TP ATTACHMENT 6-1 – PROJECT ENVIRONMENTAL COMMITMENT REQUIREMENTS

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LAND USE/PARKS/RECREATION		
LU-1	If a Build Alternative is selected for implementation, the Riverside County Transportation Commission (RCTC) will request the County of Riverside, the County of Orange, and the cities along the alignments of State Route 91 (SR 91) and Interstate 15 (I-15) to amend their respective General Plans to reflect the selected SR-91 Corridor Improvement Project (CIP) alternative and the modification of land use designations for properties that would be acquired for the project which are not currently designated for transportation uses.	RCTC action
PR-1	During final design/construction of the Initial Phase, RCTC will contribute $100,000 to the planning and implementation of improvements in that area that would support and expand regional trail connectivity.	RCTC action
PR-2	During final design/construction of the Initial Phase, RCTC will coordinate with State Parks on the aesthetic features that will be included in the project specifications for the proposed retaining wall facing CHSP between SR-71 and the westbound Green River Road off-ramp, consistent with the aesthetic and features required in Measure V 2. The aesthetic treatment will include a texture to simulate a natural type appearance such as a soil or rock surface, or equivalent.	
PR-3	RCTC's Resident Engineer will require the design/build contractor to limit the hours of construction in CHSP to daylight hours, with the exception of limited periods when evening or night construction is necessary for safety or operations reasons.	
	Other Commitments by RCTC Relevant to Chino Hills State Park. RCTC has committed to an additional action in the Coal Canyon area, as follows. A stand-alone project will be developed to construct barriers on the south and north sides of SR-91 to shield headlight glare and freeway noise. The required barriers are estimated to be approximately 1,500 feet and 1,300 feet long on the south and north sides of SR-91 respectively. The project will follow environmental process requirements and engage subject area experts to establish the specific requirements and effectiveness of the proposed barriers to meet the project purpose as well as ensure safety and structural standards are met. In consideration of and reliance on the needs of State Parks and other open space plans that depend on Chino Hills State Park, and subject to environmental review, RCTC commits to build this barrier in tandem with the completion of the SR-91 widening in this area currently planned for completion	RCTC will be responsible for the following: **Other Commitments by RCTC Relevant to Chino Hills State Park.** RCTC has committed to an additional action in the Coal Canyon area, as follows. A stand-alone project will be developed to construct barriers on the south and north sides of SR-91 to shield headlight glare and freeway noise. The required barriers are estimated to be approximately 1,500 feet and 1,300 feet long on the south and north sides of SR-91 respectively. The project will follow environmental process requirements and engage subject area experts to establish the specific requirements and effectiveness of the proposed barriers to meet the project purpose as well as ensure safety and structural standards are met. In consideration of and reliance on the needs of State Parks and other open space plans that depend on Chino Hills State Park, and subject to

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	in 2035. RCTC intends to work with the Department and other agencies to fund and implement this project.	environmental review, RCTC commits to build this barrier in tandem with the completion of the SR-91 widening in this area currently planned for completion in 2035. RCTC intends to work with the Department and other agencies to fund and implement this project
GROWTH		
	No avoidance, minimization, and/or mitigation measures are required.	
FARMLANDS/TIMBERLANDS		
	Measure CI-3, provided below under Community Impacts, addresses potential impacts related to remainder parcels and access to agricultural parcels.	
COMMUNITY IMPACTS		
CI-1	The Riverside County Transportation Commission's (RCTC) Project Engineer will ensure that design refinements are incorporated in the final design and project specifications to minimize impacts to existing land uses related to the temporary use and/or permanent acquisition of property. Prior to and during construction, RCTC's Resident Engineer will ensure that the design refinements included in the project specifications to minimize impacts to existing land uses related to temporary use and/or permanent acquisition of property are properly implemented by the design/build contractor.	RCTC action
CI-2	Where property acquisition and relocation are unavoidable, RCTC's Right-of-Way Agents will follow the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs. Appendix D in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) provides a summary of the RCTC Relocation Assistance Program for implementing the Uniform Act. For properties where a partial acquisition results in the removal of some or all of the parking for the property, RCTC's Right-of-Way Agents will conduct parking studies to investigate the use of adjacent acquisitions for replacement parking, reconfiguring the remaining parking spaces and lots on the property, restriping parking spaces, enlarging parking lots, and reconfiguring driveways and/or delivery locations to reduce the project effects on the property.	RCTC action
CI-3	Where possible during final design, RCTC's Right-of-Way Agents and the Project Engineer will work with owners of commercial, agricultural, and	RCTC action

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	industrial uses subject to partial property acquisitions to reconfigure those uses on site consistent with applicable local codes and ordinances in such a manner as to enable them to remain in operation. If a commercial or industrial partial acquisition cannot be reconfigured to allow for continued operation, RCTC's Right-of-Way Agents will work with the property owners to either relocate that use to land designated for that given land use, preferably within the boundaries of the study area or to provide compensation for the land pursuant to the provisions of the Uniform Act. If an agricultural use cannot be reconfigured to allow for its continued operation, the property owner will be compensated pursuant to the provisions of the Uniform Act as required in Measure CI-2 and the agricultural use will be discontinued.	
CI-4	During final design and property acquisition, the RCTC Project Engineer and Right-of-Way Agents will work with billboard/property owners, the City of Corona, and the California Department of Transportation's (Department) Outdoor Advertising Unit to find locations for relocating the affected billboards, within the existing sites where the billboards are currently located or other sites in the City where billboards are allowed. The Right-of-Way Agents will work with the City and the Department's Outdoor Advertising Unit to ensure that the sites for the relocated billboards comply with the requirements in the City of Corona Municipal Code and the Outdoor Advertising Act and Regulations. The Right-of-Way Agents will also work with the billboard/property owners to develop Billboard Relocation Agreements with the City of Corona.	RCTC action
UTILITIES/EMERGENCY SERVICES		
UES-1	**Utilities.** During final design, the Riverside County Transportation Commission's (RCTC) Project Engineer will prepare utility relocation plans 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. **Utilities.** Prior to and during construction, the RCTC Resident Engineer will ensure that the components of the utility relocation plans provided in the	

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	project specifications are properly implemented by the design/build contractor.	
UES-2	**Law Enforcement, Fire Protection, and Emergency Medical Service Providers.** Prior to and during construction, RCTC's Resident Engineer will require the design/build 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 as part of the *Final Transportation Management Plan* (TMP) and *Final Ramp Closure Study* required in Measures T-1 and T-2, including the identification of alternative routes and routes across the construction areas for emergency vehicles developed in coordination with the affected agencies.	
UES-3	**Fire Prevention During Construction.** Prior to and during any construction activities, the RCTC Project Engineer will require the design/build contractor to implement the following to minimize the risk of fires during construction: • Coordinate with the applicable local fire department to identify and maintain defensible spaces around active construction areas • Coordinate with the applicable local fire department to identify and maintain firefighting equipment (extinguishers, shovels, water tankers) in active construction areas • Prohibit the use of mechanized equipment or equipment that could throw off sparks in areas adjacent to open space or undeveloped land, including areas adjacent to CHSP • Post emergency services phone numbers (fire, emergency medical, police) in visible locations in all active construction areas.	
UES-4	**Fire Prevention Adjacent to CHSP.** The final design of the SR-91 CIP Build Alternatives will include closing gaps so there is the equivalent of a continuous barrier 30 to 36 inches high on the edge of the shoulder on both westbound and eastbound SR-91 from SR-71 to SR-241, as follows: • **Initial Phase:** The 36-inch high concrete barrier on westbound SR-91 between SR-71 and Green River Road already included in the design alternatives will meet the requirements for this barrier; • **Ultimate Project:** Close gaps to provide an equivalent continuous barrier 30 to 36 inches high on the edge of shoulder on SR-91 in both directions between Green River Road and SR-241 meeting Department standards applicable at the time.	RCTC will be responsible for the following: **Ultimate Project:** Close gaps to provide an equivalent continuous barrier 30 to 36 inches high on the edge of shoulder on SR-91 in both directions between Green River Road and SR-241 meeting Department standards applicable at the

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	time.	
TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES		

T-1	**Transportation Management Plan.** During final design, the Riverside County Transportation Commission's (RCTC) Project Engineer direct a qualified traffic engineer to prepare the Final Traffic Management Plan (TMP), which will be based on the Preliminary TMP developed for the Project Report, to address specific short-term traffic impacts during construction of the project. The objectives of the Final TMP are to:
	• Maintain traffic safety during construction
	• Effectively maintain an acceptable level of traffic flow throughout the transportation system during construction
	• Minimize traffic delays and facilitate reduction of overall duration of construction activities
	• Minimize detours and impacts to pedestrians and bicyclists
	• Foster public awareness of the project and related impacts
	• Achieve public acceptance of construction of the project and the Final TMP measures.
	RCTC will submit the Final TMP to the California Department of Transportation (Department) for review and approval during final design and prior to any construction activities.
	
	The existing Preliminary TMP contains the following elements intended to reduce traveler delay and enhance traveler safety. These elements will be refined during final design and incorporated in the Final TMP for implementation during project construction.
	• **Public Information/Public Awareness Campaign (PAC).** The primary goal of the PAC is to educate motorists, business owners/operators, residents, elected officials, and government agencies about construction activities and associated impacts. The PAC is an important tool for reaching target audiences with important construction project information and will include, but not be limited to:
	  • Rideshare information
	  • Brochures and mailers
	  • Media releases
	  • Paid advertising	

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- Public meetings
- Broadcast fax and email services
- Telephone hotline
- Notification to targeted groups
- Commercial traffic reporters/feeds
- Project website
- Visual information
- Local cable television and news
- Internet postings

- **Traveler Information Strategies.** The effective implementation of a traveler information system during construction is crucial for enabling motorists to make informed decisions about their travel plans and options with real-time traffic information. That real-time traffic information will include information on lane closures, detours, delays, access to adjacent land uses, "businesses are open" signing, and other signing and information to assist travelers in navigating through and in construction areas. Key components of this system will include, but not be limited to:
  - Fixed changeable message signs
  - Portable changeable message signs
  - Ground-mounted signs
  - Automated work zone information systems
  - Highway advisory radio
  - Lane closure website
  - Department highway information network
  - Bicycle and pedestrian information
  - Commute Smart website
- **Incident Management.** Effective incident management will ensure that incidents in construction areas are cleared quickly and do not lead to substantial delays for the traveling public through work zones. Incident management includes, but is not limited to:
  - Construction Zone Enhanced Enforcement Program (COZEEP)
  - Freeway service patrol for construction
  - Traffic surveillance stations
  - Transportation Management Center Unit 370
  - Traffic management team

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- Towing services
- **Construction Strategies.** The Final TMP will include procedures to lessen the effect of typical construction activities and will include, but not be limited to, consideration of the following:
  - Conflicts with other projects and special events
  - Construction staging alternatives
  - Mainline lane closures
  - Local road closures
  - Ramp/connector closures
  - Pedestrian and bicycle detours and facility closures
  - Traffic control improvements
  - Coordination with other projects
  - Project phasing
  - Traffic screens
  - Truck traffic restrictions
- **Demand Management.** Temporarily reducing the overall traffic volumes on the project segments of State Route 91 (SR-91) and Interstate 15 (I-15) could reduce the short-term adverse effects of construction on traffic operations. The Final TMP will include, but not be limited to, the following strategies that could reduce vehicular demand in the study area during project construction:
  - Rideshare incentives
  - Transit services
  - Shuttle services
  - Variable work hours/telecommuting
  - High-occupancy vehicle (HOV) lanes/ramps
  - Park-and-ride lots
- **Alternate Route Strategies.** The Final TMP will provide strategies for notifying motorists, pedestrians, and bicyclists, especially interregional commuters, of planned construction activities. This notification will allow travelers to make informed decisions about their travel plans, including the consideration of possible alternate routes. The Final TMP will consider the development of alternate routes for motorists to address the following:
  - Mainline lane closures
  - Ramp/connector closures

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	• Local road closures • Temporary highway or shoulder use • Local street improvements • Temporary detours and closures of bicycle and pedestrian facilities • Traffic signal coordination RCTC's Resident Engineer will ensure that the measures in the Final TMP are properly implemented by the design/build contractor prior to and during construction.	
T-2	**Management of Ramp Closures.** During final design, RCTC's Project Engineer will direct a qualified traffic engineer to develop the *Final Ramp Closure Study* to address specific short-term impacts associated with ramp closures longer than 10 days during construction. The objectives of the *Final Ramp Closure Study* will be to: • Minimize inconvenience to the traveling public • Minimize closures • Avoid or minimize concurrently multiple closures where possible • Coordinate closures as needed with other projects and activities Prior to and during construction, RCTC's Resident Engineer will ensure that the measures included in the *Final Ramp Closure Study* are properly implemented by the design/build contractor.	
T-3	**Fair Share Contributions.** RCTC's Project Manager will ensure that RCTC pays the fair share contribution for the project-related impacts at area intersections. Those fair shares are shown by intersection in Table T-3.1. The recommended improvements include additional turn and through lanes. Summaries of the improved intersection delays and levels of service (LOS) are provided in Tables T-3.2, T-3.3, and T-3.4 for 2015 with the Initial Phase of Alternative 2, Design Year 2035 with Alternative 1, and Design Year 2035 with Alternative 2 conditions, respectively. Note: The tables cited in this measure are provided following the last page of Table E-1.	RCTC Action.
T-4	During final design, the RCTC Project Engineer will ensure that the final design and project specifications for the widened areas in the undercrossings on SR-91 and I-15 include appropriate lighting for vehicles and pedestrians. The RCTC Project Engineer will also assess the need for additional lighting in the original parts of the undercrossings in the event the longer undercrossings	

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	result in the need for additional lighting in those areas. That additional lighting, if any, will also be shown in the project specifications. The RCTC Project Engineer will have any lighting considered at Coal Canyon reviewed and approved by the Project Biologist prior to incorporation in the project specifications to ensure the lighting does not affect the use of Coal Canyon as a wildlife crossing. During construction, the RCTC Resident Engineer will require the design/build contractor to implement the lighting in undercrossings as shown in the project specifications.	
VISUAL/AESTHETICS		
V-1	**Construction Plan.** To address adverse impacts associated with views of construction access and staging areas, the Riverside County Transportation Commission's (RCTC) Resident Engineer will require the design/build contractor to construct the project in accordance with California Department of Transportation (Caltrans) Standard Construction Specifications, including appropriate measures to address visual impacts during construction.	
V-2	**Structure Elements.** To address adverse impacts of the project structures, the Project Engineer will direct a qualified landscape architect to ensure that the final project design incorporates the mitigation and minimization elements A–D, below, and that these enhancements to structures are incorporated in the design and construction of sound walls, retaining walls, and bridge elements and will not be "follow-up" enhancements. During construction, RCTC's Resident Engineer will ensure that the design/build contractor constructs the retaining and sound walls, medians, bridges, and other structures consistent with aesthetic and design features included in the project specifications. RCTC's Resident Engineer will ensure that those aesthetic and design features are constructed during the construction phase when the impact occurs. A. Sound walls in low-density, developed areas or those fronting private property will be heavily textured (i.e. split-face or fractured rib) and integrally colored to minimize reflected glare and visual mass. Sound walls facing public-use areas (parks, streets, etc.) will incorporate textures and color as above plus site-specific aesthetic features (local or historical references) to minimize/mitigate impacts to community character and to restore a "sense of place." Specific color selection for sound walls will be determined by the *215/91 Corridor Master Plan*.	

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	B. Retaining walls (including walls associated with bridge structures) will be heavily textured (i.e., split-face or fractured rib) to minimize glare and visual mass. Retaining walls facing public use areas (parks, streets, etc.) over 9 feet (ft) high will be heavily textured (i.e., split-face or fractured rib) and include site-specific aesthetic features (local or historical references). Color (integral or applied) is not required for retaining walls. C. In addition to texture and color as described in A and B, above, sound walls and retaining walls with low-density development or recreational viewer groups will include planting of trees or trees and shrubs, and vines at the base of the walls (non-motorist side) to minimize loss of visual unity. Plantings will be local native species or ornamental species that require no irrigation after establishment. These plantings will not require permanent irrigation. D. Slope paving in all areas with bicyclist and pedestrian viewers will include texture (i.e. stamped slate). In urban areas, slope paving will direct a qualified landscape architect to incorporate site-specific aesthetic features in addition to texture. Texture and pattern will be used to minimize the visual impacts of increased hard surface, and reinforce community identify, offsetting reduced community connectivity associated with increased bridge widths.	
V-3	**Highway Planting:** RCTC's Project Engineer will direct a qualified landscape architect to ensure that replacement planting to mitigate the loss of existing landscaping is included in the final design. Replacement planting will be funded with the project's construction and will include no less than 3 years of plant establishment. All planting must be reviewed and approved by the District Landscape Architect. RCTC's Project Engineer will ensure that the replacement planting is under construction within 2 years of acceptance of the highway contract that damaged or removed the existing planting. RCTC's Project Engineer will direct a qualified landscape architect to ensure the project plans show that where plantable right-of-way is reduced (as at Main Street), replacement planting will be trees, shrubs, vines, ground cover, permanent irrigation, and enhanced structural elements. Enhanced structural elements will minimize the impact of reduced planting areas. Enhanced structural elements will include enhanced pedestrian facilities (such as pavement treatments, graphics, or above-standard decorative pedestrian lighting) and may incorporate community entry features into the structures. RCTC's Project Engineer will direct a qualified landscape architect to ensure that the project plans show that where plantable right-of-way is eliminated (as	

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	at residential areas on both sides of State Route 91 [SR-91] between just east of Lincoln Boulevard to approximately 400 ft west of East Grand Boulevard), the loss will be mitigated by off-site planting. Planting of street trees or other approved planting such as vines with permanent irrigation in City right-of-way such as at the base of retaining walls at Bollero Place and the 600 to 700 block of West Second Street will minimize the loss of existing landscape. The off-site tree planting will minimize the visual presence of the widened adjacent mainline. Replacement of existing trees by new street trees will be at a 1:1 (new tree to existing tree) ratio. To minimize the visual loss of the mature existing trees, these mitigating/replacement street trees will be planted at no less than 36 in box size. RCTC's Project Engineer will direct a qualified landscape architect to ensure that where plantable right-of-way is eliminated without the prospect of site-adjacent mitigation (as at the industrial areas just east of East Grand Boulevard or the above residential areas if street planting is not accepted by the City), the loss will be mitigated by planting within the project limits. This planting will be at a 4:1 (new tree to existing tree) ratio. If vehicle recovery distances prohibit tree planting in any selected area, mitigation planting may be achieved at a ratio of 10 new shrubs to 1 existing tree. For this mitigation planting, all trees will be no less than 15-gallon size and all shrubs will be no less than 5-gallon size. RCTC's Project Engineer will direct a qualified landscape architect to ensure that the project plans show that all mitigation planting within the State right-of-way, where appropriate, will include native tree, shrub, and vine species, and include temporary irrigation for establishment. Replacement planting will include permanent irrigation. The Project Engineer will refer to the Project Development Procedures Manual (PDPM) for the California Department of Transportation's (Department) policy regarding planting, and Measures V-2 and V-3 above. RCTC's Resident Engineer will ensure that the design/build contractor properly implements the landscaping and structural treatment components described in Measures V-1 through V-4.	
V-4	**Light and Glare.** To reduce glare, RCTC's Project Engineer will ensure that the project plans specify lighting fixtures with non-glare hoods and that lighting is designed to illuminate only the right-of-way. The lighting plans will require the review and approval of the Department and	

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	applicable cities and counties before construction to assure compliance with their applicable policies regarding public streetlighting. RCTC's Project Engineer will coordinate with the City of Corona and other applicable cities and counties to ensure that sufficient lighting is provided as part of the improvements to local streets within the project limits, consistent with applicable local policies and street lighting codes. Increased glare from walls, structures and pavement will be minimized by measures identified in V-2 and V-3. RCTC's Resident Engineer will ensure that the project lighting plan included in the project specifications is implemented by the design/build contractor during construction.	

V-5	**Graffiti Reduction, Removal and Control.** During final design, the RCTC Project Engineer will incorporate vine planting on all sound barriers in the project specifications to reduce the potential for graffiti and to soften the appearance of those walls, consistent with the Highway Design Manual, Index 902.3(5).
	After the construction of each sound barrier, the RCTC Resident Engineer will require the design/build contractor to install vine planting consistent with the project specifications and the planting requirements in Measure V-3.
	The Department and the City of Corona have existing ongoing maintenance programs for the control and removal of graffiti. Those programs would apply to all new and modified structures in Alternatives 1 and 2, on public and private property, as appropriate. Key components of those programs are:
	
	• **Department Program.** Chapter D1, Litter, Debris, and Graffiti (July 2006), in the Caltrans Maintenance Manual (Volume I, January 2011) describes the Department's maintenance program for the control and removal of graffiti. Key program components applicable to the project features in Alternatives 1 and 2 are:
	  • Use of recycled paint for various structures and matching paint used to cover graffiti with the original paint color on the structure.
	  • Use of physical devices such as rat guards, sign hoods, razor wire, and glare screen patches to limit access to facilities targeted by taggers.
	  • Replacement of ground-mounted signs with signs that have protective
		Caltrans and the City of Corona Action.

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coatings or application of protective coatings to signs.

- **City of Corona Program.** Chapter 9.30, Graffiti Abatement Procedure, in the Corona Municipal Code, describes the City's procedures related to the prohibition of graffiti in the City and the graffiti removal process. Methods for the removal of graffiti include power washing, gel removers, and painting.

CULTURAL RESOURCES

Condition for the Grand Boulevard Historic District: Acorn-Style Streetlights. The following condition will be implemented during the project design/build phase regarding the removal, temporary storage, and relocation of up to seven existing acorn-style streetlights within the project disturbance limits in the Grand Boulevard Historic District:

- The Riverside County Transportation Commission (RCTC) Project Engineer will require the design/build contractor to clearly indicate on the final plans the locations of up to seven acorn-style streetlights in the project disturbance limits that are to be removed at the beginning of construction in those areas and to identify the locations where the removed streetlights would be reinstalled.
- The RCTC Resident Engineer will require the design/build contractor to remove and, as necessary, dismantle the affected acorn-style streetlights and to place them in containers appropriate for storing those fixtures during the project construction period.
- The RCTC Resident Engineer will require the design/build contractor to store the containers holding the acorn-style streetlights in a secure location protected from public access and weather.
- The RCTC Project Engineer will require the design/build contractor to verify that the locations identified for the reinstallation of the affected streetlights are acceptable to the City of Corona and consistent with the City's requirements for the siting of streetlights.
- The RCTC Resident Engineer will require the design/build contractor to reinstall the acorn-style streetlights at the locations designated in the final plans when no further construction/disruption will occur at those locations, as follows:
  - The streetlights will be reinstalled as close to their original locations as possible, based on the project design and available space, in a manner consistent with the other acorn-style streetlights in the Grand

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	Boulevard Historic District and with the City of Corona requirements for the siting of streetlights. • If any of the acorn-style streetlights cannot be reinstalled at or near their original locations, they will be reinstalled elsewhere within the boundaries of the Grand Boulevard Historic District, focusing on locations where acorn-style lights have previously been removed as long as those locations are consistent with the historic spatial relationships of the Historic District and with the City of Corona requirements for the siting of streetlights; and • If the lights cannot be reinstalled as described above, the RCTC Project Engineer will consult with the City of Corona to identify alternative locations. • The RCTC Resident Engineer will require the construction contractor to have an architectural historian on site during the removal, dismantling, and reinstallation of the acorn-style streetlights.	
CR-1	**Replacement of Trees in the Grand Boulevard Historic District.** The requirements of Measure V-3 related to highway planting would apply to the replacement of the 18 trees in the Grand Boulevard Historic District. In addition, the following will be implemented during the design/build phase regarding the removal and replacement of the 18 trees in the Grand Boulevard Historic District: • The RCTC Project Engineer will require the design/build contractor to replace all trees removed from the Historic District at a ratio of 1:1. • The RCTC Project Engineer will require the design/build contractor to install replacement trees that are compatible with the existing plantings in the Grand Boulevard Historic District and with the overall character of the Historic District, and that the replacement trees be identified in consultation with the City of Corona, the California Department of Transportation (Department) District Landscape Architect, and a Professional Qualified Staff Architectural Historian from the District. The RCTC Project Engineer will require the construction contractor to install all replacement trees no later than the completion of construction activities in the Grand Boulevard Historic District.	
CR-2	**Discovery of Cultural Materials.** If cultural materials are discovered during construction, the RCTC Project Engineer will require the design/build contractor to divert all earthmoving activity within and around the immediate	

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	discovery area until a qualified archaeologist can assess the nature and significance of the find.	
CR-3	**Discovery of Human Remains.** If human remains are discovered during construction, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and the County Coroner shall 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), which will then notify the Most Likely Descendant (MLD). At that time, the Department's District 8 Environmental Branch Chief or the District 8 Native American Coordinator (Gary Jones, [909] 383-7505) will be contacted so they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	
CR-4	During final design, the RCTC Project Manager and Department Cultural Resources Professionally Qualified Staff will coordinate with representatives from the Pechanga Band of Mission Indians to identify areas in the project disturbance limits considered sensitive to the Tribe.	RCTC will be responsible for the following: During final design, the RCTC Project Manager and Department Cultural Resources Professionally Qualified Staff will coordinate with representatives from the Pechanga Band of Mission Indians to identify areas in the project disturbance limits considered sensitive to the Tribe.
	During final design, the RCTC Project Engineer will identify on the project plans all areas that require monitoring by a Native American Monitor during site preparation, disturbance, and grading. During all site preparation, disturbance, and grading, the RCTC Resident Engineer will require the design/build contractor to have a Native American monitor present and conducting monitoring activities in all areas identified by the Pechanga Band of Mission Indians as sensitive, as shown in the project specifications.	During final design, the RCTC Project Engineer will identify on the project plans all areas that require monitoring by a Native American Monitor during site preparation, disturbance, and grading.
HYDROLOGY AND FLOODPLAINS		
	As discussed in Section 3.10, Water Quality and Storm Water Runoff, in the EIR/EIS, Construction Site, Design Pollution Prevention, and Treatment best management practices (BMPs) will be implemented to minimize water quality-related impacts to the 100-year floodplain and the associated beneficial uses. As discussed in Section 3.17, Natural Communities, and Section 3.18, Wetlands and Other Waters, in the EIR/EIS measures to minimize impacts and preserve natural and beneficial floodplain values include installation of	

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	construction fencing around riparian/riverine vegetation to be preserved and compensatory mitigation for temporary and permanent impacts to riparian and aquatic habitats. With implementation of these measures, no other specific measures for impacts to hydrology floodplains are required.	
WATER QUALITY AND STORM WATER RUNOFF		
WQ-1	Prior to and during construction, Riverside County Transportation Commission's (RCTC) Resident Engineer will require the design/build contractor to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), and any subsequent permit, as they relate to the project construction activities. This will include submission of the Permit Registration Documents, including a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement to the State Water Resources Control Board (SWRCB) at least 14 days prior to the start of construction activity. The SWPPP will meet the requirements of the Construction General Permit and will identify potential pollutant sources associated with construction activities; identify non-storm water discharges; develop a water quality monitoring and sampling plan; and identify, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants associated with the construction site. The BMPs identified in the SWPPP will be implemented during project construction. A Notice of Termination (NOT) will be submitted to the SWRCB on the completion of construction and the stabilization of the site. RCTC's Resident Engineer will also require the design/build contractor to implement SWRCB Resolution No. 2001-046 requiring sampling and analysis during project construction.	
WQ-2	Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to comply with the provisions of the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality, Order No. R8-2009-0003, NPDES No. CAG998001, as they relate to discharge of non-storm-water dewatering wastes for the project. This will include submitting to the Santa Ana Regional Water Quality Control Board (RWQCB) an NOI at least 60 days prior to the start of construction, notification of discharge at least 5 days prior to any planned discharges, and monitoring reports by the 30th day of each month following the monitoring period.	

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WQ-3	Prior to dewatering activities, RCTC's Resident Engineer will provide the design/build contractor with a copy of the discharge authorization letter issued by the RWQCB Executive Director.	RCTC Action.
WQ-4	Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to follow the procedures outlined in the California Department of Transportation (Caltrans) Storm Water Quality Handbooks, Project Planning and Design Guide (July 2010 or subsequent issuance) for implementing Design Pollution Prevention and Treatment BMPs for the project. This will include coordination with the Santa Ana RWQCB with respect to the feasibility, maintenance, and monitoring of Treatment BMPs as set forth in the Department's Statewide Storm Water Management Plan (SWMP, May 2003 or subsequent issuance). RCTC's Resident Engineer will also require the design/build contractor to comply with other provisions identified in the NPDES Permit, Statewide Storm Water Permit, and Waste Discharge Requirements for the State of California, Department of Transportation (Order No. 99-06-DWQ, NPDES No. CAS000003). RCTC's Resident Engineer will also require the design/build contractor to comply with other provisions identified in the NPDES Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the incorporated cities of Riverside County within the Santa Ana Region (Order No. R8-2010-0033, NPDES No. CAS618033); and for the County of Orange, Orange County Flood Control District, and the incorporated cities of Orange County within the Santa Ana Region (Order No. R8-2009-0030), as applicable.	
GEOLOGY/SEISMIC/TOPOGRAPHY		
GEO-1	During final design, the Riverside County Transportation Commission's (RCTC) Project Engineer or a Project Geotechnical Engineer or Project Geologist under contract to RCTC will prepare a design-level geotechnical report. This report will document soil-related constraints and hazards such as slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present along the project segments of State Route 91 (SR-91) and Interstate 15 (I-15). This report will require review and approval by the California Department of Transportation (Department). The performance standard for this report will be the geotechnical design standards of the State of California and the Department, as they apply to the project features and structures. RCTC will submit the design-level geotechnical report to the Department for review and approval during final design.	

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	The report will include but not be limited to: • Evaluation of expansive soils and recommendations regarding construction procedures and/or design criteria to minimize the effect of these soils on the construction of the project and to minimize effects related to expansive soils on project facilities in the long term. • Identification of potential liquefiable areas within the project limits and recommendations for mitigation. • Evaluation of the corrosion potential of soils along those segments of the project alignment not previously tested (i.e., areas along I-15 and the westbound side of SR-91). • Demonstration that no retaining walls or excavations will occur in the existing landslide areas, or that landslide stabilization measures independent of the retaining wall design are included in the final project design. • Demonstration that the design of all retaining walls is geotechnically suitable for project area soils, and verification that project design has considered and addressed the possibility of scour associated with the Santa Ana River. • Demonstration that side slopes can be designed and graded so that surface erosion of the engineered fill is not increased compared to existing, natural conditions. • RCTC's Project Engineer will incorporate the measures recommended in the design-level geotechnical report in the final design and project specifications. RCTC's Resident Engineer will require the design/build contractor to implement the measures recommended in the design-level geotechnical report as included in the project specifications.	
GEO-2	RCTC's Resident Engineer will maintain a quality assurance/quality control plan during construction. The plan will include observing, monitoring, and testing by the Project Geotechnical Engineer and/or the Project Geologist under contract to RCTC 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 design/build contractor, or if different site conditions are encountered,	

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	appropriate changes are made to accommodate such issues. The geotechnical engineer will submit weekly reports to RCTC and the Department during all project-related grading, excavation, and construction activities.	
GEO-3	During final design, if blasting is required, RCTC's Project Engineer will require the design/build contractor to prepare a blasting plan to minimize potential hazards related to blasting activities. The blasting plan will address all applicable standards in accordance with the United States Department of the Interior, Office of Surface Mining. The issues to be addressed in the blasting plan will include, but are not limited to, the following: hours of blasting activity, notification to adjacent property owners, noise and vibration, and dust control. RCTC's Resident Engineer will require the design/build contractor to implement the blasting plan prior to and during any blasting during construction.	
PALEONTOLOGY		
PAL-1	Following preparation of suitable construction drawings and elevations and during final design, the Riverside County Transportation Commission's (RCTC) Project Engineer will require the Designated Principal Paleontologist under contract to RCTC to prepare a *Paleontological Mitigation Plan* (PMP). The PMP will provide guidance for developing and implementing paleontological mitigation efforts, including field work, laboratory methods, and curation. This PMP will be consistent with guidelines provided in the Department's *Standard Environmental Reference* (SER), Environmental Handbook, Volume I, Chapter 8, Paleontology, the Counties of Riverside and Orange, and the Society of Vertebrate Paleontology (SVP), and will be specifically tailored to the resources and sedimentary formations in the disturbance limits. The part of the PMP that covers excavation will include but not be limited to: • Prior to any ground disturbance, RCTC's Designated Principal Paleontologist or his/her representative will attend a meeting with the design/build contractor to explain the likelihood for encountering paleontological resources during construction, what resources may be discovered, and the methods that will be employed if anything is discovered. • RCTC's Principal Paleontologist will conduct a preconstruction field survey in areas identified as having high paleontological sensitivity after vegetation	

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	and any pavement are removed, followed by salvage of any observed surface paleontological resources prior to the beginning of additional ground-disturbing activities. The survey will be conducted by the Principal Paleontologist or their representative who is qualified to identify vertebrate, invertebrate, and plant fossils. • During ground disturbance, grading, and excavation, RCTC's Project Engineer will require the design/build contractor to retain a Principal Paleontologist. The Principal Paleontologist will provide a Paleontological Monitor who is qualified to recognize and professionally collect vertebrate, invertebrate, and plant fossils. The qualified Paleontological Monitor will initially be present on site on a full-time basis whenever these types of construction activities occur in sediments that have a high paleontological sensitivity rating and also on a spot-check basis in sediments that have a low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a high sensitivity rating. Any reduction or modification in scheduling of monitoring will be determined by the Principal Paleontologist and RCTC's Resident Engineer. The qualified Paleontological Monitor will inspect fresh cuts and/or spoils piles to recover paleontological resources. That monitor will be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor will be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, RCTC's Resident Engineer will require the design/build contractor to make heavy equipment available to assist in the removal and collection of large materials. • Localized concentrations of small (or micro-) vertebrates may be found in all native sediments. Therefore, the qualified Paleontological Monitor will occasionally spot-screen native sediments through one-eighth- to one-twentieth-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, a standard sediment sample (up to 3 cubic yards or 6,000 pounds) will be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the project limits that will be accessible throughout the duration of construction but will also be away from any cut or fill areas or active	

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construction areas. Processing is usually completed concurrently with construction and with the intent to have all processing completed before, or just after, project completion. A small corner of a staging or equipment parking area is an ideal location for this activity. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water.

- RCTC's Project Engineer will require the Principal Paleontologist or their representative to prepare any recovered specimens to the point of identification and permanent preservation. This includes sorting any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens. This is best accomplished at a designated laboratory with access to fossil preparation tools, magnifying equipment, storage boxes and vials, and chemical hardeners. Processing of fossils through the lab is best accomplished concurrently with construction, especially if numerous fossils are being collected.
- Specimens will be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. Repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university that has a curator who can retrieve the specimens on request. RCTC's Project Manager and the California Department of Transportation (Department) will require that a draft curation agreement be in place between the Principal Paleontologist and an approved curation facility prior to the initiation of paleontological monitoring and mitigation activities for the project.

RCTC's Resident Engineer will require the design/build contractor to comply with the provisions of the PMP during all ground disturbance, grading, and excavation activities. This will include appropriate coordination with RCTC's Designated Principal Paleontologist and the provision of qualified paleontological monitors consistent with the provisions of the PMP.
After the completion of all ground disturbance and grading, RCTC's Project Manager will require the design/build contractor to have the design/build contractor's Designated Principal Paleontologist to prepare a *Final*

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	Paleontological Mitigation Report (PMR) that summarizes the project area investigated, the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the scientific significance of the curated collection. RCTC's Project Manager will retain a copy of the report for the RCTC project files and will provide a copy of the report to the Department.	
HAZARDOUS WASTE/MATERIALS		
HW-1	A Phase I ESA was conducted for the Mobil No. 18-FLM site (616 Paseo Grande Street, Corona, California), and a Phase I ESA and Phase II Site Investigation were conducted for the Honda Cars of Corona site (231 South Lincoln Avenue, Corona, California) as part of the DSI, in accordance with ASTM Standard E 1527-05. The DSI identified Recognized Environmental Conditions (RECs) associated with on-site releases. Based on the results of the DSI, the following measures will be implemented for these two sites of potential environmental concern: • **Honda Cars of Corona Site:** During final design and prior to any ground disturbance, RCTC's Resident Engineer will require the design/build contractor to consult with regulators, confirm that the final confirmation sampling has been completed at the site, and that contaminant investigation for the site has received regulatory site closure. In addition, prior to the completion of final design, the RCTC Resident Engineer will require the design build/build contractor to properly abandon all monitoring wells and vapor extraction wells on the site in accordance with regulatory requirements. • **Mobil No. 18-FLM Site:** During final design and prior to any ground disturbance, RCTC's Resident Engineer will require the design/build contractor to conduct further investigation on contaminants in soils on site after a work plan is prepared and additional information is available.	
HW-2	During final design and prior to any ground disturbance activities, RCTC's Resident Engineer will require the design/build contractor to conduct site investigations for any new release sites that are within the project right-of-way. RCTC's Resident Engineer will require the design/build contractor to conduct these site investigations in compliance with applicable federal, State, and local regulations and in accordance with ASTM Standard E 1527-05. If contaminants are determined to be present during the site investigation, RCTC's Resident Engineer may require the design/build contractor to prepare	

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	one or more of the following specialized reports: Remedial Actions Options Report, Sensitive Receptor Survey, Human Health/Ecological Risk Assessment, and/or Quarterly Monitoring Report.	
HW-3	During final design and prior to any ground disturbance activities, RCTC's Resident Engineer will require the design/build contractor to conduct an aerially deposited lead (ADL) study for soil if excavation will exceed 3 feet (ft) below ground surface (bgs) in unpaved locations adjacent to the State right-of-way between Gypsum Canyon Road and Magnolia Avenue, or 5 ft bgs in unpaved locations in areas where there would be fiber-optic signage along eastbound State Route 91 (SR-91) starting east of the Weir Canyon Road undercrossing and extending east of the Gypsum Canyon Road undercrossing. During construction, if soils within the project disturbance limits along SR-91 are removed off site, RCTC's Resident Engineer will require the design/build contractor to treat the soils as State hazardous waste and to properly dispose of those soils at an appropriate State-certified landfill facility. In addition, during construction, RCTC's Resident Engineer will require the design/build contractor to test all soils imported on site as fill. RCTC's Resident Engineer will require the design/build contractor to use only clean soils as imported fill on site.	
HW-4	Predemolition asbestos and/or LBP surveys were conducted for 21 road structures that will be renovated or demolished during project construction. Based on the results of the ACM surveys of the 21 freeway structures, the SR-91/State Route 71 (SR-71) Separation (Bridge No. 56-0587), East SR-91/North SR-71 Connector Separation (Bridge No. 56-0635), Prado Overhead (Bridge No. 56-0637), West Grand Boulevard Undercrossing (UC) (Bridge No. 56-0445 L/R), El Cerrito Road UC (Bridge No. 56-0558 L/R), and Serfas Club Drive UC (Bridge No. 56-0368 L/R) contain ACMs. Therefore, prior to disturbance associated with renovation or demolition of these bridges, RCTC's Resident Engineer will require the design/build contractor to have a licensed asbestos contractor properly remove and dispose of asbestos-containing railing brace pads from these structures. Based on the results of the LBP surveys of the 21 freeway structures, the Main Street UC (Bridge No. 56-0448 L/R), McKinley Street UC (Bridge No. 56-0365), and Buchanan Street Overcrossing (Bridge No. 56-0368) contain LBPs. Therefore, prior to disturbance associated with renovation or demolition of	

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	these bridges, RCTC's Resident Engineer will inform the design/build contractor of the presence of LBPs in those structures. RCTC's Resident Engineer will require the design/build contractor to protect construction workers from exposure to lead dust when disturbing LBP during bridge renovation or demolition activities. In addition, a hazardous materials survey identified two areas with potential hazardous materials. Based on the results of the visual hazardous materials survey of the bridges, light fixture components and possible lead metal railing braces may pose an additional concern. These components include: • Light fixtures (some flush-mounted) on the undersides of many of the bridges. At a few of the bridges that cross over the freeway, there are light posts. The light bulbs in these fixtures may contain mercury. • The Temescal Wash Bridge overhead has some metal braces and wire tension cable at joint locations on the underside of the bridge. While no suspected ACMs were observed or sampled at these locations, the presence of metal washers and spacers, which may contain lead, was noted. • Soft metal railing brace pads that may be composed of lead metal were observed at the following bridges: Pierce Street UC (Bridge No. 56-0369 L/R) and Buchanan Street Overcrossing (Bridge No. 56-0368) Therefore, during final design and prior to any disturbance of these facilities and materials, RCTC's Resident Engineer will inform the design/build contractor of the presence and location of the hazardous materials in the freeway structures described above. Prior to the disturbance of freeway structures, RCTC's Resident Engineer will require the design/build contractor to have asbestos-containing railing brace pads removed and disposed of by a licensed asbestos abatement contractor. If abated, RCTC's Resident Engineer will require the design/build contractor to remove non-friable ACMs in accordance with Category II asbestos abatement procedures as defined in Federal Occupational Safety and Health Administration (Fed-OSHA) 29 Code of Federal Regulations (CFR) 1926.1101. However, if mechanical means are utilized for abatement of ACMs, RCTC's	RCTC will be responsible for the following: In addition, a hazardous materials survey identified two areas with potential hazardous materials. Based on the results of the visual hazardous materials survey of the bridges, light fixture components and possible lead metal railing braces may pose an additional concern. These components include: • Light fixtures (some flush-mounted) on the undersides of many of the bridges. At a few of the bridges that cross over the freeway, there are light posts. The light bulbs in these fixtures may contain mercury. • The Temescal Wash Bridge overhead has some metal braces and wire tension cable at joint locations on the underside of the bridge. While no suspected ACMs were observed or sampled at these locations, the presence of metal washers and spacers, which may contain lead, was noted. • Soft metal railing brace pads that may be composed of lead metal were observed at the following bridges: Pierce Street UC (Bridge No. 56-0369 L/R) and Buchanan Street Overcrossing (Bridge No. 56-0368). Therefore, during final design and prior to any disturbance of these facilities and materials, RCTC's Resident Engineer will inform the design/build contractor of the presence and location of the hazardous materials in the freeway structures described above.

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	Resident Engineer will require the design/build contractor to convert these non-friable materials into a friable state during removal activities and manage these materials under Class I asbestos abatement procedures. Prior to disturbance of freeway structures, RCTC's Resident Engineer will require the design/build contractor to properly test any areas that have not been previously tested, and remove and dispose of any materials from these structures that exceed California Health and Safety Code criteria for hazardous waste at an appropriate State-certified landfill facility. During final design and prior to any ground disturbance, demolition, or renovation activities, RCTC's Project Engineer will require the design/build contractor to conduct predemolition asbestos, LBP, polychlorinated biphenyl (PCB), and/or mercury surveys of any buildings that will be renovated or demolished. During construction, RCTC's Resident Engineer will require the design/build contractor to properly remove and dispose of any materials from these structures that exceed California Health and Safety Code criteria for hazardous waste at an appropriate State-certified landfill facility.	
HW-5	During final design and prior to any ground disturbance activities, RCTC's Resident Engineer will require the design/build contractor to conduct inspections for potential PCBs in utility pole-mounted transformers that will be relocated or removed as part of the project. RCTC's Resident Engineer will require the design/build contractor to consider leaking transformers a PCB hazard unless tested and confirmed otherwise, and to handle them accordingly.	
HW-6	During construction, RCTC's Resident Engineer will require the design/build contractor to test, remove, and dispose of any yellow traffic striping and pavement marking materials in accordance with the California Department of Transportation (Department) Construction Manual, Chapter 7, Section 106.	
HW-7	During final design and prior to any dewatering activities, RCTC's Resident Engineer will require the design/build contractor to conduct additional coordination with the Riverside County Department of Environmental Health when groundwater dewatering will occur in the vicinity of contaminated soils or contaminated groundwater sites.	
HW-8	During final design and prior to any ground disturbance activities, RCTC's Project Engineer will require the design/build contractor to sample soil adjacent to the Burlington Northern Santa Fe (BNSF) railroad tracks that will be disturbed during construction for the presence of petroleum hydrocarbons,	

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	metals, solvents, and other potential contaminants (e.g., polynuclear aromatic hydrocarbons [PNAs], kerosene, ACMs, chlorinated hydrocarbons, pesticides, and herbicides). That testing will determine whether the soils require special handling and disposal during construction. During construction, RCTC's Resident Engineer will require the design/build contractor to properly dispose of all soils exceeding the criteria for State or federal hazardous waste at an appropriate State-certified landfill facility.	
HW-9	Prior to the start of construction, RCTC's Project Engineer will require the design/build contractor to prepare a site-specific Health and Safety Plan (HASP) by a certified industrial hygienist. The HASP will be based on evaluation of proposed construction activities, the potential hazards identified in the Phase I Environmental Site Assessment and Phase II testing, and any future assessments prepared for the project. The HASP will outline specific procedures for encountering expected and unexpected contaminants. It will include safe work practices, contaminant monitoring, the need for personal protective equipment, emergency response procedures, and safety training requirements to protect construction workers and third parties working on site. The HASP will be in compliance with the requirements of 29 CFR 1910 and 1926 and all other applicable federal, State, and local regulations and requirements. During construction, RCTC's Resident Engineer will require the design/build contractor to implement the requirements in the HASP.	
HW-10	Prior to the start of construction, RCTC's Project Engineer will require the design/build contractor to prepare a soils and groundwater Contaminant Management Plan (CMP). The CMP will include procedures for contaminant monitoring and identification as well as temporary storage, handling, treatment, and disposal of hazardous waste and materials in accordance with applicable federal, State, and local regulations and requirements. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to implement the soils and groundwater CMP.	
HW-11	Prior to the start of construction, RCTC's Project Engineer will require the design/build contractor to prepare a Construction Contingency Plan (CCP) in accordance with the Department's Unknown Hazards Procedures for Construction. The CCP will include provisions for emergency response in the event that unidentified underground storage tanks (USTs), hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes are discovered during construction activities. The CCP will address UST	

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	decommissioning, field screening, contaminant materials testing methods, mitigation and contaminant management requirements, and health and safety requirements for construction workers. RCTC's Resident Engineer will require the design/build contractor to implement the CCP during all construction activities. During construction, RCTC's Resident Engineer will require the design/build 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, RCTC's Resident Engineer will require the design/build contractor to notify the National Response Center by calling 1-800-424-8802. RCTC's Resident Engineer will require the design/build contractor to perform cleanup of unexpected releases under the appropriate federal, State, or local agency oversight.	
HW-12	RCTC's Resident Engineer will require the design/build contractor to notify Underground Service Alert (USA) at least 2 days prior to excavation by calling 811 to require that all utility owners within the project disturbance limits identify the locations of underground transmission lines and facilities.	
HW-13	RCTC's Resident Engineer will require the design/build contractor to submit the fees to the South Coast Air Quality Management District (SCAQMD) at least 10 days prior to proceeding with any demolition or renovation of a structure (refer to SCAQMD Rule 1403). RCTC's Resident Engineer will require the design/build contractor to adhere to the requirements of SCAQMD Rule 1403 during renovation and demolition activities.	
HW-14	During final design and prior to any ground disturbance, RCTC's Resident Engineer will require the design/build contractor to test all wooden utility poles, railroad ties, and other treated wood waste material that will be removed and disposed of as part of the project are tested for wood treatments/preservatives. RCTC's Resident Engineer will also require the design/build contractor to test soils surrounding railroad ties for wood treatments/preservatives. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to properly dispose of all treated wood waste as required in Alternative Management Standards for Wood Treated Waste in Section 67386.6(a)(2)(B)(3) of the California Code of Regulations (CCR). Alternative Management Standards for Wood Treated Waste. In addition, RCTC's Resident Engineer will require the design/build contractor to require any personnel who come in contact with treated wood waste or contaminated soils to follow all applicable requirements under Section 67386.6(a)(2)(B)(3) of	

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	the CCR and to be trained in the proper identification, disposal, and safe handling of treated wood waste and contaminated soils.	
AIR QUALITY		
SC-1	**Development of a Construction Emissions Mitigation Plan.** Prior to any site preparation, grading and/or construction activities, the Riverside County Transportation Commission (RCTC) Project Engineer will require the design/build contractor to develop a Construction Emissions Mitigation Plan. That plan will specifically incorporate measures for controlling particulate and other emissions during construction from the following sources: • California Department of Transportation (Department) Standard Specifications Sections 10 and 18 (Dust Control) • Department's Standard Specifications Section 39-3.06 (Asphalt Concrete Plant Emissions) • South Coast Air Quality Management District (SCAQMD) Rule 403, including control measures from Tables 1, 2, and 3 in that rule The plan will also include the following measures: Control of ozone precursor emissions from construction equipment vehicles by maintaining equipment engines in good condition and in proper tune per the manufacturers' specifications. Control of material on all trucks hauling excavated or graded material from the site by compliance 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.	
SC-2	**Implementation of the Construction Emissions Mitigation Plan.** During all site preparation, grading, construction, clean-up, and other activities during construction, RCTC's Resident Engineer will require the design/build contractor to comply with the measures in the Construction Emissions Mitigation Plan. RCTC's Resident Engineer will conduct site inspections at least once a month to ensure that the design/build contractor is complying with the provisions of the Construction Emissions Mitigation Plan.	
SC-3	Prior to any construction activities, RCTC's Project Engineer will ensure that the grading plans and project specifications show the anticipated duration of construction in individual construction areas along the project alignment.	

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SC-4	During final design and prior to any ground disturbance, RCTC's Project Geologist will conduct appropriate testing to determine whether there are asbestos-containing materials (ACMs) present in the project disturbance limits.	
SC-5	If RCTC's Project Geologist determines that ACMs are present in the project disturbance limits during that final preconstruction inspection, RCTC's Resident Engineer will require the design/build contractor to properly remove and dispose of those ACMs.	
NOISE		
N-1	Based on studies completed to date, Riverside County Transportation Commission (RCTC) intends to incorporate noise abatement in the form of reasonable and feasible barriers at 15 to 16 locations, depending on the selected alternative, ranging in height from 8 feet (ft) to 14 ft, depending on the alternative and the design variations. Calculations based on preliminary design data indicate that the barriers will reduce noise levels by 5 to 15 A-weighted decibels (dBA) for 333 to 419 homes and the Green River Golf Club, depending on the design variation. If during final design conditions have substantially changed, noise abatement at some of these locations may not be necessary. The final decision on noise abatement will be made on completion of the project design and the public involvement processes for the environmental document. RCTC's Resident Engineer will require the design/build contractor to construct the noise abatement measures included in the final design and project specifications.	RCTC will be responsible for the noise abatement for the sound wall locations: D1-B and M-3. For sound wall areas E-1, the design builder shall only provide noise abatement for the mobile home park; no sound wall will be built in front of the Green River Golf Course during this phase of the project. The design builder will provide special attention to sound wall area K-1-A to ensure that the length and the heights of the sound wall consider the existing physical conditions and noise levels.
N-2	RCTC's Resident Engineer will require the design/build contractor to control noise from construction activity consistent with the California Department of Transportation's (Department's) Standard Specifications, Section 14-8.02, "Noise Control," and Standard Special Provisions (SSP) S5-310. RCTC's Resident Engineer will require the design/build contractor to ensure that noise levels from construction operations within the State right-of-way between the hours of 9:00 p.m. and 6:00 a.m. not exceed 86 dBA at a distance of 50 ft. The noise level requirement will apply to the equipment on the job site or related to the job, including, but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the contractor. RCTC's Resident Engineer will require the design/build contractor to use an alternative warning method instead of a sound signal unless required by safety laws. In addition, RCTC's Resident Engineer will require the design/build	

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	contractor to equip all internal combustion engines with the manufacturer-recommended mufflers and not operate any internal combustion engine on the job site without the appropriate mufflers. As directed by RCTC's Resident Engineer, the design/build contractor will implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.	
N-3	In accordance with the Municipal Codes of the Cities of Anaheim, Corona, Riverside, and Norco, RCTC's Resident Engineer will require the design/build contractor to limit construction activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, excluding weekends and holidays. If construction is needed outside those hours or days, RCTC's Resident Engineer will require the design/build contractor to coordinate with the affected local jurisdiction. In addition to Measure N-3, Measure GEO-3 specifically addresses potential noise control in the event blasting is necessary during construction along State Route 91 (SR-91) east of Interstate 15 (I-15).	
N-4	If noise barriers proposed for I-15 (with the exception of Noise Barrier [NB] K1-A), as part of a separate project, are not constructed within 5 years of the completion of the construction the SR-91 Corridor Improvement Project (CIP), the RCTC will initiate a separate project to construct those walls.	RCTC Action
N-5	Residences that would experience a severe traffic noise impact of 75 dBA equivalent continuous sound level (L_{eq}) or higher would qualify for consideration of unusual and extraordinary abatement under Alternative 2f. NBs M-1, M-2, M-3, and D1-B are considered unusual and extraordinary noise abatement. During the design/build phase, RCTC will contract with a qualified acoustical specialist to conduct interior noise analyses at residences projected to experience severe traffic noise impacts. Interior noise abatement for each of those homes will be evaluated on a case-by-case basis per FHWA guidance and noise protocol.	RCTC Action
ENERGY		
	No avoidance, minimization, and/or mitigation measures are required.	
NATURAL COMMUNITIES		
	Compensatory Mitigation. Compensatory mitigation for the effects to coastal sage scrub (CSS) vegetation within Riverside County will be achieved through project consistency with the Western Riverside County Multiple Species	RCTC Action.

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	Habitat Conservation Plan (MSHCP). Permanent effects to CSS vegetation in Orange County occupied by coastal California gnatcatcher (CAGN) or within CAGN-designated critical habitat will be mitigated as described in the Biological Opinion received from the United States Fish and Wildlife Service (USFWS) on November 30, 2011. Specifically, 16.03 acres (ac) of habitat (e.g., CSS) suitable for CAGN breeding, dispersal, and foraging will be restored in Chino Hills State Park (CHSP) (or another off-site area approved by the USFWS) during construction of the Initial Phases under Alternatives 1 and 2. This will increase the amount of conserved habitat available for CAGN in the area. Temporarily impacted CSS and other vegetation communities used by CAGN for dispersal and foraging will be restored with in-kind or better vegetation during and after construction as the construction in each disturbed area is completed (e.g., after each phase of construction). Measures TE-1 through TE-17, provided later in the Environmental Commitments Record (ECR), were developed from the Biological Opinion. The plant palette used for restored areas in the project limits and CHSP (or other areas approved by the USFWS) will be approved by the District Biologist at each location. The District Biologist may consult with local responsible agencies (e.g., local fire agencies) regarding the plant palettes if the District Biologist determines that such consultation would be appropriate. Compensatory mitigation for riparian communities in both counties will be required for United States Army Corps of Engineers (Corps) Section 404 and California Department of Fish and Game (CDFG) Section 1600 permitting. Typically, riparian habitat subject to Corps and CDFG jurisdiction is mitigated at a minimum mitigation-to-effect ratio of 2:1 for permanent effects and 1:1 for temporary effects, which is consistent with Corps and CDFG policies for no net loss of riparian/riverine habitat (e.g., wetlands) standards. Mitigation for permanent effects will be conducted in advance during the Initial Phases in the form of habitat restoration and/or enhancement in on- or off-site areas where similar riparian habitat exists. Temporary effects to riparian communities will be mitigated at a minimum mitigation ratio of 1:1 to be replaced on site in kind after the temporary impact has occurred. Final details for compensatory mitigation will be coordinated and environmental clearance will be obtained (if	

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	necessary) through coordination among the Riverside County Transportation Commission (RCTC), the California Department of Transportation (Department), the resource agencies, and third-party landowners. Prior to beginning construction, a Habitat Mitigation and Monitoring Plan (HMMP) will be developed in coordination with the Corps, CDFG, and USFWS that ensures no net loss of riparian habitat value or acreage. Final details for compensatory mitigation will be evaluated through coordination among the Department, RCTC, and the resource agencies. The HMMP will comply with all terms and conditions set forth in the permits and opinions issued by the resource agencies for the project and will include, at a minimum, the following provisions: Permanent impacts to riparian/riverine areas will be replaced on or off site at a minimum ratio of 3:1 with in-kind habitat. Permanent effects to native habitat will be replaced on or off site at a minimum 2:1 ratio with in-kind habitat. Temporary effects to native vegetation will be replaced at a minimum 1:1 ratio with in-kind habitat restored in place within the project area. If off-site restoration is conducted, it will be done within the same watershed as the project. The HMMP will identify a success criterion of at least 80 percent cover of native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation. Further criteria specified in the HMMP will include an establishment period for the replacement habitat, regular trash removal, and regular maintenance and monitoring activities to ensure the success of the mitigation plan. After construction, annual summary reports of biological monitoring will be provided to the Corps, CDFG, and USFWS documenting the monitoring effort. The duration of the monitoring and reporting will be established by resource agency permit conditions. Compensatory mitigation for effects to oak trees (excluding California scrub oaks) with trunk sizes above 8 inches in diameter at breast height (dbh) will involve replacement at a mitigation-to-effect ratio of 3:1. Heritage oaks (oaks with a greater than 36-inch dbh) will be replaced at a mitigation-to-effect ratio of 10:1, if feasible. If the replacement trees cannot be planted in the immediate vicinity of where the previous trees were located, they may be planted elsewhere in the project area, subject to approval by the Department	

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	Landscape Architect and the affected local jurisdiction, if any. All compensatory mitigation for the entire project, both the Initial Phases and Ultimate Projects, will be provided in the Initial Phases of the SR-91 CIP Build Alternatives. RCTC will provide appropriate funds, to be maintained in a non-wasting endowment, to Chino Hills State Park to provide for the long-term maintenance and management of the restored areas within the park to support gnatcatcher habitat in perpetuity.	
NC-1	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to delineate all environmentally sensitive areas (ESAs) within the project footprint and the immediately surrounding areas in the project specifications. ESAs include CSS, chaparral, and riparian/riverine vegetation; the protected zone of any oak tree (5 feet [ft]) outside the dripline or 15 ft from the trunk of the tree, whichever is greater) or oak habitat; and designated critical habitat (with constituent elements). In addition, all restoration and mitigation areas at Coal Canyon adjacent to the project footprint will be designated ESAs on the project plans. Prior to clearing or construction, RCTC's Resident Engineer will require the design/build contractor to install highly visible barriers (such as orange construction fencing) around all designated ESAs. No grading or fill activity of any type will be permitted within the ESAs. 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 preserved areas. 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 to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities.	
NC-2	RCTC's Resident Engineer will require the design/build contractor to have a Designated Qualified Biologist under contract. The Designated Qualified Biologist will monitor construction in the vicinity of the ESAs for the duration of construction to flush any wildlife species present prior to construction and to ensure that all vegetation removal, best management practices (BMPs), ESAs, and all avoidance and minimization measures are properly implemented.	
NC-3	To avoid effects to nesting birds, RCTC's Resident Engineer will require the design/build contractor to conduct any native or exotic vegetation removal or tree trimming activities outside of the nesting bird season (i.e., February 15–	

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	September 15). In the event that vegetation clearing is necessary during the nesting season, RCTC's Resident Engineer will require the design/build contractor to have the Designated Qualified Biologist conduct a preconstruction survey within 300 ft of construction areas no more than 7 days prior to construction to identify the locations of nests. Should nesting birds be found, an exclusionary buffer of 300 ft will be established by the Designated Biologist around each nest site. This buffer will be clearly marked in the field by construction personnel under guidance of the design/build contractor's Designated Qualified Biologist, and construction or clearing will not be conducted within this zone until the Designated Qualified Biologist determines that the young have fledged or the nest is no longer active. In the event that construction must occur within the 300 ft buffer, the Designated Biologist will take steps to ensure that construction activities do not disturb or disrupt nesting activities. If the Designated Biologist determines that construction activities are disturbing or disrupting nesting activities, the Designated Biologist will notify the Resident Engineer, who has the authority to halt construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, and/or working in other areas until the young have fledged.	
NC-4	When work is conducted during the fire season (as identified by the Orange County Fire Authority [OCFA], Riverside County Fire Department [RCFD], City of Norco Fire Department, and/or the City of Corona Fire Department) adjacent to any vegetated open space, RCTC's Resident Engineer will require the design/build contractor to ensure that appropriate firefighting equipment (e.g., extinguishers, shovels, water tankers) is available on site during all phases of project construction to help minimize the potential for human-caused wildfires. Shields, protective mats, and/or other fire-preventive methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventive actions, and responses to fires will advise contractors regarding fire risk from all construction-related activities. If a responsible fire agency (OCFA, RCFD, City of Norco Fire Department, or City of Corona Fire Department) requires the RCTC to clear defensible spaces during construction, the RCTC's Resident Engineer, the design/build contractor, and the design/build contractor's Designated Qualified Biologist will	

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	coordinate with the USFWS prior to this clearing effort. In the event there are resources in the areas identified for defensible clearing, RCTC's Resident Engineer and the Designated Qualified Biologist will coordinate with any applicable permitting agencies regarding possible effects to those resources prior to approving the defensible clearing of any areas by the contractor. During all Red Flag Warning periods as issued by the National Weather Service, the design/build contractor will not be allowed to operate mechanized equipment or equipment that could throw off sparks or potentially start fires in any areas of natural open space in CHSP or other areas.	
NC-5	During final design, the Project Engineer will coordinate with the Designated Qualified Biologist to identify developed or nonsensitive upland habitat areas appropriate for use during construction for equipment maintenance, staging, dispensing of fuel and oil, or any other such activities and will delineate and identify those areas on the project specifications. The Designated Qualified Biologist will specifically identify developed or nonsensitive upland habitat areas to prevent any spill runoff on those sites from entering waters of the United States. During construction, RCTC's Resident Engineer will require the design/build contractor to ensure that all equipment maintenance, staging, dispensing of fuel and oil, or any other such activities occur in developed or designated nonsensitive upland habitat areas designated in the project specifications for those uses.	
NC-6	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to identify the locations of all existing wildlife fencing and will delineate and identify those areas on the project specifications. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to install new fencing prior to the removal of any existing wildlife fencing to protect against wildlife-vehicle incidents. The new fencing must be the same or greater height than the previous wildlife fence. The RCTC Resident Engineer will require the design/build contractor to ensure that the fencing is maintained and functional throughout the project construction. The Department will ensure that the fencing is maintained and functional throughout the life of the project to prevent wildlife-vehicle incidents.	Caltrans will be responsible for the following: The Department will ensure that the fencing is maintained and functional throughout the life of the project to prevent wildlife-vehicle incidents.

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NC-7	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to identify the habitat adjacent to Coal Canyon, B Canyon, Fresno Canyon/Wardlow Wash, and Bedford Wash that is anticipated to be disturbed by construction activities and will delineate those areas on the project specifications. As detailed in the project specifications, RCTC's Resident Engineer will require the design/build contractor to restore habitat adjacent to Coal Canyon, B Canyon, Fresno Canyon/Wardlow Wash, and Bedford Wash that was disturbed during construction as construction in the affected areas is completed. That restoration will be provided on a 1:1 ratio, using native vegetation as determined by RCTC and the Department in coordination with the resource agencies.	
NC-8	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to delineate all wildlife corridors within the project footprint and the immediately surrounding areas as Environmentally Sensitive Areas (ESAs) in the project specifications. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to ensure that equipment maintenance, lighting, and staging are limited to designated areas away from wildlife corridor entrances.	
NC-9	During final design, RCTC's Project Engineer will develop design and construction management measures to direct temporary construction noise and nighttime construction lighting and permanent facility lighting away from the wildlife corridors, bridges (structures potentially occupied by bats), biologically sensitive areas, Western Riverside County MSHCP Conservation Areas, vegetated drainages, CSS in CAGN-designated critical habitat with long-term conservation value for covered species. Those design measures will be approved by Department District 8 Biology/Environmental prior to the completion of final design. If construction work must be done at night, RCTC's Resident Engineer will require the design/build contractor to properly implement the measures developed during final design to direct noise and direct lighting away from the wildlife corridors, bridges, and biologically sensitive areas during those nighttime construction activities.	
NC-10	Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to keep the wildlife corridors clear of all equipment or structures that could potentially serve as barriers to wildlife passage.	

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NC-11	During final design, RCTC's Project Engineer will ensure that the existing culvert structures that will be extended or modified by the project are designed so that they are at least as compatible with wildlife usage as the existing culvert structures. Those culverts will be shown on the project specifications. RCTC's Resident Engineer will require the design/build contractor to properly implement these compatible culvert designs during construction.	
NC-12	Within Coal Canyon, B Canyon, Fresno Canyon/Wardlow Wash, and Bedford Wash, RCTC's Resident Engineer will require the design/build contractor to limit the hours of construction within 1,000 ft of the centerline of each of these crossings to daylight hours (7:00 a.m. to 4:00 p.m.) to ensure continued use of these wildlife corridors during construction, with the exception of limited periods when evening or night work is required for safety or operations reasons.	
NC-13	During final design, RCTC's Project Engineer will ensure that the design and construction process for all structures required for bridge and/or culvert work within Coal Canyon, B Canyon, Fresno Canyon/Wardlow Wash, and Bedford Wash, will not block the main underpass at these locations during construction. RCTC's Project Engineer will ensure that the design of the scaffolding and false work is restricted to the sides of the underpass and limits of the existing exclusionary chain-link fence to maintain the existing width of the wildlife corridor during construction activities. During construction within Coal Canyon, B Canyon, Fresno Canyon/Wardlow Wash, and Bedford Wash, RCTC's Resident Engineer will require the design/build contractor to ensure that all structures required for bridgework are installed and constructed consistent with the final design specifically to avoid blocking the main underpass during construction and to restrict all scaffolding and false work to the sides of the underpass and limits of the existing exclusionary chain-link fence to maintain the existing width of the wildlife corridor during construction activities.	
NC-14	Minimal equipment staging area is available at the eastbound Coal Canyon off-ramp along the sides of the paved road and will be used for the staging of equipment for Coal Canyon work only. During final design, RCTC's Project Engineer will ensure that the available area for construction staging at the eastbound Coal Canyon off-ramp is delineated on the project specifications. RCTC's Resident Engineer will require the design/build contractor to minimize the use of this area during construction and, where possible, to avoid the area from February 15 to September 1. RCTC's Resident Engineer will require the	

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	design/build contractor to ensure that vehicles staged in this area are equipped with security lights.	
NC-15	During construction within Coal Canyon, RCTC's Resident Engineer will require the design/build contractor to keep the Coal Canyon on- and off-ramps open at all times for emergency and police personnel. RCTC's Resident Engineer will require the design/build contractor to ensure that use of the emergency access road as a turnaround or shortcut for any construction or non-emergency traffic is prohibited. That road will only be used during bridge construction and general road construction at Coal Canyon. RCTC's Resident Engineer will also require the design/build contractor to ensure that, in general, no hauling is allowed at night through underpasses and freeway off-ramps.	
NC-16	During construction in Coal Canyon, RCTC's Resident Engineer will require the design/build contractor to close the gates at Coal Canyon at the end of each construction day. The locations of those gates will be shown on the project specifications.	
NC-17	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to identify existing and proposed conservation areas within the project footprint or in the immediately surrounding areas and will designate those areas on the project specifications. To reduce impacts where the project interfaces with existing or proposed conservation areas prior to and during construction, RCTC's Project Manager will ensure that the project complies with the Urban/Wildlands Interface Guidelines in Section 6.1.4 of the Western Riverside County MSHCP. The project specifications will include applicable guidelines from the Western Riverside County MSHCP.	
NC-18	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to identify existing Criteria Areas within the project footprint or in the immediately surrounding areas and will designate those areas on the project specifications. To reduce impacts where the project is located within the Criteria Area, RCTC's Project Manager will ensure that the project complies with the applicable siting and design criteria and the Construction Guidelines in Section 7.5.2 of the Western Riverside County MSHCP. The project specifications will include applicable guidelines from the Western Riverside County MSHCP.	RCTC will be responsible for the following: To reduce impacts where the project is located within the Criteria Area, RCTC's Project Manager will ensure that the project complies with the applicable siting and design criteria and the Construction Guidelines in Section 7.5.2 of the Western Riverside County MSHCP. The project specifications will include applicable guidelines from the Western Riverside County MSHCP.
NC-19	During construction, RCTC's Resident Engineer will require the design/build contractor to comply with guidelines from the Western Riverside County	

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	MSHCP included in the project specifications. The SR-91 CIP is a covered project. Therefore, RCTC's Resident Engineer will ensure that the SR-91 CIP complies with all Western Riverside County MSHCP Construction Guidelines and Standard BMPs prior to and during construction.	RCTC will be responsible for the following: The SR-91 CIP is a covered project. Therefore, RCTC's Resident Engineer will ensure that the SR-91 CIP complies with all Western Riverside County MSHCP Construction Guidelines and Standard BMPs prior to and during construction.
WETLANDS AND OTHER WATERS		
WET-1	Riverside County Transportation Commission's (RCTC) Project Manager will ensure that prior to any clearing or construction, a Section 404 Nationwide Permit is obtained through the United States Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (CWA). RCTC's Resident Engineer will retain a copy of the Corps permit at the construction site and will ensure that the conditions in that permit are properly implemented prior to and during construction.	RCTC will be responsible for the following: Riverside County Transportation Commission's (RCTC) Project Manager will ensure that prior to any clearing or construction, a Section 404 Nationwide Permit is obtained through the United States Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act (CWA).
WET-2	RCTC's Project Manager will ensure that prior to any clearing or construction, a Streambed Alteration Agreement with California Department of Fish and Game (CDFG) is obtained. RCTC's Resident Engineer will retain a copy of the CDFG agreement at the construction site and will ensure that the conditions in that agreement are properly implemented prior to and during construction.	RCTC will be responsible for the following: RCTC's Project Manager will ensure that prior to any clearing or construction, a Streambed Alteration Agreement with California Department of Fish and Game (CDFG) is obtained.
WET-3	RCTC's Project Manager will ensure that prior to any clearing or construction, a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) is obtained. RCTC's Resident Engineer will retain a copy of the Section 401 certification at the construction site and will ensure that the conditions in that certification are properly implemented prior to and during construction.	RCTC will be responsible for the following: RCTC's Project Manager will ensure that prior to any clearing or construction, a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB) is obtained. RCTC's Resident Engineer will retain a copy of the Section 401 certification at the construction site and will ensure that the conditions in that certification are properly implemented prior to and during construction.
PLANT SPECIES		
	No individual avoidance, minimization, or compensatory mitigation measures for the plant species of concern discussed in Section 3.19 (Southern California black walnut and Coulter's matilija). Mitigation for the project effects to those species in Riverside County will be achieved through consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Measures to protect riparian habitats (which the oak is associated	

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	with) and coastal sage scrub (which the poppy is associated with) would benefit these two species where they are impacted in Orange County.	
ANIMAL SPECIES		
AS-1	During final design, the Riverside County Transportation Commission's (RCTC) Project Engineer will coordinate with the Designated Qualified Biologist to identify all areas of potential burrowing owl (BUOW) habitat within the project footprint or in the immediately surrounding areas and will designate those areas on the project specifications. To ensure that any BUOW that may occupy the site in the future are not affected by construction activities, RCTC's Resident Engineer will require the design/build contractor to have preconstruction BUOW surveys conducted by a Designated Qualified Biologist within 30 days prior to any phase of construction in the areas identified as potential BUOW habitat. These preconstruction surveys are also required to comply with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), the federal Migratory Bird Treaty Act (MBTA), and the California Fish and Game Code. If any of the preconstruction surveys determine that BUOW are present, one or more of the following mitigation measures may be required: (1) avoidance of active nests/burrows and surrounding buffer area during construction activities; (2) passive relocation of individual owls; (3) active relocation of individual owls; and (4) preservation of on-site habitat with long-term conservation value for the owl. The specifics of the required measures will be coordinated among the Department District Biologist, RCTC's Project Manager, RCTC's Resident Engineer, the design/build contractor, the design/build contractor's Designated Qualified Biologist, and the resource agencies. RCTC's Resident Engineer will ensure that any BUOW measures determined to be required based on the results of the preconstruction surveys and the required coordination are properly implemented by the design/build contractor prior to and during construction in the BUOW areas identified in the surveys.	
AS-2	During final design, RCTC's Project Engineer will coordinate with the Designated Qualified Biologist to identify all areas of potential bat habitat within the project footprint or in the immediately surrounding areas and will designate those areas on the project specifications. RCTC's Project Manager will require the design/build contractor to have a Designated Qualified Bat Biologist survey all potential bat habitat in June, prior to construction, to assess the potential for the presence of maternity roosts	

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	because maternity roosts are generally formed in late spring. The Designated 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.	
AS-3	To avoid direct mortality to bats roosting in areas subject to effects from construction activities, RCTC's Resident Engineer will require the design/build contractor to ensure that any structure with potential bat habitat will have temporary bat exclusion devices installed under the supervision of the Designated Qualified Bat Biologist prior to construction. The installation of the exclusion devices will be conducted during the fall (September or October) to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. Replacement roosting habitat may also be needed to minimize effects to excluded bats. All bat exclusion techniques will be coordinated among the California Department of Transportation (Department) District 8 Biologist, the Department District 12 Biologist, RCTC's Project Manager, RCTC's Resident Engineer, the design/build contractor, the design/build contractor's Designated Qualified Bat Biologist, and the resource agencies.	
AS-4	As required in Measure NC-10, RCTC's Resident Engineer will ensure that all construction work on bridges will take place during the day to the best extent feasible. Limited evening and/or night construction may be required for safety and/or operations reasons. The RCTC Project Engineer will require the design/build contractor to include construction management measures to direct lighting and noise away from bat night roosting areas in the project specifications. The RCTC Resident Engineer will require the design/build contractor to implement those measures during evening and night construction as much as possible while providing for safe facility operations and construction worker safety.	
AS-5	RCTC's Project Engineer will ensure that the final design specifically addresses keeping riparian vegetation delineated on the project specifications that is adjacent to bat roosting sites (which include crevices in bridges, culverts, and overhead structures) intact during construction per measures included in the project specifications. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to properly implement the measures in the project	

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	specifications to keep riparian vegetation adjacent to bat roosting sites intact.	
AS-6	To prevent project effects to bridge- and crevice-nesting birds (i.e., swifts and swallows), RCTC's Resident Engineer will require the design/build contractor to ensure that all work on existing bridges with potential habitat that is conducted between February 15 and October 31 includes removal of all bird nests prior to construction under the guidance and observation of the Designated Qualified Biologist prior to February 1 of that year, before the swallow colony returns to the nesting site. Removal of swallow nests that are under construction must be repeated as frequently as necessary to prevent nest completion or until a nest exclusion device is installed (such as netting or a similar mechanism that keeps birds from building nests). Nest removal and exclusion device installation will be monitored by the Designated Qualified Biologist. Such exclusion efforts must be continued to keep the structures free of swallows until September or completion of construction. All nest exclusion techniques will be coordinated among the Department District 8 Biologist, the Department District 12 Biologist, RCTC's Project Manager, RCTC's Resident Engineer, the design/build contractor, the design/build contractor's Designated Qualified Biologist, and the resource agencies.	
AS-7	During final design, RCTC's Project Manager, the Department District 8 Biologist, the Department District 12 Biologist, and the Designated Qualified Biologist will determine whether structural features providing existing bat roosting habitat cannot be permanently retained following construction. If that is the case, RCTC's Project Manager, RCTC's Project Engineer, the Department District 8 Biologist, the Department District 12 Biologist, and the Designated Qualified Biologist will identify alternative roosting habitat to be installed during project construction. The project specifications will include suitable designs and specifications for bat exclusion and habitat replacement structures. Prior to and during construction, RCTC's Resident Engineer will require the design/build contractor to properly implement the designs and specifications for bat exclusion and habitat replacement structures included in the project specifications. The installation and maintenance of those structures will be monitored by the Designated Qualified Biologist.	
AS-8	RCTC's Resident Engineer will require the design/build contractor to install and maintain silt fence barriers at all staging or construction areas at Coal Canyon and areas within Chino Hills State Park (CHSP) to prevent small animals from entering those areas.	

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THREATENED AND ENDANGERED SPECIES		
TE-1	Prior to any ground disturbing activities, an individual will be identified as the Designated Biologist. A qualified Designated Biologist must have a Bachelor's degree with an emphasis in ecology, natural resource management, or related science; 3 years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society; previous experience with applying the terms and conditions of a Biological Opinion; and the appropriate permit and/or training if conducting focused or protocol surveys for listed species. The Riverside County Transportation Commission (RCTC) will ensure the Designated Biologist position is filled throughout the construction period. Each successive Designated Biologist (if applicable) will be approved by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (hereafter referred to as the Wildlife Agencies). The Designated Biologist will have the authority to ensure compliance with conservation measures and will be the primary agency contact for the implementation of these measures. The Designated Biologist will have the authority and responsibility to halt activities that are in violation of the conservation measures.	RCTC will be responsible for the following: The Riverside County Transportation Commission (RCTC) will ensure the Designated Biologist position is filled throughout the construction period. Each successive Designated Biologist (if applicable) will be approved by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (hereafter referred to as the Wildlife Agencies).
TE-2	To minimize adverse effects from dust during all site disturbance, grading, and construction activities, the design/build contractor will ensure that all active parts of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust. Additionally, the design/build contractor will ensure that all stockpiled material is sufficiently watered or covered to prevent excessive amounts of dust.	
TE-3	All erosion and sediment control devices during project construction and operation, 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.	
TE-4	During all site disturbance, grading, and construction activities, the design/build contractor will be required to control noise from construction activity consistent with Caltrans Standard Specifications, Section 14-8.02, "Noise Control," and the California Department of Transportation (Caltrans) Standard Special Provisions S5-310. Noise levels from construction operations within the State	

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	right-of-way between the hours of 9:00 p.m. and 6:00 a.m. will not exceed 86 A-weighted decibels (dBA) at a distance of 50 feet (ft) from the noise source. The noise level requirement will apply to the equipment on the job site or related to the job, including, but not limited to, trucks, transit mixers, or transient equipment that may or may not be owned by the contractor.	
TE-5	During all site disturbance, grading, and construction activities in and immediately adjacent to biologically sensitive areas, Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Conservation Areas, vegetated drainages, and coastal sage scrub (CSS) in coastal California gnatcatcher (CAGN) designated critical habitat, the design/build contractor will be required to control noise from construction activity by using an alternative warning method instead of a sound signal unless required by safety laws. In addition, the contractor will equip all internal combustion engines with the manufacturer-recommended mufflers and will not operate any internal combustion engine on the job site without the appropriate mufflers. As directed by the RCTC Resident Engineer, the contractor will implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.	
TE-6	In accordance with the Municipal Codes of the Cities of Anaheim, Corona, Riverside, and Norco, the design/build contractor will be required to limit construction activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, excluding weekends and holidays. If construction is needed outside those hours or days, the design/build contractor will be required to coordinate with the affected local jurisdiction. If the local jurisdiction approves construction hours that are different from those imposed by this measure, then the design/build contractor will immediately request that RCTC consider a modification to this measure to allow construction during the new hours that the local jurisdiction approved.	
TE-7	In the major wildlife movement corridors at, Coal Canyon, Wardlow Wash, and Fresno Canyon, and areas adjacent to least Bell's vireo and CAGN occupied areas (approximately Post Mile [PM] ORA-91-R17.16 to PM ORA-91-R18.74), construction activities will be limited to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday. Should an exception to this measure be necessary, RCTC and the California Department of Transportation	

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	(Department) will consult with the Wildlife Agencies to determine effective measures to avoid and minimize adverse impacts to these species and movement corridors.	
TE-8	**Braunton's Milk-vetch Conservation Measures**. A pre-construction survey will be conducted prior to ground disturbing activities in the vicinity of the historical occurrence in Coal Canyon in Orange County. This survey will be conducted by a biologist familiar with the species and during the appropriate time of year to optimize detection. Should Braunton's milk-vetch be found during surveys, the Designated Biologist will consult with the USFWS to determine effective measures to avoid and minimize adverse impacts to this species.	
TE-9	**Coastal California Gnatcatcher Conservation and Compensatory Measures.** The Designated Biologist (or their designee) will monitor construction within the vicinity of CAGN-designated critical habitat areas prior to and during site preparation, grading, and construction activities, to flush any wildlife species present prior to construction and to ensure that vegetation removal, best management practices (BMPs), Environmentally Sensitive Areas (ESAs), and all avoidance and minimization measures are properly implemented and followed.	
TE-10	RCTC will offset the permanent loss of 8.42 acres (ac) of occupied CAGN habitat in Orange County, including 6.32 ac of designated critical habitat, by restoring 16.03 ac of habitat suitable for CAGN breeding, dispersal, and foraging in Chino Hills State Park (CHSP) to be conducted during the Initial Phase of the project. If restoration is unable to be conducted in CHSP, another location will be selected on approval of the Wildlife Agencies.	RCTC Action
TE-11	RCTC will offset the temporary loss of 3.01 ac of occupied CAGN habitat in Orange County, including 2.09 ac of CAGN-designated critical habitat, with in-kind, or better, on-site restoration after the completion of project construction.	RCTC Action
TE-12	Prior to site preparation, grading or construction activities, a restoration plan will be developed by a qualified biologist for the permanent and temporary impacts to occupied CAGN habitat in Orange County, including designated critical habitat. The plan will be submitted to the USFWS for review and approval. This plan will include, at a minimum, a detailed description of restoration methods, slope stabilization/erosion control, criteria for restoration to be considered successful, and monitoring and reporting protocol(s).	

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	The restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial watering has been off for at least 2 years.	
TE-13	During all site preparation, grading, and construction activities in Orange County, the RCTC Resident Engineer, will require the design/build contractor to use shielded lighting for any nighttime construction adjacent to coastal sage scrub in CAGN-designated critical habitat.	
TE-14	**Riparian Birds Conservation Measures.** During the bird breeding season (i.e., February 15–September 15), the Designated Biologist (or their designee) will monitor riparian and riverine areas within 500 ft of active construction areas for the duration of the construction in those areas to survey for active nests and/or nesting activity to ensure breeding activities are not disrupted and to ensure vegetation removal, BMPs, ESAs, and all avoidance and minimization measures are properly implemented.	
TE-15	**Measure for Light Intrusion and Wildfires.** To minimize adverse effects from light intrusion from vehicle headlights and the potential threat of increased fires from the operation of State Route 91 (SR-91), during final design, the Department and RCTC will work with the USFWS to investigate the possibility of adding features along SR-91 in the vicinity of the Coal Canyon wildlife crossing in Orange County. For example, consideration can be given to the placement of K-rail, concrete walls, and/or hardscaping barriers along the shoulder of SR-91. In investigating these features, consideration must be given to motorist safety, freeway operations, vehicle headlight mitigation and the potential fire threat.	
TE-16	**Santa Ana Sucker Conservation Measures.** The United States Army Corps of Engineers (Corps) is in the process of constructing the Santa Ana River (SAR) Reach 9 Phase 2 Green River Golf Club Embankment Protection Project within the action area. Following completion of the embankment construction, perennial stream habitat for the Santa Ana sucker will be reestablished within the construction footprint. The Department and RCTC will coordinate with the Corps during construction of the SR-91 CIP to ensure these restoration areas will not be temporarily or permanently impacted during construction of the SR-91 CIP.	RCTC Action
TE-17	The Department and RCTC will coordinate with the Corps during construction to ensure that the SR-91 CIP will not affect releases from Prado Dam or result in a permanent reduction of acreage within the Santa Ana River Canyon Habitat Management Area.	RCTC Action

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INVASIVE SPECIES		
IS-1	During final design, Riverside County Transportation Commission (RCTC) Project Engineer will direct a qualified landscape architect develop a weed abatement program for inclusion in the project specifications. That program will be developed in compliance with Executive Order (EO) 13112 to minimize the potential for intrusion or export of invasive plant species to and from the biological study area (BSA) during project construction. At a minimum, the following will be included in the weed abatement program and implemented prior to and during construction to address potential effects associated with invasive species: RCTC's Resident Engineer will require the design/build contractor to inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another. RCTC's Resident Engineer will require the design/build contractor to limit soil and vegetation disturbance to those areas specifically required for the project construction. RCTC's Resident Engineer will require the design/build contractor to obtain soil, gravel, and rock from weed-free sources. RCTC's Resident Engineer will require the design/build contractor to use only certified weed-free straw, mulch, and/or fiber rolls for erosion control during construction. Prior to the completion of construction, RCTC's Resident Engineer will require the design/build contractor to revegetate affected areas adjacent to native vegetation with plant species that are native to the vicinity and approved by the California Department of Transportation (Department) District 8 and District 12 Biologists. RCTC's Resident Engineer will require the design/build contractor to not use any species listed in the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory with a high or moderate rating in revegetation. After construction, RCTC's Resident Engineer will ensure that erosion control and revegetation sites are monitored until achievement of the performance standards included in the weed abatement program or for a period of 2 to 3 years after installation to detect nonnative species prior to the establishment of the native vegetation. RCTC's Resident Engineer will require the design/build contractor and the post-construction monitors to implement eradication procedures (e.g., spraying and/or hand weeding) should an infestation occur. The use of herbicides will	

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	be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by the Department District 8 and District 12 Biologists during and after project construction. During construction, RCTC's Resident Engineer will require the design/build contractor to reduce indirect impacts of exotic plant infestations and litter by regular roadside maintenance to remove litter and weeds from the right-of-way. Because the Department already conducts regular ongoing maintenance of landscaping in the State right-of-way, no additional project-specific measures for invasive species are required during project operations.	
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY		
--	No avoidance, minimization, and/or mitigation measures are required.	
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION		
--	No avoidance, minimization, and/or mitigation measures are required.	
CUMULATIVE IMPACTS		
--	No avoidance, minimization, and/or mitigation measures are required beyond those listed above for Alternatives 1 and 2.	