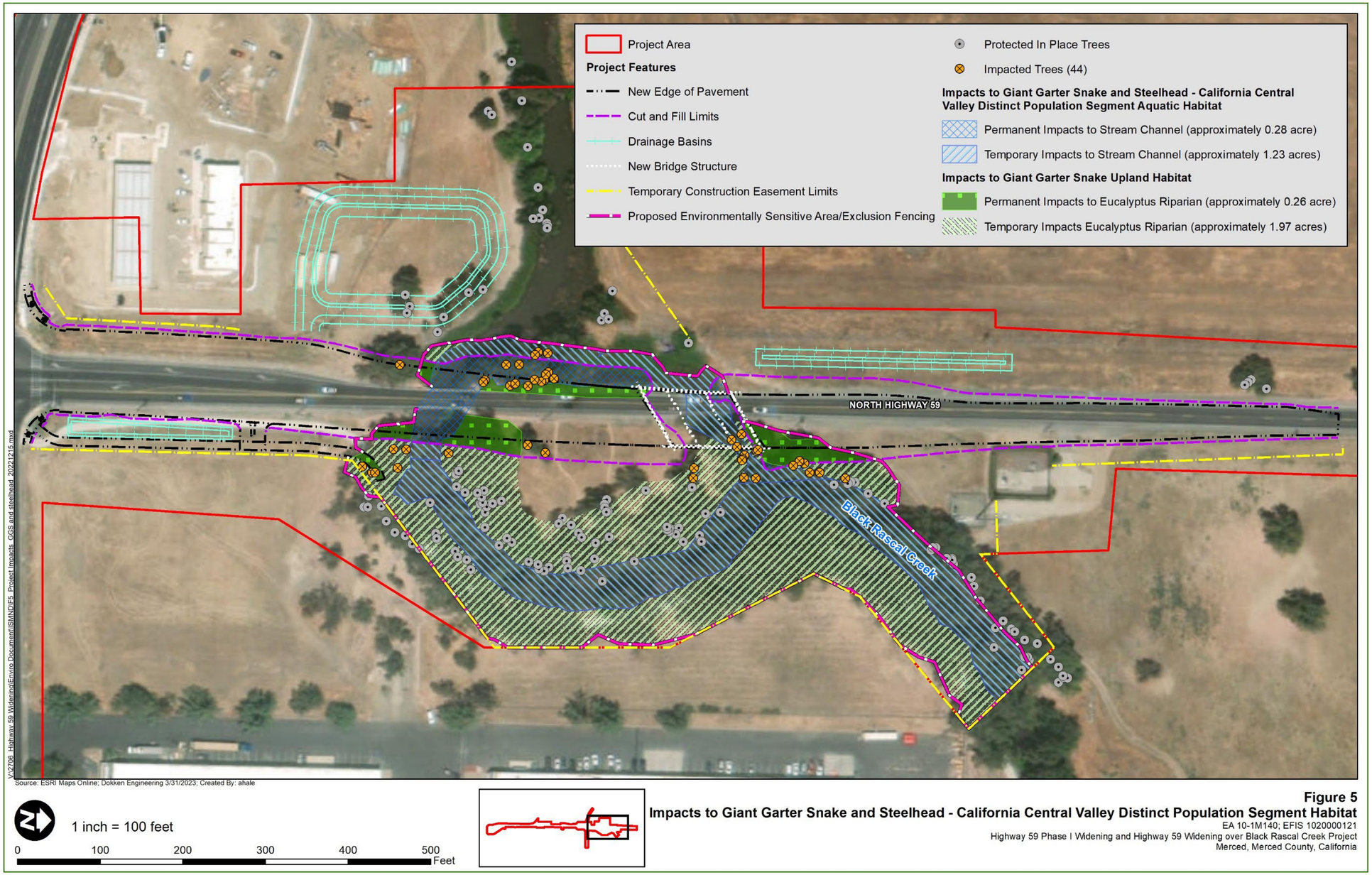


Figure 5
Impacts to Giant Garter Snake and Steelhead - California Central Valley Distinct Population Segment Habitat
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Table 6 Jurisdictional Waters Impact Quantities

Impact Type (Acres)	Jurisdictional Feature: Stream Channel-Black Rascal Creek (Waters of the U.S., Waters of the State)	Jurisdictional Feature: Seasonal Wetland (Waters of the U.S., Waters of the State)	Jurisdictional Feature: Eucalyptus Riparian Corridor
Temporary	1.23	0	1.97
Permanent	0.28	0	0.26
Total	**1.51**	**0**	**2.23**

Additionally, avoidance and minimization measures BIO-28 and BIO-29 would be implemented to prevent the spread or infestation of invasive species, further reducing impacts to riparian or other sensitive habitats.

d) **Less Than Significant Impact With Mitigation Incorporated.** Database research indicated that the Biological Study Area is within Essential Fish Habitat for Chinook salmon (*Oncorhynchus tshawytscha*). Impacts to Essential Fish Habitat, including the removal of riparian vegetation and the placement of bridge piles and fill, are expected to occur. On September 8, 2022, an informal Section 7 Consultation with the National Marine Fisheries Service was initiated. On November 1, 2022, the National Marine Fisheries Service issued a letter of concurrence with additional conservation recommendations to minimize impacts to Essential Fish Habitat, which have been incorporated as biological measures BIO-26, BIO-27, and BIO-37. With the implementation of measures BIO-12, BIO-24 through BIO-27, and BIO-37, the project would avoid, minimize, and mitigate adverse effects to Essential Fish Habitat.

The project would permanently impact about 0.28 acre of Steelhead – California Central Valley Distinct Population Segment habitat and temporarily impact about 1.23 acres of Steelhead – California Central Valley Distinct Population Segment habitat. Permanent habitat loss could potentially decrease Steelhead – California Central Valley Distinct Population Segment migration habitat, although these effects would be minimal and would not restrict fish passage or impede future fish migration. The species would be expected to use Black Rascal Creek to the same extent following project completion.

Additionally, the project may use impact pile driving to install bridge piers. Pile driving may be completed using vibratory pile driving, impact hammer pile driving, or a combination of both methods. Impact hammer pile driving is a potential stressor to fish, such as Steelhead – California Central Valley Distinct Population Segment. Impact hammer pile driving can generally cause auditory tissue damage, rupture of swim bladders, and capillary rupture. These effects may occur when fish of certain masses are near impact hammer pile driving. However, pile driving required for the project would be minimized and limited to the low-flow period, when steelheads are not expected to use the project area. Further, due to poor migratory habitat

conditions, including a lack of cover vegetation, high water temperatures, and low water levels during the dry season, the species has a very low potential to access the project area during construction. Because the species is unlikely to occur and would be excluded with a water diversion and fish exclusion plan, potential hydroacoustic stressors related to pile driving are not expected to affect steelheads.

With the incorporation of avoidance, minimization, and mitigation measures BIO-12, BIO-24 through BIO-27, Steelhead – California Central Valley Distinct Population Segment are not likely to be encountered during construction, and the project is *Not Likely to Adversely Affect* the species. On September 8, 2022, an informal Section 7 Consultation with the National Marine Fisheries Service was initiated. On November 1, 2022, the National Marine Fisheries Service agreed with the *Not Likely to Adversely Affect* determination by issuing a letter of concurrence.

Native bird species are protected under the Migratory Bird Treaty Act and have the potential to nest within the Biological Study Area, specifically within the mixed oak woodland, montane riparian, and mixed coniferous forest habitat types. Avoidance and minimization measure BIO-30 would be implemented to avoid impacts to migratory birds to the greatest extent feasible.

Lastly, avoidance and minimization measure BIO-31 through BIO-35 would avoid impacts to general wildlife in the area, further reducing impacts.

e) **Less Than Significant Impact With Mitigation Incorporated.** The project would require the removal of about 44 non-native eucalyptus riparian trees; however, this number is subject to change depending on the final design. Removing non-native eucalyptus riparian trees would benefit the riparian corridor and reduce the spread of non-native species in the watershed.

The project would remain compliant by obtaining a tree removal permit before any tree removal work per the City of Merced's tree ordinance (Chapter 14.12-Trees, Shrubs, and Plants). With the incorporation of measures BIO-1 through BIO-8, negative impacts to the riparian corridor would be minimized to the extent feasible. Implementation of mitigation measures BIO-27 and BIO-36 would ensure impacts to trees would be reduced to less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures BIO-8 and BIO-9 would be implemented to mitigate the permanent and temporary loss of Black Rascal Creek. Mitigation measures BIO-24 through BIO-27 would ensure all impacts to special-status fish are reduced to less than significant. Mitigation measures BIO-27 and BIO-36 would reduce impacts to tree preservation. The remaining avoidance and minimization measures, along with Best Management Practices, have been

incorporated into the project design to minimize impacts to special-status fish and wildlife species and natural communities to the greatest extent practicable.

BIO-1: Best Management Practices: Construction Best Management Practices that are consistent with Caltrans' most recent manuals would be developed for the water quality and introducing construction-related contaminants and sediment. Best management practices would address soil stabilization, sediment control, wind erosion control, stormwater management, and waste management practices. City/Caltrans personnel and/or the contractor would perform routine inspections of the construction area to verify that the Best Management Practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector would inspect the site before and after a rain event to ensure that stormwater practices are adequate.

- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources.

- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.

- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities, such as traffic and grading activities.

- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.

- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered as feasible.

- All erosion control measures and stormwater control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented.

- All disturbed areas would be restored to preconstruction contours and revegetated, where applicable, either through hydroseeding or other means, with weed-free native plant seed mix.

- All construction materials would be hauled offsite after completion of construction.

- To avoid entangling the giant garter snake and other wildlife, erosion control methods would not use monofilament plastic mesh, line or jute

netting, tightly woven fiber netting, or similar materials. Appropriate alternatives include materials like burlap-wrapped fiber rolls, coconut coir matting, sediment fencing, and tackified hydroseeding compounds.

- All concrete curing activities would minimize spray drift to prevent compounds from entering the waterways.

BIO-2: Before the start of construction activities, the project limits, in proximity to Black Rascal Creek and eucalyptus riparian habitat, must be delineated with high-visibility Environmentally Sensitive Area fencing or stakes to ensure construction would not further encroach into waters or sensitive habitats. The project biologist would periodically inspect the Environmentally Sensitive Area to ensure sensitive locations remain undisturbed.

BIO-3: Refueling or maintaining equipment without secondary containment would not be allowed to occur within 100 feet of Black Rascal Creek. All refueling and maintenance that must occur within 100 feet of the creek must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-4: Equipment would be checked daily for leaks and would be well maintained to prevent lubricants and any other harmful materials from entering Black Rascal Creek and the associated riparian area.

BIO-5: Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitats and delineated with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.

BIO-6: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-7: Secondary containment consisting of plastic sheeting or other impermeable sheeting would be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or spilling directly into Black Rascal Creek. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).

BIO-8: All temporary impact areas within Black Rascal Creek, eucalyptus riparian habitat, and annual grasslands would be regraded to preconstruction contours, cleaned of any trash or debris, and seeded with a native seed mix specific to that habitat type. This would allow natural habitats to return to preconstruction conditions.

BIO-9: Permanent impacts to waters of the U.S./waters of the State (Black Rascal Creek) would be mitigated via the payment of an In-Lieu Fee or other U.S. Army Corps of Engineers-approved compensation method for waters of the U.S./waters of the State, at a 1-to-1 ratio. The final mitigation method would satisfy the requirements of the California Department of Fish and Wildlife, Regional Water Quality Control Board, and U.S. Army Corps of Engineers and would be finalized during the permitting phase of the project.

BIO-10: Before construction, seasonal wetlands within the project area would be delineated with Environmentally Sensitive Area fencing at the direction of the project biologist and designated as a no-work zone.

BIO-11: Before construction, a focused plant survey would occur within the typical blooming season of special-status plant species that have the potential to occur within the project area (for Sanford's arrowhead, May through October). The survey would be conducted by a qualified biologist to identify populations of Sanford's arrowhead and other special-status plant species within the project area. If special-status plant species are seen within the project area, the identified plant or population of plants would be protected with Environmentally Sensitive Area orange snow fencing, and work would be prohibited from occurring within the delineated area. If Environmentally Sensitive Area delineation is infeasible due to project design, then plant relocations may be conducted by the project biologist in coordination with the City of Merced and the California Department of Fish and Wildlife.

BIO-12: Before the start of work/ground disturbance, a qualified biologist would conduct worker environmental awareness training for all construction personnel, including contractors, subcontractors, and contractors' representatives, covering the status of the species, how to identify the species and its habitat, the importance of avoiding impacts to the species, the laws that protect it, and what to do if an individual is encountered during construction. New construction personnel who are added to the project after the training is first conducted would also be required to take the training. Documentation of the training, including sign-in sheets, would be kept on file and made available to the U.S. Fish and Wildlife Service upon request.

BIO-13: The removal of large (greater than 6 inches in diameter at standard height) diameter trees would be avoided to the greatest extent practicable. Any large-diameter trees that cannot be protected within the project impact area would be removed outside of the Swainson's hawk nesting season (February 1 to September 30) before construction.

BIO-14: In accordance with the Swainson's Hawk Technical Advisory Committee Recommended Timing and Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley (2000), protocol-level surveys would be conducted during the appropriate survey periods immediately before construction to determine the presence/absence of the species. If a

Swainson's hawk is discovered 0.25 mile from the project area, a 500-foot no-work buffer would be installed around the nest using Environmentally Sensitive Area fencing, and the project biologist would monitor the nest until it is determined that the young have fledged. A reduced buffer or additional appropriate protective measures may be developed in coordination with the California Department of Fish and Wildlife.

BIO-15: Before construction, trees that are planned for removal would be assessed by a qualified biologist to determine if the trees are suitable bat habitat trees. If any of the trees required for removal are determined to be suitable bat habitat trees, such trees would be marked. Removal of bat habitat trees must occur outside of the bat breeding season (April 1 through August 31) to avoid impacts to maternity colonies if feasible. If bat habitat trees must be removed during the bat breeding season, then a qualified biologist would survey the trees immediately before removal for the presence of bats within the trees. If any such trees are found to support bat maternity colonies, the biologist would coordinate with the City of Merced to determine a bat exclusion plan before tree removal.

BIO-16: All construction activities at the northern end of the project (in and around Black Rascal Creek) would occur during the active season for the giant garter snake (approximately May 1 to October 1) when the species is more likely to be moving around and can more easily avoid being disturbed.

A. If work must continue outside of the active season, ground-disturbing activities must start during the active season (before October 1). This way, no habitat within the construction areas would remain available for the giant garter snake to use as refugia during the inactive season; this would deter individuals from moving into active work zones.

BIO-17: All fencing would be composed of appropriate materials that do not risk entangling the giant garter snake or other wildlife. Before the start of work, a qualified biologist would guide the installation of high-visibility exclusion fencing along the edge of work areas in sensitive habitats for the giant garter snake (e.g., Black Rascal Creek and the riparian corridor). The fencing would denote the limits of the work areas to prevent ground disturbance and parking/staging from encroaching outside the designated work zones, to prevent the inadvertent discharge of construction-generated materials into the creek, and to prevent the species from entering active work areas. The fencing would be buried at least six inches below ground or secured with weighted material. A qualified biologist would ensure, on a regular basis, that all fencing is maintained for the duration of construction and is repaired or replaced as necessary.

BIO-18: No more than 24 hours before the start of groundbreaking activities at Black Rascal Creek, a qualified biologist would conduct a preconstruction survey in suitable aquatic and upland habitats for the giant garter snake. If

construction stops for two weeks or longer, a new preconstruction survey would be completed no more than 24 hours before restarting work. If the species is discovered during surveys or at any time during construction, the city, in coordination with Caltrans, would stop work where the individual occurs and contact the U.S. Fish and Wildlife Service to discuss how to proceed and possible initiation of formal consultation.

BIO-19: After April 15, dewatered habitats would remain dry for at least 15 consecutive days before excavating, filling, or otherwise working in the dewatered habitat.

BIO-20: All construction pipes or similar structures/materials stored on the construction site overnight within 200 feet of Black Rascal Creek would be thoroughly inspected for the species before capping, moving, burying, or otherwise using them. Similarly, vehicles and other equipment that could provide shade or shelter would also be inspected for animal presence before use. If an animal is observed during these inspections, the structure or vehicle would not be disturbed until the individual voluntarily leaves.

BIO-21: A qualified biologist would be present onsite to monitor vegetation removal in upland habitat (i.e., vegetated areas within 200 feet of the Black Rascal Creek channel) as well as construction activities in and next to the creek.

BIO-22: Clearing vegetation within 200 feet of suitable giant garter snake aquatic habitat would be restricted to the minimum area necessary to facilitate construction. The movement of heavy equipment would be confined to existing roadways or temporary construction access roads.

BIO-23: To prevent the inadvertent entrapment of the giant garter snake or other wildlife within 200 feet of Black Rascal Creek during construction, all excavated, steep-walled openings (e.g., holes, trenches) more than 6 inches deep would be covered at the close of each working day or provided with one or more escape ramps constructed of earth fill or planks. Before any such openings are filled, they would be thoroughly inspected for trapped wildlife. If at any time a trapped or injured giant garter snake is discovered, work would stop immediately, and Caltrans would contact the U.S. Fish and Wildlife Service.

BIO-24: Pile driving activities within Black Rascal Creek would be limited to June 1 through October 1 during the summer low-flow period, when salmonids are not expected to occur within the project area due to high water temperatures and low channel flow downstream.

BIO-25: Before construction, the contractor would prepare a water diversion and fish exclusion plan. The water diversion and fish exclusion plan would be either developed or approved by a biologist with knowledge of the life history

of salmonid fish. The water diversion and fish exclusion plan would include measures to exclude fish from Black Rascal Creek within the action area before water diversion. The National Marine Fisheries Service would approve a water diversion and fish exclusion plan before construction.

BIO-26: Permanent effects to stream channel habitat would be mitigated via the purchase of salmonid-specific mitigation credits through an in-lieu fee program, such as San Joaquin Aquatic Resource credits from the National Fish and Wildlife Foundation's Sacramento District California In-Lieu Fee Program.

BIO-27: Riparian shade trees that must be removed due to construction activities would be mitigated through the planting of native tree species onsite at a 3-to-1 ratio to ensure a 1-to-1 replacement. Should it be determined that onsite mitigation is infeasible, an offsite mitigation option would also be considered.

BIO-28: Before arriving at the project site and before leaving the project site, construction equipment that may contain invasive plants and/or seeds would be cleaned to reduce the spreading of noxious weeds.

BIO-29: Following the completion of construction, temporarily disturbed areas within the project footprint would be decompacted and regraded to return the areas to preconstruction contours and conditions. These areas would be hydroseeded using a weed-free native plant seed mix.

BIO-30: The construction contractor would avoid removing vegetation during the nesting bird season (February 1 to September 30). If vegetation must be removed within the nesting season, a preconstruction nesting bird survey must be conducted no more than three days before vegetation removal. Vegetation must be removed within three days from the nesting bird survey.

A minimum 100-foot no-disturbance buffer would be established around any active nest of migratory birds, and a minimum 300-foot no-disturbance buffer would be established around any nesting raptor species. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with the City of Merced) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by the project biologist and approved by the City of Merced.

BIO-31: If wildlife species are encountered during construction, they would be allowed to leave the area unharmed. Construction crew members should stop work near observed wildlife until the wildlife voluntarily leaves the area. To allow wildlife enough time to escape clearing and grubbing activities,

equipment would be operated slowly (no greater than 5 miles per hour) during initial clearing and grubbing.

BIO-32: All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed, secured containers and removed daily from the project site to reduce the potential for attracting predator species.

BIO-33: No rodenticides or herbicides would be used on the project site during construction.

BIO-34: To eliminate the potential for disturbance or injury to or death of the species resulting from the presence of pets and firearms, neither (except for firearms carried or working animals handled by authorized law enforcement officials) would be allowed on the project site.

BIO-35: All project-related vehicles would observe a daytime speed of no more than 20 miles per hour and a nighttime speed of no more than 10 miles per hour in all project areas except on the highway. Off-road travel outside of designated project areas would be prohibited. Project personnel would be provided with guidance on vehicle use and speed limits.

BIO-36: Before cutting, trimming, or removing trees, permission must be obtained from the City of Merced, per Municipal Code 14.12.040. Mitigation for removing trees would be determined through a permit approval process and may be accomplished through onsite planting, offsite planting, or payment through an in-lieu fee program.

BIO-37: Engineering plans will be provided to the contractors that clearly show the amount of fill to be placed at the project site.

2.1.5 Cultural Resources

Considering the information in the Historic Property Survey Report dated August 2022 and the Archaeological Survey Report dated June 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**Less Than Significant Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**Less Than Significant Impact**

Affected Environment

The Area of Potential Effects for the project was established in consultation with Raymond Benson, Caltrans Professionally Qualified Staff Principal Investigator in Prehistoric and Historical Archaeology, and Caltrans Project Manager Charlie Do on May 26, 2022 (see Figure 6 Area of Potential Effects).

The horizontal Area of Potential Effects was established as the area of direct and indirect effects and consists of an approximately 35-acre area. This includes all staging areas, street closures, vegetation/tree removal, approach roadway realignment, bridge replacements, grading activities, channel realignment, temporary construction easements, potential utility relocations, and minimal right-of-way acquisition. The Area of Potential Effects extends north to south along an estimated 1.1-mile stretch of State Route 59 from its 16th Street intersection to Buena Vista Drive.

The vertical Area of Potential Effects consists of a maximum of 15 feet of depth from the existing ground surface to below ground surface to accommodate earthwork for the construction of bridge abutments. The minimum depth of ground disturbance is about 5 feet below the ground surface, required for all roadway approach realignment work, vegetation removal, channel realignment, and fill compaction.

Efforts to identify potential archaeological resources in the Area of Potential Effects included background research, a search of site records and survey reports on file at the Central California Information Center, efforts to coordinate with Native American representatives, and a pedestrian surface survey.

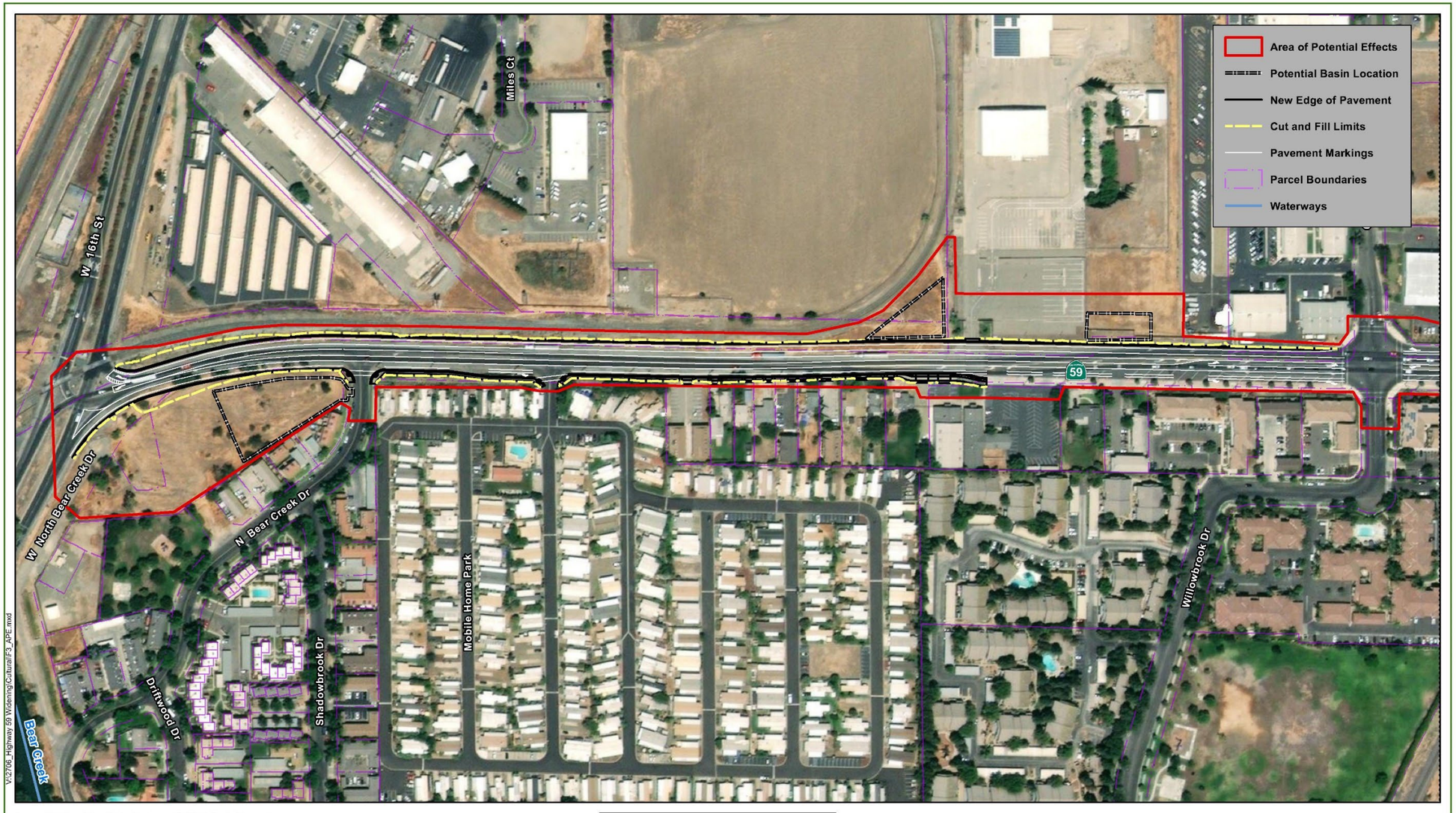
The records search disclosed 16 Central California Information Center previously recorded resources located within, or partially within, the Area of Potential Effects. All 16 resources are historic-era cultural resources, but none of them have been eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources.

The pedestrian survey identified one previously unrecorded cultural resource within the Area of Potential Effects: an abandoned siphon. This siphon is made up of two concrete conduits, which would have conveyed water beneath a now-abandoned railroad berm (one of the 16 historic-era resources previously determined ineligible for listing in the National Register of Historic Places). It is located just south of Rascal Creek, west of State Route 59, and is oriented east-west, perpendicular to the north-south alignment of the

railroad. The siphon is associated with the now-removed railroad berm and is no longer in use. This feature is similar to the siphons identified north of the creek. This resource qualifies as a Type 1 exempt resource (minor water conveyance feature) per the Caltrans Section 106 Programmatic Agreement Attachment 4, Properties Exempt from Evaluation because it is a ubiquitous water conveyance feature found throughout the U.S. across many time periods. As such, it does not have the potential to be considered a historic property under Section 106 of the National Historic Preservation Act or a historical resource under the California Register of Historical Resources. No further cultural resources were identified.

Figure 1 Area of Potential Effects

Figure 6
Area of Potential Effects
Page 1 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California



Source: ESRI Maps Online; Dokken Engineering 3/11/2022; Created By: amyd

1 inch = 200 feet

0 200 400 600 800 1,000 Feet

Figure 6
Area of Potential Effects
Page 2 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

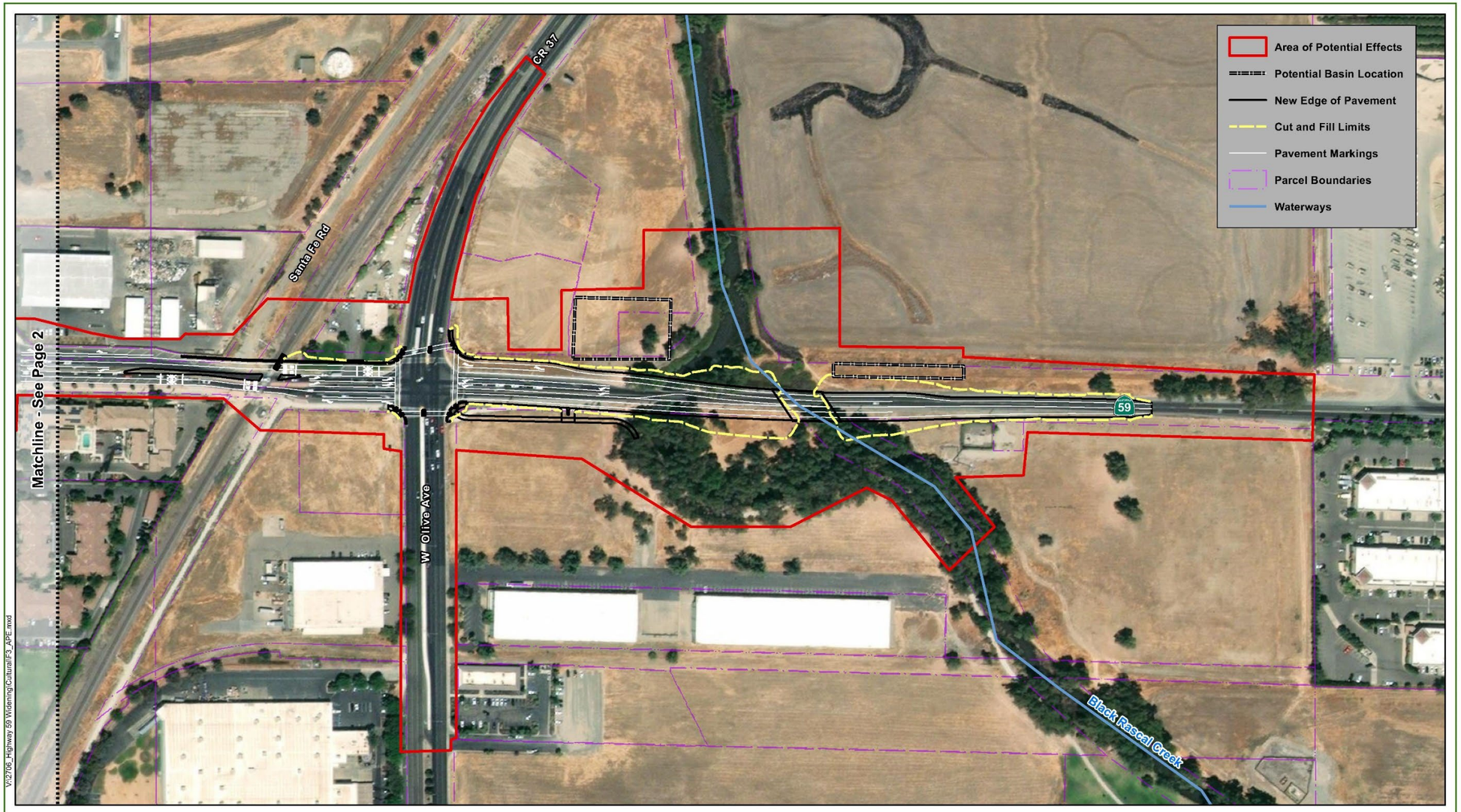


Figure 6
Area of Potential Effects
Page 3 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Buried Archaeological Site Potential

As with all projects requiring ground disturbance, there is always the possibility that unknown cultural resources may be encountered. To determine the potential that subsurface cultural resources are present within the vertical Area of Potential Effects, the buried archaeological site potential was analyzed. Current knowledge of the geomorphic history of the region provides a strong basis for assessing the potential for discovering buried archaeological sites. The project area is on the southeastern side of the Great (Central) Valley physiographic province. The Great Valley is a relatively flat alluvial plain about 400 miles long and 50 miles wide that trends northwest-to-southeast (Fenneman 1931). The main geologic formations in the project area consist of the upper and lower Modesto Formation and Holocene alluvium. Soils that are associated with early-to-middle Holocene eolian sand dunes, which sometimes overlie the upper Modesto terraces and fans in Merced County, are known to be sensitive for buried Holocene-aged archaeological deposits (LSA Associates 2018).

While there is a potential for subsurface features associated with the historic resources in the area, due to the previously recorded resources, it is unlikely that historic-era subsurface features (privies, cellar/subsurface storage, refuse pits/piles) are in the roadway, roadway shoulder, or near the Black Rascal Creek areas. Further, the amount of historic and modern disturbances throughout the project area, combined with the erosional environment of the creek channel, it is further unlikely that any intact refuse pits, privies, or buried Native American resources would be present.

Given the project area's location within an area that has mainly been used as a road and railroad, the extensive landscape modification (both historic and modern), and considering that the construction footprint would occur largely within previously disturbed soils, the potential for a buried archaeological site to be located within the Area of Potential Effects is considered to be low.

Environmental Consequences

a) **Less Than Significant Impact.** Efforts to identify potential historical resources in the Area of Potential Effects included background research, a search of site records and survey reports on file at the Central California Information Center, coordination with Native American representatives, and a pedestrian ground surface inventory. The records search identified 16 resources within or partially within the Area of Potential Effects. All 16 resources are historic-era cultural resources, but none have been eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources. Further, the new cultural resource identified during the field survey consists of a ubiquitous water feature and a siphon that does not have the potential to be a historic property under Section 106 of the

National Historic Preservation Act or a historical resource under the California Register of Historical Resources.

While there are no historic properties or historical resources that have been identified within the Area of Potential Effects, with any project requiring ground disturbance, there is always the possibility that unknown cultural resources may be encountered. With the implementation of measure CR-1, potential impacts would be less than significant.

b) **Less Than Significant Impact.** A records search conducted at the Central California Information Center indicated that 16 known historic-era cultural resources were recorded partially within the Area of Potential Effects; however, none of them have been eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources. Further, while the archaeological field investigation identified one new historic-era resource, the siphon, this resource is exempt from evaluation because it is a ubiquitous water feature found throughout the U.S. in many time periods.

Given the project area's location within an area that has mainly been used as a road and railroad, the extensive landscape modification (both historic and modern), and considering that the construction footprint would occur largely within previously disturbed soils, the potential for a buried archaeological site to be within the Area of Potential Effects is considered to be low.

Despite the lack of identified cultural resources and the low potential for buried cultural resources to be present within the Area of Potential Effects, with any project requiring ground disturbance, there is always the possibility that unknown archaeological resources may be encountered.

With the implementation of measure CR-1, potential impacts would be less than significant.

c) **Less Than Significant Impact.** Disturbance to human remains, including those interred outside of formal cemeteries, is not expected given the extensive modifications made to the Area of Potential Effects as a result of transportation, business, and residential development and because no known cemetery exists within the area. For these reasons, the potential for buried cultural resources, including human remains, to be present within the Area of Potential Effects is low; however, with any project that requires ground disturbance, there is always the possibility that unknown archaeological resources may be encountered. With the implementation of measure CR-2, potential impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. Additionally, the following avoidance and minimization measures are included

in most, if not all, Caltrans projects and would be applied to the project and would further reduce impacts to cultural resources to a less than significant level.

CR-1: If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. An additional archaeological survey would be needed if project limits are extended beyond the present survey limits.

CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains, and grave goods, regardless of age, and provide a method and means for the appropriate handling of such remains. If human remains are encountered, work should stop in that vicinity, and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.

2.1.6 Energy

Considering the information in the City of Merced General Plan dated 2015, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**Less Than Significant Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

Affected Environment

Natural gas and electrical power in the City of Merced are supplied by the Pacific Gas and Electric Company. Merced Irrigation District also provides electrical services to some customers.

Environmental Consequences

a) Less Than Significant Impact. The project would require fuel for construction equipment. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation administered by the California Air Resources Board (CARB, 2016). The In-

Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to the California Air Resources Board, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. As another benefit of these restrictions, off-road, diesel-powered vehicles would consume less fuel and combust fuel more efficiently. The project would also be subject to mandates on portable diesel generators and the California Environmental Protection Agency's strict on-road emissions standards for heavy-duty engines. These regulations contain strict air emissions standards that result in efficient engine fuel consumption rates (compared to previous standards). As such, temporary energy use during project construction would not result in a significant increase in peak or base demands on regional energy supplies or require additional capacity from local or regional energy supplies. As such, project construction activities would not result in a wasteful, inefficient, or unnecessary consumption of energy resources.

Following construction, the only additional energy expenditures would be for occasional maintenance. Because the project would facilitate more efficient transportation along State Route 59, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Therefore, the project would have a less than significant impact.

Avoidance, Minimization, and/or Mitigation Measures

Because Best Management Practices and California requirements would result in a less than significant impact on energy, no avoidance, minimization, and/or mitigation measures would be required.

2.1.7 Geology and Soils

Considering the information in the City of Merced General Plan dated 2015 and Merced County General Plan Draft Environmental Impact Report dated 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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**
ii) Strong seismic ground shaking?	**No Impact**
iii) Seismic-related ground failure, including liquefaction?	**No Impact**
iv) Landslides?	**No Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**Less Than Significant Impact**
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**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**Less Than Significant Impact**
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**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

Affected Environment

The project lies on the edge of the San Joaquin Valley, just west of the low foothills of the Central Sierra Nevada. The topography within the project area is relatively flat, with an elevation of about 185 feet above sea level. The area is surrounded by several creeks and streams, the major drainage being the Black Rascal Creek. The main geologic formations in the project area consist of the upper and lower Modesto Formation and Holocene alluvium (LSA

Associates 2018). Soils within the project area consist of alluvium deposited during the Pleistocene-Holocene epochs and include the following:

- Burchell silty clay loam, moderately saline-alkali, 0 to 1 percent slopes
- Honcut silt loam, 0 to 1 percent slopes
- Landlow clay, 0 to 1 percent slopes
- Wyman clay loam, deep over hardpan, 0 to 1 percent slopes
- Wyman clay loam, 0 to 3 percent slopes

Records of paleontological finds maintained by the University of California Museum of Paleontology state that there are 12 localities (places where fossil remains have been found) in Merced County. These occur in three major geologic formations: the Moreno, Panoche, and Kreyenhagen formations, which are exposed primarily in the western part of Merced County in the Coast Range (Merced County, 2012). The project is in the eastern part of Merced County, and none of these formations are located within the project area or even the City of Merced. While the project area does contain the Modesto Formation, which is also known to have fossil occurrences, the Modesto Formation within Merced County and the City of Merced does not typically contain productive fossils and is thought to have a low potential for fossil occurrence. Additionally, a review of the University of California Museum of Paleontology online collection/database did not identify any fossil occurrences within the Modesto formation in the City of Merced or Merced County.

Environmental Consequences

b) **Less Than Significant Impact.** According to the Natural Resources Conservation Service, soils within the project area are as follows: Burchell silty clay loam, moderately saline-alkali, 0 to 1 percent slopes; Honcut silt loam, 0 to 1 percent slopes; Landlow clay, 0 to 1 percent slopes; Wyman clay loam, deep over hardpan, 0 to 1 percent slopes; Wyman clay loam, 0 to 3 percent slopes; Water (National Resources Conservation Service 2020). The erodibility factor for the soil in the project area is K=0.37, indicating that it is moderately susceptible to detachment and may produce moderate runoff. Erosion due to surface runoff is not expected in paved and/or properly sloped areas with controlled surface drainage facilities. Grading and earthwork during construction may result in erosion and sedimentation. Impacts would be minimized through erosion control methods as detailed in avoidance and minimization measure WQ-4 listed in Section 2.1.10 Hydrology and Water Quality. Impacts on erosion and loss of topsoil would be less than significant.

d) **Less Than Significant Impact.** Expansive soils contain significant amounts of clay particles that can give up water (shrink) or take on water

(swell). When these soils swell, the change in volume can exert significant pressures on loads that are placed on them and can result in structural distress and/or damage. The near-surface soils in the City of Merced consist of moderately expansive lean and fat clay. Impacts related to construction on expansive soils would be less than significant since roadways and structures would incorporate the design recommendations of a geotechnical engineer. These recommendations would be included in the Geotechnical Design and Materials Report prepared for this project. Impacts related to expansive soils are expected to be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Please refer to Section 2.1.10 Hydrology and Water Quality for avoidance and minimization measure WQ-4. No other avoidance, minimization, and/or mitigation measures are required.

2.1.8 Greenhouse Gas Emissions

Considering the information in the Air Quality Report dated May 2022 and the Traffic Operations Analysis Report dated May 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**No Impact**

Affected Environment

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operation. Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during the construction phase. With innovations such as longer-life pavement, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. Greenhouse gas emissions produced during operations are those that

result from potentially increased traffic volumes or changes in automobile speeds.

Environmental Consequences

a) **Less Than Significant Impact.** Greenhouse gas emissions can be divided into those produced during construction and those produced during operation. Greenhouse gas emissions generated from the construction and operation of the project are discussed below.

Construction Emissions

A temporary increase in greenhouse gases would be generated by the use of construction vehicles and minor increases in traffic congestion when construction requires lane closures on existing roadways. The Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model estimates that the project would generate about 1,697.94 tons of carbon dioxide throughout the project, see Table 3 Construction Emissions for Roadways in Section 2.1.3 Air Quality. However, work would be temporary and is not expected to result in significant adverse construction greenhouse gas emissions. A less than significant impact is expected.

Operational Emissions

According to Table 5 Summary of Comparative Emissions Analysis during Peak Hour Opening Year in Section 2.1.3 Air Quality, CO2 emissions in the design year are expected to increase by 4,787 pounds, or about 11 percent, over existing conditions if the project is implemented. The Caltrans Emission FACtors model does not account for the project's effects on vehicle delay; however, if modeled, these would yield a reduction in greenhouse gas emissions estimates for the Build Alternative. The emission estimate is the most conservative because it does not take any of these other factors into consideration, which would likely reduce the greenhouse gas emissions estimate for the Build Alternative.

The project would add about 8,000 lane feet of additional travel lanes, which would induce an additional 2.8 million vehicle miles traveled per year. However, the City of Merced would sponsor road dieting projects as part of Measure TRA-2, discussed further under Section 2.1.17, Transportation, as part of a mitigation strategy to offset the vehicle miles traveled impact. The net vehicle miles traveled change after mitigation would result in about 0.1 million vehicle miles traveled less than the No-Build Alternative, which would further contribute to a reduction in operational greenhouse gas emissions.

Because the project would contribute to the 2018 Merced County Association of Governments' positive progress toward cumulative/regional/indirect effects on air quality standards, operational emissions would result in a less than significant impact.

Avoidance, Minimization, and/or Mitigation Measures

Please refer to Section 2.1.17 Transportation for measure TRA-2. No other avoidance, minimization, and/or mitigation measures are required.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Hazardous Waste Initial Site Assessment dated March 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
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**
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**
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**
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**
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**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

Affected Environment

A hazardous waste Initial Site Assessment was prepared for the project. The project area was evaluated for the presence of Recognized Environmental Conditions and/or Activity and Use Limitations, which are:

Recognized Environmental Conditions: "…the presence or the likely presence of any hazardous substances or petroleum hydrocarbons on the (Subject Property) that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum hydrocarbons into structures or into the ground, groundwater, or surface water of the subject property."

Activity and Use Limitations: "…an explicit recognition by a federal, tribal, state, or local agency that residual levels of hazardous substances or petroleum hydrocarbons may be present on the property, and that unrestricted use of the property may not be acceptable."

During the preparation of the Initial Site Assessment, the following information that could potentially affect environmental conditions was revealed:

- Elevated concentrations of lead (from the use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical documents for the project area, aerially deposited lead has the potential to be encountered during construction activities. Pursuant to Caltrans' Standard Specifications and Standard Special Provisions, and in accordance with the California Department of Toxic Substances Control and Caltrans' Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils ("The Agreement"), soil sampling for the presence of aerially deposited lead would be performed in unpaved locations of the project before the start of construction activities. Should aerially deposited lead be detected in the soil samples, a lead compliance plan would be prepared before the start of construction activities. Additionally, soil would be managed pursuant to Caltrans' Standard Specifications and Standard Special Provisions and in accordance with The Agreement.

- The Burlington Northern Santa Fe Railway and Union Pacific Railroad cross the project area near the West Olive Avenue/Santa Fe Drive

intersection and West 16th Street intersection. Soil sampling in the vicinity of each railroad would be performed before construction activities start.

- Various natural gas transmission pipelines and other utilities run parallel to or cross the project area, indicating a potential hazard during construction. Coordination with local utility companies to avoid potential impacts is recommended before the start of construction activities.

- Properties along State Route 59 have been historically used for agricultural purposes from at least 1937 to about 1976. Residual pesticides and herbicides may be present in wouldow soil within the project area. Soil sampling for the presence of pesticides and herbicides would be conducted before construction.

- The project proposes to replace the Black Rascal Canal Bridge (Number 39-68) and South Fork Black Rascal Creek Bridge (Number 39-67). The potential exists for asbestos-containing materials and lead-based paint to be present. An asbestos-containing materials/lead-based paint survey would be performed in conformance with the U.S. Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations Part 61, Subpart M, and California Department of Public Health guidelines.

- Lead chromate was used in yellow traffic paint and thermoplastic material before being banned in 1997 and 2004, respectively. Yellow striping was seen on roadway centerlines throughout the site, and testing of the yellow traffic striping/markings is required. Removal of the yellow traffic striping/markings, and other colors of paint, would be performed in accordance with Caltrans' Standard Specifications and Standard Special Provisions.

- Pole- and pad-mounted electrical transformers were seen within and adjoining the project area. No evidence of staining or leakage from transformers was observed. However, stained soil was observed immediately surrounding power poles along the southern portion of the project. Shallow soil sampling would be performed at the base of poles in areas of observed staining. In addition, should power pole or transformer removal be required as part of the project, a local utility company would be notified for proper testing and removal.

- The potential exists for treated wood waste to be present associated with signs or guardrail posts within the project area. Treated wood waste would be handled in accordance with Caltrans' Standard Special Provisions.

- Although not expected in other areas of the project, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, the resident engineer overseeing construction

would stop work until a hazardous waste specialist can assess the soil for proper handling.

Environmental Consequences

a) **Less Than Significant Impact.** The project would involve the use of heavy equipment for grading, hauling, and materials handling. Using this equipment may require using fuels and other common materials that have hazardous properties (e.g., fuels are flammable). These materials would be used in accordance with all applicable laws and regulations and, if used properly, would not pose a hazard to people, animals, or plants. All refueling of construction vehicles and equipment would occur within the designated staging area for the project. Using hazardous materials would be temporary, and the project would not include a permanent use or source of hazardous materials. A less than significant impact is expected.

b) **Less Than Significant Impact.** Potential hazardous materials during construction activities can occur due to upset conditions within the project area. Potentially hazardous materials identified within the project area include: lead paint, pesticides, treated wood waste, asbestos, transformer leaks, aerially deposited lead, and soils next to railroads, all of which are discussed in the Affected Environment subsection above. Phase 2 testing would be carried out before construction to confirm the presence of hazardous materials. Additionally, with any project that involves excavation, there is a possibility of encountering unknown hazardous contamination during construction. With the implementation of avoidance and minimization measures HAZ-1 through HAZ-9, project impacts from upset or accident conditions would be reduced to a less than significant level.

f) **Less Than Significant Impact.** The contractor would build the project in two stages—the east half during stage 1 and the west half during stage 2. Construction would be staged this way to maintain traffic on State Route 59. Response times may be affected during construction; however, emergency services would be notified before construction and during construction if there are any changes. Avoidance and minimization measure, TRA-1, listed in Section 2.17 Transportation, would be implemented to minimize any potential impacts to emergency service access. Impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

No hazardous waste sites have been identified within the project. Furthermore, the following standard measures are included in most, if not all, Caltrans projects and would be applied to the project and would further reduce hazards and hazardous material impacts to a less than significant level.

HAZ-1: Pursuant to Caltrans' Standard Special Provisions and in accordance with the California Department of Toxic Substances Control and Caltrans' Soil

Management Agreement for Aerially Deposited Lead-Contaminated Soils ("The Agreement"), soil sampling for the presence of aerially deposited lead would be performed in unpaved locations of the project before construction activities start. Should aerially deposited lead be detected in the soil samples, a lead compliance plan would be prepared before the start of construction activities. Additionally, the soil would be managed pursuant to Caltrans' Standard Specifications and Standard Special Provisions and in accordance with The Agreement.

HAZ-2: Soil sampling in the vicinity of each railroad would be performed before construction activities start.

HAZ-3: Various natural gas transmission pipelines and other utilities run parallel to or cross the project area, indicating a potential hazard during construction. Coordination with local utility companies to avoid potential impacts is recommended before the start of construction activities.

HAZ-4: Soil sampling for the presence of pesticides and herbicides would be conducted before construction.

HAZ-5: An asbestos-containing materials/lead-based paint survey would be performed in conformance with the U.S. Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations Part 61, Subpart M, and California Department of Public Health guidelines.

HAZ-6: Yellow striping was observed on roadway centerlines throughout the site, and testing of the yellow traffic striping/markings is required. Removal of the yellow traffic striping/markings, and other colors of paint, would be performed in accordance with Caltrans' Standard Specifications and Standard Special Provisions.

HAZ- 7: Shallow soil sampling would be performed at the base of poles in areas of observed staining. In addition, should utility pole or transformer removal be required as part of the project, the local utility company would be notified for proper testing and removal.

HAZ-8: The potential exists for treated wood waste to be present associated with signs or guardrail posts within the project area. Treated wood waste would be handled in accordance with Caltrans' Standard Special Provisions.

HAZ- 9: Although not expected in other areas of the project, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, the resident engineer overseeing construction would stop work until a hazardous waste specialist can assess the soil for proper handling.

2.1.10 Hydrology and Water Quality

Considering the information in the Water Quality Assessment Report dated April 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**Less Than Significant Impact**
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	**No Impact**
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**
(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**
(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**
(iv) impede or redirect flood flows?	**No Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**Less Than Significant Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

Affected Environment

Hydrology

The project is within the designated Merced Hydrologic Area, which is within the San Joaquin Valley Floor Hydrologic Unit subwatershed of the San Joaquin Hydrologic Region (Caltrans Water Quality Planning Tool, 2020). The northern, western, and eastern portions of the City of Merced contain several creeks and canals, including Bear Creek, Black Rascal Creek, Fahrens Creek, and Cottonwood Creek (City of Merced, 2012). Within the project area, hydrological features include Black Rascal Creek and associated wetlands, which are next to the creek.

Groundwater Hydrology

The project is within the San Joaquin Valley Groundwater Basin within the San Joaquin Valley-Merced Subbasin. The San Joaquin Valley-Merced Subbasin is bound on the east by the Sierra Nevada and the Coast Ranges on the west (Department of Water Resources, 2019).

Floodplains

Data obtained from the Federal Emergency Management Agency Flood Map Service Center shows that the project area lies within Zone AE, AH, and AO. Zone AE, AH, and AO are classified as high-risk areas. The water feature in the project area, Black Rascal Creek, is a "Regulated Floodway." Due to the project being within a high-risk area and a regulated floodway, a Central Valley Flood Protection Board Encroachment Permit would be obtained.

Environmental Consequences

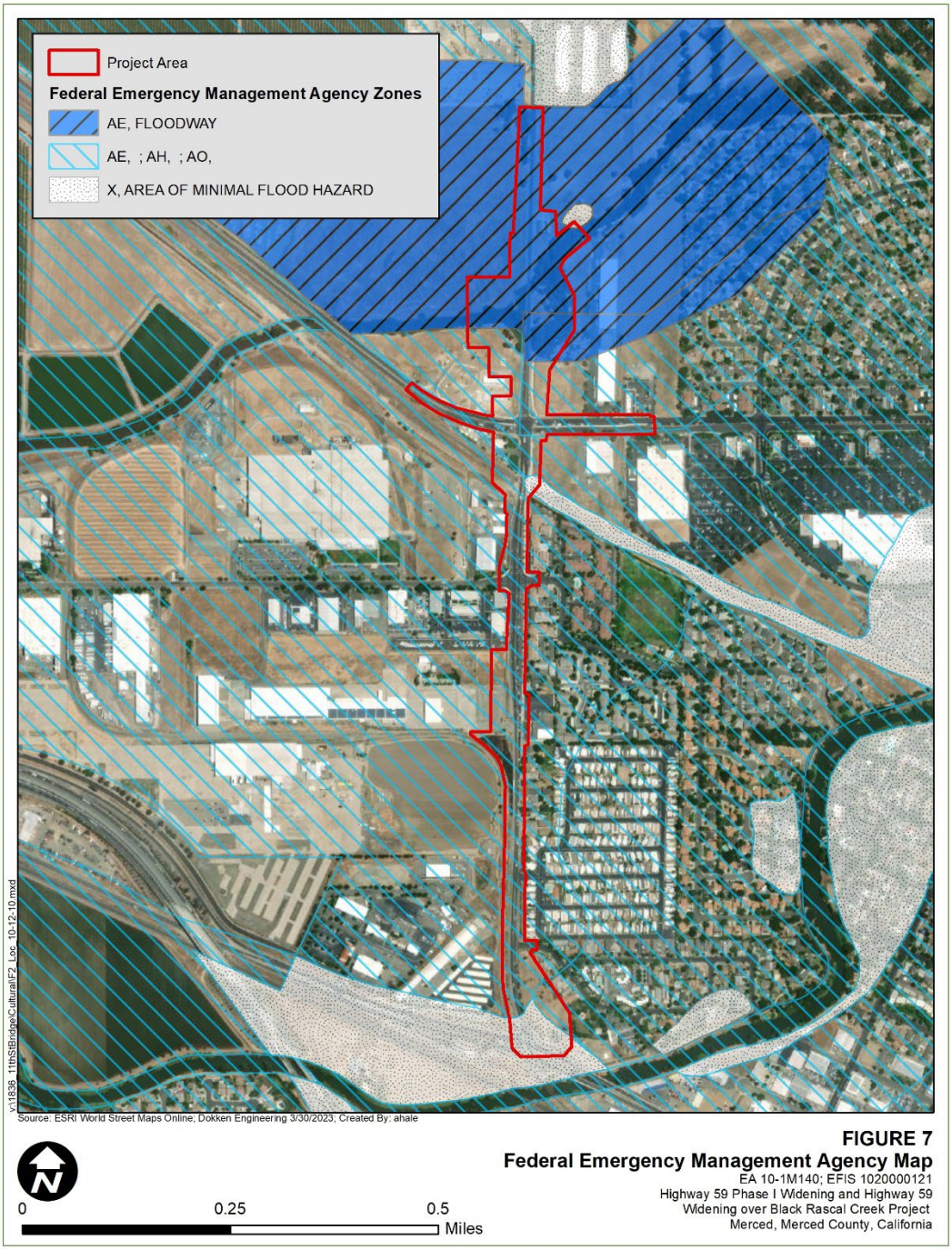
a) **Less Than Significant Impact.** The project is not expected to violate any water quality standards or waste discharge requirements. In the long term, the project would add impervious surfaces resulting in less natural infiltration. As a result, additional runoff could potentially increase erosion. This increase in impervious surfaces and potential runoff would be accommodated in the project design. In the short term, the project would disturb more than 1 acre. Construction-related earth-disturbing activities would potentially cause soil erosion and sedimentation to local waterways. Such construction activities would involve grading that would require heavy equipment such as earth-moving devices. Avoidance and minimization measures WQ-1 through WQ-4 are required to ensure the project grading would conform to the State Water Resources Control Board standards and, in doing so, would ensure the project impacts would be less than significant.

c(i,ii,iii)) **Less Than Significant Impact.** With any construction project, indirect effects to receiving water may occur due to construction site soil disturbance and stormwater runoff. The project’s compliance with the City of Merced and state water quality and stormwater Best Management Practices

would ensure the project avoids and/or minimizes impacts related to erosion or surface runoff. The project would result in a net increase of 4.03 acres of new impermeable surface. This number could change depending on the project design. Implementation of measures WQ-1, WQ-2, and WQ-4 would ensure that project impacts would be less than significant.

d) **Less Than Significant Impact.** The project area is located in the Central Valley, a significant distance from the coast and any sizeable lakes. Therefore, the project site is not subject to seiche, tsunami, or mudflow. The project area is within a 100-year floodplain, and the water feature in the project area, Black Rascal Creek, is a “Regulated Floodway” (see Figure 7 Federal Emergency Management Agency Map). Although the chance of inundation is low, measures WQ-1 and WQ-2 would minimize the risk of pollutants being released during construction if inundation does occur. A less than significant impact is expected.

Figure 2 Federal Emergency Management Agency Map



Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. Additionally, the following avoidance and minimization measures are included in most, if not all, Caltrans projects and would be applied to the project and

would further reduce hydrology and water quality impacts to a less than significant level.

WQ-1: The project would implement all feasible Low Impact Development Best Management Practices and follow the Central Valley Region Phase 2 Small Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System General Permit of stormwater associated with construction activities (Construction General Permit 2012-0006-Division of Water Quality).

WQ-2: To conform with water quality requirements in the Construction General Permit, the following would be implemented during construction:

- Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must be a minimum of 50 feet from surface waters. Any necessary equipment washing must occur where the water cannot flow into surface waters.

- The project specifications would require the contractor to operate under an approved spill prevention and cleanup plan.

- Construction equipment would not be operated in flowing water.

- Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to surface waters.

- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life must be prevented from contaminating the soil or entering surface waters.

- Equipment used in and around surface waters must be in good working order and free of dripping or leaking contaminants.

- Any concrete rubble, asphalt, or other debris from construction must be taken to an approved disposal site.

WQ-3: Before the start of construction activities, the project limits, in proximity to jurisdictional waters, must be delineated with high-visibility Environmentally Sensitive Area fencing or stakes to ensure construction would not further encroach into jurisdictional waters.

WQ-4: Contract specifications would include the following Best Management Practices, where applicable, to reduce erosion during construction:

Existing vegetation would be protected in place where feasible to provide an effective form of erosion and sediment control.

As a permanent Best Management Practice, slope roughening by equipment tracking would be implemented to create unevenness on bare soil. Surface roughening reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing water infiltration.

2.1.11 Land Use and Planning

Considering the information in the Community Impact Assessment dated August 2022, the City of Merced General Plan dated 2015, and the Merced County Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy dated 2018, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**No Impact**
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**

2.1.12 Mineral Resources

Considering the information in the Merced County General Plan Draft Environmental Impact Report dated 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
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**
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**

2.1.13 Noise

Considering the information in the Noise Study Report dated March 2022, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
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**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**Less Than Significant Impact**
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?	**Less Than Significant Impact**

Affected Environment

Land uses in the project vicinity consist of residential, industrial, and open space parcels. The noise environment in the project area is dominated by State Route 59. Traffic noise modeling using Traffic Noise Model 2.5 was conducted to determine the existing and future traffic noise impacts at sensitive receptors near the proposed State Route 59 roadway and bridge improvements. Receptors were included in this assessment if they were located in sensitive land uses within 500 feet of the proposed State Route 59 widening that would benefit from a lowered noise level. A total of 51 residential receptor locations were modeled within this evaluation area. The existing noise environment at the existing residential receptors within the project study area was quantified through short-term noise level measurements conducted at two locations on November 19, 2020. The modeled receptor locations and noise measurement locations are shown in Figure 8.

The traffic noise modeling results under Existing baseline conditions range from 37 to 66 A-weighted decibels Equivalent Sound Level over one hour. Noise levels at outdoor use areas currently do not interfere with the 67 A-weighted decibels threshold for human speech interference.

Figure 3 Noise Measurement and Receiver Locations

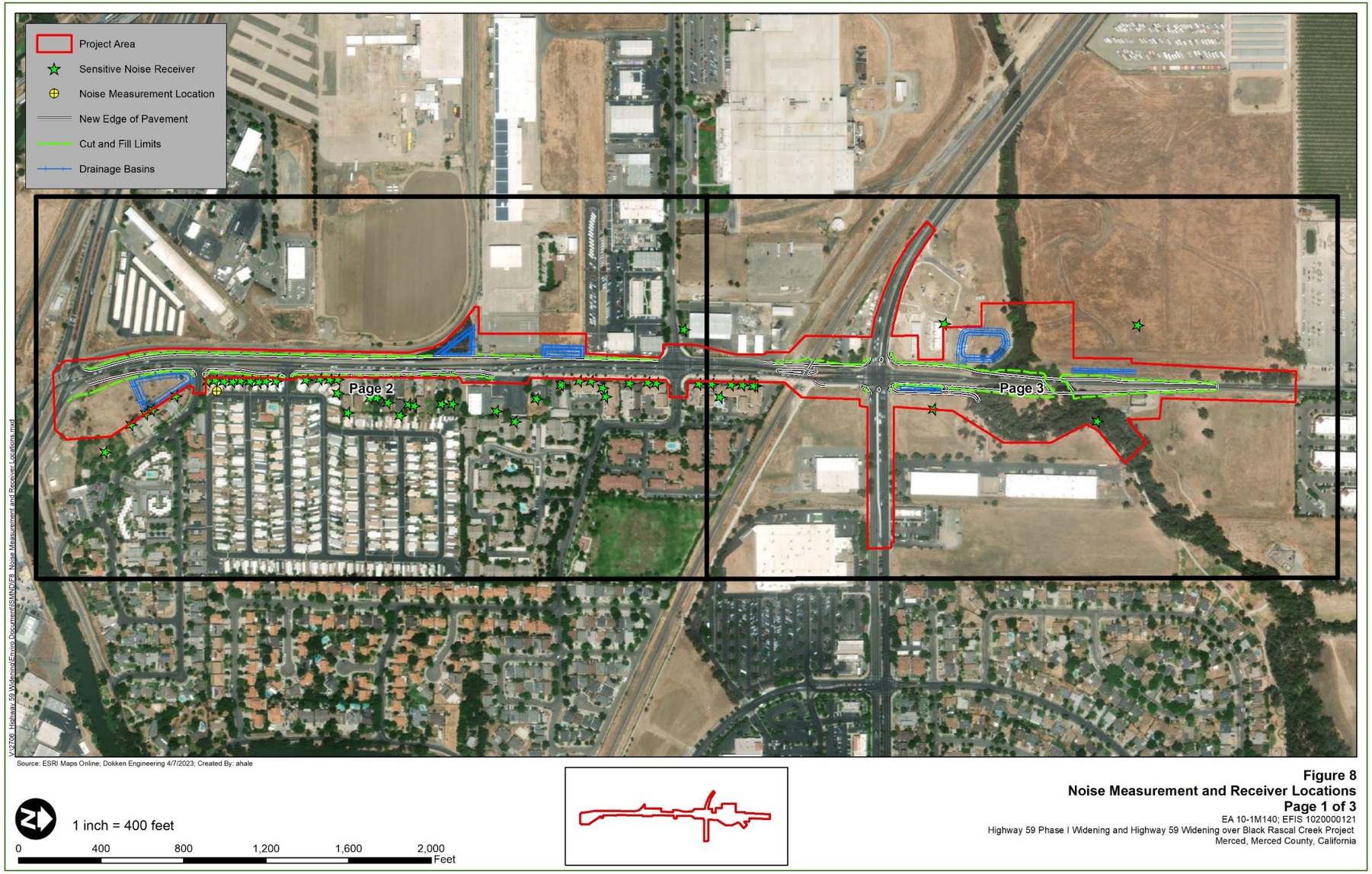


Figure 8
Noise Measurement and Receiver Locations
Page 1 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Figure 8
Noise Measurement and Receiver Locations
Page 2 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

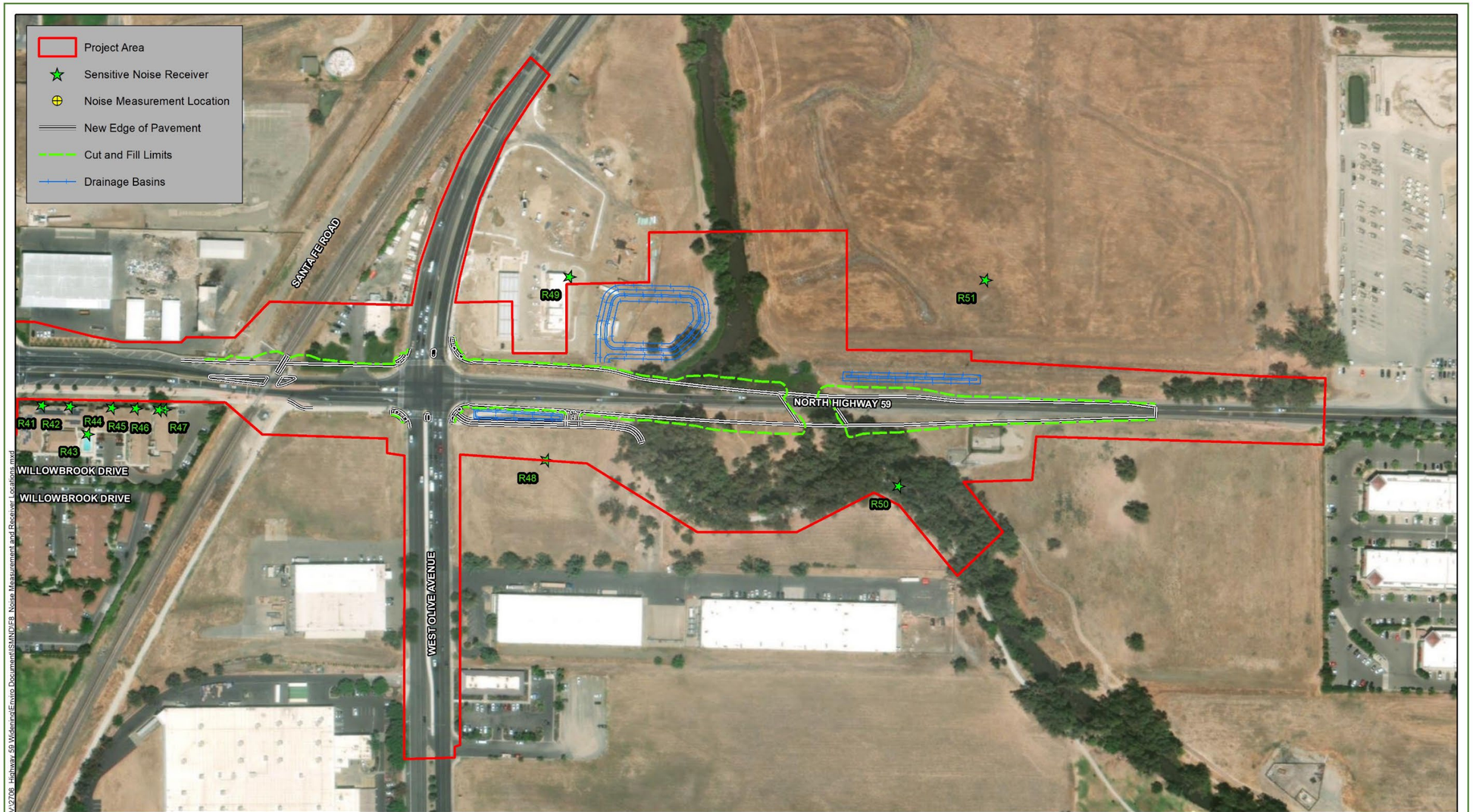


Figure 8
Noise Measurement and Receiver Locations
Page 3 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Environmental Consequences

a) **Less Than Significant Impact.**

Construction Noise

During project construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 7 below summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 80 to 89 decibels at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance. To minimize the construction-generated noise, NOI-1 would be implemented.

Table 3 Construction Equipment Noise Emissions Levels

Equipment	Maximum Noise Level (A-Weighted Decibels at 50 Feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration, 2006.

No adverse noise impacts from construction are expected because construction would be conducted in accordance with measure NOI-1 and applicable local noise standards. Construction noise would be short term, intermittent, and overshadowed by local traffic noise. Compliance with the City of Merced's local noise ordinances for construction is recommended to minimize construction noise.

Operational Noise

Traffic noise modeling using Traffic Noise Model 2.5 was conducted to determine the existing and future traffic noise impacts at sensitive receptors near the proposed State Route 59 roadway and bridge improvements. The results of the traffic noise modeling are shown and compared below in Table 8.

The design year traffic noise modeling results at receptors in the project area range from 39 to 68 A-weighted decibels Equivalent Sound Level over one hour. Noise levels from existing to project conditions are generally expected to increase by up to 3 A-weighted decibels at most analyzed receptors. This increase is not considered a substantial increase in noise levels that would be noticeable to the human ear. Furthermore, most analyzed receptors are not expected to experience noise levels exceeding the 67 A-weighted decibels threshold that would interfere with regular human conversation. Two of the 51 receivers analyzed showed results potentially indicating a perceptible noise increase or noise level that would interfere with human conversation.

Receiver R35, which represents an outdoor swimming pool of a multifamily residence at 2809 Willowbrook Drive, showed an increase of 4 A-weighted decibels with project construction. However, the absolute future noise level at R35 is 64 A-weighted decibels, which does not exceed the 67 A-weighted decibels threshold that would interfere with regular human conversation.

Receiver R32, which represents an outdoor common-use area for a multifamily residence at 2790 North State Highway 59, showed an absolute future noise level of 68 dBA. The March 2022 Noise Study Report includes an analysis of the potential for a soundwall to be included at this location but concluded a soundwall to be infeasible due to not meeting the Caltrans acoustical design goal of a 7 dB reduction. Furthermore, as existing and future no-build noise conditions at this location are already projected to occur without the project, this is not considered a substantial permanent increase in ambient noise levels. Therefore, a significant noise impact would not occur at R32.

Based on the guidance for CEQA analysis presented in the Caltrans Traffic Noise Analysis Protocol, no overall significant noise impact would occur as a result of future-build conditions. Impacts would be less than significant.

b) **Less Than Significant Impact.** Site preparation and roadway construction would involve excavation, grading, improving existing roadways, constructing new sidewalks, and paving roadway surfaces. These temporary construction activities within the project vicinity are expected to create groundborne vibration. Groundborne vibration or noise levels as a result of construction would be short term and intermittent. The project would have a less than significant impact, and the implementation of measure NOI-1 would reduce impacts even further.

c) **Less Than Significant Impact.** The western portion of the project area is within the Castle Airport Land Use Compatibility Zone C. As discussed above, the project would not generate a substantial permanent increase in ambient noise levels (as defined by the Caltrans Traffic Noise Analysis Protocol), and impacts would be less than significant.

Table 4 Modeled Existing and Future Traffic Noise Levels

Receptor Identification	Land Use	Noise Abatement Category	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future No Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	Future No Build to Future Build Year Project Noise Increase
R1	Park	C(67)	0	1755 West North Bear Creek Drive	56	57	56	1	0	Negative 1
R2	Multifamily Residence	B(67)	4	1775 West North Bear Creek Drive	52	53	53	1	1	0
R3	Multifamily Residence	B(67)	4	1785 West North Bear Creek Drive	49	50	50	1	1	0
R4	Multifamily Residence	B(67)	4	1795 West North Bear Creek Drive	49	50	50	1	1	0
R5	Multifamily Residence	B(67)	4	1805 West North Bear Creek Drive	51	52	53	1	2	1
R6	Single Family Residence	B(67)	1	2500 North State Highway 59	58	60	60	2	2	0
R7	Single Family Residence	B(67)	1	2500 North State Highway 59	59	60	61	1	2	1
R8	Single Family Residence	B(67)	1	2500 North State Highway 59	58	59	59	1	1	0
R9	Single Family Residence	B(67)	1	2500 North State Highway 59	57	58	59	1	2	1
R10	Single Family Residence	B(67)	1	2500 North State Highway 59	58	59	60	1	2	1
R11	Single Family Residence	B(67)	1	2500 North State Highway 59	58	59	60	1	2	1
R12	Single Family Residence	B(67)	1	2500 North State Highway 59	57	58	59	1	2	1

Receptor Identification	Land Use	Noise Abatement Category	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future No Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	Future No Build to Future Build Year Project Noise Increase
R13	Single Family Residence	B(67)	1	2500 North State Highway 59	59	60	61	1	2	1
R14	Single Family Residence	B(67)	1	2500 North State Highway 59	61	62	62	1	1	0
R15	Single Family Residence	B(67)	1	2500 North State Highway 59	62	63	63	1	1	0
R16	Single Family Residence	B(67)	1	2500 North State Highway 59	61	62	63	1	2	1
R17	Single Family Residence	B(67)	1	2500 North State Highway 59	61	62	63	1	2	1
R18	Single Family Residence	B(67)	1	2500 North State Highway 59	62	63	63	1	1	0
R19	Single Family Residence	B(67)	1	2500 North State Highway 59	53	54	54	1	1	0
R20	Single Family Residence	B(67)	1	2610 North State Highway 59	43	44	44	1	1	0
R21	Single Family Residence	B(67)	1	2636 North State Highway 59	46	47	48	1	2	1
R22	Single Family Residence	B(67)	1	2646 North State Highway 59	48	49	49	1	1	0
R23	Single Family Residence	B(67)	1	2652 North State Highway 59	52	53	54	1	2	1
R24	Multifamily Residence	B(67)	4	2500 North State Highway 59	37	39	39	2	2	0

Receptor Identification	Land Use	Noise Abatement Category	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future No Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	Future No Build to Future Build Year Project Noise Increase
R25	Single Family Residence	B(67)	1	2678 North State Highway 59	58	59	60	1	2	1
R26	Multifamily Residence	B(67)	4	2680 North State Highway 59	56	57	58	1	2	1
R27	Single Family Residence	B(67)	1	2696 North State Highway 59	58	59	59	1	1	0
R28	Single Family Residence	B(67)	1	2708 North State Highway 59	57	58	59	1	2	1
R29	Multifamily Residence	B(67)	4	2740 North State Highway 59	40	41	43	1	3	2
R30	Multifamily Residence	B(67)	4	2030 Willowbrook Drive	44	45	46	1	2	1
R31	Single Family Residence	B(67)	1	2768 North State Highway 59	55	56	57	1	2	1
R32	Multifamily Residence	B(67)	12	2790 North State Highway 59	**66**	**67**	**68**	1	2	1
R33	Multifamily Residence	B(67)	1	2820 North State Highway 59	61	62	64	1	3	2
R34	Multifamily Residence	B(67)	4	2822 North State Highway 59	61	62	64	1	3	2
R35	Multifamily Residence	B(67)	4	2809 Willowbrook Drive	60	61	64	1	4	3
R36	Multifamily Residence	B(67)	4	2809 Willowbrook Drive	53	54	56	1	3	2
R37	Multifamily Residence	B(67)	4	2842 North State Highway 59	61	62	64	1	3	2
R38	Multifamily Residence	B(67)	4	2850 North State Highway 59	62	63	65	1	3	2

Receptor Identification	Land Use	Noise Abatement Category	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future No Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Modeled Future Build Year 2045 Noise Level Equivalent Sound Level, A-Weighted Decibels	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	Future No Build to Future Build Year Project Noise Increase
R39	Multifamily Residence	B(67)	4	2852 North State Highway 59	62	63	64	1	2	1
R40	Industrial	F	0	2901 North State Highway 59	62	63	64	1	2	1
R41	Multifamily Residence	B(67)	4	2902 North State Highway 59	61	62	63	1	2	1
R42	Multifamily Residence	B(67)	4	2910 North State Highway 59	61	63	64	2	3	1
R43	Multifamily Residence	B(67)	4	2910 North State Highway 59	55	56	57	1	2	1
R44	Multifamily Residence	B(67)	4	2910 North State Highway 59	60	62	63	2	3	1
R45	Multifamily Residence	B(67)	4	2920 North State Highway 59	61	62	64	1	3	2
R46	Multifamily Residence	B(67)	4	3060 Snelling Highway	62	64	65	2	3	1
R47	Multifamily Residence	B(67)	4	3060 Snelling Highway	62	64	64	2	2	0
R48	Open Space	C(67)	0	Rascal Bike Path Southern Entrance	63	65	65	2	2	0
R49	Commercial	C(67)	0	3101 North State Highway 59	60	62	62	2	2	0
R50	Industrial	C(67)	0	1985 West Olive Avenue	62	64	65	2	3	1
R51	Commercial	C(67)	0	2425 Santa Fe Drive	59	61	61	2	2	0

Avoidance, Minimization, and/or Noise Abatement Measures

No significant impacts that require mitigation measures would occur. Additionally, the following standard measure is included in most, if not all, Caltrans projects and would be applied to the project and would further reduce noise impacts to a less than significant level.

NOI-1: To minimize construction-generated noise, abatement measures from Standard Specifications Section 14-8.02 “Noise Control” must be followed:

- Do not exceed 86 A-weighted decibels at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m.

2.1.14 Population and Housing

Considering the City of Merced’s design and safety standards to be implemented to avoid private property and acquisition, and information in the Community Impact Assessment dated August 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

2.1.15 Public Services

Considering the information in the Community Impact Assessment dated August 2022, the City of Merced General Plan dated 2015, and the Section 4(f) De Minimis Analysis dated April 2022 (Appendix F), the following significance determinations have been made:

Question:	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: (i) Fire protection?	**Less Than Significant Impact**
(ii) Police protection?	**Less Than Significant Impact**
(iii) Schools?	**No Impact**
(iv) Parks?	**Less Than Significant Impact**
(v) Other public facilities?	**Less Than Significant Impact With Mitigation Incorporated**

Affected Environment

The City of Merced Police Department provides police protection for the City of Merced. The project is within the North Police District. The City of Merced Fire Department provides fire protection, rescue, and emergency medical services from five fire stations strategically located throughout the City of Merced. The nearest fire station is Station 53 at 800 Loughborough Drive, Merced, California 95348. Lastly, the closest school is Leontine Gracey Elementary School, which is about 0.60 mile from the project area.

A segment of the publicly accessible Rascal/Michael O'Sullivan Bike Path is within the project area. This is a City of Merced-owned multifunctional trail that is included in a network of trails used throughout the City of Merced for recreational activities, such as walking, running, and biking. The Rascal/Michael O'Sullivan Bike Path is a Class 1 bikeway and provides access to Fahrens Park, where amenities, such as drinking fountains, restrooms, and parking, can be found. Additionally, the bike path provides access to downtown Merced, shopping areas, schools, hospitals, and medical clinics.

Environmental Consequences

a (i, ii) **Less Than Significant Impact.** The project would not result in the need for new public services beyond what was expected in the City of Merced General Plan. The project does not propose a new housing or commercial

development requiring additional police or fire services. The project accommodates existing and planned growth per the respective general plan.

Further, the project would have a less than significant impact on fire and police emergency access. Measure TRA-1, listed in Section 2.1.17 Transportation, would be implemented to reduce temporary impacts to emergency access as a result of construction activities to a less than significant level.

a (iv) **Less Than Significant Impact.** The project would not result in the need for new parks beyond what was expected in the City of Merced General Plan. Fahrens Park is next to the project area, and southwestern access to the park would be limited due to impacts to Rascal/Michael O'Sullivan Bike Paths discussed below. However, all other access points to the park would be available throughout construction. Impacts would be less than significant.

a (v) **Less Than Significant Impact With Mitigation Incorporated.** A portion of the Rascal/Michael O'Sullivan Bike Paths is located within the project area. The Rascal/Michael O'Sullivan Bike Paths are public facilities used for recreational activities and provide access to Fahrens Park. Project construction would impact the performance objective of the Rascal/Michael O'Sullivan Bike Paths by temporarily preventing recreational use of the bike paths during construction. The Loughborough neighborhood, located next to the bike path, is the proposed detour location during construction since these roads can be safely used for bicyclists and pedestrians (see Section 2.1.16). Measures REC-1 through REC-3, listed in Section 2.1.16 Recreation, would reduce impacts to a less than significant level because they would establish a detour route that can be used during temporary closure and would reestablish the trail upon completion of construction.

Avoidance, Minimization, and/or Mitigation Measures

Please refer to Section 2.1.16 Recreation for measures REC-1 through REC-3. No other avoidance, minimization, and/or mitigation measures are required.

2.1.16 Recreation

Considering the information in the Section 4(f) De Minimis Analysis dated April 2022 (Appendix F) and the Community Impact Assessment dated August 2022, the following significance determinations have been made:

Question—Would the project:	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**
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?	**Less Than Significant Impact With Mitigation Incorporated**

Affected Environment

A segment of the publicly accessible Rascal/Michael O'Sullivan Bike Path is within the project area (see Figure 9 Recreational Impacts). This is a City of Merced-owned multifunctional trail that is included in a network of trails used throughout the City of Merced for recreational activities, such as walking, running, and biking. The Rascal/ Michael O'Sullivan Bike Path is a Class 1 bikeway and provides access to Fahrens Park, where amenities, such as drinking fountains, restrooms, and parking, can be found. Additionally, the bike path provides access to downtown Merced, shopping areas, schools, hospitals, and medical clinics. See Figure 9 for the location of the Rascal/Michael O'Sullivan Bike Path in relation to the project.

About 430 feet of the trail would be realigned and temporarily closed during construction (see Figure 9 Recreational Impacts). This closure would temporarily prevent pedestrian use on this bike path segment.

Environmental Consequences

b) **Less Than Significant Impact With Mitigation Incorporated**. A portion of the Rascal/Michael O'Sullivan Bike Paths is within the project area. About 430 feet of the trail would be realigned and closed during construction (see Figure 9 Recreational Impacts). This closure would temporarily prevent recreational use on this bike path segment. The Loughborough neighborhood next to the bike path is the proposed detour location during construction since these roads can be safely used for bicyclists and pedestrians (see Figure 10 Temporary Pedestrian Detour Route). Measures REC-1 through REC-3 would reduce impacts to less than significant.

Figure 9 Recreational Impacts

Figure 9
Recreational Impacts

EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Figure 10 Temporary Pedestrian Detour Route

Figure 10
Temporary Pedestrian Detour Route

EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. The following mitigation measures would be implemented.

REC-1: Users of the Rascal/Michael O'Sullivan Bike Paths would be temporarily detoured to the Loughborough neighborhood during the reconstruction of the trail or during times when construction activities are preventing the safe use of the Rascal/Michael O'Sullivan Bike Paths.

REC-2: By project completion, the portions of the Rascal/Michael O'Sullivan Bike Paths impacted by construction would be actively restored along a new alignment, using as many portions of the original as feasible to maintain the activities, features, and attributes of the trail.

REC-3: Access to the Rascal/Michael O'Sullivan Bike Paths outside the construction zone would remain open during normal business hours.

2.1.17 Transportation

Considering the information in the Traffic Operations Analysis Report dated May 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**Less Than Significant Impact With Mitigation Incorporated**
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**
d) Result in inadequate emergency access?	**Less Than Significant Impact**

Affected Environment

According to the City of Merced General Plan, State Route 59 is one of three routes that currently provide regional access for the City of Merced. State Route 59 is a north/south facility that extends from State Route 152 south of El Nido to Snelling north of Merced. It enters Merced from the south via

Martin Luther King Junior Way (South J Street), crosses the City of Merced via State Route 99, and continues northward on its own State Route 59 corridor.

The project proposes to widen and improve State Route 59 from a two-lane roadway to a four-lane roadway from the 16th Street intersection to about 600 feet south of Buena Vista Drive. The National Center for Sustainable Transportation Induced Travel Calculator was used to estimate the induced vehicle miles traveled as a result of the project. Because the proposed widening would result in 8,000 lane feet of additional travel lanes, the project is estimated to induce an additional 2.8 million vehicle miles traveled per year.

Environmental Consequences

b) **Less Than Significant Impact With Mitigation Incorporated.** CEQA Guidelines Section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled are the most appropriate measure of transportation impacts. For this section, vehicle miles traveled refers to the amount and distance of automobile travel attributable to a project. Subdivision (b) defines the criteria for analyzing transportation impacts.

The project proposes to widen and improve State Route 59 from a two-lane roadway to a four-lane roadway from the 16th Street intersection to about 600 feet south of Buena Vista Drive, which would increase roadway capacity. The project would add about 8,000 lane feet of additional travel lanes, which would induce an additional 2.8 million vehicle miles traveled per year. A road diet mitigation strategy, TRA-2, would be implemented to offset vehicle miles traveled-related impacts and ensure such impacts are reduced. Road diets eliminate travel lanes and reallocate the space into areas that can be used for parking, bike lanes, or sidewalks, directly benefitting pedestrian and bicyclist mobility and safety.

The increase of about 8,000 feet of new lane miles at the project site would be directly offset by the reduction in about 8,285 feet of lane miles within the mitigation site located in downtown Merced (Figure 11 Project and Vehicle Miles Traveled Mitigation Site Location). Therefore, the project would achieve rough proportionality between impact and mitigation, as shown in Table 9.

Figure 4 Project and Vehicle Miles Traveled Mitigation Site Location

FIGURE 11
Project and VMT Mitigation Site Location
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Table 5 Net Vehicle Miles Traveled Change

Proposed Project/Proposed Mitigation	Capacity Added (Lane-Feet)	Vehicle Miles Traveled Impact (Vehicle Miles Traveled Per Year)	Net Vehicle Miles Traveled Change (Vehicle Miles Traveled Per Year)
Proposed Project	8,000	2.8 million	Negative 0.1 million
Proposed Mitigation	Negative 8,285	Negative 2.9 million	Negative 0.1 million

The City of Merced has prepared a traffic analysis that confirms the proposed road diet mitigation meets traffic demands for the area. Construction of a road diet satisfies mitigation measures that reduce vehicle miles traveled off the State Highway System listed on the Transportation Analysis Under CEQA guidance document, Section 5.7. It should be highlighted that as the proposed road diet is considered a mitigation for the project's vehicle miles traveled impacts, the design of the road diet is not included as a component of the project's design. The road diet would be designed as a separate project, subject to its own environmental compliance, and would also be under the control, funding, and implementation authority of the City of Merced. A future cooperative agreement detailing the mitigation strategy and timeframe for implementation would be executed between the City of Merced and Caltrans, as specified in TRA-2. It is expected that the implementation of TRA-2 would be, at most, 10 years from the approval of this Initial Study. Table 10 shows the net vehicle miles traveled change with the implementation of TRA-2.

Table 6 Net Vehicle Miles Traveled Change

Scenario	Regional Vehicle Miles Traveled
Existing	2,145,230
Opening Year 2025 No Build	2,282,330
Opening Year 2025 Build	2,282,060
Design Year 2045 No Build	2,739,340
Design Year 2045 Build	2,738,170

With the implementation of TRA-2, impacts would be less than significant.

d) **Less Than Significant Impact.** The contractor would build the project in two stages—the east half during stage 1 and the west half during stage 2. Construction would be staged this way to maintain traffic on State Route 59. Response times may be affected during construction; however, emergency services would be notified before construction and during construction if there are any changes. Measure TRA-1 would be implemented to minimize any potential impacts to emergency service access. A less than significant impact is expected.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance and minimization measure TRA-1 would minimize any potential impacts to emergency vehicle access, while implementation of mitigation measure TRA-2 would reduce impacts to vehicle miles traveled to a less than significant level.

TRA-1: Temporary impacts to traffic flow due to construction activities would be minimized through construction phasing and signage and a Traffic Management Plan.

TRA-2: A lane reduction (road diet) mitigation strategy would be implemented within two roadways in the City of Merced to offset impacts to vehicle miles traveled. A future cooperative agreement detailing the mitigation strategy and time frame for implementation would be executed between the City of Merced and Caltrans.

2.1.18 Tribal Cultural Resources

Considering the information in the Historic Property Survey Report dated August 2022 and the Archaeological Survey Report dated June 2022, the following significance determinations have been made:

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:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
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	**Less Than Significant Impact**
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency would consider the significance of the resource to a California Native American tribe.	**Less Than Significant Impact**

Affected Environment

The horizontal Area of Potential Effects was established as the area of direct and indirect effects and consists of an estimated 35-acre area (see Section 2.1.5 Cultural Resources for Figure 6 Area of Potential Effects Limits). This includes all staging areas, street closures, vegetation/tree removal, approach roadway realignment, bridge replacements, grading activities, channel realignment, temporary construction easements, potential utility relocations, and minimal right-of-way acquisition. The Area of Potential Effects extends north to south along an estimated 1.1-mile stretch of State Route 59 from its 16th Street intersection to Buena Vista Drive.

The vertical Area of Potential Effects consists of a maximum of 15 feet of depth from the existing ground surface to below the ground surface to accommodate earthwork for the construction of bridge abutments. The minimum depth of ground disturbance is about 5 feet below the ground surface, required for all roadway approach realignment work, vegetation removal, channel realignment, and fill compaction.

Tribal cultural resource identification efforts were conducted to determine whether a tribal cultural resource, as defined by Public Resources Code Section 21074, would be impacted by the project. These efforts included background research, a search of archaeological site records and cultural survey reports on file at the Central California Information Center, a literature and map review, a review of the Sacred Lands File by the Native American Heritage Commission, efforts to coordinate with Native American Tribal Governments, and a pedestrian field survey.

Project notification letters were sent to the following:

- Amah Mutsun Tribal Band; Chairperson
- Dumna Wo-Wah Tribal Government
- North Fork Rancheria of Mono Indians
- North Valley Yokuts Tribe
- Southern Sierra Miwuk Nation
- Tule River Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

None of the tribes listed above responded to the notification letter. The results of the Native American Heritage Commission Sacred Lands File search did not identify any Native American cultural resources within the Area of Potential Effects. Further, the pedestrian field survey did not identify any Native American cultural resources.

Buried Archaeological Site Potential

As with all projects requiring ground disturbance, there is always the possibility that unknown cultural resources may be encountered. To determine the potential that subsurface cultural resources are present within the vertical Area of Potential Effects, the buried archaeological site potential was analyzed. Current knowledge of the geomorphic history of the region provides a strong basis for assessing the potential for discovering buried archaeological sites. The project area is on the southeastern side of the Great (Central) Valley physiographic province. The Great Valley is a relatively flat alluvial plain about 400 miles long and 50 miles wide that trends northwest-to-southeast (Fenneman 1931). The main geologic formations in the project area consist of the upper and lower Modesto Formation and Holocene alluvium. Soils that are associated with early-to-middle Holocene eolian sand dunes, which sometimes overlie the upper Modesto terraces and fans in Merced County, are known to be sensitive for buried Holocene-aged archaeological deposits (LSA 2018).

While there is a potential for subsurface features, the amount of historic and modern disturbances throughout the project area, combined with the erosional environment of the creek channel, it is unlikely that any intact buried Native American artifacts or features would be present.

Given the project area's location within an area that has mainly been used as a road and railroad, the extensive landscape modification (both historic and modern), and considering that the construction footprint would occur largely within previously disturbed soils, the potential for a buried archaeological site to be located within the Area of Potential Effects is considered to be low.

As a result of these efforts, no Native American cultural resources were identified. Because of this, there are no tribal cultural resources within the Area of Potential Effects.

Environmental Consequences

a) **Less Than Significant Impact.** A records search, a Native American Heritage Commission Sacred Lands File Search, Native American tribal outreach, a pedestrian survey, and a buried archaeological site assessment did not identify any Native American cultural resources within the Area of Potential Effects; therefore, no tribal cultural resources, as defined by Public Resources Code Section 21074, were identified within the Area of Potential Effects.

While the project is not expected to cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historic resources as defined in Public Resources Code Section 5020.1(k), with any project requiring ground disturbance, there is always the possibility that unknown cultural resources, including human remains, may be encountered. With the implementation of avoidance and minimization measures CR-1 and CR-2, listed in Section 2.1.5 Cultural Resources, potential impacts would be less than significant.

b) **Less Than Significant Impact.** As mentioned above, the cultural resource identification efforts did not identify any Native American cultural resources. Because there are no Native American cultural resources, there are no tribal cultural resources, as defined by Public Resources Code Section 21074, within the Area of Potential Effects. Given that the project is within an area that has mainly been used as a road and railroad, the extensive landscape modification (both historic and modern), and considering that the construction footprint would occur largely within previously disturbed soils, the potential for a buried archaeological site to be located within the Area of Potential Effects is considered to be low.

Despite the lack of identified cultural resources and the low potential for buried cultural resources, including human remains, to be present within the

Area of Potential Effects, with any project requiring ground disturbance, there is always the possibility that unknown archaeological resources may be encountered. With the implementation of avoidance and minimization measures CR-1 and CR-2, listed in Section 2.1.5 Cultural Resources, potential impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

No significant impacts that require mitigation measures would occur. Please refer to Section 2.1.5 Cultural Resources for measures CR-1 and CR-2. No other avoidance, minimization, and/or mitigation measures are required.

2.1.19 Utilities and Service Systems

Considering the information in the Community Impact Assessment dated August 2022, the City of Merced General Plan dated 2015, and the Merced County General Plan Draft Environmental Impact Report dated 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
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**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	**No Impact**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**No Impact**
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?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

Affected Environment

Existing Utilities

Existing utilities within the project area include American Telephone and Telegraph (also known as AT&T), Comcast, the City of Merced, the Pacific Gas and Electric Company, Merced Irrigation District, and T-Mobile.

Water

The City of Merced relies on groundwater as its main water source, but groundwater is recharged almost entirely through the agricultural application of surface water from the Merced River.

Wastewater

Wastewater (sanitary sewer) collection and treatment in the Merced urban area is provided by the City of Merced. The wastewater collection system handles wastewater generated by residential, commercial, and industrial uses in the City of Merced.

Solid Waste

The City of Merced is served by the State Route 59 Landfill and the State Route 59 Compost Facility, located at 6040 North State Highway 59, 1.5 miles north of Old Lake Road. Merced County is the contracting agency for landfill operations and maintenance; the Merced County Association of Governments owns the facilities. The City of Merced provides services for all trash pickup within the city limits; franchise hauling companies collect in the unincorporated areas.

Environmental Consequences

a) **Less Than Significant Impact.** There are existing utility lines within the project area that may require relocation. Utility relocations would be conducted with close coordination with the utility companies and property owners. Should utility systems require relocation, they would be relocated within the project area and would be designed to ensure that no new environmental impacts not already discussed in this initial study would occur.

Furthermore, the project would not include the construction of any uses that would increase demand for wastewater, stormwater facilities, electric power,

natural gas, or telecommunications facilities. No new utilities would be required, and the potential relocation of utilities would have a less than significant impact.

d) **Less Than Significant Impact.** The project would not generate substantial solid waste during operation. Solid waste may be generated during construction; however, the amount would not exceed landfill capacities because the amount would not be substantial and would occur only during the construction period. Therefore, impacts associated with project development would be considered less than significant.

Avoidance, Minimization, and/or Mitigation Measures

None.

2.1.20 Wildfire

Considering the information in the Merced County General Plan dated 2013, the following significance determinations have been made:

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

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**No Impact**
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**
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	**No Impact**
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?	**Less Than Significant Impact**

Affected Environment

According to the Merced County General Plan, most of the project area is not subject to severe fire hazard risk or wildfire threat. However, the vacant grassland portion of the project area north of Santa Fe Drive and west of State Route 59 is within a moderate fire hazard severity zone and subject to moderate wildfire risk.

Environmental Consequences

d) **Less Than Significant Impact.** Because the project area is generally flat, there are no impacts related to downslope landslides. Furthermore, because the project would replace the existing Black Rascal Creek Bridge with a replacement bridge that would be raised about 2 to 3 feet to reduce flood risk hazard, impacts related to downstream flooding would be reduced. Finally, with the implementation of avoidance and minimization measures WQ-1 through WQ-4, impacts related to runoff would be reduced to a less than significant level.

Avoidance, Minimization, and/or Mitigation Measures

Please refer to Section 2.1.10 Hydrology and Water Quality for avoidance and minimization measures WQ-1 through WQ-4. No other avoidance, minimization, and/or mitigation measures are required.

2.1.21 Mandatory Findings of Significance

Question:	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**

Question:	CEQA Significance Determinations for Mandatory Findings of Significance
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	**Less Than Significant Impact With Mitigation Incorporated**
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	**Less Than Significant Impact With Mitigation Incorporated**

Environmental Consequences

a) **Less Than Significant Impact With Mitigation Incorporated.** Project implementation would have the potential to impact the quality of the existing environment. Potentially significant impacts have been identified related to Biological Resources (2.1.4), Public Services (2.1.15), Recreation (2.1.16), and Transportation (2.1.17). Mitigation measures have been identified related to individual resource-specific impacts. The project has the potential to impact riparian habitats and other sensitive communities used by wildlife species in the project area; however, mitigation measures would reduce the level of all project-related impacts to less than significant. Therefore, impacts are considered less than significant with mitigation incorporated.

b) **Less Than Significant Impact With Mitigation Incorporated.** All potential significant impacts discussed in this initial study can be reduced to a less than significant level with the incorporation of avoidance, minimization, and/or mitigation measures. Past projects in the region have been cleared through the CEQA process, and potentially significant impacts from those previous projects would have already been addressed through their own environmental review process. No significant cumulative effects have been identified with the incorporation of the measures provided in this initial study. Incorporation of these measures would ensure that project-level impacts do not contribute to cumulatively significant impacts on a regional level.

c) **Less Than Significant Impact With Mitigation Incorporated.** The project would not cause significant adverse effects to human beings, either directly or indirectly with mitigation incorporated. Potential impacts have been identified related to Hazards and Hazardous Materials (2.1.9), Hydrology and Water Quality (2.1.10), Public Services (2.1.15), Recreation (2.1.16), and Transportation (2.1.17). Avoidance, minimization, and/or mitigation measures

have been identified related to individual resource-specific impacts. Mitigation measures would reduce the level of all project-related impacts to less than significant. Therefore, impacts are considered less than significant with mitigation incorporated.

Avoidance, Minimization, and/or Mitigation Measures

- Measures VIS-1 through VIS-6
- Measure AQ-1
- Measures BIO-1 through BIO-36
- Measures CR-1 and CR-2
- Measures HAZ-1 through HAZ-9
- Measures WQ-1 through WQ-4
- Measure NOI-1
- Measures REC-1 through REC-3
- Measures TRA-1 and TRA-2

References

California Air Resources Board 2020. Ambient Air Quality Standards. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

California Department of Transportation. 2018. CT-EMFAC2014, Version 6.0.0.29548.

California Department of Transportation. 2015. Standard Specifications. Prepared by the State of California Department of Transportation. Available at http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2015_stdspecs/2015_stdspecs.pdf.

California Department of Transportation (Caltrans). 2020. Water Quality Planning Tool. Available at: <http://www.water-programs.com/wqpt.htm>

City of Merced. 2012. Amended 2015. 2030 General Plan. Available at: <https://www.cityofmerced.org/departments/development-services/planning-division/merced-vision-2030-general-plan>

City of Merced. 2022. Municipal Code. Available at: < https://library.municode.com/ca/merced/codes/code_of_ordinances>

City of Merced. 2015. City of Merced Local Hazard Mitigation Plan. Available at: <https://www.cityofmerced.org/departments/development-services/planning-division/local-hazard-mitigation-plan/documents>

California Native Plant Society. 2021. Inventory of Rare and Endangered Plants of California. Available at: <http://www.rareplants.cnps.org/>

Department of Conservation. 2022. California Earthquake Hazards Zone Application. Available at: <https://www.conservation.ca.gov/cgs/geohazards/eq-zapp>

DWR (Department of Water Resources). 2019. Groundwater Basin Boundary Assessment Tool. Available at: <http://gis.water.ca.gov/app/bbat/>

Farmland Mapping & Monitoring Program - Department of Conservation. California Important Farmland Finder. Available at: https://maps.conservation.ca.gov/dlrp/ciff/

Federal Emergency Management Agency (FEMA) 2022

Fenneman, N. M. 1931. Physiography of Western United States. New York: McGraw-Hill.

Jepson eFlora. 2021. Geographic subdivisions. Available at: <https://ucjeps.berkeley.edu/eflora/geography.html>

LSA. 2018. Public Review Draft Initial Study/Mitigation Negative Declaration for the Merced Mall Expansion Project, Merced, CA.

Merced County. 2012. 2030 Merced County General Plan Draft EIR. Available at: <https://www.co.merced.ca.us/1926/draft-general-plan-draft-program-eir>

Merced County. 2013. 2030 Merced County General Plan. Available at: <https://www.co.merced.ca.us/100/general-plan>

United States Climate Data. 2021. Climate Merced – California. Available at: <https://www.usclimatedata.com/climate/merced/california/united-states/usca0695>

Zeiner, D.C., Laudenslayer, W.F., Mayer, K.E., & White, M. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

Chapter 3 List of Preparers

This document was prepared by the following Caltrans District 10 staff:

Charlie Do, Project Manager

Alexandros Xides, Associate Environmental Planner - Generalist

Christopher Jannusch, Biology Branch Chief

Nancy Lemos, Environmental Planner – Natural Sciences

Ben Broyles, Environmental Branch Chief

Raymond Benson, Associate Environmental Planner–Archaeology

Hazardous Waste

Jonathan Schlee, Hazardous Waste Specialist

Eric Chin, District 10 Chief of Office of Project Initiation & Traffic Forecasting

Homer Zarzuela, Transportation Engineer, District 10 Office of Project Initiation and Travel Forecasting

Allam Alhabaly, Transportation Engineer (Civil)

Robert Leong, Water Quality Specialist

City of Merced

Paul Flores, Assistant Engineer. Bachelor of Science, Civil Engineering, California State University Fresno, Fresno; 6 Years of project management experience. Contribution: Provided support for Dokken Engineering for coordination and communications with the City of Merced.

Dokken Engineering

Juann Ramos, Project Manager. Bachelor of Science, Environmental Engineering, California Polytechnic State University, San Luis Obispo; Master of Science, Civil and Environmental Engineering, California Polytechnic State University, San Luis Obispo; 28 years of project management experience. Contribution: Oversaw preparation of the environmental document.

Jacqueline Lockhart, Project Engineer. Bachelor of Science, Civil Engineering, Santa Clara University; 17 years of transportation and civil engineering experience. Contribution: Oversaw preparation of the environmental document.

Pamela Dalcin-Walling, Hydraulic Engineer. Bachelor of Science, Civil Engineering, University of California, Davis; 32 years of hydraulic engineering experience. Contribution: Wrote Location Hydraulic Study.

Amy Dunay, Senior Environmental Planner/Archaeologist. Bachelor of Arts, Classics, Mount Holyoke College; Master of Arts, Archaeology, University of California, Los Angeles; 20 years of environmental planning experience. Contribution: Wrote the Historic Property Survey Report/Archaeological Survey Report.

Ken Chen, Associate Environmental Planner/Noise and Air Quality Specialist. Bachelor of Science, Community and Regional Development, University of California, Davis; 9 years of environmental planning experience. Contribution: Wrote Environmental Document, Air Quality Report, Noise Study Report, and Visual Impact Assessment.

Clare Favro, Environmental Planner/Biologist. Bachelor of Science, Biological Science, California Polytechnic State University, San Luis Obispo; 4 years of environmental planning experience. Contribution: Wrote Natural Environment Study and Biological Assessment.

Aliana Hale, Environmental Planner. Bachelor of Science, Environmental Geoscience, Texas A and M University; 4 years of environmental planning experience. Contribution: Wrote Water Quality Assessment Report.

Roberto Ramirez, Environmental Planner. Bachelor of Science, Environmental Studies, California State University, Sacramento; 5 years of environmental planning experience. Contribution: Wrote Community Impact Assessment.

Kleinfelder

Stefan Birardi, Senior Staff Environmental Scientist, Bachelor of Science, Environmental and Earth Science, Keene State College, Connecticut; 7 years of experience conducting Environmental Site Assessments and Site Investigations for transportation agencies, including High Speed Rail Authority, Port of San Diego, and Caltrans Districts 8, 10, and 11. Contribution: Primary researcher and preparer of the Initial Site Assessment.

Fehr and Peers

Ian Barnes, PE, Senior Associate. Bachelor of Science, Civil Engineering, California Polytechnic State University, San Luis Obispo; Master of Science, Civil Engineering, University of California, Berkley; 13 years of traffic engineering experience. Contribution: Oversaw preparation of the Traffic Analysis Operations Report.

Appendix A Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov

September 2022

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 non-discriminatory 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) 639-6392 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 PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"

This Page Intentionally Left Blank

Appendix B Road Construction Emissions Model Results

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for Highway 59 Widening, Part 1

Project Phases	ROG (Pounds per Day)	Carbon Monoxide (Pounds per Day)	Nitrogen Oxides (Pounds per Day)	Total Particulate Matter 10 (Pounds per Day)	Exhaust Particulate Matter 10 (Pounds per Day)	Fugitive Dust Particulate Matter 10 (Pounds per Day)	Total Particulate Matter 2.5 (Pounds per Day)	Exhaust Particulate Matter 2.5 (Pounds per Day)	Fugitive Dust Particulate Matter 2.5 (Pounds per Day)	Sulfur Oxides (Pounds per Day)	Carbon Dioxide (Pounds per Day)	Methane (Pounds per Day)	Nitrous Oxide (Pounds per Day)	Carbon Dioxide Equivalent (Pounds per Day)
Grubbing/Land Clearing	0.93	10.25	8.27	10.37	0.37	10.00	2.40	0.32	2.08	0.03	2,486.65	0.59	0.08	2,525.19
Grading/Excavation	3.82	29.76	36.79	11.51	1.51	10.00	3.38	1.30	2.08	0.10	9,447.72	2.52	0.22	9,575.28
Drainage/Utilities/ Sub-Grade	2.61	25.51	24.01	10.97	0.97	10.00	2.95	0.87	2.08	0.06	5,843.46	1.19	0.08	5,896.62
Paving	0.82	11.31	7.94	0.39	0.39	0.00	0.32	0.32	0.00	0.02	2,390.83	0.48	0.11	2,435.84
Maximum Daily (Pounds per Day)	3.82	29.76	36.79	11.51	1.51	10.00	3.38	1.30	2.08	0.10	9,447.72	2.52	0.22	9,575.28
Project Total (Tons/Construction Project)	0.70	6.22	6.64	2.52	0.27	0.27	0.71	0.24	0.47	0.02	1,697.94	0.41	0.04	1,719.12

Notes: Project Start Year: 2025; Project Length (months): 24; Total Project Area (acres): 35; Maximum Area Disturbed/Day (acres): 1; Water Truck Used: Yes

Daily Emission Estimates for Highway 59 Widening, Part 2

Project Phases	Total Soil Imported/Exported Volume (Cubic Yards per Day)	Total Asphalt Imported/Exported Volume (Cubic Yards per Day)	Daily Vehicle Miles Traveled (Miles per Day) – Soil Hauling	Daily Vehicle Miles Traveled (Miles per Day) – Asphalt Hauling	Daily Vehicle Miles Traveled (Miles per Day) – Worker Commute	Daily Vehicle Miles Traveled (Miles per Day) – Water Truck
Grubbing/Land Clearing	26	0	60	0	320	40
Grading/Excavation	95	19	150	30	1,200	40
Drainage/Utilities/Sub-Grade	0	0	0	0	800	40
Paving	0	65	0	120	400	40

Notes: Particulate Matter 10 and Particulate Matter 2.5 estimates assume 50 percent control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total Particulate Matter 10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total Particulate Matter 2.5 emissions shown in column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

Carbon dioxide equivalent emissions are estimated by multiplying mass emissions for each greenhouse gas by its global warming potential, 1, 25, and 298 for carbon dioxide, methane, and nitrous oxide, respectively. Total carbon dioxide equivalent is then estimated by summing carbon dioxide equivalent estimates over all greenhouse gases.

Total Emission Estimates by Phase for Highway 59 Widening

Project Phases	ROG (Tons/Phase)	Carbon Monoxide (Tons/Phase)	Nitrogen Oxides (Tons/Phase)	Total Particulate Matter 10 (Tons/Phase)	Exhaust Particulate Matter 10 (Tons/Phase)	Fugitive Dust Particulate Matter 10 (Tons/Phase)	Total Particulate Matter 2.5 (Tons/Phase)	Exhaust Particulate Matter 2.5 (Tons/Phase)	Fugitive Dust Particulate Matter 2.5 (Tons/Phase)	Sulfur Oxides (Tons/ Phase)	Carbon Dioxide (Tons/Phase)	Methane (Tons/Phase)	Nitrous Oxide (Tons/Phase)	Carbon Dioxide Equivalent (Metric Tons/Phase)
Grubbing/Land Clearing	0.02	0.27	0.22	0.27	0.01	0.26	0.06	0.01	0.05	0.00	65.65	0.02	0.00	60.48
Grading/Excavation	0.40	3.14	3.89	1.22	0.16	1.06	0.36	0.14	0.22	0.01	997.68	0.27	0.02	917.31
Drainage/Utilities/ Sub-Grade	0.24	2.36	2.22	1.01	0.09	0.92	0.27	0.08	0.19	0.01	539.94	0.11	0.01	494.28
Paving	0.03	0.45	0.31	0.02	0.02	0.00	0.01	0.01	0.00	0.00	94.68	0.02	0.00	87.51
Maximum Daily (Tons/Phase)	0.40	3.14	3.89	1.22	0.16	1.06	0.36	0.14	0.22	0.01	997.68	0.27	0.02	917.31
Project Total (Tons/Construction Project)	0.70	6.22	6.64	2.52	0.27	2.24	0.71	0.24	0.47	0.02	1,697.94	0.41	0.04	1,559.58

Notes: Particulate Matter 10 and Particulate Matter 2.5 estimates assume 50 percent control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total Particulate Matter 10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total Particulate Matter 2.5 emissions shown in column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

Carbon dioxide equivalent emissions are estimated by multiplying mass emissions for each greenhouse gas by its global warming potential, 1 ,25, and 298 for carbon dioxide, methane, and nitrous oxide, respectively. Total carbon dioxide equivalent is then estimated by summing carbon dioxide equivalent estimates over all greenhouse gases.

The carbon dioxide equivalent emissions are reported as metric tons per phase.

Appendix C Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: September 14, 2022
Project Code: 2022-0085311
Project Name: Highway 59 Phase 1 Widening and Highway 59 Widening over Black Rascal Creek

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0085311
Project Name: Highway 59 Phase 1 Widening and Highway 59 Widening over Black Rascal Creek
Project Type: Road/Hwy - Maintenance/Modification
Project Description: Highway 59 Phase 1 Widening and Highway 59 Widening over Black Rascal Creek

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.3163628,-120.50505790450404,14z

Counties: Merced County, California

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Amphibians

NAME	STATUS
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Colusa Grass *Neostapfia colusana* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5690	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Dokken Engineering
Name: Clare Favro
Address: 110 Blue Ravine Road #200
City: Folsom
State: CA
Zip: 95630
Email cfavro@dokkenengineering.com
Phone: 9168580642

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Merced (3712034) OR Atwater (3712035) OR Winton (3712045) OR Yosemite Lake (3712044) OR Sandy Mush (3712025) OR El Nido (3712024))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
beaked clarkia *Clarkia rostrata*	PDONA050Y0	None	None	G2G3	S2S3	1B.3
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S1	FP
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	AAAAA01181	Threatened	Threatened	G2G3	S3	WL
Colusa grass *Neostapfia colusana*	PMPOA4C010	Threatened	Endangered	G1	S1	1B.1
Conservancy fairy shrimp *Branchinecta conservatio*	ICBRA03010	Endangered	None	G2	S2	
Delta button-celery *Eryngium racemosum*	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1
dwarf downingia *Downingia pusilla*	PDCAM060C0	None	None	GU	S2	2B.2
ferruginous hawk *Buteo regalis*	ABNKC19120	None	None	G4	S3S4	WL
forked hare-leaf *Lagophylla dichotoma*	PDAST5J070	None	None	G2	S2	1B.1
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
hairy Orcutt grass *Orcuttia pilosa*	PMPOA4G040	Endangered	Endangered	G1	S1	1B.1
hardhead *Mylopharodon conocephalus*	AFCJB25010	None	None	G3	S3	SSC
heartscale *Atriplex cordulata var. cordulata*	PDCHE040B0	None	None	G3T2	S2	1B.2
Henderson's bent grass *Agrostis hendersonii*	PMPOA040K0	None	None	G2Q	S2	3.2

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G3G4	S4	
Keck's checkerbloom *Sidalcea keckii*	PDMAL110D0	Endangered	None	G2	S2	1B.1
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
Merced kangaroo rat *Dipodomys heermanni dixoni*	AMAFD03062	None	None	G4T2T3	S2S3	
Merced phacelia *Phacelia ciliata var. opaca*	PDHYD0C0S2	None	None	G5TH	SH	3.2
merlin *Falco columbarius*	ABNKD06030	None	None	G5	S3S4	WL
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
molestan blister beetle *Lytta molesta*	IICOL4C030	None	None	G2	S2	
mountain plover *Charadrius montanus*	ABNNB03100	None	None	G3	S2S3	SSC
Northern Claypan Vernal Pool *Northern Claypan Vernal Pool*	CTT44120CA	None	None	G1	S1.1	
Northern Hardpan Vernal Pool *Northern Hardpan Vernal Pool*	CTT44110CA	None	None	G3	S3.1	
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G4	S3	SSC
recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0	None	None	G2?	S2?	1B.2
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin Valley Orcutt grass *Orcuttia inaequalis*	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
shining navarretia *Navarretia nigelliformis ssp. radians*	PDPLM0C0J2	None	None	G4T2	S2	1B.2
spiny-sepaled button-celery *Eryngium spinosepalum*	PDAPI0Z0Y0	None	None	G2	S2	1B.2
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	AFCHA0209K	Threatened	None	G5T2Q	S2	
subtle orache *Atriplex subtilis*	PDCHE042T0	None	None	G1	S1	1B.2

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
succulent owl's-clover *Castilleja campestris var. succulenta*	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool smallscale *Atriplex persistens*	PDCHE042P0	None	None	G2	S2	1B.2
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	
watershield *Brasenia schreberi*	PDCAB01010	None	None	G5	S3	2B.3
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G4G5T4	S3S4	SSC
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western red bat *Lasiurus blossevillii*	AMACC05060	None	None	G4	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G2G3	S3	SSC
Yuma myotis *Myotis yumanensis*	AMACC01020	None	None	G5	S4	

Record Count: 52

Clare Favro

From: Clare Favro
Sent: Tuesday, November 30, 2021 12:02 PM
To: nmfswcrca.specieslist@noaa.gov
Subject: Highway 59 Phase 1 Widening and Highway 59 Widening over Black Rascal Creek Project

Quad Name **Winton**
Quad Number **37120-D5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

1

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -
Quad Name **Yosemite Lake**
Quad Number **37120-D4**

2

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - X
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - X
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -
Quad Name Atwater
Quad Number 37120-C5

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -

4

CCV Steelhead DPS (T) - X
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -
Quad Name Merced
Quad Number 37120-C4

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - X
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -

Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -
Quad Name **Sandy Mush**
Quad Number **37120-B5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

8

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **El Nido**
Quad Number **37120-B4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Clare Favro (she/her)
Biologist/Environmental Planner
Dokken Engineering
Cell: 916.778.7347 Office: 916.858.0642
Email: cfavro@dokkenengineering.com
110 Blue Ravine Road, Suite 200 | Folsom, CA 95630
www.dokkenengineering.com

Inventory of Rare and Endangered Plants of California

California Native Plant Society

Search Results

25 matches found. Click on scientific name for details

Search Criteria: Quad is one of **[3712034:3712035:3712045:3712044:3712025:3712024]**

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Agrostis hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	G2Q	S2	3.2	 ©2005 Steve Matson
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	No Photo Available
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	No Photo Available
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	No Photo Available
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	No Photo Available
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	G5	S3	2B.3	 ©2014 Kirsten Bovee
Castilleja campestris var. *succulenta*	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	FT	CE	G4? T2T3	S2S3	1B.2	No Photo Available
Centromadia parryi ssp. *rudis*	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	No Photo Available
Clarkia rostrata	beaked clarkia	Onagraceae	annual herb	Apr-May	None	None	G2G3	S2S3	1B.3	No Photo Available
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2	No Photo Available
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	No Photo Available

Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	No Photo Available
Eryngium racemosum	Delta button-celery	Apiaceae	annual/perennial herb	(May)Jun-Oct	None	CE	G1	S1	1B.1	No Photo Available
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Lagophylla dichotoma	forked hare-leaf	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.1	No Photo Available
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	No Photo Available
Navarretia nigelliformis ssp. *radians*	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	None	None	G4T2	S2	1B.2	No Photo Available
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	FT	CE	G1	S1	1B.1	No Photo Available
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	FT	CE	G1	S1	1B.1	No Photo Available
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	FE	CE	G1	S1	1B.1	No Photo Available
Phacelia ciliata var. *opaca*	Merced phacelia	Hydrophyllaceae	annual herb	Feb-May	None	None	G5TH	SH	3.2	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	No Photo Available
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	FE	None	G2	S2	1B.1	No Photo Available

Showing 1 to 25 of 25 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0). Website https://www.rareplants.cnps.org [accessed 30 November 2021].

Send questions and comments to rareplants@cnps.org.

About the Inventory
Release Notes
Advanced Search

Glossary

About the Rare Plant Program
CNPS Home Page
About CNPS

Join CNPS

The Calflora Database
The California Lichen Society

California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Developed by Rincon Consultants, Inc.

This Page Intentionally Left Blank

Appendix D Mitigation, Monitoring, and Reporting Program

Environmental Commitments Record

DIST-CO-RTE: DISTRICT 10 – MER – 59 **PM/PM:** 15.4/16.6 **EA/Project ID.:** 10-1M140/1020000121
Project Description: The California Department of Transportation (Caltrans) and the City of Merced propose to widen and improve State Route 59 from a two-lane roadway to four lanes from the 16th Street intersection to about 600 feet south of Buena Vista Drive. The Highway Phase 1 Widening and Widening Over Black Rascal Creek Project also proposes to replace the Black Rascal Creek Bridge and the South Fork Black Rascal Creek Bridge. Additional project features include standard shoulders, intersection improvements, Class 2 bicycle lanes, a striped two-way left-turn lane and median, and sidewalks.
Date (Last modification): April 11, 2023
Environmental Planner: **Phone Number:**
Construction Liaison: **Phone Number:**
Resident Engineer: **Phone Number:**

PERMITS

Permit	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirement Completed by:	Permit Requirement Completed on:	Comments
Section 401 of the Clean Water Quality Act - Water Quality Certification	Regional Water Quality Control Board	Enter date	Enter date	Enter date	Enter Name	Enter date	The application will be submitted during the Plans, Specifications, and Estimates phase.
Section 404 of the Clean Water Quality Act - Nationwide Permit	U.S. Army Corps of Engineers	Enter date	Enter date	Enter date	Enter Name	Enter date	The application will be submitted during the Plans, Specifications, and Estimates phase.
Section 1600 of the California Endangered Species Act - Streambed Alteration Agreement	California Department of Fish and Wildlife	Enter date	Enter date	Enter date	Enter Name	Enter date	The application will be submitted during the Plans, Specifications, and Estimates phase.
Central Valley Flood Protection Board – Encroachment Permit	Central Valley Flood Protection Board	Enter date	Enter date	Enter date	Enter Name	Enter date	The application will be submitted during the Plans, Specifications, and Estimates phase.
Section 7 of the Federal Endangered Species Act – Letter of Concurrence for Giant Garter Snake	U.S. Fish and Wildlife Service	10-08-22	02-15-23	Not Applicable	Enter Name	Enter date	Reference Number 2022-0085311-S7-001
Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response	National Marine Fisheries Service	10-08-22	11-01-22	Not Applicable	Enter Name	Enter date	Reference Number NMFS ECO#: WCRO-2022-02073

ENVIRONMENTAL COMMITMENTS

PA&ED

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response

PROJECT, SPECIFICATIONS, AND ESTIMATES /BEFORE READY TO LIST:

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Hazardous Waste	HAZ-1: Pursuant to Caltrans' Standard Special Provisions and in accordance with the California Department of Toxic Substances Control and Caltrans' Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils ("The Agreement"), soil sampling for the presence of aerially deposited lead shall be performed in unpaved locations of the project before construction activities start. Should aerially deposited lead be detected in the soil samples, a lead compliance plan shall be prepared before the start of construction activities. Additionally, the soil shall be managed pursuant to Caltrans' Standard Specifications and Standard Special Provisions and in accordance with The Agreement.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Yes	City of Merced; Contractor	Conduct Aerially Deposited Lead Testing	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ-2: Soil sampling in the vicinity of each railroad shall be performed before construction activities start.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	No	City of Merced	Conduct Hazardous Soil Sampling	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ-3: Various natural gas transmission pipelines and other utilities run parallel to or cross the project area, indicating a potential hazard during construction. Coordination with local utility companies to avoid potential impacts is recommended before the start of construction activities.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	No	City of Merced	Contact Utility Companies	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ-4: Soil sampling for the presence of pesticides and herbicides shall be conducted before construction.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	No	City of Merced	Conduct Hazardous Soil Sampling	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ-5: An asbestos-containing materials/lead-based paint survey shall be performed in conformance with the U.S. Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations Part 61, Subpart M, and California Department of Public Health guidelines.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Select a response	City of Merced	Conduct Asbestos/Lead Paint Survey	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ- 7: Shallow soil sampling shall be performed at the base of poles in areas of observed staining. In addition, should utility pole or transformer removal be required as part of the project, the local utility company shall be notified for proper testing and removal.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Select a response	City of Merced	Conduct Hazardous Soil Sampling; Contact Utility Companies	Enter date	Enter Name	Enter date	Enter remarks	No

ROW/PURCHASING

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Select a category	Enter task and brief description	Enter source	Select a response	Enter name	Enter action	Enter date	Enter Name	Enter date	Enter remarks	Select a response

PRECONSTRUCTION

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-2: Before the start of construction activities, the project limits, in proximity to Black Rascal Creek and eucalyptus riparian habitat, must be marked with high visibility Environmentally Sensitive Area fencing or staking to ensure construction will not further encroach into waters or sensitive habitats. The project biologist will periodically inspect the Environmentally Sensitive Area to ensure sensitive locations remain undisturbed.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor; Project Biologist	Install Environmentally Sensitive Area Fencing	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-9: Permanent impacts to waters of the U.S/waters of the State (Black Rascal Creek) will be mitigated via the payment of an In-Lieu Fee or other U.S. Army Corps of Engineers-approved compensation method for waters of the U.S/waters of the State, at a 1-to-1 ratio. The final mitigation method will satisfy the requirements of the California Department of Fish and Wildlife, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers and will be finalized during the permitting phase of the project.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	No	City of Merced	Mitigate waters impacts.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-10: Before construction, seasonal wetlands within the project area will be marked with Environmentally Sensitive Area fencing at the direction of the project biologist and designated as a no-work zone.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Install Environmentally Sensitive Area fencing	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-11: Before construction, a focused plant survey will occur within the typical blooming season of special-status plant species that have the potential to occur within the project area (for Sanford's arrowhead, May through October). The survey will be conducted by a qualified biologist to identify populations of Sanford's arrowhead and other special-status plant species within the project area. If special-status plant species are seen within the project area, the identified plant or population of plants will be protected with Environmentally Sensitive Area orange snow fencing, and work will be prohibited from occurring within the delineated area. If Environmentally Sensitive Area delineation is infeasible due to project design, then plant relocations may be conducted by the project	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Conduct Biological Survey	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
	biologist in coordination with the City of Merced and the California Department of Fish and Wildlife.									
Biology	BIO-14: In accordance with the Swainson's Hawk Technical Advisory Committee Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys In California's Central Valley (2000), protocol-level surveys will be conducted during the appropriate survey periods immediately before construction to determine the presence/absence of the species. If a Swainson's hawk is discovered 0.25 mile from the project area, a 500-foot no-work buffer will be installed around the nest using Environmentally Sensitive Area fencing, and the project biologist will monitor the nest until it is determined that the young have fledged. A reduced buffer or additional appropriate protective measures may be developed in coordination with the California Department of Fish and Wildlife.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Conduct Biological Survey	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-15: Before construction, trees that are planned for removal will be assessed by a qualified biologist to determine if the trees are suitable bat habitat trees. If any of the trees required for removal are determined to be suitable bat habitat trees, such trees will be marked. Removal of bat habitat trees must occur outside of the bat breeding season (April 1 through August 31) to avoid impacts to maternity colonies if feasible. If bat habitat trees must be removed during the bat breeding season, then a qualified biologist will survey the trees immediately before removal for the presence of bats within the trees. If any such trees are found to support bat maternity colonies, the biologist will coordinate with the City of Merced to determine a bat exclusion plan before tree removal.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Conduct Biological Survey	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-18: No more than 24 hours before the start of groundbreaking activities at Black Rascal Creek, a qualified biologist will conduct a preconstruction survey in suitable aquatic and upland habitats for the giant garter snake. If construction stops for two weeks or longer, a new preconstruction survey will be completed no more than 24 hours before restarting work. If the species is discovered during surveys or at any time during construction, the city, in coordination with Caltrans, will stop work where the individual occurs and contact the U.S. Fish and Wildlife Service to discuss how to proceed and possible initiation of formal consultation.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Conduct Biological Survey	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-25: Before construction, the contractor will prepare a water diversion and fish exclusion plan. The water diversion and fish exclusion plan will be either developed or approved by a biologist with knowledge of the life history of salmonid fish. The water diversion and fish exclusion plan will include measures to exclude fish from Black Rascal Creek within the action area before water diversion. The National Marine Fisheries Service will approve a water diversion and fish exclusion plan before construction.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Prepare Water Diversion/Fish Exclusion Plan	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-26: Permanent effects to stream channel habitat will be mitigated via the purchase of salmonid-specific mitigation credits through an in-lieu fee program, such as San Joaquin Aquatic Resource credits from the National Fish and Wildlife Foundation's Sacramento District California In-Lieu Fee Program.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	No	City of Merced	Mitigate Impacts to Fish Habitat	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-27: Riparian shade trees that must be removed due to construction activities will be mitigated through the planting of native tree species onsite at a 3-to-1 ratio to ensure a 1-to-1 replacement. Should it be determined that onsite mitigation is infeasible, an offsite mitigation option will also be considered.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	No	City of Merced	Mitigate Impacts to Fish Habitat	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-36: Before cutting, trimming, or removing trees, permission must be obtained from the City of Merced, per Municipal Code 14.12.040. Mitigation for removing trees will be determined through a permit approval process and may be accomplished through onsite planting, offsite planting, or payment through an in-lieu fee program.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Obtain Tree Permit	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-37: Engineering plans will be provided to the contractors that clearly show the amount of fill to be placed at the project site.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	City of Merced	Provide Engineering Plans	Enter date	Enter Name	Enter date	Enter remarks	No
Water Quality	WQ-3: Before the start of construction activities, the project limits, in proximity to jurisdictional waters, must be marked with high-visibility Environmentally Sensitive Area fencing or staking to ensure construction will not further encroach into jurisdictional waters.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.10	Yes	Contractor	Install Environmentally Sensitive Area Fencing	Enter date	Enter Name	Enter date	Enter remarks	No

CONSTRUCTION

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Air Quality	AQ-1: Implement San Joaquin Valley Air Pollution Control District Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust. The implementing agency will require, as a standard or specification of its contract, the construction contractor(s) to implement basic control measures to reduce construction-related fugitive dust. Although the following measures are outlined in the San Joaquin Valley Air Pollution Control District's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the avoidance and minimization measures before and during construction and documents compliance with the adopted avoidance and minimization measures. **Regulation 8 Control Measures for Construction Emissions of Particulate Matter 10** All disturbed areas, including storage piles, that are not being used for construction purposes shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or covered with a tarp or other suitable cover or vegetative ground cover. All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions by applying water or by presoaking. When materials are transported offsite, all materials shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained. All operations shall limit or expeditiously remove the accumulation of mud or dirt from nearby public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions). (Using blower devices is expressly forbidden). Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions using sufficient water or a chemical stabilizer/suppressant. Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday. An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.3	Yes	Contractor	Implement Best Management Practices	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
	more axles, shall implement measures to prevent carryout and trackout. Carryout and trackout: Any and all materials that adhere to and agglomerates on vehicles, haul trucks, and/or equipment (including trailers, tires, etc.) and fall onto a paved public road or the paved shoulder of a paved public road. **Enhanced Control Measures for Construction Emissions of Particulate Matter 10** Post speed limit signs on unpaved roads limiting traffic to no more than 15 miles per hour. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. **Additional Control Measures for Construction Emissions of Particulate Matter 10** Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site. Construct and maintain wind barriers sufficient to limit visible dust to 20 percent opacity. Suspend excavation and grading activities when winds exceed 20 miles per hour. Limit the size of areas subject to excavation, grading, and other construction activities occurring at any one time.									

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-1: Best Management Practices: Construction Best Management Practices that are consistent with Caltrans' most recent manuals will be developed for the water quality and introducing construction-related contaminants and sediment. Best management practices will address soil stabilization, sediment control, wind erosion control, stormwater management, and waste management practices. City/Caltrans personnel and/or the contractor will perform routine inspections of the construction area to verify that the best management practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector will inspect the site before and after a rain event to ensure that stormwater practices are adequate. Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources. Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events. Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the project site caused by wind and construction activities, such as traffic and grading activities. All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly. All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered as feasible. All erosion control measures and stormwater control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented. All disturbed areas would be restored to preconstruction contours and revegetated, where applicable, either through hydroseeding or other means, with weed-free native plant seed mix. All construction materials would be hauled offsite after completion of construction. To avoid entangling the giant garter snake and other wildlife, erosion control methods will not use monofilament plastic mesh, line or jute netting, tightly woven fiber netting, or similar materials. Appropriate alternatives include materials like burlap-wrapped fiber rolls, coconut coir matting, sediment fencing, and tackified hydroseeding compounds. All concrete curing activities will minimize spray drift to prevent compounds from entering the waterways.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Implement Best Management Practices	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-3: Refueling or maintaining equipment without secondary containment will not be allowed to occur within 100 feet of Black Rascal Creek. All refueling and maintenance that must occur within 100 feet of the creek must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Refuel/maintain vehicles/equipment 100 feet away from creek/water ways.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-4: Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other harmful materials from entering Black Rascal Creek and the associated riparian area.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Inspect equipment for leaks daily.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-5: Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitats marked with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Materials storage kept outside of Environmentally Sensitive Area fencing.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-6: A chemical spill kit must be kept onsite and available for use in the event of a spill.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Prepare and use chemical spill kit	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-7: Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or spilling directly into Black Rascal Creek. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Use secondary containment.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-8: All temporary impact areas within Black Rascal Creek, eucalyptus riparian habitat, and annual grasslands will be regraded to preconstruction contours, cleaned of any trash or debris, and seeded with a native seed mix specific to that habitat type. This will allow natural habitats to return to preconstruction conditions.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Regrade areas around creek to preconstruction conditions. Remove all debris. Seed with native seed mix.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-12: Before the start of work/ground disturbance, a qualified biologist will conduct worker environmental awareness training for all construction personnel, including contractors, subcontractors, and contractors' representatives, covering the status of the species, how to identify the species and its habitat, the importance of avoiding impacts to the species, the laws that protect it, and what to do if an individual is encountered during construction. New construction personnel who are added to the project after the training is first conducted will also be required to take the training. Documentation of the training, including sign-in sheets, will be kept on file and made available to the U.S. Fish and Wildlife Service upon request.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Provide environmental training to all construction personnel.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-13: The removal of large (greater than 6 inches in diameter at standard height) diameter trees will be avoided to the greatest extent practicable. Any large-diameter trees that cannot be protected within the project impact area shall be removed outside of the Swainson's hawk nesting season (February 1 to September 30) before construction.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Avoid impacting trees. Do not remove between February 1 through September 30.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-16: All construction activities at the northern end of the project (in and around Black Rascal Creek) will occur during the active season for the giant garter snake (approximately May 1 to October 1) when the species is more likely to be moving around and can more easily avoid being disturbed. A. If work must continue outside of the active season, ground-disturbing activities must start during the active season (before October 1). This way, no habitat within the construction areas will remain available for the giant garter snake to use as refugia during the inactive season; this will deter individuals from moving into active work zones.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Construction within/next to Black Rascal Creek can occur only from May 1 through October 1.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-17: All fencing will be composed of appropriate materials that do not risk entangling the giant garter snake or other wildlife. Before the start of work, a qualified biologist will guide the installation of high-visibility exclusion fencing along the edge of work areas in sensitive habitats for the giant garter snake (e.g., Black Rascal Creek and the riparian corridor). The fencing will denote the limits of the work areas to prevent ground disturbance and parking/staging from encroaching outside the designated work zones, to prevent the inadvertent discharge of construction-generated materials into the creek, and to prevent the species from entering active work areas. The fencing will be buried at least six inches below ground or secured with weighted material. A qualified biologist will ensure, on a regular basis, that all fencing is maintained for the duration of construction and is repaired or	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Install fencing per giant garter snake guidelines.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
	replaced as necessary.									
Biology	BIO-19: After April 15, dewatered habitats will remain dry for at least 15 consecutive days before excavating, filling, or otherwise working in the dewatered habitat.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Dewater Black Rascal Creek after April 15. Must remain dry for 2 Weeks before work can occur.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-20: All construction pipes or similar structures/materials stored on the construction site overnight within 200 feet of Black Rascal Creek will be inspected thoroughly for the species before capping, moving, burying, or otherwise using them. Similarly, vehicles and other equipment that could provide shade or shelter will also be inspected for animal presence before use. If an animal is observed during these inspections, the structure or vehicle will not be disturbed until the individual leaves voluntarily.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Check all equipment, materials, and vehicles within 200 feet of creek daily for giant garter snake presence.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-21: A qualified biologist will be present onsite to monitor vegetation removal in upland habitat (i.e., vegetated areas within 200 feet of the Black Rascal Creek channel) as well as construction activities in and next to the creek.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Project Biologist	Monitor vegetation removal and construction activities within 200 feet of creek.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-22: Clearing vegetation within 200 feet of suitable giant garter snake aquatic habitat will be restricted to the minimum area necessary to facilitate construction. The movement of heavy equipment will be confined to existing roadways or temporary construction access roads.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Minimize vegetation removal within 200 feet of creek.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-23: To prevent the inadvertent entrapment of the giant garter snake or other wildlife within 200 feet of Black Rascal Creek during construction, all excavated, steep-walled openings (e.g., holes, trenches) more than 6 inches deep will be covered at the close of each working day or provided with one or more escape ramps constructed of earth fill or planks. Before any such openings are filled, they will be inspected thoroughly for trapped wildlife. If at any time a trapped or injured giant garter snake is discovered, work will stop immediately, and Caltrans will contact the U.S. Fish and Wildlife Service.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Within 200 feet of creek, all holes deeper than 6- inches will be covered each day or provided with one or more escape ramps (planks/earthen). Before filled, inspect for wildlife.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-24: Pile driving activities within Black Rascal Creek will be limited to June 1 through October 1 during the summer low-flow period, when salmonids are not expected to occur within the project area due to high water temperatures and low channel flow downstream.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Pile driving only between June 1 and October 1.	Enter date	Enter Name	Enter date	Enter remarks	Yes
Biology	BIO-28: Before arriving at the project site and before leaving the project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Clean equipment to remove invasive plants.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-29: Following the completion of construction, temporarily disturbed areas within the project footprint will be decompacted and regraded to return the areas to preconstruction contours and conditions. These areas will be hydroseeded using a weed-free native plant seed mix.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Regrade areas around creek to preconstruction conditions. Remove all debris. Seed with native seed mix.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-30: The construction contractor shall avoid removing vegetation during the nesting bird season (February 1 to September 30). If vegetation must be removed within the nesting season, a preconstruction nesting bird survey must be conducted no more than three days before vegetation removal. Vegetation must be removed within three days from the nesting bird survey. A minimum 100-foot no-disturbance buffer will be established around any active nest of migratory birds, and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with the City of Merced) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by the project biologist and approved by the City of Merced.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Avoid removing vegetation between Feb 1 and Sep 30. Establish a nesting bird buffer if an active nest is discovered.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Biology	BIO-31: If wildlife species are encountered during construction, they will be allowed to leave the area unharmed. Construction crew members should stop work near observed wildlife until the wildlife voluntarily leaves the area. To allow wildlife enough time to escape clearing and grubbing activities, equipment will be operated slowly (no greater than 5 miles per hour) during initial clearing and grubbing.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Stop work and allow wildlife to leave if detected in the construction area.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-32: All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed, secured containers and removed daily from the project site to reduce the potential for attracting predator species.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Dispose of trash in proper/secured containers.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-33: No rodenticides or herbicides will be used on the project site during construction.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	No rodenticide or herbicide use.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-34: To eliminate the potential for disturbance or injury to or death of the species resulting from the presence of pets and firearms, neither (except for firearms carried or working animals handled by authorized law enforcement officials) will be allowed on the project site.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	No pets or firearms permitted.	Enter date	Enter Name	Enter date	Enter remarks	No
Biology	BIO-35: All project-related vehicles will observe a daytime speed of no more than 20 miles per hour and a nighttime speed of no more than 10 miles per hour in all project areas except on the highway. Off-road travel outside of designated project areas will be prohibited. Project personnel will be provided with guidance on vehicle use and speed limits.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.4	Yes	Contractor	Observe vehicle speed limit specified for project.	Enter date	Enter Name	Enter date	Enter remarks	No
Cultural Resources	CR-1: If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. An additional archaeological survey would be needed if project limits are extended beyond the present survey limits.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.5	Yes	Caltrans District 10 Archaeologist	Stop work if cultural resources are discovered. Contact Caltrans.	Enter date	Enter Name	Enter date	Enter remarks	No
Cultural Resources	CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains, and grave goods, regardless of age, and provide a method and means for the appropriate handling of such remains. If human remains are encountered, work should stop in that vicinity, and the County coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.5	Yes	Caltrans District 10 Archaeologist	Stop work if human remains are discovered. Contact coroner and Caltrans.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Hazardous Waste	HAZ-6: Yellow striping was observed on roadway centerlines throughout the site, and testing of the yellow traffic striping/markings is required. Removal of the yellow traffic striping/markings, and other colors of paint, shall be performed in accordance with Caltrans' Standard Specifications and Standard Special Provisions.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Yes	Contractor	Remove yellow striping per Caltrans standards.	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ-8: The potential exists for treated wood waste to be present associated with signs or guardrail posts within the project area. Treated wood waste shall be handled in accordance with Caltrans' Standard Special Provisions.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Yes	Contractor	Treated wood waste should be handled in accordance with Caltrans' Standard Special Provisions.	Enter date	Enter Name	Enter date	Enter remarks	No
Hazardous Waste	HAZ- 9: Although not expected in other areas of the project, should impacted soil (as evidenced by staining and/or odors) be encountered during construction activities, the resident engineer overseeing construction shall stop work until a hazardous waste specialist can assess the soil for proper handling.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.9	Yes	Contractor	Stop work if hazardous materials are identified.	Enter date	Enter Name	Enter date	Enter remarks	No
Water Quality	WQ-1: The project will implement all feasible Low Impact Development Best Management Practices and follow the Central Valley Region Phase 2 Small Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System General Permit of stormwater associated with construction activities (Construction General Permit 2012-0006-Division of Water Quality).	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.10	Yes	Contractor	Implement Best Management Practices	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Water Quality	WQ-2: To conform with water quality requirements in the Construction General Permit, the following will be implemented during construction: Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must be a minimum of 50 feet from surface waters. Any necessary equipment washing must occur where the water cannot flow into surface waters. The project specifications will require the contractor to operate under an approved spill prevention and clean-up plan. Construction equipment will not be operated in flowing water. Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to surface waters. Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life must be prevented from contaminating the soil or entering surface waters. Equipment used in and around surface waters must be in good working order and free of dripping or leaking contaminants. Any concrete rubble, asphalt, or other debris from construction must be taken to an approved disposal site.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.10	Yes	Contractor	Implement Best Management Practices	Enter date	Enter Name	Enter date	Enter remarks	No
Water Quality	WQ-4: Contract specifications will include the following Best Management Practices, where applicable, to reduce erosion during construction: Existing vegetation will be protected in place where feasible to provide an effective form of erosion and sediment control. As a permanent Best Management Practice, slope roughening by equipment tracking will be implemented to create unevenness on bare soil. Surface roughening reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing water infiltration.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.10	Yes	Contractor	Implement Best Management Practices	Enter date	Enter Name	Enter date	Enter remarks	No
Noise	NOI-1: To minimize construction-generated noise, abatement measures from Standard Specifications Section 14-8.02 “Noise Control” must be followed: Do not exceed 86 A-weighted decibels at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.13	Yes	Contractor	Follow noise control restrictions.	Enter date	Enter Name	Enter date	Enter remarks	No
Other	REC-1: Users of the Rascal/Michael O’Sullivan Bike Paths would be temporarily detoured to the Loughborough neighborhood during the reconstruction of the trail or during times when construction activities are preventing the safe use of the Rascal/Michael O’Sullivan Bike Paths.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.16	Yes	Contractor	Provide detour notifications	Enter date	Enter Name	Enter date	Enter remarks	No
Other	REC-2: By project completion, the portions of the Rascal/Michael O’Sullivan Bike Paths impacted by construction will be actively restored along a new alignment, using as many portions of the original as feasible to maintain the activities, features, and attributes of the trail.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.16	Yes	Contractor	Reconstruction impacted bike path segment.	Enter date	Enter Name	Enter date	Enter remarks	No

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Other	REC-3: Access to the Rascal/Michael O'Sullivan Bike Paths outside the construction zone shall remain open during normal business hours.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.16	Yes	Contractor	Maintain access.	Enter date	Enter Name	Enter date	Enter remarks	No
Other	TRA-1: Temporary impacts to traffic flow as a result of construction activities would be minimized through construction phasing and signage and a Traffic Management Plan.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.17	Yes	Contractor	Prepare and use traffic management plan.	Enter date	Enter Name	Enter date	Enter remarks	No
Other	TRA-2: A lane reduction (road diet) mitigation strategy will be implemented within two roadways in the City of Merced to offset impacts to vehicle miles traveled. A future cooperative agreement detailing the mitigation strategy and time frame for implementation would be executed between the City of Merced and Caltrans.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.17	No	City of Merced	Create Cooperative Agreement	Enter date	Enter Name	Enter date	Enter remarks	Yes

POSTCONSTRUCTION

Category	Task and Brief Description	Source	Included in Plans, Specifications, and Estimates Package	Responsible Branch/Staff	Action To Comply	Due Date	Task Completed By	Task Completed On	Remarks	Mitigation for Significant Impacts Under CEQA?
Other	TRA-2: A lane reduction (road diet) mitigation strategy will be implemented within two roadways in the City of Merced to offset impacts to vehicle miles traveled. A future cooperative agreement detailing the mitigation strategy and time frame for implementation would be executed between the City of Merced and Caltrans.	Initial Study with Proposed Mitigated Negative Declaration-Chapter 2/Section 2.1.17	No	City of Merced	Implement approved mitigation strategy.	Enter date	Enter Name	Enter date	Enter remarks	Yes

Appendix E Distribution List

A Notice of Availability would be distributed to the following agencies and interested parties:

State Government

California State Clearinghouse
Post Office Box 3044
Sacramento, California 95812-3044

California Air Resources Board
1001 I Street
Sacramento, California 95814

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670

California Department of Fish and Wildlife Region 4
1234 East Shaw Avenue
Fresno, California 93710

Local Agencies

Stanislaus County Clerk-Recorder
1021 I Street, Suite 101
Modesto, California 95358

Stanislaus County Sheriff
250 East Hackett Road
Modesto, California 95358

Stanislaus County Office of Emergency Services
Attention: Randy Crook
3705 Oakdale Road
Modesto, California 95357

Stanislaus Consolidated Fire Protection District
3324 Topeka Street
Riverbank, California 95367

Appendix F Section 4(f) Findings Analysis

Highway 59 Widening and Bridge Widening Over Black Rascal Creek Project

On State Route 59 in Merced County
10-MER-59-PM 15.4-16.6
Project ID Number 1020000121

Section 4(f) De Minimis Analysis

Prepared by:

Dokken Engineering
110 Blue Ravine Road, Suite 200
Folsom, California 95630

Prepared for:

California Department of Transportation District 10
1976 E Charter Way
Stockton, CA 95205

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S.C. 327.

April 2022

INTRODUCTION

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

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

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

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

PROJECT DESCRIPTION

The City of Merced proposes to widen and improve Highway 59 from a two-lane roadway to four-lanes from the 16th Street intersection to approximately six hundred feet south of Buena Vista Drive (**Figure 1. Project Vicinity and Figure 2. Project Location**). The Project also proposes to replace the Black Rascal and South Fork Black Rascal Creek bridges. Additional Project features include standard shoulders, intersection improvements, class II bicycle lanes, striped two-way left turn lane and median, and sidewalks (**Figure 3. Project Features**).

Highway 59 is primarily a two-lane conventional highway with localized widening to four-lanes at the Cooper Avenue and Willowbrook Drive intersection. The proposed Project would include widening the segment of Highway 59 from West 16th street to approximately 600 feet south of Buena Vista Drive to a four-lane facility. The proposed widening would also require widening of the existing at-grade crossing through the Burlington Northern Santa Fe right-of-way.

To accommodate the four-lane facility, the Black Rascal Creek and South Fork Black Rascal Creek bridges would be replaced. Both bridge structures are within the regulatory floodway of Black Rascal Creek and are overtopped in large storm events. To correct this overtopping and improve the hydraulics, the main creek channel will be realigned to flow beneath the Black Rascal Creek Bridge crossing. The existing South Fork Black Rascal Creek Bridge will be replaced with culverts which will then serve to allow for continued water flow as well as function as an emergency bypass during very heavy creek flows.

The existing Black Rascal Creek Bridge will be replaced with a four-lane, three-span, cast-in-place, reinforced concrete flat slab bridge. To facilitate the creek flow from the realigned channel, the replacement bridge will be lengthened and raised approximately two to three feet to provide the two feet of freeboard over the one hundred year storm event, as required by the Central Valley Flood Protection Board. The Black Rascal Creek Bridge replacement will also include upgrades to meet current safety and performance

standards, including increased load capacity, standard barrier railings, improved width and cross-slope, and a resistance to channel scour.

Minimal right-of-way acquisition will be required to accommodate the widened roadway and may also be needed for potential utility relocations. Temporary construction easements and encroachment permits will also be required to accommodate construction of the Project. The Project will be constructed in stages to maintain traffic flow through the area. A detour may be required for several days to accommodate the widening at the intersection of Highway 59 and the Burlington Northern Santa Fe railroad.

Purpose

The purpose of the Project is to:

- Construct a four-lane roadway to meet existing and forecasted traffic demand;
- Improve access to all modes of travel including bicycles and pedestrians;
- Reduce the number of collisions; and,
- Reduce flooding occurrences on the roadway during high flows in Black Rascal Creek.

Need

The Project is needed because:

- The existing two-lane roadway cannot meet existing and forecasted traffic demand;
- The current collision rates are significantly higher than the State average for similar facilities;
- Existing pedestrian and bicycle facilities are inconsistent with gaps in between constructed improvements;
- The existing Black Rascal Creek Bridge does not meet current freeboard requirements within the floodway for the Central Valley Flood Protection Board.
-

No Build Alternative

Under the No-Build Alternative, Highway 59 would not be widened to a four-lane facility, and the existing Black Rascal and South Fork Black Rascal Creek bridges would not be replaced. The existing roadways would continue to be insufficient to meet existing and forecasted traffic demand and would continue to experience flooding during high flow events.

Figure 1: Project Vicinity

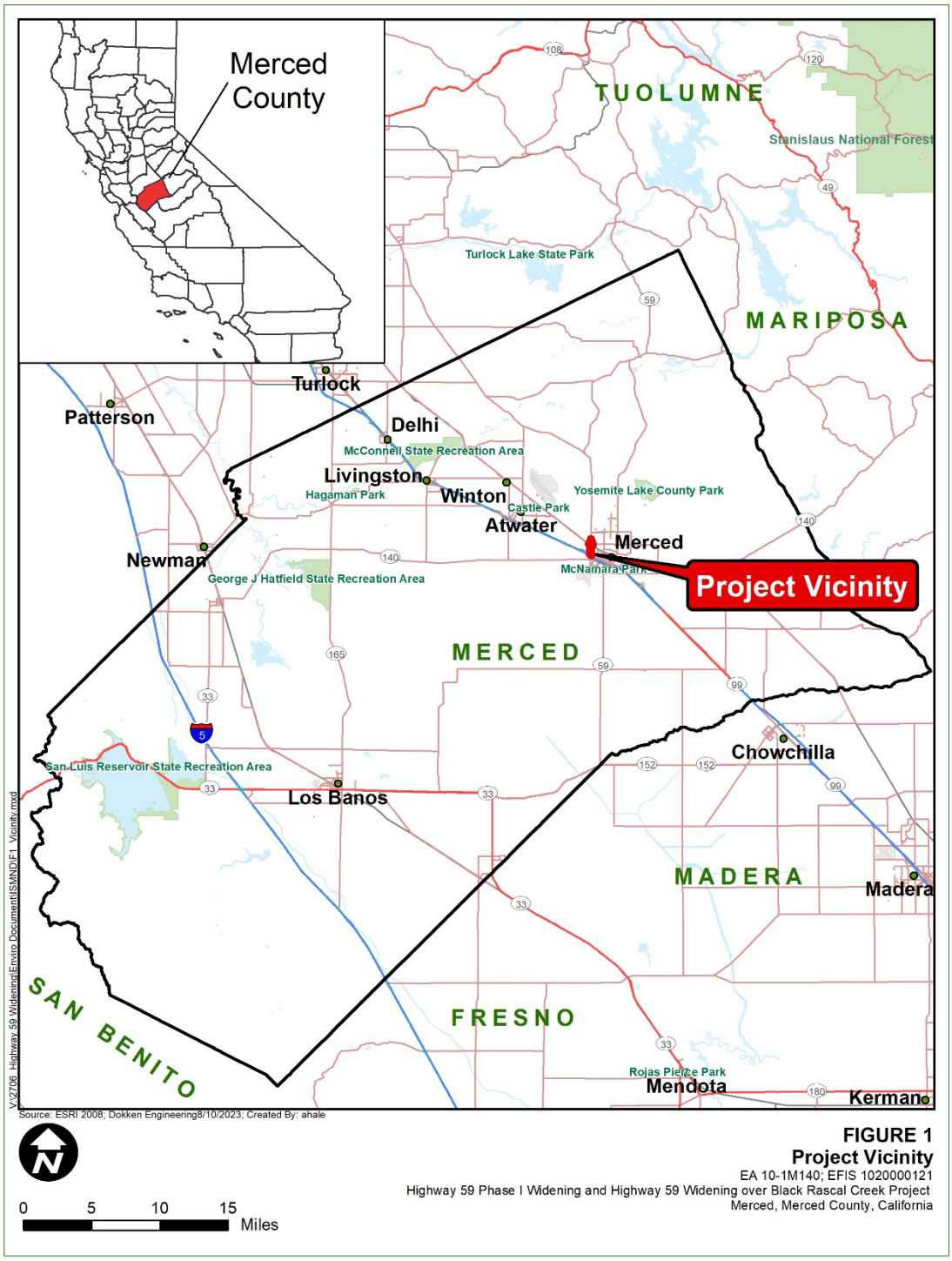


Figure 2: Project Location

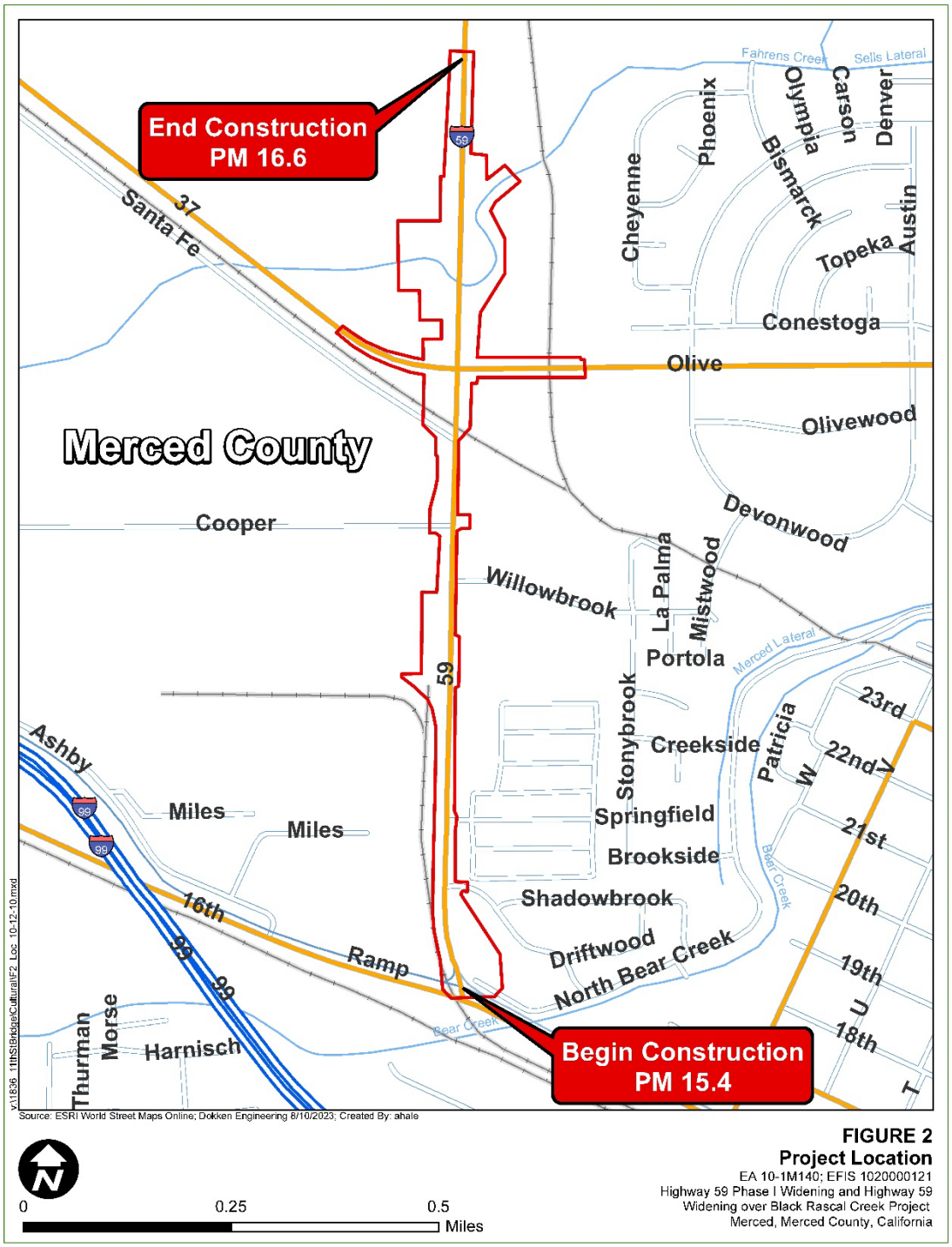


FIGURE 2
Project Location
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Figure 3: Project Features

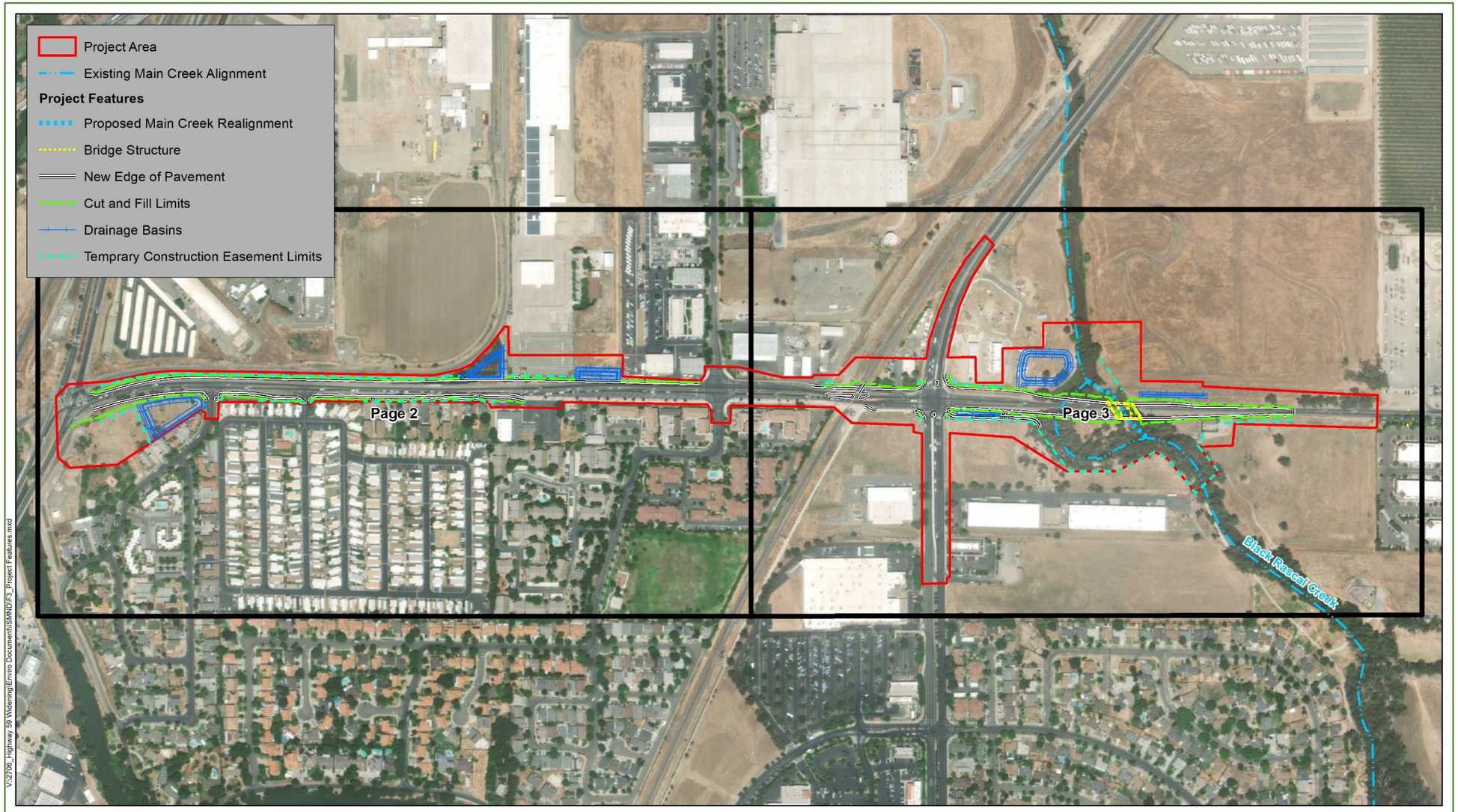


FIGURE 3
Project Features
Page 1 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Source: ESRI Maps Online; Dokken Engineering 4/7/2023; Created By: ahale

1 inch = 200 feet

0 200 400 600 800 1,000 Feet

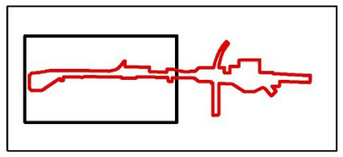


FIGURE 3
Project Features
Page 2 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

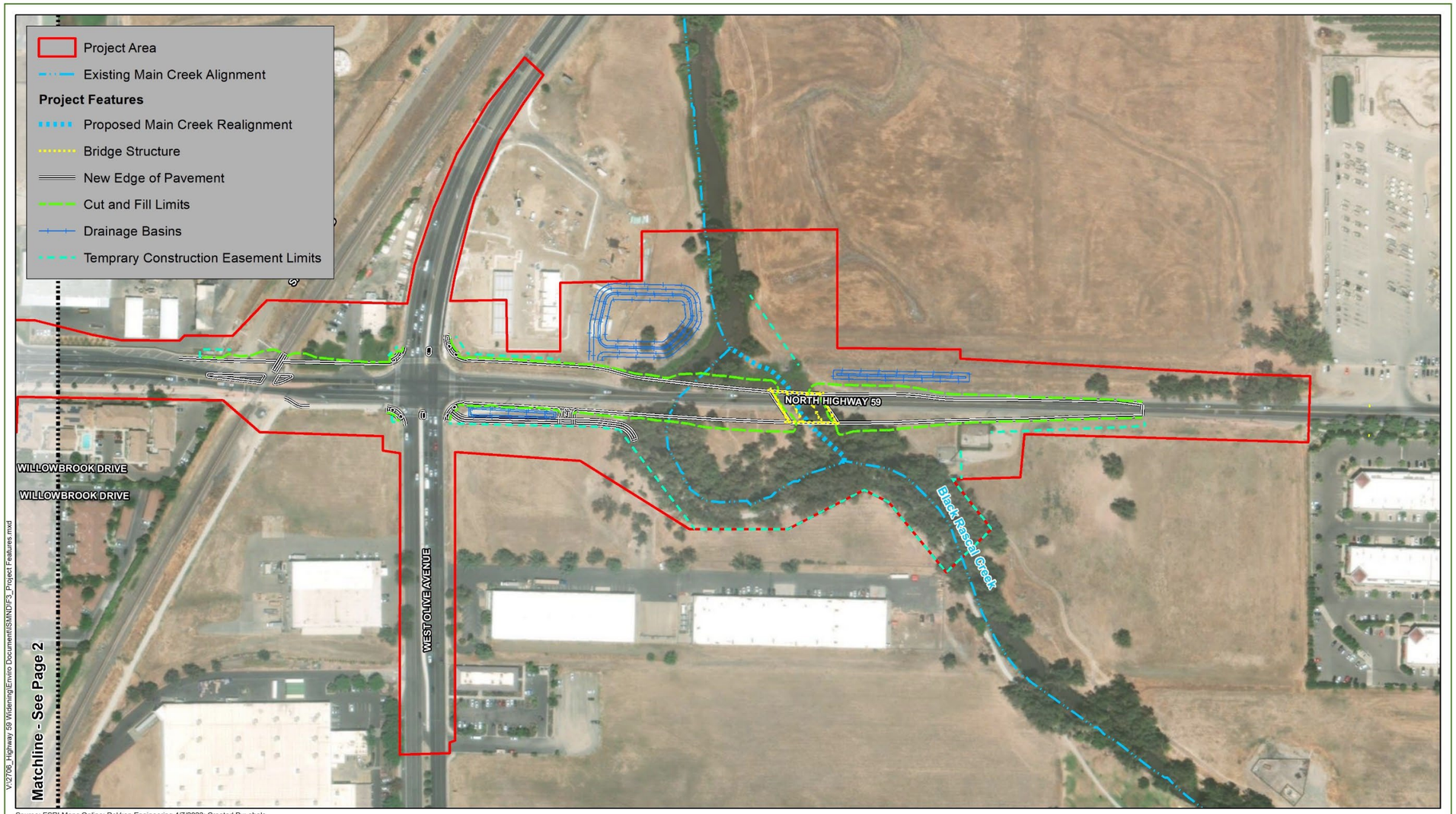


FIGURE 3
Project Features
Page 3 of 3
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

LIST AND DESCRIPTION OF SECTION 4(f) PROPERTIES

1.1 Park/Recreation Resources

Qualifying Section 4(f) recreational facilities within the Project area include the Rascal / Michael O'Sullivan Bike Path in the northern portion of the Project area. Table 1 summarizes the potential impact from the proposed Project on park/recreation resources in the Project area.

Table 1. Park/Recreation Resources in the Project area

Resource Name	Qualifies as Section 4(f)?	Previous Mitigations	Impact from Proposed Project
Rascal/Michael O'Sullivan Bike Path	Yes	No	• Trail Realignment and Relocation • Temporary Closure

Rascal/Michael O'Sullivan Bike Path

The publicly accessible Rascal/Michael O'Sullivan Bike Path is a Section 4(f) resource that is included in a network of trails used for recreational activities, such as walking, running, and biking, in Merced. The City of Merced has jurisdiction over this Section 4(f) resource. The Rascal/ Michael O'Sullivan Bike Path is a Class I bikeway and provides access to Fahrens Park, where amenities such as drinking fountains restrooms and parking can be found. Additionally, the bike path provides access to downtown Merced, shopping areas, schools, hospitals, and medical clinics. See Figure 4 for location of the Rascal/Michael O'Sullivan Bike Path in relation to the proposed Project (**Figure 4. Section 4(f) Resources**).

IMPACTS ON SECTION 4(f) PROPERTIES

No Build

No construction would be associated with the No Build Alternative. Therefore, no impact to any resources would result from the project. However, this alternative would result in an increase in traffic congestion within the City of Merced.

Build Alternative

The following subsection describes impacts under the build alternative.

1.2 Park/Recreation Resources

Rascal/Michael O'Sullivan Bike Path

The Rascal/Michael O'Sullivan Bike Path runs adjacent to the northern portion on the East side of the Project area (**Figure 4. Section 4(f) Resources**). The Project will have a *de minimis* impact on the Rascal/Michael O'Sullivan Bike Path due temporary closure and trail relocation during construction. Approximately 430 feet of the trail will be realigned and closed during construction (**Figure 5. Section 4(f) Impacts**). This closure would prevent recreational use on this bike path segment. The Loughborough neighborhood adjacent to the bike path is the proposed detour location during construction since these roads can be safely used for bicyclists and pedestrians (**Figure 4. Section 4(f) Resources**).

To reduce impacts to a less than significant level, the implementation of Mitigation Measures (REC-1 through REC-3) would be required:

REC-1: Users of the Rascal/Michael O'Sullivan Bike Path would be temporarily detoured to the Loughborough neighborhood during reconstruction of the trail or during times when construction activities are impeding safe use of the Rascal/Michael O'Sullivan Bike Path.

REC-2: By completion of the project, the portions of the Rascal/Michael O'Sullivan Bike Path impacted by construction will be actively restored along a new alignment, using as many portions of the original as feasible to maintain the activities, features, and attributes of the trail.

REC-3: Access to the Rascal/Michael O'Sullivan Bike Path outside the construction zone shall remain open during normal business hours.

Table 2 presents the resources and Section 4(f) use by the Build Alternative.

Table 2: List of Resources and Section 4(f) use by Build Alternative

Resource	Build Alternative	Coordination
Rascal/Michael O'Sullivan Bike Path	• 430 feet of bike trail realigned and shifted 30 feet east to accommodate for road widening • Temporary closure	City of Merced

See **Figure 5** for impacts to the Rascal/Michael O'Sullivan Bike Path.

Figure 4: Section 4(f) Resources

Figure 4
Section 4(f) Resources with
Temporary Pedestrian Detour Route
EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

Figure 5: Section 4(f) Impacts

Figure 5
Recreational Impacts

EA 10-1M140; EFIS 1020000121
Highway 59 Phase I Widening and Highway 59 Widening over Black Rascal Creek Project
Merced, Merced County, California

COORDINATION

Coordination for the Rascal/Michael O'Sullivan Bike Path was done through the City of Merced, who is the jurisdictional agency of the resource as they both own and maintain the resource. Caltrans, on behalf of FHWA, is proposing a *de minimis* determination under Section 4(f) for impacts to the Rascal/Michael O'Sullivan Bike Path. Impacts to the protected activities, features, and attributes of the Section 4(f) resources will be reduced to a *de minimis* level with implementation of the minimization measures detailed above. The City of Merced concurred that the project would only result in minor permanent and temporary impacts to the park as a recreational resource. The City further concurred with the preliminary analysis that a *de minimis* impact is anticipated to the park as a Section 4(f) resource.

SECTION 4(F) DE MINIMIS DETERMINATION

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

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

It is anticipated that all impacts to Section 4(f) properties will be *de minimis*. Caltrans will make a final impact determination in consultation with the City after considering any comments received in response to the public notification and circulation of this analysis between September 26 and October 26, 2023.

This Page Intentionally Left Blank

List of Technical Studies Bound Separately (Volume 2)

Air Quality Report (May 2022)

Biological Assessment (August 2022)

Community Impact Assessment (August 2022)

Hazardous Waste Initial Site Assessment Report (March 2022)

Historic Property Survey Report/Archaeological Survey Report (August 2022/June 2022)

Location Hydraulic Study (February 2022)

Natural Environment Study (August 2022)

Noise Study Report (March 2022)

Traffic Operations Analysis Report (May 2022)

Visual Impact Assessment (June 2022)

Water Quality Assessment Report (April 2021)

Section 4(f) Analysis Memorandum (April 2022)

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

C. Scott Guidi District 10 Environmental Division
California Department of Transportation
1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205

Or send your request via email to: scott.guidi@dot.ca.gov
Or call: 209-479-1839

Please provide the following information in your request:

Project title: Highway 59 Phase 1 Widening and Widening Over Black Rascal Creek
General location information: On State Route 59 in Merced County
District number-county code-route-post mile: 10-MER-59-PM 15.4-16.6
Project ID number: 1020000121/EA 10-1M140