Appendix D Avoidance, Minimization, and/or Mitigation Summary

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ENVIRONMENTAL COMMITMENTS RECORD
(ECR)

District-County–Route: 12-ORA-241 PM 36.1/39.1, 12-ORA-91 PM 14.7/18.9
EA and Project No: 0K9700 and 1200020097
Project Description: SR-241/SR-91 Express Lanes Connector

Task and Brief Description[1]	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
DESIGN KICK-OFF	Project Management and Project Development	Beginning of 1 phase							
ENVIRONMENTAL PS&E REVIEW	Project Management and Environmental	District Plans, Specifications and Estimates (PS&E) Circulation							
PRECONSTRUCTION MEETING	Project Management	Contract Award							
Transfer Resident Engineer Book	Project Engineer	Preconstruction Meeting							
PREJOB MEETING	Project Management and Construction	Construction							
ENVIRONMENTAL COMPLIANCE REVIEW	Project Management and Construction	Safety Review							
DESIGN FEATURES MEMORANDUM	Project Management and Construction	Post Construction							
Land Use									
Minimization Measure LU-1: Uniform Act and Park Preservation Act Compliance. Where acquisition and relocation are unavoidable, the provisions of the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended), Title 49 Code of Federal Regulations (CFR) Part 24 and, where applicable, the California Public Park Preservation Act of 1971 will be followed.	Project Engineer	During Final Design and right-of-way acquisition	No	Right-of-Way Engineering and Acquisitions have been updated per these requirements.	On-going	On-going			
Utilities and Emergency Services									
Minimization Measure UES-1: Utilities. During final design, utility protection-in-place plans will be prepared in consultation with the affected utility providers/owners for those utility facilities anticipated to be relocated, removed, and protected in-place. Final design will focus on avoiding utility relocations. If relocation is necessary, final design will focus on relocating utilities within the State right-of-way or within other existing public rights-of-way and/or easements. If relocation outside of existing or the additional public rights-of-way and/or easements required for the project is necessary, final design will focus on relocating those facilities in such a manner as to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. The utility relocation plans will be included in the project specifications. Prior to and	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and during construction	No	Final Design has been conducted per these requirements. Only two utility required relocations/adjustments. AT&T Manhole needs to be adjusted to grade temporary and permanently. SCE Electrical Line requires relocations.	On-going	On-going			

[1] Note: Mitigation measures which reduce impacts to a level below significant under CEQA are denoted with an asterisk (*).

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during construction, the F/ETCA will ensure that the components of any utility relocation plans provided in the project specifications are properly implemented by the construction contractor.									
Minimization Measure UES-2: Law Enforcement, Fire Protection, and Emergency Medical Service Providers. Prior to and during construction, the F/ETCA will require the construction contractor to coordinate all temporary ramp and lane closures and detour plans with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times. The plans shall be developed in coordination with the affected agencies and shall include the identification of alternative routes and access to construction areas for emergency vehicles.	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	TCA to setup meeting if needed. Project specs include requirement for contractor to coordinate with law enforcement, fire, and EMS prior to closure/detour implementation. Closure/ Detour plans were routed through local agencies for law enforcement, fire and EMS input.	On-going	On-going	Coordination on-going during construction.		
Minimization Measure UES-3: Law Enforcement, Fire Protection, and Emergency Medical Service Providers. Prior to operation of the connector, an emergency call box shall be placed along the alignment in compliance with OCTA Call Box placement policies.	Project Engineer, Resident Engineer, and Construction Contractor	During construction	No	TCA Action Item.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure U-2. *In conjunction with Final Design, the TCA shall explore the joint use of Corridor maintenance roads, if needed, by the County and utility companies. (North and East Legs)*	Project Engineer	During Final Design	No	TCA Action Item.	On-going	On-going			
ETC Final EIR and Final EIS Measure PS-2. *The impact on other law enforcement agencies is considered to be minor. Implementation of several measures by the TCA shall assist law enforcement agencies in fulfilling their responsibilities and in avoiding confusion in providing service to their jurisdictions. These measures are: clear identification of jurisdictional boundaries along the Corridor, clearly signed and well-lit intersections, and distance location markers along the Corridor. (North and East Legs)*	Project Engineer	During Final Design	No	Multiple Meetings have been held with CHP and design has been updated per these meetings.	GMK	7/5/22	No additional action required.		
Traffic and Transportation/Pedestrian and Bicycle Facilities									
Minimization Measure TR-1: Transportation Management Plan. Ensure that a Transportation Management Plan (TMP) is completed in consultation with the California Department of Transportation and included in the Plans, Specifications, and Estimates for implementation by the contractor prior to and during construction of any project improvements. The TMP will be consistent with the Caltrans Transportation Management Plan Guidelines (November 2015), which includes coordination with affected jurisdictions, transportation agencies, and public	Project Engineer, Project Traffic Engineer, and Resident Engineer	During Final Design and construction	No	The latest TMP has been submitted with 95% Submittal on 6/30/22. TMP includes these elements.	On-going	On-going	Coordination on-going during construction.		

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outreach. The TMP will be prepared by a qualified traffic engineer and will address traffic impacts from temporary detours and weekend or nighttime closures to reduce traveler delays and enhance traveler safety during project construction. The TMP may include the following elements: • Public awareness campaign • Highway advisory radio • Portable changeable message signs • Temporary loop sensor/signals • Bus or shuttle service • Construction Zone Enhanced Enforcement Program • Incident management • Staging construction • Traffic control plan • Freeway service patrol • Transportation management team (TMT)									
ETC Final EIR and Final EIS Measure T-13. *During final design, the TCA shall establish ETC bridge structure clearances to provide an absolute minimum construction false work vertical clearance of 14.0 feet over existing and planned arterial undercrossing identified in the Orange County Master Plan of Arterial Highways.*	Project Engineer	During Final Design	No	Minimum construction false work vertical clearance of 15.0 feet over the existing and planned arterial undercrossing are provided.	On-going	On-going			
ETC Final EIR and Final EIS Measure C-15. *All traffic control measures shall conform with applicable local and State Regulations*.	Project Engineer and Resident Engineer	During Final Design and construction	No	All traffic control measures conform to current local and state regulations	On-going	On-going	Coordination on-going during construction.		
Visual									
Minimization Measure V-1: Lighting Fixtures. In conjunction with Final Design, proposed lighting fixtures shall be hooded where feasible and lighting shall be directed on the site to minimize potential intrusion of light and glare onto nearby land uses. Lighting shall be designed consistent with the existing lighting along the State Route 241 corridor.	Project Engineer and Construction Contractor	During Final Design	No	Confirming with AECOM	On-going	On-going			
Minimization Measure V-2: Hillsides. To avoid visual impacts resulting from cut hillsides and filled topography, hills should be preserved where possible. All disturbed areas associated with cut-and-fill activities should appear similar in color to existing topography. Manufactured fill slopes should not exceed a four-to-one ratio. Manufactured cut slopes should not exceed a two-to-one ratio. Rounding of manufactured slopes should be applied.	Project Engineer and District Landscape Architect	During Final Design	No	Design complies with mitigation as noted except specific fill locations where grading at 4:1 would increase grading impact to biological resources. To minimize impacts grading at these locations will slightly exceed the 4:1 requirement	On-going	On-going			
Minimization Measure V-3: Architectural Treatments. To maintain consistency with the existing infrastructure (i.e., bridges and walls, etc.) in the Project Area, landscape and/or architectural treatments (i.e., color, texture, etc.) for the structure elements of the Proposed Project shall be	Project Engineer and District Landscape Architect	During Final Design	No	These elements have designed to maintain the consistency with existing infrastructure and submitted to District Landscape Architect for review.	On-going	On-going			

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determined in consultation with the District Landscape Architect during the Final Design process.									
Minimization Measure V-4: Landscaping. To maintain the context of the Project Area (color, form, and texture) the Proposed Project shall install landscaping that is compatible with the existing landscape along the freeway. The landscape concept and plant palette shall be determined in consultation with the District Landscape Architect during the Final Design process. Erosion control plant species utilized shall be determined by the District Landscape Architect to ensure that the mix and application strategy is appropriate for the specific soil composition of the area. Drought-tolerant native species shall be used adjacent to areas of native habitat. Enhanced plantings shall occur adjacent to wildlife crossings.	Project Engineer and District Landscape Architect	During Final Design	No	These elements have included as part of final design and submitted to District Landscape Architect for review.	On-going	On-going			
Minimization Measure V-5: Construction Lighting. For all nighttime construction activities, necessary lighting for safety and construction purposes shall be contained and directed toward the specific area of construction.	Resident Engineer and District Landscape Architect	During construction	No	Confirming with AECOM	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure V-6: Context-sensitive Solutions. Context-sensitive solutions will be used. Slopes graded for the Build Alternative will be contoured consistent with the existing topography, and all disturbed soil areas will be seeded with drought-tolerant native plant species consistent with existing vegetation.	Resident Engineer, District Landscape Architect, and Construction Contractor	During Final Design and construction	No	These elements have included as part of final design and submitted to District Landscape Architect for review.	On-going	On-going	Coordination on-going during construction.		
Minimization Measure V-7: Tree Planting. Permanently impacted Coast live oak, California walnut, and sycamore trees will be replaced at a minimum 1:1 ratio. Heritage oaks (oaks greater than 36 inches in diameter at breast height) will be replaced at a minimum 3:1 ratio.	Resident Engineer, District Landscape Architect, and Construction Contractor	During construction	No	17 Sycamore/Coast Live Oaks are being removed and 17 Sycamore/Coast Live Oaks are being planted at a 1:1 ratio.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure C-19. *Where appropriate and feasible, construction staging areas shall be located inconspicuously to minimize adverse visual effects on residential and recreation areas. They shall be located to avoid any additional impacts on biological, historical or cultural resources. (Construction Staging, North and East Legs)*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	Staging has been designed to minimize adverse visual effects on residential and recreation areas and avoid any additional impacts on biological, historical, or cultural resources. Also see SSP 14-1.02 & 14-16.03A	On-going	On-going	Coordination on-going during construction.		
Cultural Resources									
Avoidance and Minimization Measure CR-1: Cultural Materials. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. At that time, the Caltrans District 12 Environmental	Resident Engineer, Construction Contractor, and District Environmental Specialist	Construction and after construction	No	Covered by Standard Specification 14-2.	On-going	On-going	Coordination to be done during and after construction.		

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Branch Chief will be contacted to ensure that Section 106 compliance is maintained. Section 106 compliance could include: excavation in accordance with a data recovery plan and standard archaeological field methods and procedures; laboratory and technical analyses; report of findings; curation at an appropriate facility for future research and/or display; an interpretive display at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials.									
Avoidance and Minimization Measure CR-2: Human Remains. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), who will designate the Most Likely Descendant (MLD). At this time, the Caltrans District 12 Environmental Branch Chief will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. The MLD recommendations may include scientific removal and nondestructive analysis, preservation in place, relinquishment to the descendants for treatment, or any other culturally appropriate treatment. Further provisions of PRC 5097.98 are to be followed as applicable.	Resident Engineer, Construction Contractor, and District Environmental Specialist	Construction and after construction	No	Covered by standard specification 14-2. Standard Specification 14-4 Native American Concerns is not covered by standard specification, RSS, or SSP.	On-going	On-going	Coordination to be done during and after construction.		
Water Quality and Storm Water Runoff									
Minimization Measure WQ-1: Construction General Permit. The Proposed Project will comply with the requirements prescribed in the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-009-DWQ, as amended, or any future replacement permit. The Proposed Project shall comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) to	Resident Engineer and Construction Contractor	During construction	No	SWDR has prepared per these requirements and SSP have been provided to require the contractor to conduct these during construction.	On-going	On-going	Coordination to be done during Construction.		

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control the pollutants, such as Sediment Control, Catch Basin Inlet Protection, Construction Materials Management and Nonstorm Water BMPs. All work shall conform to the Construction Site BMP requirements specified in the latest edition of the Caltrans *Storm Water Quality Handbooks: Construction Site Best Management Practices Manual* to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, waste management and materials pollution control, wind erosion control, and other nonstorm water BMPs.									
Minimization Measure WQ-2: Caltrans Permit. The Proposed Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit, *Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit), as amended, or any future replacement permit.	Resident Engineer and Construction Contractor	During construction	No	SWDR has prepared per these requirements and SSP have been provided to require the contractor to conduct these during construction.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure WQ-3: Design Pollution Prevention Best Management Practices. Caltrans-approved Design Pollution Prevention BMPs will be implemented to the maximum extent practicable (MEP) consistent with the requirements of the *Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit) and the Caltrans Project Planning and Design Guide. Design Pollution Prevention BMPs include preservation of existing vegetation, slope/surface protection systems (erosion control/reseeding and replanting of vegetation) dikes, overside drains, and concentrated flow conveyance systems such as ditches, berms, and biofiltration swales and strips.	Project Engineer and Resident Engineer	During Final Design and construction	No	SWDR has prepared per these requirements and layouts and drainage plans have been designed to meet these requirements.	On-going	On-going	Coordination on-going during construction.		
Minimization Measure WQ-4: Treatment Best Management Practices. Caltrans-approved Treatment BMPs will be implemented to the MEP consistent with the requirements of the Caltrans Permit, which is described in Measure WQ-2 and the Project Planning and Design Guide. Treatment BMPs may include biofiltration swales, biofiltration strips, and media filters.	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	SWDR has prepared per these requirements and layouts and drainage plans have been designed to meet these requirements.	On-going	On-going	Coordination on-going during construction.		
Minimization Measure WQ-5: Groundwater Dewatering. If groundwater dewatering is required, the Proposed Project will comply with the provisions of General Waste Discharge Requirements for Discharges to Surface Waters	Resident Engineer and Construction Contractor	During construction	No	Covered by standard specification 13-1.01A.	On-going	On-going	Coordination to be done during Construction.		

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that Pose an Insignificant (De Minimis) Threat to Water Quality, Order No. R8-2015-0004, NPDES No. CAG998001, as they relate to discharge of non-storm water dewatering wastes for the Proposed Project.									
ETC Final EIR and Final EIS Measure W-12. *In conjunction with final design, entry into drainages shall be avoided during site preparation, grading and construction, except where required for construction. Activity in drainages shall be limited to crossings rather than using the lengths of drainage courses for access or for parking automobiles, trucks, and construction equipment. In addition, these areas will be marked for "limited access" on construction plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	JD Waterways have been noted on plans as ESA and fenced off where feasible.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure W-14. *During site preparation, grading, and construction, vehicles and equipment shall not be parked in washes or other drainages.*	Resident Engineer and Construction Contractor	During construction	No	JD Waterways have been noted on plans as ESA and fenced off where feasible.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure W-15. *During site preparation, grading and construction, overwatering shall be avoided in washes and other drainages.*	Project Engineer and Construction Contractor	During construction	No	The contractor's approved SWPPP and associated BMP's will address this requirement.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure WQ-2. *The TCA will ensure that all herbicides used in landscaping and weed control are handled, stored, applied, and disposed of consistent with all applicable federal, state, and local regulations.*	Resident Engineer and Construction Contractor	During construction	No	SSP 20-1.03C does not allow pesticides, and only includes weed control through hand pull.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure WQ-3. *Whenever feasible, construction vehicles will be rinsed before leaving the construction area to remove mud and other materials before the vehicles leave the site.*	Resident Engineer and Construction Contractor	During construction	No	The contractor's approved SWPPP and associated BMP's will address this requirement.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure E-1. *In conjunction with final design, the TCA shall map native vegetation outside the right-of-way on grading and construction plans to indicate vegetation to protect from use as vehicle travel or parking areas, storage of equipment and storage of debris or building materials.*	Project Engineer and Construction Contractor	During Final Design and construction	No	The contractor is not permitted to work outside the Right-of-way and there is no work planned outside the right-of-way.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure E-3. *During final design, the TCA shall ensure that all proposed grading shall conform to the Caltrans Highway Design Manual and the TCA Project Manual Guidelines. All applicable policies and guidelines shall be listed in the grading plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	All proposed grading conforms to Caltrans HDM or design exception has been prepared.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure E-6. *In conjunction with final design, the TCA shall ensure that cut and fill slopes shall not be steeper than 2:1. Where steeper slopes are indicated, TCA shall, in conjunction with final design, prepare geologic and engineering analyses. These analyses shall*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	All slopes are designed to be 2:1 or flatter.	On-going	On-going	Coordination on-going during construction.		

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determine the safety of those slopes and proposed erosion control measures consistent with Caltrans design standards.									
ETC Final EIR and Final EIS Measure E-9. *As part of final design, TCA shall ensure that all slopes shall conform to slope criteria developed by TCA and Caltrans. All slope criteria shall be noted on final plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	All slopes are designed to be 2:1 or flatter.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure E-10. *Fills shall not encroach on natural watercourses or improved channels except as shown on the approved project plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No	Fills are noted on final plans.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure E-11. *Fills placed against watercourses shall have suitable protection against erosion during storm flows, such as riprap, protective walls, and culverts.*	Resident Engineer and Construction Contractor	During construction	No	TWPC plans include temporary erosion control.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure E-12. *During site preparation, grading, and construction, the TCA shall ensure that excavated materials shall not be deposited or stored in or alongside watercourses where the materials can be washed away by high water or storm runoff.*	Resident Engineer and Construction Contractor	During construction	No	The contractor's approved SWPPP and associated BMP's will address this requirement.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure E-13. *During site preparation and grading, the TCA shall ensure that all land shall be graded to drain and dispose of surface water without ponding, except where approved by Caltrans or the affected responsible public agency.*	Resident Engineer and Construction Contractor	During construction	No	The contractor's approved SWPPP and associated BMP's will address this requirement.	On-going	On-going	Coordination to be done during Construction.		
Geology									
Minimization Measure GEO-1: Final Geotechnical Report. During Final Design, a qualified geotechnical engineer will conduct a comprehensive geologic and geotechnical investigation and prepare a design-level geotechnical report. This report will document geology-related constraints and hazards such as fault-induced ground rupture, slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present along the alignment of the Build Alternative. The performance standard for this report will be the California Department of Transportation's (Caltrans) Geotechnical Manual (2012 or most recent version) standards as they apply to the project features and structures. The measures recommended in the design-level geotechnical report will be incorporated into the Final Design and project specifications. The construction contractor will implement the measures recommended in the design-level geotechnical reports as included in the project design and specifications.	Project Engineer, Construction Contractor, and Project Geotechnical Engineer	During Final Design	No	GDR and FR have prepared based on these requirements. Final plans and specifications have been update to based on GDR and FR.	On-going	On-going			

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Minimization Measure GEO-2: Quality Assurance/Quality Control Plan. During Final Design, a quality assurance/quality control (QA/QC) plan will be prepared and implemented during construction. The QA/QC plan will include observing, monitoring, and testing by the Project Geotechnical Engineer and/or the Project Geologist prior to and during construction to confirm that the geotechnical/geologic recommendations from the design-level geotechnical report and standard design and construction practices are fulfilled by the contractor, or if different site conditions are encountered, appropriate changes are made to accommodate such issues. Weekly reports will be prepared during all project-related grading, excavation, and construction activities.	Project Engineer, Resident Engineer, Construction Contractor, and Project Geotechnical Engineer	During Final Design and during construction	No	The Caltrans RE will enforce Caltrans QAQC procedures in accordance with the Caltrans Construction Manual for this project and insure contractor compliance.	On-going	On-going	Coordination on-going during construction.		
Paleontology									
Mitigation Measure PAL-1: Paleontological Mitigation Plan.* During Final Design a Paleontological Mitigation Plan (PMP) will be prepared and adhered to during construction. The PMP will follow the guidelines of the Society of Vertebrate Paleontologists (SVP) and Caltrans. The PMP requires inclusion of, but not limited to, the following items a through h: a. Attendance at the pregrade meeting by a qualified paleontologist or representative; b. Preconstruction field survey by the paleontological mitigation team; c. Monitoring during construction excavation by the paleontological mitigation team; d. Collection of representative samples from geologic formations; e. Sieving of bulk samples for microfossil recovery; f. Preparation of specimens to the point of identification and permanent preservation; g. Curation of fossils into a repository with permanent retrievable storage that meets Caltrans' requirements; and h. Preparation of a Paleontological Mitigation Report documenting the implementation of the Paleontological Mitigation Plan.	Project Engineer, Resident Engineer, Construction Contractor, Project Paleontologist, and District Environmental Specialist	During Final Design, construction, and post construction	No	LSA to prepare.	On-going	On-going	Coordination on-going during and post construction.		

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Hazardous Waste/Materials									
Minimization Measure HAZ-1: Aerially Deposited Lead. Consistent with Minimization Measure MW-3 of the State Route 91 Corridor Improvement Project Final Environmental Impact Report/Environmental Impact Statement (SR-91 CIP 2012 Final EIR/EIS), dated August 2012, the Project Engineer will ensure that a qualified consultant conducts a new soil Aerially Deposited Lead (ADL) evaluation and/or investigation for this project at the Design Phase. The previous ADL test results may be used if applicable along with any new ADL test results. The new soil ADL evaluation and/or investigation will be consistent with the new DTSC Lead Agreement contaminant concentration limits. In addition, new DTSC Lead Agreement soil reuse requirements and restrictions will apply. A Lead Compliance Plan will be prepared to address workers' health and safety.	Project Engineer, Construction Contractor, and Certified Specialist	During Final Design (35 percent Design for work plan and 65 percent Design for evaluation and/or investigation)	No	ADL Report has been prepared and approved by Caltrans. Lead Compliance Plan is included as bid item. SSP 7-1.02K(6)(j)(iii) has been prepared.	GMK	7/5/22	Coordination on-going during construction.		
Minimization Measure HAZ-2: Asbestos-Containing Materials. During the design phase, a certified specialist will confirm the presence or absence of asbestos in the Gypsum Canyon Road Undercrossing, if demolition/renovation of the bridge structure will occur as part of the Project. If asbestos is present, the certified asbestos abatement specialist should monitor the disposal of the asbestos-containing materials as they are uncovered. The construction contractor will comply with the Caltrans Standard Specifications Section 14-9.02 pertaining to air pollution control compliance with rules, regulations, ordinances, and statues during renovation and demolition activities.	Project Engineer, Resident Engineer, Construction Contractor, and Certified Specialist	During Final Design and construction	No	Asbestos Containing Materials and Lead Based Paint Survey Report, has been prepared and approved by Caltrans. Asbestos Compliance Plan is included as bid item. SSP 14-11.16 has been prepared.	GMK	7/5/22	Coordination on-going during construction.		
Minimization Measure HAZ-3: Treated Wood Waste. During construction, the construction contractor will comply with Caltrans Standard Specifications Section 14-10 pertaining to the handling and disposal of treated wood waste.	Resident Engineer and Construction Contractor	During construction	No	Treated Waste Wood included in quantities. SSP 14-11.14 has been prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure HAZ-4: Traffic Striping. During construction, the construction contractor will comply with Caltrans Standard Specifications Section 14-11 pertaining to the testing, removal, and disposal of any traffic striping and pavement-marking materials.	Resident Engineer and Construction Contractor	During construction	No	Yellow stripes on Gypsum Canyon Rd and Santa Ana Canyon Rd will be removed as Hazardous Material. SSP 14-11.12 has been prepared.	On-going	On-going	Coordination to be done during Construction.		

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Minimization Measure HAZ-5: Petroleum Pipeline. During construction, the construction contractor will comply with Caltrans Standard Specifications pertaining to excavation. The contractor shall notify the regional notification center, ensuring that all utility owners within the project disturbance limits identify the locations of underground transmission lines and facilities (including underground petroleum pipelines).	Resident Engineer and Construction Contractor	During construction	No	Plans require contractor to positively identify oil line. During Final Design the oil line could not be identified.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure HAZ-6: Construction Contingency Plan. Prior to the start of construction, the construction contractor will prepare a Construction Contingency Plan (CCP) in accordance with Caltrans Unknown Hazards Procedures for Construction, in the Caltrans Construction Manual. The CCP will include provisions for emergency response in the event that unidentified hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes are discovered during construction activities. The CCP will address field screening, contaminant materials testing methods, mitigation and contaminate management requirements, and health and safety requirements for construction workers. The construction contractor will implement the CCP during all construction activities. During construction, the Resident Engineer will require the construction contractor to cease work immediately if an unexpected release of hazardous substances is found in reportable quantities. If an unexpected release of hazardous substances is found in reportable quantities, the Resident Engineer will require the construction contractor to notify the National Response Center by calling 1-800-424-8802. The construction contractor will perform cleanup of unexpected releases under the appropriate federal, State, and local agency oversight.	Resident Engineer and Construction Contractor	During Final Design and construction	No	Caltrans RE will require contractor to submit for approval prior to issuance of a NTP the required CCP and enforce compliance thereafter.	On-going	On-going	Coordination on-going during construction.		
ETC Final EIR and Final EIS Measure HW-2. *Hazardous substances are strictly regulated by the Environmental Protection Agency (U.S. EPA), the California and National Occupational Safety and Health Administration (OSHA) and the United States Department of Transportation (DOT). The DOT specifies the procedures for safely transporting hazardous materials, as well as the procedures to follow in case of accidental spills during transport, in the 49 Code of Federal Regulations (CFR) series of regulations (parts 100 through 177). U.S. EPA specifies the requirements for proper labeling and placarding of hazardous substances. The American National Standards*	Resident Engineer and Construction Contractor	During construction	No	Caltrans RE will require that this be addressed in the contractor's safety plan prior to issuance of a NTP.	On-going	On-going	Coordination to be done during Construction.		

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Institute recommends safety procedures for handling and storing hazardous materials, and OSHA specifies the procedures required for using and storing hazardous materials. These procedures shall be followed during all ETC site preparation, grading, construction, operations, and maintenance.									
Air Quality									
Minimization Measure AQ-1: Fugitive Dust Source Controls. During clearing, grading, earthmoving, and excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. • All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. • Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. • These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the Proposed Project will be prevented to the maximum extent feasible.	Resident Engineer and Construction Contractor	During construction	No	Standard specification require compliance with all permits and local and state regulations which include air quality and dust control. RE will enforce these regulations during construction.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure AQ-2: Ozone Precursor Emission Controls. Construction equipment vehicle engines will be maintained in good condition and in proper tune per manufacturers' specifications in order to minimize emissions.	Resident Engineer and Construction Contractor	During construction	No	Standard specification require compliance with all permits and local and state regulations which include air quality.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure AQ-3: Prevention of Spills onto Public Streets. All trucks hauling excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.	Resident Engineer and Construction Contractor	During construction	No	Standard specification require compliance with all permits and local and state regulations which include state vehicle code. RE along with CHP will enforce these regulations during construction	On-going	On-going	Coordination to be done during Construction.		

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Minimization Measure AQ-4: Caltrans Standard Specifications for Construction. The contractor will adhere to Caltrans Standard Specifications for Construction (Sections 14-9.02 and 14-9.03).	Resident Engineer and Construction Contractor	During construction	No	Caltrans RE will enforce during construction.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure AQ-5: Construction Vehicles Prohibition. All construction vehicles both on- and off-site shall be prohibited from idling in excess of 5 minutes.	Resident Engineer and Construction Contractor	During construction	No	Standard specs require compliance with all permits and local and state regulations which include air	On-going	On-going	Coordination to be done during Construction.		
Noise				quality. RE toe enforce.					
Minimization Measure N-1: Control of Construction Noise Levels. The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, “Noise Control.” The nighttime noise level from the contractor’s operations, between the hours of 9:00 p.m. and 6:00 a.m., will not exceed 86 A-weighted decibels (dBA) one-hour A weighted equivalent continuous sound level (L_{eq}(h)) at a distance of 50 feet.	Resident Engineer and Construction Contractor	During construction	No	Covered by standard specification 14-8.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure N-2: Deck Specifications. To ensure that noise impacts are minimized, the deck texture on the direct connector ramps will be constructed using the new quieter longitudinally-tined Groove and Grind deck specification, instead of a transversely-tined texture.	Resident Engineer and Construction Contractor	During construction	No	Direct connector designed to current Caltrans standards.	On-going	On-going	Coordination to be done during Construction.		
Natural Communities									
Minimization Measure NC-1: Coastal California Gnatcatcher Environmentally Sensitive Areas. *Prior to the commencement of grading operations or other activities involving substantial soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate CAGN and cactus wrens within 100 ft of the outer extent of projected soil disturbance activities. The locations of any such species shall be clearly marked and identified on the construction/grading plans.*	Construction Contractor and Monitoring Biologist	Prior to construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to Construction.		
Minimization Measure NC-2: Nesting Coastal California Gnatcatcher. *During clearing or construction, to the maximum extent practicable, no grading of CSS habitat that is occupied by nesting CAGN will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these “construction-related*	Resident Engineer, Construction Contractor, and Project Biologist	During clearing or construction	No	SSP 14-6.03A and 14-6.03B was prepared.	On-going	On-going	Coordination to be done during Construction.		

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minimization measures" are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFW with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of CAGN, cactus wrens (Campylorhynchus brunneicapillus), and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent practicable in the context of the public health and safety considerations. (Note: While this text is taken directly from NCCP/HCP Construction Minimization Measures to preserve their integrity, the capture and relocation of birds is not encouraged or authorized by the USFWS.) The breeding season is now considered to be from February 15 through August 31; therefore, these dates are applicable to this measure.									
Minimization Measure NC-3: Biological Monitor. *A monitoring biologist acceptable to USFWS/CDFW will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFW at least 7 calendar days (preferably 14 calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System.* (Note: While this text is taken directly from NCCP/HCP Construction Minimization Measures to preserve their integrity, the capture and relocation of birds is not encouraged or authorized by the USFWS.) *It will be the responsibility of the monitoring biologist to ensure that Identified Species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.*	Resident Engineer, Construction Contractor, and Project Biologist	During vegetation clearing	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		

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Minimization Measure NC-4: Coastal Sage Scrub Environmentally Sensitive Area. *Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment or materials will be permitted within such marked areas.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-5: Coastal Sage Scrub Access Restrictions. *In areas bordering the NCCP/HCP Reserve System or Special Linkage/Special Management areas containing substantial CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors, and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-6: Coastal Sage Scrub Dust Control. *CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-7: Coast Live Oak Tree Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers and, as needed, silt fencing will be installed around the protected zone of any oak tree or oak habitat. Such areas will be designated on the project specifications as Environmentally Sensitive Areas (ESAs) to be preserved. The ESAs will extend 5 ft outside the dripline or 15 ft from the trunk of each tree, whichever is greater, unless the area includes a road shoulder or existing asphalt. In those instances, safety requires the road shoulder or existing asphalt not be included in the ESA and the boundary of the ESA will be modified accordingly. These modified ESAs are included because impacts to oaks may occur within these road shoulder and asphalt areas if roots become exposed, soil surrounding roots is excessively compacted, material is deposited over roots, or	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to Construction.		

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branches or roots are broken or damaged. In addition, to avoid breaking overhanging branches, branch trimming may be required. Proper tree pruning procedures will be followed. No grading or fill activity of any type will be permitted within the ESAs for trees that are expected to be preserved. In addition, heavy equipment, including motor vehicles, will not be allowed to operate in the ESAs. All construction equipment will be operated in such a manner as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, will be allowed in the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned construction activities.									
Minimization Measure NC-8: Coast Live Oak Tree Replacement. During Final Design, the TCA will develop a revegetation program to help compensate for lost oak trees with spacing criteria to be determined by the Project Biologist. Senate Concurrent Resolution No. 17 (filed with the Secretary of State on September 1, 1989) requests all State agencies to preserve and protect native oak woodlands to the maximum extent feasible or to provide for replacement plantings. Impacts to any oak trees (excluding California scrub oaks) with trunk sizes greater than 8 inches diameter at breast height (dbh), but less than 36 inches dbh, will be replaced at a minimum mitigation-to-impact ratio of 1:1. Heritage oaks (oaks greater than 36 inches dbh) will be replaced at a minimum mitigation-to-impact ratio of 3:1. Replacement resources will include a combination of plantings such as acorns, 5-gallon, and 15-gallon trees and/or transplantation where feasible. Replacement plantings may take place in TCA or Caltrans right-of-way or suitable areas in proximity to the project limits.	Project Engineer, Resident Engineer, and Project Biologist	During Final Design and after construction	No	SSP 14-6.03A was prepared. Coast Live Oaks have been replaced at 1:1 ratio per the planting plans.	On-going	On-going	Coordination on-going after construction.		
Minimization Measure NC-9: Existing Wildlife Fencing. If necessary for construction access, the existing wildlife fencing will be removed only after installation of temporary fencing to protect against wildlife-vehicle incidents during construction. Temporary fencing will be the same or greater height than the existing wildlife fencing and must be maintained and functional throughout project construction. After construction, any temporary fencing will be replaced with new permanent fencing consistent with the existing wildlife fencing.	Resident Engineer, Project Biologist, and Construction Contractor	During and after construction	No	All existing wildlife fence being impacted is to be reconstructed.	On-going	On-going	Coordination to be done during and after Construction.		

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Minimization Measure NC-10: Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Revegetation. Following the completion of the project construction, all disturbed habitat adjacent to Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be restored with native vegetation consistent with the 1994 Biological Opinion and the 2019 Biological Opinion, as applicable.	Resident Engineer and Project Biologist	After construction	No	All grading is reseeded with native plants.	On-going	On-going	Coordination to be done after Construction.		
Minimization Measure NC-11: Construction Lighting and Staging. Construction equipment maintenance, lighting, and staging must be in designated areas, away from Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-12: Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Avoidance. During construction, Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be avoided as much as is feasible. Activity that must take place at the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be done as quickly as possible and only during daylight hours. Noise levels generated from construction activities at Coal Canyon Undercrossing shall not exceed 5 A-weighted decibels (dBA) above the ambient noise level within 100 ft from the edge of roadway.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-13: Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Access. Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-14: Windy Ridge Wildlife Undercrossing Construction Staging. Within Windy Ridge Wildlife Undercrossing, structures required for bridgework will be erected as to not block the main underpass. Scaffolding and false work will be restricted to the sides of the underpass to maintain the functionality of the crossing for wildlife movement.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure NC-15: Western Riverside County Multiple Species Habitat Conservation Plan Construction Guidelines. Construction activities in the SR-91 Advanced Signage Area in Riverside County will comply with the objectives, policies, procedures, and guidelines from Section 7.5.3: Construction Guidelines as well as (BMPs outlined in Appendix C (WR-MSHCP Volume 1) of the Western Riverside County	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	Plans have been developed per these requirements.	On-going	On-going	Coordination to be done during Construction.		

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Multiple Species Habitat Conservation Plan (WR-MSHCP). The applicable guidelines from Section 7.5.3: Construction Guidelines are: • When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, and water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or additional fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities. • Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat. The applicable practices from the 15 practices listed in Appendix C: Standard Best Management Practices are: • The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible. • To avoid attracting predators of the species of concern, the project site shall be kept clean of debris. All food-related trash items shall be enclosed in sealed containers and regularly removed from the project site. • Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project construction activities and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas. • The Permittee shall have the right to access									

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and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.									
Avoidance and Minimization Measure NC-16: Sensitive Species and Habitats. In conjunction with the final design and prior to site preparation, all sensitive species and special habitats within 300 ft of the Project Area shall be mapped on the grading plans by a qualified biologist. Sensitive and candidate species and special habitats shall be defined as: • Coastal California gnatcatcher • Cactus wren • Designated critical habitat for Coastal California gnatcatcher • Thread-leaved brodiaea • Designated critical habitat for Braunton's milk-vetch • Least Bell's vireo • Southwestern willow flycatcher • Drainages and streambeds • Coastal sage scrub • Coast live oak woodland	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to and during Construction.		
Avoidance and Minimization Measure NC-17: Cactus. Prior to clearing and grubbing and construction, cactus will be saved where feasible, for use in revegetation efforts.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to and during Construction.		
ETC Final EIR and Final EIS Measure B-2. *Prior to grading and site preparation, all native oak, sycamore, and willow trees of 4 inches in diameter at breast height (DBH-4 ½ ft from mean ground level) within the Project limits and within 20 ft of grading and construction operations shall be tagged and numbered with permanent tags. The tag numbers of the trees to be protected and those to be removed shall be noted. Records of these numbers shall be kept by TCA, the Resource Management Coordinator/Monitor and the Orange County Environmental Management Agency/ Environmental Planning Division for use in mitigation/replacement and monitoring of tree resources before, during and after grading and construction activities.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to, during, and after construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to, during, and after Construction.		
ETC Final EIR and Final EIS Measure B-3. *Prior to grading and site preparation, all trees subject to removal shall be marked with a red "X" on the trunk. Trees to be preserved shall be marked with yellow flagging visible from all direction.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to construction	No	Removal show on plans	On-going	On-going	Coordination to be done prior to Construction.		
ETC Final EIR and Final EIS Measure B-4. *In conjunction with grading, site preparation and construction, short term soil stabilization using*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		

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accepted soil protection techniques and native species shall be conducted under the direction of a qualified biologist, where determined to be appropriate to protect sage scrub communities.									
ETC Final EIR and Final EIS Measure B-8. *For the period covering all site preparation, grading and construction, a resource management coordinator shall monitor wildlife* [and plant] *habitat preservation to ensure that the ESAs and areas outside the Caltrans right-of-way are not adversely impacted. The monitor shall be on site before, during, and after the completion of site preparation, grading and construction.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	There is no work outside Caltrans right-of-way and contractor is not permitted outside the right-of-way.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure B-11. *Prior to site preparation, grading and construction, the TCA shall implement procedures for protecting sensitive and candidate species and special habitats* [particularly Braunton's milk-vetch critical habitat] *identified and mapped on grading plans during site preparation, grading, construction and maintenance activities by following Caltrans Environmentally Sensitive Area procedures.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to and during Construction.		
ETC Final EIR and Final EIS Measure B-25. *During site preparation and grading, the TCA shall phase operations around important habitat areas to allow for completion of nesting and breeding activities for the coastal California gnatcatcher and raptor species occurring in oak woodland ~~as well as willow and sycamore forested woodlands~~. This measure will be conducted and overseen by a qualified biologist.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No	Staging has designed to allow for phasing operations around important habitat areas.	On-going	On-going	Coordination to be done prior to and during Construction.		
Wetlands and Other Waters									
Minimization Measure WET-1: Nationwide Permit. Prior to initiation of construction, a permit will be obtained through the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. As part of coordination with the USACE, a Nationwide Permit will be pursued, if appropriate.	Project Engineer and Project Biologist	During Final Design and prior to construction	No	LSA Action Items	On-going	On-going	Coordination on-going prior to construction.		
Minimization Measure WET-2: Streambed Alteration Agreement. Prior to initiation of construction, a Streambed Alteration Agreement (SAA) with the California Department of Fish and Wildlife will be obtained and any specifications in the SAA will be implemented.	Project Engineer and Project Biologist	During Final Design and prior to construction	No	LSA Action Items	On-going	On-going	Coordination on-going prior to construction.		
Minimization Measure WET-3: Water Quality Certification. Prior to initiation of construction, a Section 401 Water Quality Certification from the Santa Ana Regional Water Quality Control Board will be obtained and any specifications in the Certification will be implemented.	Project Engineer and Project Biologist	During Final Design and prior to construction	No	LSA Action Items	On-going	On-going	Coordination on-going prior to construction.		
ETC Final EIR and Final EIS Measure B-13. *In*	Project Engineer and	During Final Design	No						

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conjunction with final design, the TCA shall, to the extent feasible, construct stream bank reinforcements of ungrouted riprap gabions or other appropriate material at the shallowest possible slope (2:1 or less), allowing for the replacement of soil and the subsequent revegetation of these areas with riparian plant species.	Resident Engineer			Grading is outside any riparian areas.	On-going	On-going			
Plant Species									
Minimization Measure PS-1: California Black Walnut Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any southern California black walnut tree and designated as an Environmentally Sensitive Area (ESA) to be preserved for those trees not within the footprint of project structures or areas of ground disturbance. The protected zone will extend 5 feet (ft) outside of the drip line or 15 ft from the trunk of the tree, whichever is greater. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby California black walnut trees. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned grading activities.	Resident Engineer, Monitoring Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure PS-2: California Black Walnut Sapling Relocations. The California black walnut saplings in the median of the SR-241/SR-91 interchange will be assessed at the time of construction and relocated within Caltrans right-of-way, if feasible. If not feasible, replacement planting of California black walnut saplings will be done at a minimum 2:1 ratio.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done prior to and during Construction.		
Minimization Measure PS-3: Coulter's Matilija Poppies Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any Coulter's Matilija poppies and designated as an ESA to be preserved to the extent feasible. The protected zone will extend 5 ft outside of the vegetation edge. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		

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will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby Coulter's Matilija poppies. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where Coulter's Matilija poppies are adjacent to planned grading activities.									
Animal Species									
Minimization Measure AS-1: Nesting Birds. Prior to clearing or construction, to avoid impacts to nesting birds, any native vegetation removal or tree- (native or exotic) trimming activities will occur outside of the bird nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season or if construction activities or access have the potential to impact nesting birds, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active. Construction of the Coal Canyon Undercrossing access ramp and widening of Windy Ridge Wildlife Undercrossing will be conducted outside the bird nesting season (February 15 through August 31). Periodic monitoring by the project biologist will be conducted as needed to ensure that construction activities do not impact bridge-nesting birds at Coal Canyon Undercrossing and Windy Ridge Wildlife Undercrossing.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure AS-2: Bat Maternity Roosting Survey. A qualified bat biologist will survey the Project Area during the maternity roosting period, typically in June, to assess the potential for its use as a maternity roost because maternity roosts are generally formed in late spring. The qualified bat biologist will also perform preconstruction surveys because bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.	Project Engineer and Project Bat Biologist	During Final Design and prior to construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination on-going prior to construction.		
Minimization Measure AS-3: Bridgework	Project Engineer,	During Final Design and	No						

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Schedule. To prevent impacts to bridge and crevice-roosting bats, all bridgework will be scheduled between September 1 and November 30 to avoid hibernating bats and the maternity season. If this is not feasible, temporary bat eviction and exclusion devices will be installed between September 1 and November 20 prior to the initiation of construction activities and under the supervision of a qualified bat biologist. Exclusion devices will be installed during the fall, or as otherwise directed by a qualified biologist, to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts will be continued to keep the structures free of bats until the completion of construction on those structures, at which time the devices will be removed to allow the bats to resume roosting in the structure and prevent any permanent loss of bat-roosting habitat. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies.	Resident Engineer, and Project Bat Biologist	prior to construction		SSP 14-6.03A was prepared.	On-going	On-going	Coordination on-going prior to construction.		
Avoidance and Minimization Measure AS-4: Construction Work Activities. To avoid or minimize impacts to bats at a night roost, work activities are not to occur within 100 feet of the structure between sunset and sunrise. If construction work must be performed at night in the vicinity of the bridge structure containing a night roost, noise and direct lighting will be directed away from the structure or lighting will be specifically focused on the section of the bridge actively under construction to minimize impacts to night-roosting bats.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Avoidance and Minimization Measure AS-5: Bird Exclusion Netting. Airspace access to and from a bridge structure containing a night roost will not be restricted. Bird exclusion netting will not be used unless made from thick plastic and installed with no exposed overlap joints. Clearing of vegetation in the vicinity of the structure will also be minimized to the greatest extent practicable.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Minimization Measure AS-6: Unfilled Expansion. Subject to public health and safety considerations, existing unfilled expansion joints will remain unfilled and unobstructed to prevent permanent loss of existing day- and/or night-roosting habitat. Habitat for bats may be enhanced in the project limits by leaving newly created expansion joints unrubberized so that they are available to bats for day roosting after construction is complete.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	Unfilled joints are being filled for safety considerations.	On-going	On-going	Coordination to be done during Construction.		
Avoidance Measure AS-7: Burrowing Owl Survey. In accordance with the California Department of Fish and Wildlife survey guidelines	Resident Engineer and Project Biologist	Prior to ground disturbance and during construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		

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for burrowing owl, a take avoidance survey shall be conducted no less than 14 days prior to initiating ground-disturbance activities and, if time lapses between project activities, a final survey may be conducted within 24 hours prior to ground disturbance.									
Threatened and Endangered Species									
Avoidance Measure TE-1: Construction Work Limits Review. During Final Design, the construction work limits will be reviewed to ensure that the lateral work limits are reduced to avoid designated Braunton's milk-vetch critical habitat and that construction staging areas are located in areas that have been previously disturbed or developed. All designated critical habitat for Braunton's milk-vetch adjacent to and outside the project disturbance limits will be delineated on the project specifications as environmentally sensitive areas (ESAs) prior to any construction activities near those areas.	Project Engineer, Resident Engineer, Project Biologist, and Construction Contractor	During Final Design	No	SSP 14-6.03A was prepared. Final design includes ESA for critical habitat.	On-going	On-going			
Avoidance and Minimization Measure TE-2: Thread-leaved Brodiaea Preconstruction Surveys and Environmentally Sensitive Areas. Preconstruction surveys will be conducted to determine if thread-leaved brodiaea is present in the Project Area. If this species is found in the Project Area, prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any thread-leaved brodiaea individuals and designated as an ESA to be preserved to the extent feasible. The protected zone will extend 5 feet (ft) outside of the vegetation edge. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby thread-leaved brodiaea. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where thread-leaved brodiaea is adjacent to planned grading activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Avoidance Measure TE-3: Coastal California Gnatcatcher Survey. Prior to the commencement of grading operations or other activities involving disturbance of coastal sage scrub or areas of coastal California gnatcatcher designated critical habitat (with constituent elements), a survey will be conducted to locate coastal California gnatcatcher	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		

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within 100 ft of the outer extent of projected soil disturbance activities and the locations of coastal California gnatcatchers shall be clearly marked and identified on the construction/grading plans. The 100 ft buffer outside the project soil disturbance limits will be clearly marked in the field by construction personnel under the guidance of the biologist. Construction or clearing will not be conducted within the project disturbance limits adjacent to the 100 ft buffer until the biologist determines that the young have fledged or the nest is no longer active.									
Avoidance Measure TE-4: Barrier Installation. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around coastal sage scrub and coastal California gnatcatcher designated critical habitat (with constituent elements) adjacent to and outside the project footprint to designate ESAs. No grading or fill activity of any type will be permitted within the ESAs and no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries adjacent to the project footprint to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Avoidance Measure TE-5: Construction Activities Monitoring. A qualified biologist will monitor all construction activities for the duration of the project construction in areas adjacent to ESAs to flush out any wildlife species present from the construction areas prior to construction and to ensure that vegetation removal, best management practices, ESAs, and all avoidance and minimization measures are properly followed.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Avoidance and Minimization Measure TE-6: Shielded Lighting. Shielded lighting will be used for any nighttime construction adjacent to coastal sage scrub within coastal California gnatcatcher designated critical habitat to avoid and minimize artificial night lighting effects on the gnatcatcher.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Mitigation Measure TE-7: Section 7 Consultation and Biological Opinion.* Section 7 consultation was conducted with the United States Fish and Wildlife Service (USFWS) to address effects to coastal California gnatcatcher and coastal California gnatcatcher occupied and/or designated critical habitat outside the Natural	Project Engineer, Project Biologist, Resident Engineer, Construction Contractor, and Biological Monitor	During Environmental Document phase, Final Design, and after construction	No	SSP 14-6.03A was prepared. Plans have been designed to meet these requirements.	On-going	On-going	Coordination on-going after construction.		

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Communities Conservation Plan (NCCP) Area. Requirements from the 2019 Biological Opinion are listed below. Temporary impacts to coastal sage scrub and native plant restoration will be offset through restoration of 6.84 ac with coastal sage scrub (not as mitigation slopes, coastal sage scrub will be the baseline condition for future consultations). Temporary impacts to chaparral, oak woodland, nonnative grassland, and ruderal in designated critical habitat will be offset through restoration of 7.31 ac with native fuel modification zone species[1] (not mitigation slopes). Permanent impacts to coastal sage scrub and native plant restoration will be offset through: on-site restoration of 8.73 ac (6.98 ac with coastal sage scrub and 1.75 ac with native fuel modification zone species [not mitigation slopes]); off-site mitigation of 19.63 ac including advance restoration of 13.3 ac at Strawberry Farms (9.75 ac of coastal sage scrub restoration, 1.86 ac of coastal sage scrub and prickly pear cactus restoration, 0.39 ac of native perennial grassland restoration, and 1.3 ac of coastal sage scrub enhancement); and off-site mitigation of 6.33 ac at the Saddle Club (2.63 ac of coastal sage scrub and 3.7 ac of coastal sage scrub/chaparral mix). Permanent impacts to chaparral, oak woodland, nonnative grassland, and ruderal in designated critical habitat will be offset through: on-site restoration of 7.31 ac with native fuel modification zone species (not mitigation slopes); on-site restoration of 0.28 ac with native fuel modification zone species, with maintenance activities within 14 ft from edge of pavement (not mitigation slopes); and off-site mitigation of 4.24 ac at the Saddle Club with coast live oak woodland. The conservation measures included in the 2019 Biological Opinion that will be implemented as part of the Proposed Project to avoid and minimize impacts to gnatcatchers are as follows: ***Avoidance and Minimization through Project Design*** *CM 1. If feasible, the Soil Nail Wall Design Option*									

[1] A fuel modification zone is an area where combustible vegetation in the landscaping is modified or replaced with drought-tolerant or fire-resistant vegetation to provide protection against wildfires. These drought-tolerant and fire-resistant species are considered fuel modification zone species.

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will be selected to minimize permanent impacts to approximately 5 acres of land located within the Gypsum Canyon Nature Preserve. The final engineering design for this area will be reported to the CFWO at least 15 working days prior to initiating project impacts. *CM 2. Permanent project lighting will be of the lowest illumination necessary for safety and will be directed toward the roadway and away from sensitive habitats and wildlife crossing areas. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. The Caltrans Project Biologist[1] will review the permanent lighting plans and then submit them to the CFWO for review and approval at least 15 working days prior to initiating project impacts.* *CM 3. A wildlife connectivity plan will be developed and implemented to ensure that ecosystem functions[2] are maintained by the project for the benefit of listed species. The plan will be provided to the CFWO for review and approval at least 60 days prior to initiating project impacts. The plan will include the following requirements:* *a. Animals may not be able to navigate steep vertical bends and they may not utilize culverts or crossing structures that have horizontal bends that limit visibility. The culvert at drainage feature 4 will be lengthened by the project but no vertical or horizontal bends will be constructed in the culvert extension;* *b. To the maximum extent feasible, rock slope protection will be avoided at culvert and wildlife crossing openings. If rock slope protection is required, modifications (e.g., small pebble, dirt, or grouted movement pathways) will be made such that animals of all sizes can access culverts and wildlife crossings;* *c. If stream bank reinforcements are required at wildlife crossing and culvert areas, project proponents will design them in the manner most conducive to wildlife movement. If stream bank reinforcements of ungrouted riprap gabions or other material are required, they will be constructed at the shallowest possible slope (2:1 or less), and will be covered with soil and revegetated with native riparian plant species in a manner that will*									

[1] The Caltrans Project Biologist will be a Caltrans biologist familiar with the federally listed species potentially affected by the project and with the habitats that support these species; he/she will be the primary contact for the CFWO during project implementation.

[2] For example, dispersal of top predators to control meso-predators that prey on avifauna, such as gnatcatchers (e.g., Crooks and Soule 1999)

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allow for the movement of wildlife of all sizes. Project proponents will ensure that soil placement on top of stream bank reinforcements will occur in a manner that does not result in erosion holes in the soil surface over time; *d. Restoration of temporary impact areas at wildlife crossings will be planned in a manner that will encourage wildlife use and movement. Project proponents will ensure that plantings will not obscure culvert or wildlife crossing openings. Native vegetation may be used to funnel wildlife toward the crossings and create a visual barrier between the roadway and habitat in a manner that will encourage wildlife movement;* *e. Culvert openings will be flush with the road slope and ground to allow animals to easily find and access the culverts. Culvert openings that provide for wildlife movement under the roadway will not be blocked with grates, with the exception of openings from culverts to those portions of the roadway median that are not intended for wildlife access or movement;* *f. Where the project will result in new roadside fencing, project proponents will ensure that fencing ties into culvert and wildlife crossing openings such that animals following the fencing can easily find and access culverts and crossings. Any new roadside fencing will be 10 to 12-foot high chain link fence with an 18-inch "outrigger" (three strands of barbed wire) angled away from the road, located within the Caltrans right-of-way, subject to the Biological Monitor's5 recommendations, and will be buried 24 inches into the ground to discourage wildlife from digging under the fence. In areas where new fencing is installed, old fencing that blocks access to culverts and crossings will be removed. Any new fencing constructed by the project at the SR-241/SR-91 interchange will incorporate recommendations on page 194 of USGS 2013;* *g. Project proponents will coordinate with the Orange County Transportation Authority (OCTA) to ensure that the project will not negatively affect the camera study and native plantings planned by OCTA at the Coal Canyon Undercrossing;* *h. Equipment maintenance, lighting, and staging for the project will be in designated areas, away from the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing. Construction in the Windy Ridge Wildlife Undercrossing and Coal Canyon*									

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Undercrossing will be limited to daylight hours. These areas will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage. Structures required for bridgework at the Windy Ridge Wildlife Undercrossing will be erected so as not to block the main underpass, and scaffolding and false work will be restricted to the side of the underpass to maintain the functionality of the crossing for wildlife movement. Construction access to the SR-91 median at Coal Canyon will be provided within the fenced access area at Coal Canyon Road, and no project work or access will take place beyond the fencing within the existing dirt wildlife crossing area at Coal Canyon; *i. Freeway signage with lighting, including changeable message signs, will be located in areas away from the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing;* *j. Construction noise at the Coal Canyon Undercrossing will be limited to no more than 5 dBA hourly Leq above ambient levels beyond 100 feet from the edge of the roadway to avoid noise disturbance to wildlife within the crossing;* *k. A new turnaround has been constructed in the SR-91 median west of Coal Canyon that benefits both wildlife connectivity and human safety by providing a more accessible and rapid turnaround location that is outside of the wildlife undercrossing. This turnaround is not large enough to accommodate construction vehicles and will continue to be accessible to emergency vehicles during project work, maintaining the recent benefits to wildlife movement that the turnaround provides; and* *l. Subject to approval by California Highway Patrol (CHP) and Orange County Fire Authority (OCFA), install a permanent access control gate near the top of the eastbound off-ramp at Coal Canyon, leaving enough room in front of the gate for personnel in authorized vehicles to exit SR-91 and open the gate, but encouraging unauthorized vehicles to use the new median turnaround. Signage will be posted and maintained at the gate to inform the public about adjacent sensitive habitats and species as well as access restrictions (e.g., wildlife crossing, no unauthorized access, no night access). The gate and signage will be installed prior to completion of project construction. If installation of the gate is not approved, Caltrans and TCA will coordinate with the CFWO to identify an alternative measure to enhance connectivity or*									

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improve safety for dispersing wildlife to offset temporal impacts resulting from the substantially degraded functioning of Coal Canyon as a wildlife undercrossing during the 2-year construction period. If enhancing connectivity at Coal Canyon itself isn't practicable, then improvements may occur at a different location identified in coordination with the CFWO. ***Avoidance and Minimization during Vegetation Clearing/Project Construction*** *CM 4. The clearing and grubbing of native upland habitats for the project will occur between September 1 and February 14, to avoid the gnatcatcher breeding season (or sooner than September 1, if a biologist knowledgeable of gnatcatcher biology and ecology approved by the CFWO demonstrates to the satisfaction of the CFWO that all gnatcatcher nesting is complete). The project proponents will submit the biologist's name, address, telephone number, and work schedule on the project to the CFWO at least 15 working days prior to initiating project impacts.* *CM 5. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated staging areas that are a minimum of 100 feet from sensitive habitats and drainages.* *CM 6. All lighting used at night for project construction will be selectively placed and directed at the immediate work area and away from adjacent sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats.* *CM 7. Erosion and sediment control devices used for the project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.* *CM 8. The project site will be kept as clear of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site. All spoils and material disposal will be disposed of properly.* *CM 9. If fill must be borrowed from or disposed of offsite, the construction contractor will identify any necessary borrow and disposal sites and provide this information to Caltrans for review. Caltrans will review borrow and disposal site information and if borrow or disposal activities may affect a listed*									

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species or critical habitat, Caltrans will reinitiate Section 7 consultation. *CM 10. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures.* *CM 11. Project personnel will be prohibited from bringing domestic pets to construction sites to avoid disturbance and depredation of wildlife by domestic pets in adjacent habitats.* *CM 12. During project construction all invasive species included on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the California Invasive Plant Council's Invasive Plant Inventory list (Cal-IPC 2006) found growing within the project impact area will be removed. Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds and all weedy vegetation removed during construction will be properly disposed of to prevent spread into areas outside of the construction area.* *CM 13. All native or sensitive habitats outside and adjacent to the construction limits will be designated as Environmentally Sensitive Areas (ESAs) on project maps. ESAs will be temporarily fenced during construction with orange plastic snow fence, orange silt fencing, or in areas of flowing water, with stakes and flagging. No personnel, equipment, or debris will be allowed within the ESAs. Temporary ESA fencing and flagging will be installed in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. The project proponents will submit to the CFWO, at least 5 days prior to initiating project impacts (except for impacts resulting from clearing to install temporary fencing), the final plans for initial clearing and grubbing of habitat and project construction. These final plans will include photographs that show the fenced and flagged limits of impact and all areas to be impacted or avoided. Field maps indicating the location of temporary ESA fencing and/or staking will also be provided. If work occurs within gnatcatcher habitat beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the CFWO. Temporary ESA fencing and markers will be maintained in good repair until the completion of project work adjacent to each ESA and removed upon completion of project work*									

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adjacent to each ESA. *CM 14. A CFWO-approved biologist (Biological Monitor)[1] will be on site during all initial vegetation clearing/grubbing and weekly during project construction within 500 feet of gnatcatcher habitat to monitor compliance with all conservation measures. The project proponents will submit the biologist's name, address, telephone number, and work schedule on the project to the CFWO at least 15 working days prior to initiating project impacts. The contract of the Biological Monitor will allow direct communication with the CFWO at any time regarding the proposed project. The Biological Monitor will be provided with a copy of this consultation. The Biological Monitor will be available during pre-construction and construction phases to address protection of sensitive biological resources, monitor ongoing work, and maintain communications with construction personnel to facilitate the appropriate and lawful management of issues relating to biological resources. The Biological Monitor will perform the following duties:* *a. Perform a minimum of three focused preconstruction surveys, on separate days, to determine the presence of gnatcatchers in the upland project impact footprint. Surveys will begin a maximum of 30 days prior to performing vegetation clearing/grubbing, and one survey will be conducted the day immediately prior to the initiation of vegetation clearing. If any gnatcatchers are found in the upland project impact footprint, the Biological Monitor will direct construction personnel to begin vegetation clearing/grubbing in an area away from the gnatcatchers. It will be the responsibility of the Biological Monitor to implement measures (e.g., direct vegetation clearing away from gnatcatchers, flush gnatcatchers out of the active work area) to avoid death and injury of gnatcatchers by vegetation clearing/grubbing. The Biological Monitor will also record the number and location of gnatcatchers disturbed by vegetation clearing/grubbing. Caltrans will notify the CFWO at least 7 days prior to vegetation clearing/grubbing to allow the CFWO to coordinate with the Caltrans Project Biologist on potential bird flushing activities;* *b. Perform a minimum of three focused surveys, on separate days, to determine the presence of gnatcatcher nest building activities, egg incubation*									

[1] The Biological Monitor will be familiar with the federally listed species potentially affected by the project (i.e., gnatcatcher) and with the habitats that support this species.

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activities, or brood rearing activities within 500 feet of project construction that is initiated during the February 15 to August 31 breeding season for the gnatcatcher. Surveys will begin a maximum of 7 days prior to performing construction within 500 feet of gnatcatcher habitat during the breeding season, and one survey will be conducted the day immediately prior to the initiation of construction within 500 feet of gnatcatcher habitat during the breeding season. Additional surveys will be done once a week during project construction within 500 feet of gnatcatcher habitat during the breeding season. These additional surveys may be suspended as approved by the CFWO; *c. If active gnatcatcher nests are identified within 500 feet of noise generating construction activities and noise is in excess of 60 dBA hourly Leq or if noise is in excess of ambient noise levels if ambient noise levels exceed 60 dBA hourly Leq, noise attenuation structures will be installed at the noise source to reduce noise levels to 60 dBA hourly Leq or to ambient noise levels if ambient noise levels exceed 60 dBA hourly Leq at the nest location. Noise monitoring will occur during the breeding season and be reported monthly to the CFWO. If the Biological Monitor suspects that avoidance and minimization measures are ineffective, and project activities may be adversely affecting the gnatcatcher, culpable activities will be suspended within 500 feet of active nests until nesting activity is completed and fledglings are no longer in the area or until effective avoidance and minimization measures can be identified, implemented, and demonstrated to be effective. If the specified noise targets cannot be met or the Biological Monitor observes potential adverse effects to gnatcatchers from project-related noise, activities that are resulting in potential adverse effects will be halted, and the CFWO will be contacted to determine if reinitiation of consultation is necessary;* *d. Oversee installation of and inspect erosion control measures a minimum of once per week to document and bring to the attention of the contractor any breaks in erosion control measures such that they are repaired immediately;* *e. Oversee installation of and inspect ESA fencing a minimum of once per week to document and bring to the attention of the contractor any breaks in the fence such that they are repaired immediately;*									

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f. Train contractors and construction personnel expected to be in the project impact area on the biological resources associated with the project and document that training is implemented by construction personnel. At a minimum, training will include: *i. The purpose for resource protection;* *ii. A description of the gnatcatcher and its habitats;* *iii. The CMs that should be implemented during project construction to conserve the gnatcatcher, including strictly limiting activities, vehicles, equipment, and construction materials to the project footprint to avoid adjacent sensitive resource areas;* *iv. Environmentally responsible construction practices;* *v. the protocol to resolve conflicts that may arise at any time during the construction process; and* *vi. The general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act;* *g. Monitor the project site immediately prior to and during construction to identify the presence of invasive weeds and recommend measures to avoid their inadvertent spread in association with the project. Such measures may include inspection and cleaning of construction equipment and use of eradication strategies;* *h. Periodically monitor the work area to document that work activities do not generate excessive amounts of dust;* *i. Submit monthly email reports (including photographs of impact areas) to the CFWO during clearing of, and construction within, 500 feet of gnatcatcher habitat. The monthly reports will document that authorized impacts were not exceeded and general compliance with all conditions. The reports will also outline the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers and locations of gnatcatchers (if observed), their observed behavior (especially in relation to construction activities), and remedial measures employed to avoid and minimize impacts to these species. Raw field notes should be available upon request by the CFWO; and* *j. Submit a final report to the CFWO within 120*									

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days of the completion of construction for the project that includes: photographs of habitat areas that were to be avoided and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conservation measures was achieved. ***Measures to Offset Impacts to Gnatcatcher and its Habitat*** *CM 15. Areas of temporary impact, as quantified in Tables 1 and 3, will be revegetated and restored with native species as specified in Tables 4 and 5. These areas will be returned to original grade, as feasible. Prior to initiating project impacts, a restoration plan will be developed for the temporary impact areas. The plan will be submitted to the CFWO for review and approval at least 15 working days prior to initiating project impacts. This plan will include a detailed description of restoration methods, slope stabilization, and erosion control, criteria for restoration to be considered successful, and monitoring protocol(s). Following the completion of construction activities within each area of impact, the restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial water has been off for at least 2 years. Temporary impact areas will be planted as soon as possible, with consideration of seasonal timing, following re-grading after completion of construction to prevent encroachment by nonnative plants.* *CM 16. Some permanent impact cut and fill slopes for the project will be revegetated with native species as specified in Table 4. Duff and rare plants may be salvaged from the project impact footprint to aid in revegetating slopes with native habitats. The revegetated areas will have temporary irrigation and will be planted with native container plants and seeds. At least 3 years of plant establishment/ maintenance on these slopes will be conducted to control nonnative plants. These areas will be planted as soon as possible, with consideration of seasonal timing, following the completion of construction to prevent encroachment by nonnative plants.* *CM 17. If maintenance of a coastal sage scrub restoration area is necessary between February 15*									

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and August 31, a CFWO-approved biologist[1] will survey for gnatcatchers within the restoration area, access paths to it, and other areas susceptible to disturbances by site maintenance. Surveys will consist of three visits separated by 2 weeks starting March 1 of each maintenance/monitoring year. Work will be allowed to continue on the site during the survey period. However, if gnatcatchers are found during any of the visits, the applicant will notify and coordinate with the CFWO to identify measures to avoid and/or minimize effects to the gnatcatcher (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work). *CM 18. Permanent and temporary impacts to the gnatcatcher and its habitat[2] (as summarized in Tables 1, 2, and 3) will be offset as specified in Tables 4 and 5.* *CM 19. Portions of the Saddle Club property used to offset project-related impacts will be conserved and managed in perpetuity. Each of the sub-measures below will be implemented prior to initiating project-related impacts:* *a. A CFWO-approved conservation easement will be recorded over conserved land in favor of a CFWO-approved entity (e.g., a non-profit environmental organization or government agency). The conservation easement will prohibit all activities that significantly disturb wildlife or detrimentally impact habitat for the gnatcatcher. Potential recreation uses that do not impact habitat or result in significant disturbance to gnatcatchers (e.g., hiking along existing trails) may be proposed in a CFWO-approved habitat management plan for the property provided that the management plan includes sufficient measures and funding to ensure that these activities are appropriately monitored and managed;* *b. A CFWO-approved habitat management plan will be prepared that addresses potential threats to the conserved habitat, such as unauthorized human access, monitoring and management of any authorized recreational activities, control of non-native invasive plant species, and habitat degradation from fire;* *c. A CFWO-approved land manager will be*									

[1] The biologist for this measure will be a trained ornithologist with at least 40 hours of observing gnatcatchers in the field and documented experience locating and monitoring nests of the target species.

[2] Permanent and temporary impacts to 3.81 acres and 26.63 acres of habitat, respectively, have already been offset in accordance with the requirements of Biological Opinion 1-6-94-F-17.

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identified to implement the habitat management plan; and *d. A CFWO-approved non-wasting endowment or endowments will be established with sufficient funds to implement the habitat management plan and to monitor and enforce the conservation easement. The funding for the endowment(s) will be determined through a Property Analysis Record (PAR) or equivalent analysis.* *Caltrans will monitor and report on compliance with the established take exemptions for gnatcatchers associated with the proposed action. The terms and conditions of the 2019 Biological Opinion are as follows:* ***Coastal California Gnatcatcher*** *1.1 Prior to initiating project work, three preconstruction surveys will be conducted within all suitable gnatcatcher habitat within the project footprint, within 30 days prior to initiation of vegetation removal activities, to verify that no more than 1 pair of gnatcatchers will be harmed as a result of the project.* *1.2 Prior to initiating project work, Caltrans will provide to the CFWO a map showing the distribution of gnatcatchers relative to the project footprint and an estimate of the number of gnatcatcher territories that will be impacted by the project, or confirm in writing that maps, distribution information, and the number of territories that will be impacted by the project remain correct.* *1.3 Prior to project construction, the project proponent will submit to the CFWO Geographic Information System (GIS) shapefiles in UTM, Zone 11N (meters), NAD 83 coordinate system that show the following: anticipated permanent impacts, temporary impacts, habitat restoration sites, and habitat conservation sites. Please note that these polygons may overlap. For example, one location could be temporarily impacted and subsequently restored and conserved. Include the following metadata for each shapefile: summary/description of the data, attribute definitions, coordinate system/projection information or any other pertinent information. If there are any changes to the boundaries anticipated impacts, restoration, or conservation sites, such changes must be addressed consistent with the Reinitiation Notice below. In addition, updated GIS shapefiles will be submitted to the CFWO.*									

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1.4 Caltrans will notify the CFWO within 30 days of completing removal of gnatcatcher occupied habitat. The purpose of this notification is to ensure that impacts to gnatcatcher-occupied habitat from the proposed project do not exceed the take thresholds.									
Avoidance and Minimization Measure TE-8: Foraging Special-Status Riparian Birds. Prior to vegetation clearing or construction within the species foraging habitat areas during the nesting periods (generally mid-March through August), a qualified biologist will conduct a preconstruction survey to identify the locations of any special-status riparian birds. If foraging individuals are found within the vegetation-clearing area during the breeding season, clearing will be delayed until the species is absent. Per the NCCP/HCP construction minimization measures, outside the breeding season, the monitoring biologist will flush NCCP/HCP identified species from the area, prior to brush-clearing and earth-moving activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
ETC Final EIR and Final EIS Measure B-27. *Grading and construction activities shall be redirected temporarily around any nesting sites for a distance of 500 ft for candidate and listed species of birds and at a distance of 1,000 ft for raptors during nesting and breeding seasons. ~~In the event that a coyote, bobcat, or mountain lion den is located, grading and construction operations shall be redirected around the den for a distance of 1,000 ft.~~ The nesting sites ~~and dens~~ should be resurveyed toward the end of the breeding seasons of these species to verify completion of the breeding cycle. Nests ~~and dens~~ that will be removed ~~due to ETC~~ must be removed during the nonbreeding season only.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No	SSP 14-6.03A was prepared.	On-going	On-going	Coordination to be done during Construction.		
Invasive Species									
Minimization Measure IS-1: Weed Abatement Program/Non-Standard Special Provisions. During Final Design, a qualified landscape architect will develop a Weed Abatement Program/Non-Standard Special Provisions (NSSP) for inclusion in the project specifications. The Weed Abatement Program/NSSP will be developed in compliance with Executive Order 13112 to minimize the potential for intrusion or export of invasive plant species to and from the Biological Study Area during project construction. At a minimum, the following will be included in the Weed Abatement Program/NSSP and implemented prior to and during construction to address potential effects associated with invasive species. The Weed	Project Landscape Architect, Project Engineer, Project Biologist, Resident Engineer, and Construction Contractor	During Final Design	Yes	SSP 14-6.05 was prepared. Weed Abatement Program nSSP still needs to be prepared.	On-going	On-going			

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Abatement Program/NSSP will define the specific details, frequency, and, if applicable, performance standards for the following individual activities and requirements: • Inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another. • Limit soil and vegetation disturbance to those areas specifically required for the project construction. • Obtain soil, gravel, and rock from weed-free sources. • Use only certified weed-free straw, mulch, and/or fiber rolls for erosion control during construction. • Prior to the completion of construction, revegetate affected areas adjacent to native vegetation with plant species that are native to the vicinity and approved by California Department of Transportation (Caltrans) District 12 Biologists. • Not use any species listed in the California Invasive Plant Council Invasive Plant Inventory with a High or Moderate rating in revegetation. • After construction, ensure that erosion control and revegetation sites are monitored until achievement of the project-specific performance standards defined in the Weed Abatement Program/NSSP or a period of 1 year, whichever is greater, after installation, to detect nonnative species prior to the establishment of the native vegetation. • Implement eradication procedures (e.g., spraying and/or hand weeding) should an infestation occur during or after construction. The use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by Caltrans District 12 Biologists during and after project construction. • During construction, reduce indirect impacts of exotic plant infestations and litter by roadside maintenance at least once daily during construction to remove litter and weeds from the right-of-way.									

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Greenhouse Gas Emissions									
Also see Measures AQ-2, AQ-4, AQ-5, and TR-1 above.									
• Landscaping reduces surface warming, and through photosynthesis, decreases CO2. Landscaping would be provided where necessary within the corridor to provide aesthetic treatment, replacement planting, or mitigation planting for the Proposed Project. The landscape planting would help offset any potential CO2 emissions increase. The project will plant native trees and shrubs within the project area and right of way; see visual measure V-7. • The Proposed Project would specify the use of energy efficient lighting, such as light emitting diode (LED) traffic signals. LED bulbs consume 10 percent of the electricity of traditional lights, which will also help reduce the Proposed Project's CO2 emissions. • According to Caltrans Standard Specifications, idling time for lane closure during construction is restricted to 10 minutes in each direction. In addition, the contractor must comply with Title 13, California Code of Regulations (CCR) Section 2449(d)(3) that was adopted by the ARB on June 15, 2008. This regulation restricts idling of construction vehicles to no longer than 5 consecutive minutes. Compliance with this regulation reduces harmful emissions from diesel-powered construction vehicles. • Transportation System Management (TSM)/Transportation Demand Management (TDM) elements, described more fully in Section 2.2.1.2, are included in the scope of the Build Alternatives. • Legally enforceable measures intended to reduce GHG emissions from the 2016 SCAG RTP/SCS will be included in the Plans, Specifications, and Estimates package prepared for the Project. For example, the new toll lanes would be available for high occupancy vehicles such as buses and vehicles with three or more persons.	Project Engineer, District Landscape Architect, and Construction Contractor	During Final Design and during construction	No	Bullet Point 1: Project is being planted with native planting. Bullet Point 2: LED are current requirement for Caltrans projects. Bullet Point 3: Specifications require installation of lane monitoring equipment during lane closures to measure vehicle delays. In addition standard specification require compliance with all permits and local and state regulations which include air quality. RE will enforce these regulations during construction. Bullet Point 4: Specifications require installation of lane monitoring equipment during lane closures to measure vehicle delays. In addition standard specification require compliance with all permits and local and state regulations which include air quality. RE will enforce these regulations during construction. Bullet Point 5: TCA Action Item.	On-going	On-going	Coordination on-going during construction.		