- *HAZNET* is a database tracked by DTSC of hazardous waste manifests received each year. Facilities listed on the database store and/or ship hazardous materials. Two HAZNET sites were identified within or adjacent to the project footprint. Riverside County Facilities Management (3133 Mission Avenue in Riverside) was listed as properly disposing of 0.5 ton of waste oil and mixed oil in 2005. Martine Ferra (820 Mission Boulevard in Riverside) was listed as disposing of 0.005 ton of organic solids in 2011. Neither of these listings was indicative of a release to the environment and neither is considered an REC for the project site.
- *The Facility Index System (FINDS)* contains information on facilities that may store hazardous materials. No FINDS sites were identified within the project footprint.
- *(State and Tribal) Storage Tank Site* includes an inventory of Underground Storage Tanks (USTs). The database is an inventory of regulated USTs and the aboveground storage tanks (ASTs). The Leaking Underground Storage Tank (LUST) database is a listing of confirmed or suspected releases from regulated USTs that were reported to the State Water Resources Control Board (SWRCB). No UST sites were listed within the 0.25-mile search radius.

  One AST site (Fleet Services at 5293 Mission Boulevard in Riverside) was listed within the 0.25-mile search radius. The site is near the western terminus of the project and is slightly up-gradient. Because the AST is not adjacent to the project footprint and because the site is not listed in another database as having experienced a release, it is not considered an REC to the project.

  Two LUST cases were listed within the 0.5-mile search radius. LUST cases are generally not considered a significant environmental concern unless they are within approximately 0.25 mile of the project site. Stearns Downtown Liquor (4209 7th Street in Riverside) is located 0.25 mile east/southeast of the project area. This property is listed in association with a former soils-only gasoline release. The case was discovered in November 1989. Contamination was discovered to a depth of approximately 9 feet. The contaminated soil was excavated and soil vapor extraction wells were operated at the property. The case was granted regulatory closure in June 1996. Based on the case status, distance from the project site, cross-gradient location, remediation activities, permanent removal of all storage tanks, and delineation of soil concentrations from the project footprint, this property is not considered an REC. The Mission Auto Supply property (5310 Mission Boulevard in Riverside) is located less than 0.25 mile west/northwest of the project area in association with a former release of gasoline to soil and groundwater. This case was discovered in April 1991. Based on the case status, delineation from the project area, cross-gradient location, remediation activities, and permanent removal of all storage tanks, this LUST case was granted closure in February 2006; therefore, this listing is not considered an REC.
- *Solid Waste Disposal Facilities and Landfills (SWF/LF):* No SWF/LF site was listed within 0.5 mile of the project footprint in the Solid Waste Information System (SWIS), Waste Management Unit Database System (WMUDS/SWAT), Solid Waste Recycling Facilities (SWRCY) or Waste Discharge System (WDS) databases. The West Riverside Landfill, located approximately 1.25 miles up-river from the project site, operated from 1964 through 1983. Daily refuse brought to the landfill was covered in a minimum of 6 inches of clean fill soil during operation. The landfill operated as a Class II site and accepted residential, commercial, demolition, and special waste. Liquids, odorous wastes, and large quantities of rubber tires were not accepted. When the landfill was permanently closed in 1983, three layers of soil were placed over the existing landfill grade; a

minimum two feet of compacted material, followed by a minimum of one foot of low-permeability clay and a minimum one foot of topsoil were layered atop the existing landfill features. Multiple concrete and asphalt drains were installed during the site closure. The landfill is presently inspected on a monthly basis by Riverside County Waste Management Department for integrity of the cover and drainage structures, exposed refuse, erosion, overgrowth, and security. No significant contamination has been reported in the landfill perimeter wells at the facility. No violations or breaches of the landfill cover have been noted. Additionally, based on the regular inspection and maintenance of the landfill cover and drainage systems coupled with the active monitoring and waste discharge requirements following storm events, surface runoff is not expected to present an REC to the project site.

Field Reconnaissance: No evidence of hazardous substances was observed within the project footprint during the site reconnaissance. No USTs or ASTs were observed within the project area. Potential polychlorinated biphenyl (PCB) containing equipment, such as electrical transformers, was not observed within the project footprint. Two pad-mounted transformers were observed adjacent to the project footprint, one at the northwest corner of the intersection of Crestmore Road and Mission Boulevard and another on the property located at the southwest corner of the intersection of Crestmore Road and Mission Boulevard. Pipelines were not observed adjacent to or crossing the project footprint. No existing oil wells or facilities were observed within the project footprint.

No evidence of hazardous substances was observed within the project area during the site reconnaissance. Pesticides and herbicides have the potential to be present in soils along the project alignment formerly used for agricultural production.

Based on past usage of the site and project area, a potential exists that hazardous materials and/or soil or groundwater infused with hazardous materials may be encountered during the course of project-related construction activities. Mitigation Measures HAZ-4 and HAZ-5 have been identified to reduce potential impacts related to the exposure to hazardous materials to a less than significant level.

Mitigation

Asbestos, Thermoplastic Striping and Lead-Based Paint

HAZ-1 Prior to demolition and disposal of the existing Mission Boulevard Bridge, Asbestos Containing Material (ACM) and Lead Based Paint (LBP) surveys shall be conducted. If no ACM or LPB is detected within the bridge structure, no further mitigation related to this issue shall be required. In the event ACM and/or LBP is determined present in the bridge structure, any such material shall be removed, remediated, and/or disposed of prior to the commencement of demolition. The removal, remediation, and/or disposal shall conform to applicable policies and local, State, and/or federal regulations.

HAZ-2 Upon removal, yellow thermoplastic striping materials within the project limits shall be handled in accordance with Caltrans Standard Specifications (Caltrans 2015a) and the corresponding Standard Special Provision (SSP; Caltrans 2015c).

HAZ-3 Unpaved soils adjacent to the existing roadway shall be tested for Aerially Deposited Lead (ADL) according to Caltrans ADL testing guidelines. The ADL study shall include Title

22 testing of surface soils to evaluate the potential presence of other metals that may have been transported by storm water runoff. In the event ADL concentrations are detected in existing soils, such soils will be remediated or addressed in accordance with the Caltrans Standard Specifications (Caltrans 2015a) and the corresponding SSP for Handling Material Containing Hazardous Waste Concentrations of Aerially Deposited Lead.

Polychlorinated Biphenyl (PCB) Containing Equipment

HAZ-4 A Phase II Site Investigation shall be performed to evaluate the presence of PCBs in soils adjacent to electrical transformers and equipment that will be removed as part of the project. If no PCBs are detected, no further mitigation related to this issue shall be required. In the event PCBs are identified, the removal, remediation, and/or disposal shall conform to applicable policies and local, State, and/or federal regulations.

Potential Hazardous Material Sites

HAZ-5 A Phase II Site Investigation shall be performed prior to the disturbance of soils to determine the presence or absence of hazardous materials at the following locations:

- Adjacent to the project ROW where excavations are planned to evaluate the potential for contamination from pest and weed control chemicals in former agricultural areas;
- At the former gasoline station, to include testing for tested Title 22 metals, total petroleum hydrocarbons (TPHs), and polynuclear aromatic hydrocarbon (PAHs) and volatile organic compounds (VOCs);
- Within the existing Santa Ana River flood control levees disturbed during construction, to include testing Title 22 metals, TPHs, VOCs, and PAHs; and
- Within the existing Santa Ana River bed disturbed during construction of the project. If a Phase II Site Investigation is performed, soils and groundwater should be tested for Title 22 metals, TPHs, and PAHs.

If no hazardous materials are detected by the Phase II Site Investigation, no further mitigation related to this issue shall be required. In the event any hazardous materials are identified, removal, remediation, and/or disposal shall conform to applicable policies and local, State, and/or federal regulations.

Monitoring:

Monitoring for Mitigation Measures HAZ-1 through HAZ-5 shall be subject to the timing detailed in the project-specific Mitigation Monitoring and Reporting Plan (Appendix M).

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Airports				
a. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
b. For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Source: Figure N-8, *City of Riverside General Plan*, Amended November 2012; Figure 7-15, *City of Jurupa Valley Draft General Plan*, 2017; Figures F-1 and RI-1, *Riverside County Airport Land Use Compatibility Plan, Volumes 1 and 2*, October 14, 2004; and *Riverside Airport Master Plan*, Coffman Associates, Inc., January 2010.

Findings of Fact:

a) No Impact. Riverside Municipal Airport is located approximately 3.5 miles southeast of the project area. The airport occupies some 441 acres on the flat lands of the Santa Ana River plain. It has two intersecting runways—the primary runway running roughly east/west and a shorter, crosswind runway aligned north/south. Activity forecasts anticipate 160,000 annual operations in 2025 compared to just over 110,000 in 2002/03. The project site is not located within any Compatibility Zone established for this airport. Additionally, the project consists of a bridge replacement and does not include any habitable use that would affect or be affected by airport operations. No impact related to this issue would occur; therefore, no resulting public safety hazard from air operations at this airport would occur.

b) No Impact. The nearest private airport to the project area is Flabob Airport, located approximately 0.5 mile east of the project area. Aircraft utilizing Flabob Airport include single-engine airplanes, twin-engine piston and turboprop airplanes, and sail planes. No airport-specific master plan has been prepared for this privately owned airport[1]. The project site is located with Compatibility Zone C of this airport. Within Zone C (Extended Approach/Departure Zone), prohibited uses include children's schools, daycare centers, libraries, nursing homes, hospitals, buildings with more than three aboveground habitable floors, highly noise-sensitive uses, and "hazards to flight." The project consists of a bridge replacement and does not include any habitable use that would affect or be affected by airport operations. No impact related to this issue would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

[1] The Riverside County Airport Land Use Commission (ALUC) has developed the Riverside County Airport Land Use Compatibility Plan Policy Document, which establishes policies applicable to land use compatibility planning in the vicinity of airports throughout Riverside County. Included is this plan are compatibility criteria and airport influence area maps for individual airports, including Flabob Airport.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Hazardous Fire Area				
a. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Source: Figure PS-7, *City of Riverside General Plan*, Amended November 2012; and Figure 8-11, *City of Jurupa Valley Draft General Plan*, April 2017.

Findings of Fact:

a) Less than Significant Impact. The replacement bridge, roadway, and bridge features would be constructed from non-combustible materials. Residential uses (Old Plantation Mobile Home Park) are located west of the Santa Ana River. Carlson Park, Fairmont Park, Mount Rubidoux, and other open space are located east of the project footprint. The project footprint is located within a "high" fire hazard area within the City of Jurupa Valley. The City of Riverside does not assign a fire hazard designation to this area. Due to the presence of construction equipment and potential leaks from heavy equipment, the use of flammable liquids and presence of combustion engines, construction activities may incrementally increase the potential for fire within the project area. The Construction Contractor will be required to adhere to all standard and appropriate construction practices/procedures to reduce wildfire risks and protect workers and nearby residences. The project does not include the construction of habitable structures adjacent to a wildland area or significantly increase the risk of loss, injury or death resulting from wildland fires; therefore, no significant impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Hydrology and Water Quality *Would the project:*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
17. Water Quality Impacts				
a. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
b. Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
c. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
d. Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
e. Otherwise substantially degrade water quality?	☐	☒	☐	☐

Source: *Water Quality Assessment Report, Mission Boulevard Bridge Replacement at Santa Ana River*, LSA, January 2017 (Appendix G); *Jurisdictional Delineation, Mission Boulevard Bridge Replacement at Santa Ana River Project*, LSA, January 2017 (Appendix C1); *Summary Floodplain Encroachment Report*, LSA, October 2016 (Appendix I).

Findings of Fact:

a) Less than Significant with Mitigation Incorporated. A Jurisdictional Delineation prepared for the project (January 2017) identified two features within the project area: the Santa Ana River itself and Drainage A. The Santa Ana River within the project area is broad with a low gradient. The river is leveed and contains a low-flow, open water channel along the easterly levee. The Santa Ana River is considered perennial within the study area. Drainage A is an ephemeral, non-natural earthen drainage that shows evidence of an OHWM and streambed and banks. Drainage A conveys localized runoff and runs southwesterly for approximately 200 feet between Carlson Park and the Santa Ana River Trail, and then flows under the Santa Ana River Trail via an approximately 3-foot diameter corrugated metal pipe, and into the Santa Ana River.

Currently, runoff is conveyed off the existing Mission Boulevard Bridge via scupper type deck drains that outlet directly to the Santa Ana River. Generally, runoff from Mission Boulevard east of the Mission Boulevard Bridge flows west through an existing storm drain system and discharges to the Santa Ana River. West of Mission Boulevard Bridge, runoff from Crestmore Road and a portion of Mission Boulevard drains south along Crestmore Road and eventually discharges to the Santa Ana River.

The total disturbed surface area during construction would be approximately 7.04 acres. Improvements to the Santa Ana River and the uncertified levees are not anticipated except to restore the channel and levee berms to pre-existing conditions after construction.

Increases in impervious surface area can change on-site drainage patterns, decrease infiltration, and increase the volume and rate of runoff during storm events. During removal of the existing bridge, construction of the new bridge, and modifications to the roadway approaches, the proposed project would result in a net increase of approximately 1.27 acres of impervious surfaces in the project area. The existing catch basins along Mission Boulevard near the bridge approaches will be removed and replaced. A ditch and drainage inlet system will be constructed at the top of retaining walls along the northern and southern rights-of-way between Crestmore Road and the new bridge and along the northern right-of-way between the new bridge and Scout Lane. The ditch and drain system will collect and convey runoff originating from the slope that drains toward the walls. New Caltrans Type D deck drains will capture runoff along the new bridge and convey it to the Santa Ana River.

Permanent improvements in Carlson Park include the installation of Low Impact Development (LID) Best Management Practices (BMPs) (a bioretention facility with or without a drainage swale) between Mission Boulevard and Carlson Park. The area proposed for the BMPs is north of and outside the Carlson Park fence line and is currently a grassy area. The proposed drainage system would preserve the overall drainage pattern, and most of the storm water runoff would continue to be discharged into the Santa Ana River. Mitigation Measures HWQ-1 through HWQ-3 have been identified to address potential project-related impacts to water quality.

b) No Impact. Potential impacts during construction activities include exposure of excavated soil, which would increase the potential for soil erosion and sedimentation compared to existing conditions. The total disturbed area during construction would be approximately 7.04 acres. Additionally, there is the potential that construction-related chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste could be spilled or leaked without proper containment. These products have the potential to be transported via storm runoff into receiving waters.

As stated in the response to Checklist Question 17a, a bioretention facility with or without a drainage swale will be installed between Mission Boulevard and Carlson Park. The proposed drainage system would preserve the overall drainage pattern and most of the storm water runoff would continue to discharge into the Santa Ana River. Mitigation Measures HWQ-1 through HWQ-3 have been identified to address potential project-related impacts to water quality. Additionally, the project would be required to obtain the following permits:

- Clean Water Act (CWA) Section 401 Water Quality Certification from the Santa Ana RWQCB for any discharge to a water of the United States.
- CWA Section 404 Nationwide Permit from USACE for the discharge of dredge or fill material into a water of the United States.
- California Fish and Game Code Section 1602 Streambed Alteration Agreement will be required from the CDFW for impacts to CDFW riparian streambed.

A Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented during construction as required by the National Pollutant Discharge Elimination System (NPDES).[1] The construction SWPPP would identify the specific BMPs to be implemented during construction so as not to cause or contribute to an exceedance of any applicable water quality standard included in the Santa Ana RWQCB Basin Plan. These construction BMPs would be designed to meet the technology requirement stipulated in the Construction General Permit.

c) Less than Significant Impact. The northwesterly portion of the project is located within the Upper Santa Ana Valley Groundwater Basin within the Riverside-Arlington Subbasin. In addition, the southeasterly portion of the project is located within an area outside of a groundwater basin, referred to as the Upper Santa Ana Valley Highlands. The Riverside-Arlington Subbasin is bounded by impermeable rocks of Box Springs Mountains on the southeast, Arlington Mountain on the south, La Sierra Heights and Mount Rubidoux on the northwest, the Jurupa Mountains and a groundwater divide on the north, and the Rialto-Colton Fault on the northeast.

During geotechnical borings conducted in the 1958 when the existing bridge was constructed, as well as during boring conducted in 1998 at the bridge abutments, the boreholes in the streambed encountered groundwater at ground level within the channel and 5 feet below the existing channel grade. During construction of the new bridge, excavations for the cast-in-drilled-hole (CIDH) piles at the pier supports may extend between 80 feet to 100 feet below the existing riverbed. Groundwater may be encountered during construction. Any dewatering activity during construction would be short term, and the volume of groundwater removed would be minimal. Once construction of the new bridge is complete, operational activities associated with the proposed project would not require groundwater extraction.

If groundwater dewatering is required during construction, construction activities associated with the proposed project would comply with the requirements of *General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality* (Order No. R8-2015-0004, NPDES No. CAG998001). This permit covers general waste discharge requirements for discharges to surface waters that pose an insignificant (de minimus) threat to water quality within the Santa Ana Region. Under this permit, discharges must comply with discharge specifications, receiving water limitations, and monitoring and reporting requirements detailed in the permit.

The proposed project would result in a permanent increase in impervious surface area of approximately 1.27 acres. Because the on-site soils already have a low infiltration rate and, due to the incremental increase in impervious surface area, no significant decrease in infiltration capacity or change in groundwater levels would occur.

d) Less than Significant with Mitigation Incorporated. The existing catch basins along Mission Inn Boulevard near the Mission Boulevard Bridge approach would be removed and replaced. A ditch and drainage inlet system would be constructed at the top of retaining walls along the northern and

[1] General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP], Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ; NPDES No. CAS000002).

southern rights-of-way between Crestmore Road and the new bridge and along the northern right-of-way between the new bridge and Scout Lane. The ditch and drain system would collect and convey runoff originating from the slope that drains toward the walls. New Caltrans Type D deck drains would capture runoff along the new bridge and convey it to the Santa Ana River.

Increases in impervious surface area can change on-site drainage patterns, decrease infiltration, and increase the volume and rate of runoff during storm events. During removal of the existing bridge, construction of the new bridge, and modifications to the roadway approaches, the proposed project would result in a net increase of approximately 1.27 acres of impervious surfaces in the project area. Proposed LID BMPs are either a bioretention facility (Option 1) or a drainage swale combined with a bioretention facility (Option 2) between Mission Boulevard and Carlson Park. Depending on the Drainage Management Area Options, either five or six drainage management areas have been established in the project area as shown in Table N.

Table N: Drainage Management Areas (DMAs)

Location		Area	
		Option 1	Option 2
DMA-A	Western half of bridge and approach	2.07	2.07
DMA-B	Eastern half of bridge and approach	2.18	2.04
DMA-C	Northwest quadrant of bridge	0.29	0.29
DMA-D	Southwest quadrant of bridge	0.63	0.63
DMA-E	Northeast quadrant of bridge	1.10	1.10
DMA-F (Option 2 only)	Southwest quadrant of bridge	n/a	0.07

Source: Figure 3 (sheets 1 and 2), *Water Quality Assessment Report, Mission Boulevard Bridge Replacement at Santa Ana River*, LSA, January 2017.

Under either Option 1 or 2, DMA-C (0.29 acre), DMA-D (0.63 acre), DMA-E (1.10 acres), and DMA-F (0.07 acre for Option 2) are considered self-treating areas. Runoff from these areas does not comingle with runoff from the impervious surfaces within the project footprint (i.e., the roadway) and is therefore not required to be treated by BMPs. As such, runoff from the self-treating areas drains directly off site and does not drain to the proposed BMPs.

DMA-A encompasses the area from the high point of the bridge to the approach of Crestmore Road along Mission Boulevard (approximately 2.07 acres). DMA-A would not be treated with a BMP because of the lack of available right-of-way beyond the proposed slopes and retaining walls north and south of Mission Boulevard. Runoff from DMA-B, either 2.18 acres (Option 1) or 2.04 acres (Option 2), would be treated by the LID BMPs. Under Option 1, 4,142.6 cubic feet of runoff would be treated by the BMP during the design storm. For Option 2, 4,108.3 cubic feet of runoff would be treated. Flow from the roadway would be conveyed to the BMPs either as pipe flow, overside drains, or sheet flow (Options 1 and 2) or channel flow (Option 2).

The LID BMPs would treat runoff from a drainage area of 2.18 acres and 2.04 acres for Option 1 and Option 2, respectively; therefore, the LID BMPs would treat runoff from 100 percent of the new impervious surface area (1.27 acres) and a portion of the existing impervious surface area. Source Control BMPs include, but are not limited to, irrigation system and landscape maintenance,

sweeping of transportation surfaces adjoining curb and gutter, drainage facility inspection and maintenance, MS4 stenciling and signage, landscape and irrigation system design, and protection of slopes and channels. The Source Control and LID BMPs would target pollutants of concern from the operation of transportation facilities. With the implementation of Mitigation Measures HWQ-3 and the appropriate permit requirements, potential impacts related to storm water runoff would be reduced to a less than significant level.

e) Less than Significant with Mitigation Incorporated. As previously stated (Checklist Response 17.d), the project has the potential to affect water quality in the project area. The implementation of required BMPS, standard practices, and measures detailed in Mitigation Measures HWQ-3 and HWQ-3 would avoid or minimize potential violations of water quality or waste discharge standards, thereby reducing potential impacts to a less than significant level.

Mitigation

HWQ-1 **Construction General Permit.** Prior to commencement of construction activities, the proposed project shall obtain coverage under the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit [CGP]) Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent (NOI) for coverage under the permit to the State Water Resources Control Board via the Stormwater Multiple Application and Report Tracking System (SMARTS). Construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained from SMARTS. The project shall comply with the Risk Level 2 requirements of the CGP. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to affect water quality. The SWPPP shall identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) to ensure that the potential for soil erosion, sedimentation, and spills is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of groundwater dewatering activities, a Notice of Termination (NOT) shall be via SMARTS.

HWQ-2 **De Minimus Permit.** During groundwater dewatering activities, the construction Contractor shall 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. R8-2015-0004, NPDES No. CAG998001, or any subsequent permit. The County shall submit a Notice of Intent (NOI) to the Santa Ana Regional Water Quality Control Board at least 45 days before the start of groundwater dewatering activities. The construction Contractor shall be required to comply with discharge specifications, receiving water limitations, and monitoring and reporting requirements detailed in this permit for any discharge of groundwater and non-storm

water construction dewatering waste to surface waters that pose an insignificant threat to water quality in the Santa Ana Region.

HWQ-3 **MS4 Permit.** The proposed project shall comply with the provisions of the Riverside County NPDES Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District (RCFC&WCD) the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region, Order No. R8-2010-0033, NPDES Permit No. CAS618033 or any subsequent permit. The NPDES Permit shall include implementation of Low Impact Development (LID) and Source Control BMPs to the maximum extent practicable. LID BMPs for the proposed project include, but are not limited to, a bioretention facility and/or a drainage swale. Additionally a final project-specific LID report shall be prepared during final design. Source Control BMPs include, but are not limited to, irrigation system and landscape maintenance, sweeping of transportation surfaces adjoining curb and gutter, drainage facility inspection and maintenance, MS4 stenciling and signage, landscape and irrigation system design, and protection of slopes and channels.

Monitoring:

Monitoring for Mitigation Measures HWQ-1 through HWQ-3 shall be subject to the timing detailed in the project-specific Mitigation Monitoring and Reporting Plan (Appendix M).

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. Floodplains Degree of Suitability in 100-Year Floodplains. As indicated below, the appropriate Degree of Suitability has been checked. NA=Not Applicable ☒ U=Generally Unsuitable ☐ R=Restricted ☐	☐	☐	☒	☐
a. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				
b. Result in changes in absorption rates or the rate and amount of surface runoff?	☐	☐	☐	☒
c. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Dam Inundation Area)?	☐	☐	☐	☒
d. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
e. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
f. Result in changes in the amount of surface water in any water body?	☐	☐	☒	☐
g. Expose people or structures to inundation by seiche, tsunami or mudflow?	☐	☐	☐	☒

Source: *Summary Floodplain Encroachment Report,* LSA, October 2016 (Appendix I); Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C0710G, August 28, 2008; and Figure 5.8.2, *City of Riverside General Plan and Supporting Documents EIR,* November 2007; and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C0710G, August 28, 2008.

Findings of Fact:

a) Less than Significant Impact. Two features were identified in the Jurisdictional Delineation prepared for the project, the Santa Ana River itself and Drainage A. The Santa Ana River within the study area is broad with a low gradient. The river is leveed and contains a low-flow, open water channel along the easterly levee. The Santa Ana River is considered perennial within the study area. Drainage A is an ephemeral, non-natural earthen drainage that shows evidence of an OHWM and streambed and banks. Drainage A conveys localized runoff and enters the southwesterly portion of the BSA. This drainage runs southwesterly for approximately 200 feet between Carlson Park and the Santa Ana River Trail, and then flows under the Santa Ana River Trail via an approximately 3-foot diameter corrugated metal pipe and into the Santa Ana River.

The proposed project would result in a permanent increase in impervious surface area of approximately 1.27 acres. As detailed in the response to Checklist Question 17(a), encroachment from the construction of piers would result in a minimal increase of the 100-year water surface elevation of the floodplain. This minimal increase would not pose a risk to existing levees or areas protected by levees. The maximum increase in water surface elevation of the cast-in-place alternative would be 0.02 foot for a 50-year storm and 0.04 foot for a 100-year storm. The maximum increase in water surface elevation for the precast, pre-stressed alterative would be 0.06 foot for a 50-year storm and 0.13 foot for a 100-year storm. No significant change in the drainage pattern resulting in on- or off-site flooding would result from development of the proposed project.

b) No Impact. As stated in the response to Checklist Question 17(a, d), the project would not result in a significant increase in impervious surfaces. Therefore, it is not expected to change absorption rates or the rate and amount of surface runoff. Impacts are less than significant.

c) No Impact. Within the project footprint, both sides of the Santa Ana River are designated Zone X, areas protected by levees from a 1 percent annual chance of flood. A small sliver along the southeastern portion of the project footprint is designated Zone X, areas outside the 0.2 percent annual chance of flood. Furthermore, neither the City of Riverside nor the City of Jurupa Valley identifies the project area to be within a dam inundation area.

The project consists of the replacement of the existing bridge with a slightly wider and higher structure. Improvements to the Santa Ana River and the uncertified levees are not anticipated except to restore the channel and levee berms to pre-existing conditions after construction. The project does not include the development of habitable structures that would increase the number or frequency of persons within a flood hazard area. No impact resulting from flooding or levee failure would occur.

d) No Impact. The proposed project does not include a housing component; therefore, no impact related to housing within a 100-year flood hazard area would occur.

e) Less than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C0710G, the project area is located within the following flood zones:

- **Zone AE Floodway:** The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1 percent annual chance flood can be carried without substantial increases in flood heights. Within the project area, the Santa Ana River is designated as a Zone AE Floodway.
- **Zone X (Other Flood Areas):** Areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths less than 1 foot or with drainage area less than one square mile; and areas protected by levees from 1 percent annual chance flood. Within the project areas, areas outside of the Santa Ana River are designated as Zone X (Other Flood Areas).

As detailed in the project-specific Summary Floodplain Encroachment Report (SFER) (Appendix I), encroachment from the construction of piers for the bridge replacement would result in a minimal

increase of the 100-year water surface elevation of the floodplain. This minimal increase would not pose a risk to existing levees or areas protected by levees. The maximum increase in water surface elevation related to the cast-in-place alternative would be 0.02 foot for a 50-year storm and 0.04 foot for a 100-year storm. The maximum increase in water surface elevation for the precast, pre-stressed alterative would be 0.06 foot for a 50-year storm and 0.13 foot for a 100-year storm.

A "significant encroachment"[1] is a highway encroachment that would result in (1) a significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation, (2) a significant risk, or (3) a significant adverse impact on natural and beneficial floodplain values. Per this definition, the project does not constitute a significant floodplain encroachment due to the following:

- Mission Boulevard is designated by the City of Riverside as an evacuation route. Construction will occur in stages to allow for continued traffic flow during construction. Stage 1 construction will build the northerly half of the new bridge along the north edge of the existing structure while traffic is maintained on the existing bridge. Stage 2 will shift the traffic to the newly constructed bridge, while the existing bridge is demolished and the remainder of the new bridge is constructed to the south. A minimum of two travel lanes will be maintained at all times during construction.
- The proposed project would not change the capacity of the Santa Ana River to carry or store water. The proposed project would cause a minimal increase in water surface elevation but would also increase the available freeboard. The profile of the replacement bridge would be raised to accommodate current standards for the roadway design. At mid-span, the bridge profile and, as a result, the available freeboard (i.e., the distance between the flood elevation and the top of the channel) will be approximately 4 to 6 feet higher than existing conditions. After project construction, the 100-year flood would continue to be contained within the Santa Ana River and the bridge would not be overtopped during the 100-year storm event; therefore, no significant risk to life or property from flooding would occur.

The minimal increase in water surface elevation would not result in a significant adverse impact on the natural and beneficial floodplain values, would not result in any significant change in flood risks or damage, and does not have significant potential for interruption or termination of emergency service or emergency routes.

f) Less than Significant Impact. The proposed project would result in a permanent increase in impervious surface area of approximately 1.27 acres. The existing catch basins along Mission Boulevard near the bridge approaches will be removed and replaced. A ditch and drainage inlet system will be constructed at the top of retaining walls along the northern and southern rights-of-way between Crestmore Road and the new bridge and along the northern right-of-way between the new bridge and Scout Lane. The ditch and drain system will collect and convey runoff originating from the slope that drains toward the walls. New Caltrans Type D deck drains will capture runoff along the new bridge and convey it to the Santa Ana River.

[1] 23 CFR, Section 650.105(q).

While a slight increase in impervious surfaces would result from the replacement of the existing bridge, the existing drainage pattern in the project area will be maintained. The construction of the proposed bridge replacement project and associated features would not significantly change the amount of surface water in any water body.

g) No Impact. The project site is approximately 39 miles from the Pacific Ocean at an elevation of approximately 760 feet amsl. Due to the site's location and elevation, no tsunami risk is present within the project site. A seiche is an oscillatory wave that develops in an enclosed or partially enclosed body of water, such as a bay or lake, in response to seismic shaking from an earthquake. The size of the generated wave depends on the intensity and frequency of shaking and the size and shape of the confined body of water. The nearest body of water to the site is Lake Evans, which is located approximately 0.6 mile southwest of the site. A levee is located between Lake Evans and the current (and proposed) bridge structures; therefore, no significant impact resulting from a seiche event is likely.

Mitigation: No mitigation measures are required.

Monitoring: No monitoring measures are required.

Land Use/Planning *Would the project*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. Land Use				
a. Result in a substantial alteration of the present or planned land use of an area?	☐	☐	☐	☒
b. Affect land use within a city sphere of influence and/or within adjacent city or county boundaries?	☐	☐	☐	☒

Source: *City of Riverside Zoning Map*; *City of Riverside Zoning Code*, Chapter 19.140; *City of Jurupa Valley Zoning Map*; and *City of Riverside Municipal Code*, Chapters 17.72, 17.92 and 17.160.

Findings of Fact:

a) No Impact. Existing land uses in the project area include mobile home residences, vacant land, a park, and trails as detailed below:

- **North of Mission Boulevard, between Crestmore Road and Santa Ana River:** Land use in this area includes vacant land.
- **South of Mission Boulevard, between Crestmore Road and Santa Ana River:** Land uses in this area include residences at the Old Plantation Mobile Home Park and vacant land.
- **North of Mission Boulevard, east of Santa Ana River:** Land uses in this area include the Santa Ana River Trail and City of Riverside-Owned Passive Recreation Area. The Santa Ana River Trail is a paved 50.3-mile long trail that extends across San Bernardino, Riverside, and Orange Counties. It is 12 feet wide with a yellow-lined center divide for two-way traffic. The trail is used by both pedestrians and bicyclists. The City of Riverside-Owned Passive Recreation Area is an approximately 90-acre park featuring natural landscape and walking trails. It is directly north of Mission Inn Avenue on the east side of the Santa Ana River. Fairmount Park Trail is a paved path from Fairmount Park, north of the project area, which connects to the Santa Ana River Trail.
- **South of Mission Boulevard, east of Santa Ana River:** Land uses in this area include Carlson Park and Mt. Rubidoux Park and Trail. Carlson Park is a dog park offering a gated area landscaped with grass and trees. Buena Vista Drive and Park, City of Riverside Landmark #14, is completely within public right-of-way and partially within the project area. It includes the east towers of the old Rubidoux Bridge; the St. Francis Shrine/waterfall (now defunct); a drinking fountain; both sides of the historic alignment of Buena Vista Drive including raincross streetlights and balustrades, terraced stone walls, walkways, and concrete railings; Carlson Park; and the Buena Vista Bridge over Mission Boulevard (Mission Inn Avenue).

The project consists of the replacement of the existing Mission Boulevard Bridge over the Santa Ana River and the construction of associated roadway, drainage, and related improvements. The project does not require the acquisition of any right-of-way and would not adversely change the location, nature, function or use of any adjacent property. Impacts related to the permanent and temporary impacts to Carlson Park, the Santa Ana River Trail, and City of Riverside-owned passive recreation

area are detailed in the response to Checklist Questions 29(a-b) and have been identified as less than significant.

b) No Impact. The project area is located within the jurisdiction of the Cities of Riverside and Jurupa Valley. The proposed project site is not located within the Sphere of Influence (SOI) of any city; therefore, no impact would occur.

Mitigation: No mitigation measures are required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
20. Planning				
a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigation an environmental effect?	☐	☐	☐	☒
b. Disrupt or divide the physical arrangement of an established community.	☐	☐	☐	☒

Source: *City of Riverside Zoning Map*; *City of Riverside Zoning Code, Chapter 19.140*; *City of Jurupa Valley Zoning Map*; *City of Riverside Municipal Code, Chapters 17.72, 17.92* and *17.160*; Figure LU-10, *City of Riverside General Plan*, Amended November 2012; and Figure 2-5, *City of Jurupa Valley Draft General Plan*, 2017.

Findings of Fact:

a) No Impact. The project area is within the Cities of Riverside and Jurupa Valley. The portion of the project area within the City of Riverside is zoned PF (Public Facilities).[1] The portion of the project area located within the City of Jurupa Valley is zoned W-1 (Watercourse, watershed or conservation area), R-VC (Rubidoux Commercial Village), and C-1/C-P (General Commercial).[2] The project does not require the acquisition of any right-of-way. The existing bridge is a public feature and, as such, is a "permitted use." The replacement of an existing public facility with a structure of similar use at the same location is similarly permitted. General Plan land use designations in the City of Riverside include Public Park (P) south of Mission Boulevard and Open Space (OS/Natural) north of the roadway. In the City of Jurupa Valley, the General Plan land use designations include Water (OS-W), Very High Density Residential (VHDR), and Commercial Retail (CR). The project area is not located within an adopted Specific Plan Area.

The project does not include any feature or component requiring a General Plan Amendment or Zone Change. As the proposed project entails the replacement of an existing structure within an existing right-of-way, it would not be incompatible or inconsistent with existing zoning or General Plan designation; therefore, no impact would occur.

b) No Impact. The bridge replacement project would continue to provide access over the Santa Ana River between the Cities of Riverside and Jurupa Valley. Two, three, or four lanes of traffic with pedestrian access will remain open across the bridge. Construction will occur in stages to allow for continued traffic flow during construction. Stage 1 of the project will construct the northerly half of the new bridge along the north edge of the existing structure while traffic is maintained on the

[1] The Public Facilities Zone (PF) zone is established to create and preserve areas for official and public uses of property and related activities.

[2] https://www.municode.com/library/ca/riverside_county/codes/code_of_ordinances?nodeId=TIT17ZO_CH17.72GECOZO, site accessed May 18, 2017.

existing bridge. Stage 2 will shift the traffic to the newly constructed bridge, while the existing bridge is demolished and the remainder of the new bridge is constructed to the south. If more than three lanes of traffic are required during construction, a third stage may be added to complete the proposed project. During construction, a few short-term (partial day) closures may be required.

As the proposed project would continue the current connection between the Cities of Riverside and Jurupa Valley, no disruption or division of an existing community would occur.

Mitigation: No mitigation measures are required.

Monitoring: No monitoring measures are required.

Mineral Resources *Would the project:*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
21. Mineral Resources				
a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Source: Figure OS-1, *City of Riverside General Plan*, Amended November 2012; and Figure 4-16, *City of Jurupa Valley General Plan*, 2017.

Findings of Fact:

a–b) No Impact. The California Surface Mining and Reclamation Act of 1975 (SMARA) requires cities to incorporate mapped mineral resources designations approved by the State into their General Plans. SMARA was enacted to limit new development in areas with significant mineral deposits. In the City of Riverside, the area generally located between Market Street and Mission Boulevard between the Santa Ana River and Lake Evans is a State-classified mineral resource zone (MRZ-2). The City of Jurupa Valley has similarly designated portions of the project area as lying within an MRZ-2 designation. The MRZ-2 designation is assigned to areas where adequate information indicates that significant mineral deposits are present or there is a high likelihood for their presence and development should be controlled.

While the General Plans of both Cities identify the MRZ-2 in the project area, the zoning and General Plan land use designations of both Cities do not recognize mineral extraction as an appropriate use in the project area. No existing or ongoing mineral extraction or production activity currently occurs in the project area. Existing urban and recreational uses, as well as biological resources issues, render mineral extraction operations in this area infeasible. Therefore, no impact would occur.

Mitigation: No mitigation measures are required.

Monitoring: No monitoring measures are required.

Noise *Would the project result in:*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
22. Noise Effects on or by the Project				
a. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
b. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
c. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
d. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Source(s): Figure N-8, *City of Riverside General Plan*, Amended November 2012; Figure 7-15, *City of Jurupa Valley Draft General Plan*, 2017; Figures F-1 and RI-1, *Riverside County Airport Land Use Compatibility Plan*, Volumes 1 and 2, October 14, 2004; *City of Riverside Municipal Code*, *City of Jurupa Valley Municipal Code*; and *Noise Study Report Mission Boulevard Bridge Replacement at Santa Ana River*, LSA, June 2017 (Appendix J).

Findings of Fact:

a) Less than Significant Impact. A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the project. Land uses in the project area were categorized by land use type, activity category, and frequency of human use. As noise abatement is only appropriate for areas of frequent human use that would benefit from a lowered noise level, the noise impact analysis focused on locations with defined outdoor activity areas, such as residential back yards, vacant lands, and common-use areas outside of commercial buildings. The bridge (either the existing or replacement) is not itself considered a noise-sensitive use.

The primary source of noise in the project area is traffic on Mission Boulevard and Crestmore Road. Short-term (20-minute) noise measurements were conducted to document existing noise levels at five representative sensitive receptor locations within the project area. Existing ambient noise levels in the project range from 51.5 to 61.4 dBA L_{eq}. The results of short-term monitoring are detailed in Table O. Long-term (24-hour) noise monitoring identified noise levels in the project area ranging from 48 dBA L_{eq} (2:00 a.m.) to 60 dBA L_{eq} (4:00 and 5:00 p.m.). The General Plan Noise Elements of

both Cities identify "normally acceptable" noise levels of 60 dBA and 70 dBA CNEL[1] for residential and park/recreation uses, respectively.

Table O: Short-Term Ambient Noise Monitoring Results

Monitor No.	Date	Start Time	Duration	dBA L_{eq}	Location Description	Noise Sources	Comments
ST-1	7/13/2016	12:00 PM	20 minutes	53.5	Vacant Land. On the northeastern corner of Mission Boulevard/ Crestmore Road. Approximately 260 feet from the edge of Mission Boulevard.	Traffic on Mission Boulevard and Crestmore Road	No walls or barriers in this area.
ST-2	7/13/2016	11:15 AM	20 minutes	55.1	3830 Crestmore Road. At a parking lot in the mobile home park between two mobile homes that are closest to Mission Boulevard.	Traffic on Mission Boulevard and Crestmore Road	No effective barriers. Elevation of the mobile home units is much lower than Mission Boulevard.
ST-3	7/13/2016	11:15 AM	20 minutes	52.6[1]	3830 Crestmore Road. Next to a mobile home unit that is the fourth unit from Mission Boulevard for the units that parallel the Santa Ana River.	Traffic on Mission Boulevard and Crestmore Road	No effective barriers.
ST-4	7/13/2016	12:55 PM	20 minutes	59.1	At the trailhead at the northeastern corner of Mission Boulevard and the Santa Ana River.	Traffic on Mission Boulevard	No effective barriers.
ST-5	7/13/2016	12:55 PM	20 minutes	61.4	At a bench that is closest to Mission Boulevard in Carlson Dog Park.	Traffic on Mission Boulevard	No effective barriers.

Source: Table 6-1, Noise Study Report Mission Boulevard Bridge Replacement at Santa Ana River, LSA, June 2017.

[1] The L_{eq} level was calculated based on the difference between the L_{eq} level and the L_{50} level at ST-2 due to intermittent high noise levels that occurred at this location.

dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels

Under CEQA, the baseline noise level is compared to the Build noise level. The assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

The project will not result in a new noise-generating source. Traffic traveling along Mission Boulevard is a current condition and will continue into the future (with or without the project). The proposed replacement bridge will accommodate existing and future traffic through the project area.

[1] CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m., and a 5 dB penalty applied to the A-weighted sound levels occurring during the evening hours between 7:00 p.m. and 10:00 p.m.

The modeling of future roadway noise was conducted to determine the future traffic noise impacts at the 25 identified receptors. The existing and future 2042 traffic noise levels at all 25 receptor locations were modeled using the p.m. peak-hour traffic volumes identified in *Traffic Operational Analysis* (Kimley-Horn and Associates, Inc., August 2016). The existing p.m. peak-hour traffic volumes were modeled with existing roadway conditions. The p.m. peak-hour traffic volumes were selected over the a.m. peak-hour traffic volumes because the long-term noise level measurements show that peak traffic noise occurs during the p.m. period. The results of the existing traffic noise modeling are identified in Table P.

Table P: Predicted Future Noise

Receptor No.	Location	Land Use	Existing Noise Level, dBA $L_{eq}(h)$	Future (2042) Noise Level			
				No Build	Build	Change between Build and No Build Conditions	Change between Build and Existing Conditions
R-1	Mission Boulevard	Vacant Land	60	63	63	0	3
R-2	Crestmore Road	Vacant Land	63	65	64	-1	1
R-3	Crestmore Road	Residential	61	63	61	-2	0
R-4	Crestmore Road	Residential	59	61	60	-1	1
R-5	Crestmore Road	Residential	59	61	60	-1	1
R-6	Crestmore Road	Residential	58	60	59	-1	1
R-7	Crestmore Road	Residential	58	60	59	-1	1
R-8	Crestmore Road	Residential	57	59	59	0	2
R-9	Crestmore Road	Residential	57	59	59	0	2
R-10	Crestmore Road	Residential	57	59	59	0	2
R-11	Crestmore Road	Residential	57	59	59	0	2
R-12	Crestmore Road	Residential	59	62	62	0	3
R-13	Crestmore Road	Residential	57	60	60	0	3
R-14	Crestmore Road	Residential	56	59	58	-1	2
R-15	Crestmore Road	Residential	58	61	61	0	3
R-16	Crestmore Road	Residential	57	59	59	0	2
R-17	Crestmore Road	Residential	56	58	58	0	2
R-18	Crestmore Road	Residential	57	60	60	0	3
R-19	Crestmore Road	Residential	55	58	58	0	3
R-20	Crestmore Road	Residential	56	59	59	0	3
R-21	Mission Boulevard	Trail	63	66	64	-2	1
R-22	Mission Boulevard	Park	66	68	66	-2	0
R-23	Mission Boulevard	Park	64	66	65	-1	1
R-24	Mission Boulevard	Trail	64	66	65	-1	1
R-25	Mission Boulevard	Trail	60	63	63	0	3

Source: from Table B-1, Noise Study Report Mission Boulevard Bridge at Santa Ana River, LSA, June 2017.
dB = decibel(s)
dBA = A-weighted decibel(s)
$L_{eq(h)}$ = 1-hour A-weighted equivalent continuous sound level

The *State CEQA Guidelines* do not define the levels at which temporary and permanent increases in ambient noise are considered "substantial." A noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived

as a doubling of loudness. Based on this information, the following generally acceptable standards would apply to the construction and operational activities of the proposed project:

- Less than 3 dBA difference in noise levels would not be discernible; therefore, the difference would not be significant;
- Between 3 dBA and 5 dBA would be noticeable, but not significant, if noise levels were to remain below the noise level standards recommended by the State Model Community Noise Ordinance; and
- A noise level difference of 5 dBA or greater would be readily noticeable and therefore considered significant.

Future noise levels at the model receptors range from 58 to 68 dBA. The difference between the existing condition ranges and the "Build" condition ranges from 0 to 3 dBA. As stated in the traffic study, increase in traffic will occur with or without the project. This increase in traffic will result in a corresponding increase in traffic noise. The change in noise levels between the "No Build" and "Build" condition ranges from -2 to 0.

An increase in traffic noise would occur in the project area regardless whether or not construction of the replacement occurred. As detailed in Table P, changes in traffic noise levels resulting from the proposed project would reach 3 dBA, the threshold for human perception in the outdoor environment. The project itself would not include any new noise source because changes in traffic noise level would not be perceptible to humans in an outdoor environment, no significant permanent noise impact would occur.

b) Less than Significant Impact. Short-term increases in noise would result from construction activity required during the term of the bridge replacement. Generally, noise from construction activities is exempt from local noise regulations. Section 7.35.020 of the City Riverside's Municipal Code limits construction activities to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and 8:00 a.m. and 5:00 p.m. on Saturdays. Construction–related noise is prohibited on Sundays and federal holidays.[1] The City of Jurupa Valley's Municipal Code, Section 11.10.020(b), exempts noise generated from capital improvement projects of a governmental agency. To be conservative, Section 11.10.020(i) of the City's Municipal Code should limit construction activities located within one-quarter of a mile from an inhabited dwelling to between the hours of 6:00 a.m. and 6:00 p.m. during the months of June through September and between the hours of 7:00 a.m. and 6:00 p.m. during the months of October through May.

Adherence to the applicable provisions of the Municipal Code(s) governing construction noise would ensure impacts related to this issue remain less than significant.

[1] The City of Riverside's Noise Ordinance (Section 7.35.020.G, Exemptions) states that "... Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City as required; and provided said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday" are exempt from the noise level limits of the Municipal Code. Construction activities would occur in accordance with the days and times allowed as described in Section 7.35.020.G of the City's Noise Ordinance; therefore, no significant construction noise impact would occur.

c) Less than Significant Impact. As stated in the response to Checklist Question 22(b), construction activities conducted during the time restrictions stated in the Municipal Codes of the Cities of Riverside and Jurupa Valley are exempt from regulation.

The Cities of Riverside and Jurupa Valley have both identified a "normally acceptable" noise levels for residential and park/recreation uses to be 60 and 70 dBA CNEL, respectively. "Conditionally acceptable" noise levels for residential uses may approach 65 dBA CNEL and 75 dBA CNEL for park/recreation uses. Future noise levels at the model receptors range from 58 to 68 dBA. The project includes the replacement of an existing bridge and does not include any feature or use that would generate noise upon completion of construction activities. The replacement bridge will accommodate future traffic, increases of which would occur with or without the project. As stated in the response to Checklist Question 22a, changes in traffic noise levels resulting from the proposed project would reach 3 dBA, the threshold for human perception in the outdoor environment. Because the project itself would not include any new noise source, no exceedance of "normally acceptable" noise levels would result from use of the replacement bridge; therefore, no significant impact would occur.

d) Less than Significant Impact. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment) and occasional traffic on rough roads. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Problems with both groundborne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet. Typically, pile driving and similar activities have the greatest potential to generate vibration during project construction.

The nearest residential structure is approximately 230 feet from where pile driving necessary for falsework construction will occur. At this distance, the vibration level at the nearest residence will be 0.058 PPV (in/sec).[1,2] The threshold for damage in residential structures ranges from 0.2 to 0.3 PPV (in/sec). Vibration from proposed pile driving activities does not exceed the threshold for structural damage.

The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of perception for humans, which is approximately 65 VdB.[3] Annoyance from vibration may occur when the vibration exceeds the threshold of perception by 10 dB or less. At the nearest residence, the vibration level is 84 VdB, which would be perceptible to local residence. While the vibration level from project-related pile driving operations may result in a localized community

1 Peak Particle Velocity (PPV).
2 *Noise Analysis for Pile Driving Effects to Least Bell's Vireo*, LSA, November 20,2017.
3 Section 7.2.1, *Federal Transit Administration Guidance Manual for Transit Noise and Vibration Impact Assessment*, 2006.

annoyance, this necessary activity would be of limited duration (30 days) during daytime hours only; therefore, no long-term significant impact would occur.

e–f) No Impact. The nearest airport to the project area is Flabob Airport, located approximately 0.5 mile east of the project area. Riverside Municipal Airport is approximately 3.5 miles southeast of the project area. Aircraft utilizing Flabob Airport include single-engine airplanes, twin-engine piston and turboprop airplanes, and sail planes. Noise from the aircraft generates a relatively minor contribution to the overall noise environment. Approximately 75 outbound flights from this airport occur each day and may reach up to approximately 120 per day in the future.[1] As detailed in the Riverside County Airport Land Use Compatibility Plan, the existing 55 dBA Community Noise Equivalent Level (CNEL) sound contour for either airport does not extend into the project area.[2]

The proposed project entails the replacement of the existing Mission Boulevard Bridge over the Santa Ana River and does not include the development of structures or uses where people would be exposed to elevated airport-related noise. No impact would result from the implementation of the proposed project.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

1 Section 4.12 (Noise), Jurupa General Plan Draft Environmental Impact Report, April 2017.
2 Riverside County Airport Land Use Compatibility Plan, Volume 2, W3 Background Data Flabob Airport and Environs, October 2004.

Population and Housing *Would the project:*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
23. Housing				
a. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
b. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

Source: Site visit; and *Riverside County General Plan* Housing Element.

Findings of Fact:

a–b) No Impact. The project entails the replacement of the existing Mission Boulevard Bridge over the Santa Ana River. The proposed project will be constructed entirely within the existing right-of-way. No residential structure or residents will be displaced during construction of operation of the replacement bridge; therefore, no impact would occur.

c) No Impact. The project does not include a residential component; therefore, no direct increase in population would occur. The proposed replacement bridge will serve the same function as the existing bridge and will not extend roadways into area(s) spurring new development; therefore, no indirect population increase would occur. In the absence of any direct or indirect population increase, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
24. Fire Services	☐	☐	☐	☒

Source: Section 5.13 - Public Services, *City of Riverside General Plan*, Certified November 2007; Figure 4.8.5 - Wildfire Severity Zones, *City of Jurupa Valley General Plan*, April 2017; and Section 4.14 - Public Services and Facilities, *City of Jurupa Valley General Plan*, April 2017.

Findings of Fact:

No Impact. The project site receives fire protection services from the City of Riverside Fire Department and the County of Riverside Fire Department under a mutual aid agreement with the City of Jurupa Valley. The nearest fire station to the project site is Riverside County Fire Department Station 38, located at 5721 Mission Boulevard, Jurupa Valley, approximately 2 miles northwest of the project site.

The City of Riverside does not include the project in a designated fire hazard area. According to Figure 4.8.5 - Wildfire Severity Zones of the City of Jurupa Valley General Plan, the fire hazard rating of the project site is "High." However, the proposed project does not entail occupied buildings and the replacement bridge, roadway, and bridge features would be constructed from non-combustible materials. Additionally, the replacement bridge would be non-capacity increasing; it would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. Construction will occur in stages to allow for continued traffic flow during construction. Stage 1 construction will build the northerly half of the new bridge along the north edge of the existing structure while traffic is maintained on the existing bridge. Stage 2 will shift the traffic to the newly constructed bridge, while the existing bridge is demolished and the remainder of the new bridge is constructed to the south. A minimum of two travel lanes will be maintained at all times during construction.

Finally, the project does not include a residential component, so no direct increase in population would occur. The proposed replacement bridge will serve the same, albeit improved, function as the existing bridge, so no increase in the demand for fire services is anticipated. The development of the proposed uses would not cause fire staffing, facilities, or equipment to operate at a deficient level of service, nor would it require the construction/upgrade of additional fire protection facilities. In the absence of any direct or indirect population increase, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
25. Police/Sheriff Services	☐	☐	☐	☒

Source: Section 5.13 - Public Services, *City of Riverside General Plan*, Certified November 2007; and Section 4.14 - Public Services and Facilities, *City of Jurupa Valley General Plan,* April 2017.

Findings of Fact:

No Impact. The project site receives police protection services from the City of Riverside Police Department and the Riverside County Sherriff's Department under a mutual aid agreement with the City of Jurupa Valley. The nearest police station to the project site is City of Riverside Police Department headquarters, located at 4102 Orange Street, approximately 1.5 miles southeast of the project site.

The proposed replacement bridge would be non-capacity increasing; it would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. The project does not entail occupied buildings, nor does it include any residential, commercial, or other business use. Therefore, the project is not expected to increase demand for police/sheriff services or cause police/sheriff staffing, facilities, or equipment to operate at a deficient level of service since no direct increase in population would occur. In the absence of any direct or indirect population increase, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
26. Schools	☐	☐	☐	☒

Source: Section 5.13 - Public Services, *City of Riverside General Plan*, Certified November 2007; and Section 4.14 - Public Services and Facilities, *City of Jurupa Valley General Plan*, April 2017.

Findings of Fact:

No Impact. The Riverside Unified School District (RUSD) and Jurupa Unified School District (JUSD) provide public education services to the project area. However, the project does not include a residential component and will not result in population growth that would affect the existing capacity of schools within either the RUSD or JUSD or require the construction/expansion of school facilities. The proposed replacement bridge would be non-capacity increasing; it would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. In the absence of any direct or indirect population increase, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
27. Libraries	☐	☐	☐	☒

Source: Section 5.13 - Public Services, *City of Riverside General Plan*, Certified November 2007; and Section 4.14 - Public Services and Facilities, *City of Jurupa Valley General Plan*, April 2017.

Findings of Fact:

No Impact. The project does not include a residential component and will not result in population growth directly or indirectly. The proposed replacement bridge would be non-capacity increasing; it would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. Because the project would not increase the local or regional population, it would not increase the demand for library services or necessitate the construction/ upgrade of existing library facilities. In the absence of any such demand, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
28. Health Services	☐	☐	☐	☒

Source: Section 5.13 - Public Services, *City of Riverside General Plan*, Certified November 2007; and Section 4.14 - Public Services and Facilities, *City of Jurupa Valley General Plan*, April 2017.

Findings of Fact:

No Impact. The project does not include any residential uses or result in any population increase that would generate additional demand for health services. No new/upgraded healthcare facilities would be necessary; therefore, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Recreation *Would the project:*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
29. Parks and Recreation				
a. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☒	☐	☐
b. Include the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Source: *Section 4(f) Evaluation and Preliminary De Minimis Finding Determination Mission Boulevard Bridge Replacement at Santa Ana River*, LSA, April 2017 (Appendix K).

Findings of Fact:

a) Less than Significant with Mitigation Incorporated. The proposed project will replace the existing Mission Boulevard Bridge. The existing bridge accommodates four lanes of vehicular traffic and includes a 5-foot, 2-inch-wide sidewalk on the south side, but it currently does not include a designated bicycle path or lane. The proposed project will accommodate four lanes of vehicular traffic with dedicated space for pedestrians and bicyclists in accordance with current federal, State, and applicable local geometric standards. There will be a 12-foot-wide multipurpose trail with barrier separation from vehicular traffic on the south side of the bridge in lieu of standard sidewalks on each side. Since no acquisition of additional right-of-way is required to replace the existing bridge, construction of the proposed 12-foot-wide multipurpose trail is encompassed in the project footprint of the overall bridge replacement. Additionally, since the project does not include a residential component that would directly or indirectly increase the local or regional population, no impacts would occur from construction of the proposed 12-foot-wide multipurpose trail beyond those identified and mitigated in this Initial Study for the bridge replacement itself.

Carlson Park is located south of Mission Boulevard, east of the Santa Ana River. The park is a dog park offering a gated area landscaped with grass and trees. In the east corner of the park, there is a fenced area featuring an agility course for dogs with ramps and jumping features. The metal fence on the perimeter of the park features public art of dog silhouettes. Off-street parking is located on the south side of the park. Temporary construction easements (TCE) would be required in Carlson Park for construction activities that include, but are not limited to, trenching for irrigation lines, utilities, and storm drain and the installation of the drainage BMPs along Mission Inn Avenue. All TCEs would be fenced during construction to prevent unauthorized access to work areas. The temporary fence would allow the parts of the dog park outside the TCEs to continue to operate during construction activities. The park entrance will be temporarily affected to provide permanent features such as Americans with Disabilities Act (ADA) compliant curb ramps and bicycle access features such as ramping, signing, and striping. Vehicular and pedestrian access at the park entrance on Mission Inn Avenue would be maintained throughout the duration of construction. Upon completion of work within the fenced area of the park, the ground and vegetation would be returned to pre-project conditions.

Permanent improvements in Carlson Park include the installation of a bioretention feature between the Mission Boulevard right-of-way and the fence line of the park. The area proposed for the bioretention feature is outside the fence line of the park in a grassy area. Within the fenced area of the park, permanent improvements on approximately 0.19 acre within Carlson Park include the installation of a bioretention facility with or without a drainage swale between Mission Boulevard and Carlson Park. The area proposed for the BMPs is north of and outside the Carlson Park fence line and is currently a grassy area; meanwhile, grading would be required up to 10 feet south of the existing fence. The proposed drainage system would preserve the overall drainage pattern, and most of the storm water runoff would continue to be discharged into the Santa Ana River. Mitigation Measures HWQ-1 through HWQ-3 detailed in Checklist Question 17 address potential project-related impacts to water quality.

The project includes improvements to the existing Santa Ana River Trail (SART), a paved 50.3 mile-long trail that extends across San Bernardino, Riverside, and Orange Counties, terminating at Border Beach between Costa Mesa and Huntington Beach. It is 12 feet wide with a yellow-lined center divide for two-way traffic. SART is used by both pedestrians and bicyclists. In the project area, SART crosses beneath Mission Boulevard on the east side of the Santa Ana River. The re-profiling of the trail will occur on an approximately 700-foot section of the SART.

Temporary full closures during construction would be required on a portion of the SART directly beneath the Mission Boulevard Bridge. TCEs would occupy approximately 480 linear feet of the trail. These closures would occur when construction activity in the vicinity of the trail would pose a safety concern to trail users. At these times, the trail will be temporarily detoured onto Scout Lane. Construction flagging will be provided at a temporary crossing at Mission Boulevard/Mission Inn Avenue. Trail users would continue along the north edge of Mission Inn Avenue and reenter the trail north of the construction area.

The proposed project would lower the SART in-place, up to approximately 2 feet, in the area underneath the proposed bridge to achieve the standard 10-foot vertical clearance between the bottom of the bridge and the trail. Construction of the lowered trail would be planned in stages to allow trail users to access the detours around the active construction area. The lowering of the SART would require re-profiling of the trail from the south side of the existing bridge to approximately 200 feet north of the bridge, where the trail intersects with the Fairmount Park Trail. Permanent project improvements would occur on approximately 400 linear feet of the SART, but it would maintain its connection to the remainder of the Class I (off-street) trail along the Santa Ana River and intersections with the Fairmount Park Trail and Carlson Park on the north and south sides of the proposed Mission Boulevard Bridge, respectively. Therefore, the re-profiled SART would be of similar design and have the same connectivity as the existing SART.

Permanent project improvements would occur in approximately 1.08 acres of the City of Riverside-Owned Passive Recreation Area wherein a limited area of grading would be required for construction of the proposed Mission Boulevard Bridge and a retaining wall. All construction within the City of Riverside-Owned Passive Recreation Area would be fenced temporarily to prevent unauthorized access to work areas. The Fairmount Park Trail would be north of the construction area and remain open during the construction period. When project construction is complete, the area would be revegetated. The grading area would be along the edge of the passive recreation

area. It would not affect the Fairmount Park Trail, which represents the main feature and attribute of the City of Riverside-Owned Passive Recreation Area. According to Figure 3.18 of the City of Jurupa Valley General Plan, a "Primary Equestrian Route" is located along the Santa Ana River. The equestrian route runs parallel to the west levee of the channel. While crossing under the bridge, most riders travel into the channel to get to the other side (south to north)[1]. During construction, access on the trail through the project area may be impacted to accommodate project activities. During these period(s) detours will be necessary.

Evaluation of the potential for proximity impacts concludes there would be increases in noise and dust levels that would be noticeable to park and trail users during construction-related activities. Although these impacts could potentially be considered a nuisance to patrons of Carlson Park, the SART, and/or City of Riverside-Owned Passive Recreation Area, they would be temporary in nature. Noise abatement is appropriate only for areas of frequent human use that would benefit from a lowered noise level, and users of these recreational facilities are subject to existing traffic noise from Mission Inn Avenue on a daily basis. Because these recreational facilities are adjacent to existing Mission Inn Avenue and the bridge over the Santa Ana River, patrons would experience noise effects similar to existing conditions. Portions of Carlson Park, the SART, and City of Riverside-Owned Passive Recreation Area would be temporarily inaccessible to patrons during construction. Mitigation Measures REC-1 through REC-4 are identified below to address the temporary construction activities that could adversely affect the activities, features, and/or attributes of Carlson Park and Riverside-Owned Passive Recreation Area, and Mitigation Measures REC-5 through REC-8 are identified below to address the temporary construction activities that could adversely affect the activities, features, and/or attributes of the SART. Potential short-term impacts related to fugitive dust would be substantially mitigated through implementation of standard SCAQMD Rule 403 measures (refer to the response to Checklist Question 5(b). With implementation of the described mitigation measures, impacts to neighborhood or regional parks or other recreational facilities would be less than significant.

b) Less than Significant Impact. The proposed project would not require additional right-of-way to replace the existing bridge. The replacement bridge would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. Additionally, the proposed project does not include a residential component, so no direct or indirect increase the local or regional population would occur. Therefore, there would not be an increase in use of existing neighborhood or regional parks or other recreational facilities above baseline conditions, and no substantial physical deterioration existing neighborhood or regional parks or other recreational facilities would occur or be accelerated.

Mitigation:

REC-1 **Temporary Construction Easements.** During final design, the County Project Engineer shall evaluate all proposed Temporary Construction Easements (TCEs) in Carlson Park and the City of Riverside-Owned Passive Recreation Area, and will identify opportunities

[1] Some riders may use the narrow pass at the abutment, while some may cross the roadway at Mission Boulevard.

to further reduce the sizes of those TCEs. All TCEs in Carlson Park and the City of Riverside-Owned Passive Recreation Area shall be shown on the project plans and specifications and shall include notes that the Construction Contractor cannot increase the sizes or change the locations of any of those areas without consultation with and approval by the County Project Engineer.

REC-2 **Access Restrictions.** Prior to commencement of construction, the County Project Engineer shall require the Construction Contractor to fence and gate all land in Carlson Park and the City of Riverside-Owned Passive Recreation Area used for Temporary Construction Easements (TCEs). The TCEs shall be appropriately signed to restrict access to those areas by park patrons. The County Project Engineer shall require the Construction Contractor to maintain the fencing throughout the time each TCE is used and to remove the fencing only after all construction activity in an area is completed, the TCE is no longer needed, and the land used for the TCEs is ready to be returned to the property owner.

REC-3 **Signing of Fenced Temporary Construction Easements.** Prior to commencement of construction, the County Project Engineer shall require the Construction Contractor to provide signing at each Temporary Construction Easement (TCE) explaining why the area is fenced and access to the TCE is restricted, the anticipated completion date of the use of the land for the TCE, and contact information (for both the County Project Engineer and the Construction Contractor) for the public to solicit further information regarding the TCE and the project.

REC-4 **Return of Land Used for Temporary Construction Easements to the Property Owners.** The County Project Engineer shall require the Construction Contractor to return the land used for each Temporary Construction Easement (TCE) in Carlson Park and the City of Riverside-Owned Passive Recreation Area to the City of Riverside in its original or better condition when construction in an area has been completed and the temporary TCE is no longer needed. The County Project Engineer shall require the Construction Contractor to coordinate the restoration of the affected land with the City of Riverside and the County Project Engineer.

REC-5 **Temporary Trail Closure Plan.** Prior to commencement of construction, the Construction Contractor shall develop a Trail and Pedestrian Facilities Temporary Closure Plan for addressing the short-term impacts to existing trails and sidewalks within the construction limits of the project. The Temporary Closure Plan will address the Santa Ana River Trail, equestrian route and sidewalks within the project limits.

Specifically, the Temporary Closure Plan shall address:

- Identification of trail and pedestrian facilities that will be closed temporarily during construction;
- Public awareness and notification plan, including public notices on sidewalks and trail detours/closures, contact information for the County Resident Engineer and the Construction Contractor, on-site signing, and other activities to inform the public about issues associated with the trail and sidewalks during project construction;
- Developing and implementing detours for closed trails and sidewalks;

- Phasing of trail and sidewalk closures to allow for effective detours to maintain connectivity of these facilities around the construction area;
- Coordinating the trail and sidewalk closures and detours with the local jurisdictions with authority over the sidewalks and trails;
- Criteria for identifying detour routes and facilities;
- Information signing for closures and detours;
- Requirements for compliance with the Americans with Disabilities Act during construction;
- Maintaining signing for closures and detours throughout the closure period and replacing lost or damaged signing; and
- Restoring trail and sidewalk facilities at the completion of project construction.

Prior to and during construction activities that shall require the temporary closure of a trail or sidewalk, the County Project Engineer will require the Construction Contractor to comply with and implement the procedures in the Temporary Closure Plan for the affected trail and sidewalk facilities.

REC-6 **Temporary Closures of Trails and Sidewalks.** Prior to any temporary closures of trails and/or sidewalks, the County Project Engineer shall obtain approval from the Directors of the City of Riverside Public Works Department and Riverside County Regional Park and Open Space Districts, or their representatives, to review the location and need for each trail and sidewalk closure. Detours for each closure will be developed in consultation with the City of Riverside Public Works and the County Regional Park and Open Space District Directors, or their representatives.

REC-7 **Signing for Alternative Trail Routes.** Prior to any temporary closures of trails and/or sidewalks, the County Project Engineer shall require the project Construction Contractor to develop detour signs, in consultation with the City's Department of Public Works Department and County Regional Park and Open Space District, directing trail users to alternative routes. Detour signage shall include the County Resident Engineer's contact information and inform trail users to contact the County Resident Engineer and/or the Construction Contractor regarding upcoming or active trail closures. Appropriate directional and informational signage will be provided by the Construction Contractor far enough away from the closure so that trail users will not have to backtrack to get to the detour route.

REC-8 **Restoration of Affected Trail Segments.** The County Project Engineer shall require the Construction Contractor to return trail segments closed temporarily during construction to their original, or better, condition after completion of construction, prior to their return to the County Regional Park and Open Space Districts. After project construction, the County Resident Engineer will document that access to and connectivity of all trails and sidewalks have been restored.

Monitoring:

Monitoring for Mitigation Measures REC-1 through REC-8 shall be subject to the timing detailed in the project-specific Mitigation Monitoring and Reporting Plan (Appendix M).

Transportation/Traffic *Would the project*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
30. Circulation				
a. Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒
e. Result in inadequate emergency access or access to nearby uses?	☐	☐	☒	☐
f. Conflict with adopted policies, plans or programs regarding public transit, bikeways or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	☐	☒

Source: *Traffic Operational Analysis, Mission Boulevard Bridge Replacement at Santa Ana River*, Kimberly-Horn and Associates, Inc., August 2016 (Appendix L); Section 5.15 - Transportation/Traffic, City of Riverside General Plan, certified November 2007; Section 4.16 - Transportation and Traffic, City of Jurupa Valley General Plan, April 2017; *Riverside County Airport Land Use Compatibility Plan, Volume 2*, October 14, 2004; Figures 3-3 and 6-1, *City of Riverside Bicycle Master Plan*, adopted May 22, 2007; and *Route 49 Map, Riverside Transit Agency*, May 2018.

Findings of Fact:

Since the proposed project would not increase capacity, would maintain the same number of traffic lanes as the existing bridge, and would not change traffic patterns dramatically but merely improve operations, the No Build Alternative's volumes were applied to the traffic model to predict traffic volumes for the Build scenario, which can be modified to include increased roadway width.

a–b) No Impact. The proposed project will replace the existing four-lane Mission Boulevard Bridge with a four lanes bridge to accommodate vehicular traffic and dedicated space for pedestrians and bicyclists. The proposed project will include two 12-foot lanes, two 14-foot lanes, two 8-foot shoulders, and a 4-foot median. A 12-foot multipurpose trail with barrier separation from vehicular traffic will be located along the south side of the bridge in lieu of standard sidewalks on each side.

The new bridge will be approximately 88 feet wide and 1,100 feet long. The southern edge of the new bridge deck is expected to remain at its current position. The northern edge will extend past the current location to accommodate standard shoulders and the multipurpose trail; however, acquisition of new right-of-way is not required.

The 2010 Highway Capacity Manual (HCM), published by the Transportation Research Board (TRB), establishes a system whereby highway facilities are rated for their ability to process traffic volumes. The terminology "Level of Service" (LOS) is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values. The Cities of Riverside and Jurupa Valley have established maximum volume capacities for various roadway segments based on daily traffic volume and type of arterial.

The LOS standards for the City of Riverside are as follows:

> "City of Riverside allows Level of Service (LOS) D to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. LOS C is to be maintained on all street intersections." Per Council Policy CCM-2.3, it is the City policy to "Maintain LOS D or better on Arterial Streets wherever possible. At key locations, such as City Arterials that are used by regional freeway bypass traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case basis."

The LOS standards for the City of Jurupa Valley[1] are as follows:

> "City LOS D is based on the Jurupa Valley General Plan Mobility Element and applies to all study area intersections. Therefore, any study intersection potentially operating at LOS E or F requires mitigation ... a high level of congestion or concern would be when one or both peak hours of an intersection is already at LOS E or F, or has LOS D in one peak hour and its contributing roadway segments are projected to be at LOS E or F by 2035. An intersection with a moderate level of concern would be one that is already at LOS D in one peak hour and one of its contributing roadways is expected to be above LOS C by 2035."

The following study scenarios were analyzed for the project:

- Existing Conditions;
- Opening Year 2022; and
- Future Year 2042.

Existing morning peak period (7:00 a.m. to 9:00 a.m.) and evening peak period (4:00 p.m. to 6:00 p.m.) turning movement counts were obtained for four study intersections, and 24-hour roadway volumes were obtained for four study roadway segments along Mission Boulevard and Mission Inn Avenue, as detailed in Table Q.

[1] At the time of the development of the project-specific *Traffic Operational Analysis* (Appendix L), the City of Jurupa Valley analyzed LOS based on roadway capacity targets published by the County of Riverside; however, the City of Jurupa Valley has since established its own LOS standards, which generally coincide with those published by the County of Riverside (i.e., LOS D or better).

Table Q: Summary of Intersection Operations – Existing Conditions

	Signalized Intersections[1]	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Mission Boulevard at Rubidoux Boulevard	45.4	D	**63.2**	**E**
2	Mission Boulevard at Crestmore Road	19.1	B	27.4	C
3	Mission Inn Avenue at Redwood Drive	28.7	C	53.5	D
4	Mission Inn Avenue at Market Street	24.7	C	27.8	C

Source: Table 1, *Traffic Operations Analysis Replacement of Mission Boulevard Bridge at Santa Ana River*, Kimley-Horn, May 2016.
[1] Intersection operation is expressed in average seconds of delay per vehicle during the peak hour.

A review of Table Q indicates that Mission Boulevard at Rubidoux Boulevard currently operates poorly with significant delay in the evening peak hour. The project-specific Traffic Operational Analysis (Appendix L) determined LOS for roadway segments along Mission Boulevard/Mission Inn Avenue by comparing the daily traffic volumes to the County's and City's roadway capacities per classification, as detailed in Table R, which shows all roadway segments currently operate with very low delay along the study corridor at LOS of B or better.

Table R: Summary of Roadway Segment Operations – Existing Conditions

Roadway	Segment Location	Roadway Classification	Capacity	ADT	LOS
Mission Boulevard	Rubidoux Boulevard to Crestmore Road	4-lane Arterial	35,900	19,150	A
	Crestmore Road to Redwood Drive (along bridge)	4-lane Arterial	35,900	21,978	B
	Redwood Drive to Market Street	Arterial (100')	33,000	10,973	A

The project's planned Opening Year is anticipated to be 2022. Opening Year 2022 intersection LOS for the a.m. and p.m. peak hours are summarized in Table S:

Table S: Summary of Intersection Operations – Opening Year 2022 Conditions

	Signalized Intersections[1]	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Mission Boulevard at Rubidoux Boulevard	48.9	D	**89.7**	**F**
2	Mission Boulevard at Crestmore Road	21.0	C	53.3	D
3	Mission Inn Avenue at Redwood Drive	38.6	D	**89.2**	**F**
4	Mission Inn Avenue at Market Street	28.9	C	30.7	C

Source: Table 4, *Traffic Operations Analysis Replacement of Mission Boulevard Bridge at Santa Ana River*, Kimley-Horn, May 2016.
[1] Intersection operation is expressed in average seconds of delay per vehicle during the peak hour.

A review of Table S indicates that the following intersections are forecast to operate poorly with significant delay in the evening peak hour:

- Mission Boulevard at Rubidoux Boulevard; and
- Mission Inn Avenue at Redwood Drive.

Table T summarizes opening Year 2022 roadway segment LOS for Average Daily Traffic volumes. Levels of service for roadway segments along Mission Boulevard/Mission Inn Avenue were

determined by comparing the daily traffic volumes to the County and City's roadway capacities per classification. As detailed in Table T, roadway segments along the study corridor will operate with good progression and only light congestion in Opening Year 2022.

Table T: Summary of Roadway Segment Operations – Opening Year 2022 Conditions

Roadway	Segment Location	Roadway Classification	Capacity	ADT	LOS
Mission Boulevard	Rubidoux Boulevard to Crestmore Road	4-lane Arterial	35,900	21,988	B
	Crestmore Road to Redwood Drive (along bridge)	4-lane Arterial	35,900	25,893	C
	Redwood Drive to Market Street	Arterial (100')	33,000	12,592	A

Source: Table 5, *Traffic Operations Analysis Replacement of Mission Boulevard Bridge at Santa Ana River*, Kimley-Horn, May 2016.

Table U presents the Future Year 2042 Conditions analysis results and LOS for the study intersections. The following study intersections will operate poorly with significant delay in Future Year 2042:

- Mission Boulevard at Rubidoux Boulevard;
- Mission Boulevard at Crestmore Road; and
- Mission Inn Avenue at Redwood Drive.

Table U: Summary of Intersection Operations – Future 2042 Conditions

	Signalized Intersections[1]	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1	Mission Boulevard at Rubidoux Boulevard	**74.0**	**E**	**190.9**	**F**
2	Mission Boulevard at Crestmore Road	**73.7**	**E**	**200.2**	**F**
3	Mission Inn Avenue at Redwood Drive	**133.4**	**F**	**239.2**	**F**
4	Mission Inn Avenue at Market Street	34.2	C	43.7	D

Source: Table 6, *Traffic Operations Analysis Replacement of Mission Boulevard Bridge at Santa Ana River*, Kimley-Horn, May 2016.
[1] Intersection operation is expressed in average seconds of delay per vehicle during the peak hour.

The study roadway segments were analyzed in accordance with the analysis methodology described earlier in this report. The Future Year 2042 analysis results and Level of Service for the study roadway segments are presented in Table V. The following roadway segments will operate poorly with significant delay in Future Year 2042:

- Mission Boulevard between Rubidoux Boulevard and Crestmore Road; and
- Mission Boulevard/Mission Inn Avenue between Crestmore Road and Redwood Drive.

Table V: Summary of Roadway Segment Operations – Future 2042 Conditions

Roadway	Segment Location	Roadway Classification	Capacity	ADT	LOS
Mission Boulevard	Rubidoux Boulevard to Crestmore Road	4-lane Arterial	35,900	34,854	E
	Crestmore Road to Redwood Drive (along bridge)	4-lane Arterial	35,900	44,721	F
	Redwood Drive to Market Street	Arterial (100')	33,000	19,921	A

Source: Table 7, *Traffic Operations Analysis Replacement of Mission Boulevard Bridge at Santa Ana River*, Kimley-Horn, May 2016.

The proposed project is non-capacity increasing and would not require additional right-of-way to replace the existing bridge. The replacement bridge would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards.

The roadway segment between Crestmore Road and Redwood Drive, along the bridge, will operate poorly with significant delay in Future Year 2042. However, this roadway is designated as a four-lane arterial in the General Plans of both cities. The existing configuration of four lanes is constrained both to the west, in Jurupa Valley with ultimate build out conditions of four lanes with raised medians, as well as to the east, in Riverside by the hillside with decorative walls and Mount Rubidoux Drive Bridge.

Mission Boulevard at Crestmore Road is the only intersection considered within the limits of work, located directly west of the project site, in Jurupa Valley. The westbound left turns at this intersection are anticipated to increase and warrant a double left-turn lane, and the proposed curb-to-curb width of Mission Boulevard under the proposed project design allows for a dual left-turn lane in the westbound direction to support future growth.

The LOS and roadway segment impacts detailed in Tables Q through V will occur whether or not the project is constructed. The proposed project does not include the construction or operation of any use that would increase residential population or employment, nor would the replacement bridge generate additional traffic causing existing (or future) study area intersections or roadway segments to operate below the City of Riverside or City of Jurupa Valley LOS standard of D. As the project does not contribute to these conditions, there is no impact associated with this issue.

c) No Impact. The nearest airport to the project area is Flabob Airport, located approximately 0.5 mile east of the project area. Riverside Municipal Airport is approximately 3.5 miles southeast of the project area. The project site is within Zone C of the Flabob Airport Compatibility Zone, wherein highway and street rights-of-way are generally compatible. The proposed project does not require acquisition of additional right-of-way and would not cause any changes to air traffic volumes or air traffic patterns as the project is the replacement of a four-lane bridge over the Santa Ana River. Although the replacement bridge profile will be raised by approximately four to six feet at mid-span to accommodate current standards for the roadway design, the project site is not located within any Height Review Overlay Zones. Additionally, no rail or water transportation corridors are located in the project vicinity. Therefore, no impact related to this issue would occur.

d) No Impact. The construction of the proposed four-lane bridge will improve roadway drainage and provide a 12-foot multipurpose trail with barrier separation from vehicular traffic along the south side of the bridge in lieu of standard sidewalks on each side. The design of the proposed project does not include any sharp curves or dangerous intersections. Therefore, the project would not create a substantial increase in hazards due to a design feature but would remediate an existing bridge hazard and result in a net benefit to public safety. No impact would occur.

e) Less than Significant Impact. The proposed project may require a few short-term (partial day) closures to facilitate the project staging and construction. Construction will occur in stages to allow for continued traffic flow during construction. Depending on the results of the Traffic Analysis, two,

three, or four lanes of traffic with pedestrian access will remain open at all times. Stage 1 construction will build the northerly half of the new bridge along the north edge of the existing structure while traffic is maintained on the existing bridge. Stage 2 will shift the traffic to the newly constructed bridge, while the existing bridge is demolished and the remainder of the new bridge is constructed to the south. If more than three lanes of traffic are required during construction, a third stage may be added to complete the proposed project while maintaining adequate circulation.

The details of the final construction methods addressing these issues will be developed during the project design phase in consultation with the City of Riverside Police and Fire Departments, and the County of Riverside Sherriff's and Fire Departments under a mutual aid agreement with the City of Jurupa Valley. Potential staging areas have been identified north of the existing bridge on either side of the Santa Ana River and south of the bridge at the intersection of Mission Boulevard and Crestmore Road. Construction activities, which may temporarily restrict vehicular traffic, would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures. Therefore, a less than significant impact to circulation during construction would occur.

The proposed project would be required to be designed, constructed, and maintained to provide for adequate emergency access and evacuation.

Since the proposed project would not increase capacity, would maintain the same number of traffic lanes as existing, and would not change traffic patterns dramatically but merely improve operations, the additional width of the proposed roadway will facilitate improved emergency access between Riverside and Jurupa Valley in the unanticipated event of a vehicle accident resulting in congestion of the roadway along the bridge. A less than significant impact to emergency vehicle access would occur.

f) No Impact. The City of Riverside's Bicycle Master Plan identifies policies to create, improve and maximize bicycle linkages between activity centers; eliminate barriers to bicycle use; increase awareness of bicycle features; and to preserve/sustain existing biking infrastructure in the City. Mission Boulevard is not designated as an existing or proposed bicycle route in the City of Riverside's Bicycle Master Plan. A 12-foot multipurpose trail with barrier separation from vehicular traffic will be located along the south side of the bridge in lieu of standard sidewalks on each side. The existing SART will remain open during and after the new bridge construction in its current location. The proposed 12-foot multipurpose trail will maintain pedestrian and recreational cycling connectivity along the south side of the new Mission Boulevard Bridge to the SART through Carlson Park. While not designated specifically as a bicycle route, the provision of a separate multiuse trail on the replacement bridge will satisfy the goals stated in the City of Riverside's Master Bicycle plan by allowing the continuation of bicycle traffic over the Santa Ana River and the connection to existing bicycle features and pedestrian uses (e.g., SART and Fairmont Park Trail).

While the project does not include any public transportation features, Riverside Transit Agency Route 49 runs along Mission Boulevard between Riverside and Jurupa Valley. The replacement bridge will allow the continued use of this route for bus traffic. An existing sidewalk along the south side of Mission Boulevard starts at Crestmore Road on the west end in Jurupa Valley and ends 500 feet past the east end of the existing bridge in Riverside. No sidewalk connectivity currently exists

along the north side of Mission Boulevard within the project limits. The proposed multipurpose trail will improve the current patterns by allowing both directions of pedestrian and recreational bike travel on the south side of the bridge only, beginning at the intersection of Crestmore Road and Mission Boulevard and terminating at Carlson Park. The project would enhance existing infrastructure that supports alternative transportation and would provide safe and efficient pedestrian, bicycle and bus traffic through the project area; therefore, no impact associated with this issue would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Utility and Service Systems *Would the project*	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
31. Water				
a. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?	☐	☐	☐	☒
b. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

Source: Project application materials.

Findings of Fact:

a–b) No Impact. The proposed project does not require the construction or operation of any use that would increase the amount of water utilized on site. The replacement bridge would be non-capacity increasing; it would be constructed with the same number of traffic lanes as the existing bridge but with lanes and approach roadways wider than the existing facilities to accommodate current roadway standards and improve circulation. The project does not entail occupied buildings, nor does it include any residential, commercial, or other uses that would generate an increase in population and demand for construction of new water treatment facilities or expansion of existing facilities or additional water supply. Therefore, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
32. Sewer				
a. Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, the construction of which would cause significant environmental effects?	☐	☐	☒	☐
b. Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Source: Project plans.

Findings of Fact:

a–b) No Impact. The project does not entail occupied buildings, nor does it include any residential, commercial, or other uses that would generate an increase in population and demand for construction of new wastewater treatment facilities or expansion of existing facilities or additional wastewater treatment. Therefore, no impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
33. Solid Waste				
a. Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
b. Does the project comply with federal, state, and local statutes and regulations related to solid waste.	☐	☐	☐	☒

Source: *Riverside County Integrated Waste Management Plan*; California Integrated Waste Management Board 2002 Landfill Facility Compliance Study; and Public Resource Code – Section 41780.

Findings of Fact:

a–b) Less than Significant Impact. The nearest Riverside County operated landfill to the project footprint is the Badlands Landfill, located at 31125 Ironwood Avenue in Moreno Valley approximately 15.75 miles away. The California Integrated Waste Management Act under Public Resource Code Section 41780 requires local jurisdictions to divert at least 50 percent of all solid waste generated, which is in accordance with the Riverside County Integrated Waste Management Plan. In addition, the California Green Building Code requires all developments to divert 50 percent of non-hazardous construction and demolition debris for all projects and 100 percent of excavated soil and land clearing debris for all non-residential projects. The proposed project must comply with Public Resource Code Section 41780, the Riverside County Integrated Waste Management Plan, and the California Green Building Code. For these reasons, the project will not conflict with any federal, State, or local regulations related to solid waste. As a result, there is less than significant impact related to landfill capacity and regulation of solid waste.

Mitigation: No mitigation is required.

Monitoring: No monitoring measures are required.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
34. Storm Water				
a. Would the project result in the construction of new storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐

Source: *Mission Boulevard Bridge Replacement at Santa Ana River Advance Planning Study*, Kleinfelder, August 25, 2016; and *Draft Mission Boulevard Bridge Replacement Technical Report*, Kleinfelder, July 2017; and *Water Quality Assessment Report, Mission Boulevard Bridge Replacement at Santa Ana River*, LSA, January 2017 (Appendix G).

Findings of Fact:

a) Less than Significant with Mitigation Incorporated. As stated in the responses to Checklist Questions 17a and 17d, removal of the existing bridge, construction of the new bridge, and modifications to the roadway approaches would result in a net increase in impervious surface area of approximately 1.27 acres. Increases in impervious surface area can change on-site drainage patterns, decrease infiltration, and increase the volume and rate of runoff during a storm. The existing catch basins along Mission Boulevard near the bridge approaches will be removed and replaced. A ditch and drainage inlet system will be constructed at the top of retaining walls along the northern and southern rights-of-way between Crestmore Road and the new bridge and along the northern right-of-way between the new bridge and Scout Lane. The ditch and drain system will collect and convey runoff originating from the slope that drains toward the walls. New Caltrans Type D deck drains will capture runoff along the new bridge and convey it to the Santa Ana River.

Permanent improvements in Carlson Park include the installation of Low Impact Development (LID) Best Management Practices (BMPs) (a bioretention facility with or without a drainage swale) between Mission Boulevard and Carlson Park. The area proposed for the BMPs is north of and outside the Carlson Park fence line and is currently a grassy area. The proposed drainage system would preserve the overall drainage pattern, and most of the storm water runoff would continue to be discharged into the Santa Ana River. While Mitigation Measures HWQ-1 through HWQ-3 have been identified to address potential project-related impacts to water quality, Mitigation Measures REC-1 through REC-4 are identified in response to Checklist Question 29 to address the construction of storm water drainage facilities that could adversely affect the activities, features, and/or attributes of Carlson Park and Riverside-Owned Passive Recreation Area. With implementation of these measures, impacts from the construction of new storm water drainage facilities or the expansion of existing facilities would be reduced to less than significant levels.

Mitigation:

Refer to mitigation measures detailed in response to Checklist Question 17, Checklist Question 29, and as prescribed throughout this Initial Study.

Monitoring:

Monitoring for mitigation measures prescribed in this Initial Study shall be subject to the timing detailed in the project-specific Mitigation Monitoring and Reporting Plan (Appendix M).

Mandatory Findings of Significance	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
35. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Source: Refer to previous Checklist Questions for referenced documents.

Findings of Fact:

Less than Significant with Mitigation Incorporated. With implementation of Mitigation Measures BIO-1 through BIO-25 (Checklist Question 6), CUL-1 through CUL-5 (Checklist Question 7), and TCR-1 through TCR-3 (Checklist Question 8), the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. A summary mitigation for impacts to various biological, cultural, and/or tribal cultural resources and mitigation identified in previous sections includes:

- Least Bell's vireo, Mitigation Measure BIO-1 requires the provision or mitigation lands and establishes the timing of vegetation clearance to offset new impacts to the LBV.
- Santa Ana sucker, Mitigation Measures BIO-2 through BIO-11 establish requirements for water diversion during construction activity, identify survey and reporting requirements, and detail SAS handling criteria.
- Santa Ana River woollystar, Mitigation Measures BIO-12 through BIO-17 provide survey and monitoring requirements, identify avoidance measures, and establish seed collection and dispersal efforts.
- Burrowing owl, Mitigation Measure BIO-19 identifies the requirement for a pre-construction survey and relocation plan (as appropriate).
- Bats, Mitigation Measures BIO-20 through BIO-22 establish measures to limit bat mortality, avoid impacts to maternity roosting sites and provide alternate roosting locations.
- Nesting Birds, Mitigation Measure BIO-22 establishes timing for vegetation removal and pre-construction nesting bird surveys.
- Habitat Modification/Riparian-Riverine, Mitigation Measures BIO-23 through BIO-25 establish the timing and restriction on vegetation clearance, identify construction practices to limit impacts on habitat, set forth the requirements for the Habitat Mitigation and Monitoring Plan, and identify the compensatory mitigation for habitat impacts.

- Cultural Resource Mitigation Measures CUL 1 through CUL-5 require the pre-construction training of project work crews regarding the inadvertent discovery of cultural material, require the retention of a qualified archaeologist to monitor construction activities, and establish procedures for the preservation, assessment, recovery, curation, and/or reporting of any inadvertently discovered cultural resource material.
- Tribal Cultural Resource Mitigation Measures TRC-1 through TCR-3 detail requirements of tribal monitoring of ground-disturbing activities, identify the treatment and final disposition requirements for any Native American cultural material inadvertently discovered during ground disturbance activities, and detail the measures to handle any Native American burials and/or funerary objects appropriately.

As detailed in Question 6 (Biological Resources), Question 7 (Cultural Resources) and Question 8 (Tribal Cultural Resources), implementation of the mitigation as detailed in Appendix M will reduce potential impacts to less than significant levels.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
36. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects and probable future projects.)	☐	☒	☐	☐

Source: refer to Checklist Questions for referenced documents.

Findings of Fact:

Less than Significant with Mitigation Incorporated. The project consists of the replacement of an existing bridge. No increase in the number of travel lanes would occur. The project does not include the development of any use, feature, or facility that would generate traffic. While the proposed replacement bridge will accommodate anticipated future traffic, once construction is complete, the temporary environmental effects resulting from project construction activities will cease to occur. The project includes mitigation to reduce the temporary construction-related effects to less than significant levels. With the implementation of the mitigation previously identified in this IS/MND, no significantly cumulative project impact would occur.

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
37. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Source: Refer to previous Checklist Questions for referenced documents.

Findings of Fact:

Less than Significant with Mitigation Incorporated. Potential effects to humans have been identified in Questions 9 through 12 (Geology and Soils), Questions 14 through 16 (Hazards and Hazardous Materials), Question 17 (Hydrology and Water Quality), and Question 29 (Recreation). The preceding discussion(s) detail the temporary project impacts that would result from construction of the proposed bridge. As stated in previous analyses, the environmental impacts associated with the proposed project, including those affecting human beings, have been identified and (where necessary) mitigated. The implementation of project mitigation would ensure that no significant adverse direct or indirect impact to human beings would result from the construction or occupation/use of the proposed bridge replacement.

I. EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations, Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:

Earlier Analyses Used, if any: None

Location Where Earlier Analyses, if used, are available for review: Not Applicable

Location: Not Applicable

II. AUTHORITIES CITED

Authorities cited: Public Resources Code Sections 21083 and 21083.05; References: California Government Code Section 65088.4; Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.05, 21083.3, 21093, 21094, 21095 and 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3rd 296; *Leonoff v. Monterey Board of Supervisors* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka (2007)* 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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APPENDIX A

VISUAL IMPACT ASSESSMENT MEMORANDUM

APPENDIX B

AIR QUALITY ASSESSMENT REPORT

APPENDIX C1

NATURAL ENVIRONMENT STUDY

APPENDIX D

HPSR/ASR/HRER

(NOT FOR PUBLIC DISTRIBUTION)

APPENDIX E

PALEONTOLOGICAL RESOURCES ASSESSMENT

APPENDIX F1

PRELIMINARY FOUNDATION REPORT

APPENDIX F2

ADDENDUM TO PRELIMINARY FOUNDATION REPORT UPDATE

APPENDIX F3

PRELIMINARY GEOTECHNICAL DESIGN REPORT

APPENDIX G

WATER QUALITY ASSESSMENT REPORT

APPENDIX H

INITIAL SITE ASSESSMENT

APPENDIX I

SUMMARY FLOODPLAIN ENCROACHMENT REPORT

APPENDIX J

NOISE STUDY REPORT

APPENDIX K

SECTION 4(F) EVALUATION

APPENDIX L

TRAFFIC OPERATIONS ANALYSIS

APPENDIX M

MITIGATION MONITORING AND REPORTING PLAN

APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

NThis Mitigation Monitoring and Reporting Program has been prepared for use in implementing mitigation for the:

Mission Boulevard Bridge Replacement Project

The program has been prepared in compliance with State law and the Mitigated Negative Declaration (MND) prepared for the project by the County of Riverside (County).

The California Environmental Quality Act (CEQA) requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment (Public Resource Code Section 21081.6). The law states the reporting or monitoring program shall be designed to ensure compliance during project implementation.

The monitoring program contains the following elements:

1) The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
2) A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
3) The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

This Mitigation Monitoring and Reporting Program includes mitigation identified in the MND.

MITIGATION MONITORING AND RESPONSIBILITIES

As the Lead Agency, the County is responsible for ensuring full compliance with the mitigation measures adopted for the proposed project. The County will monitor and report on all mitigation activities. Mitigation measures will be implemented at different stages of development throughout the project site. In this regard, the responsibilities for implementation have been assigned to the Applicant, Contractor, or a combination thereof. If during the course of project implementation, any of the mitigation measures identified herein cannot be successfully implemented, the County shall be immediately informed, and the County will then inform any affected responsible agencies. The County, in conjunction with any affected responsible agencies, will then determine if modification to the project is required and/or whether alternative mitigation is appropriate.

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APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM
MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Biological Resources					
Least Bell's Vireo **BIO -1** The project shall mitigate for 0.68 acre of new shade impacts at a 2:1 ratio as part of the overall riparian/riverine mitigation requirements **(see Mitigation Measures BIO-23** and **BIO-24)**. In addition to the measures addressing riparian/riverine resources, which will benefit the least Bell's vireo, the project will further avoid, minimize and mitigate effects to the least Bell's vireo with implementation of measures described below.	Project Engineer or Designee	Prior to the issuance of grading or construction permit(s)	Submittal of evidence mitigation requirement has been satisfied		Withhold grading or construction permit(s).
• To avoid and minimize effects to the least Bell's vireo, removal of riparian vegetation prior to construction shall occur between September 1 and February 14 to avoid least Bell's vireo breeding season, as well as the general breeding season for other nesting birds. If vegetation removal must occur during nesting season, a nest survey shall be conducted by a qualified biologist within three days prior to vegetation removal activities to ensure that no active nests are present. If nests are present, no vegetation removal shall occur within 50 feet of the active nest until the young have fledged or the nest is determined to be inactive.	Project Engineer or Designee	Prior to the issuance of grading or construction permit(s)	Verification of timing of vegetation removal. Submittal of evidence required the required nest survey has been completed. As required, evidence required buffer areas have been established.		Withhold grading or construction permit(s). Issuance of a stop work order. Issuance of a stop work order
• Prior to the onset or project activities, to					

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
offset temporal loss of least Bell's vireo habitat, the project sponsor shall pursue off-site mitigation, if pre-project mitigation is ultimately infeasible, coordination of alternative mitigation strategies shall be conducted with the wildlife agencies.					
• If pile driving activities occur during nesting season, the following measures shall be implemented:					
○ The project shall sponsor placement of two cowbird traps for each nesting season that pile driving activities occur. This measure would improve the productivity of least Bell's vireo during nesting season, to compensate for the potential temporary loss in reproductive output for any pile driving-related noise effects during nesting season.	Project Engineer or Designee	Prior to the initiation of pile driving operations.	Submittal of evidence required cowbird trapping has been completed.		Withhold approval for initiation of pile driving
○ Throughout the duration that pile driving activities occur during the least Bell's vireo nesting season (March 15 through July 15), a biological monitor shall conduct daily site visits to document how pile driving activities affect nesting least Bell's vireo. The purpose of this monitoring is to gather information related to LBV activity during pile driving activities to inform future decisions regarding noise minimization. Coordination with the Wildlife Agencies	Project Engineer or Designee	During pile driving operations	Submittal of documentation of biological monitoring		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**
Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
will be conducted prior to monitoring to discuss the information to be collected. This data collection will not impose additional restrictions on this project.					
Santa Ana Sucker **BIO-2** Short-term stream diversions may be required to build the permanent bridge and provide temporary access to the construction area near the low-flow channel and within the defined project footprint. As required, these diversions shall be placed to facilitate temporary access within the low-flow channel and to build bridging elements. The temporary diversions would be in place for a month or less during the erection and removal process.	Project Engineer or Designee	Prior to the start of construction operations	Submittal of evidence the temporary stream diversions are located and constructed subject to provisions of the measure		Issuance of a stop work order
BIO-3 For temporary construction access, impacts shall be minimized to the low-flow channel of the Santa Ana River and the Santa Ana sucker by installing a trestle or large-diameter corrugated metal pipes over the low-flow river crossing at each construction stage. The trestle or pipes shall be located over the river under the new bridge and along the adjacent construction access area. In order to build and remove the supports for the trestle or install the pipes, the flows shall be diverted, which will occur outside of spawning season (approximately February 15 to July 31).	Project Engineer or Designee	Prior to the start of construction operations	Submittal of evidence the temporary low-water crossing is located and constructed subject to provisions of the measure		Issuance of a stop work order
BIO-4 If water diversion is not required, highly visible barriers (such as orange construction fencing) shall be installed around the low-flow channel and other areas of running water, and designated as an Environmentally Sensitive Area (ESA) to be avoided. Silt fence barriers	Project Engineer or Designee	Prior to the start of construction operations	Review of installation of the silt barriers by a qualified biologist		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
shall be installed at the ESA boundary to prevent accidental deposition of fill material in areas of flowing water.					
BIO-5 If water diversion activities are necessary, the County will submit a Fish Protection Plan that includes sound monitoring and diversion information to the Wildlife Agencies for review and approval. The plan shall be finalized prior to the initiation of water diversion activities in or adjacent to the active channel. If water diversion activities are necessary, a Wildlife Agency qualified biologist shall conduct a preliminary underwater survey of the affected area noting habitat and any fish present prior to water diversion. Water diversions shall be conducted outside of the spawning season for the species (approximately February 15 to July 31). If the Santa Ana sucker is found to be present, a relocation program shall be implemented. The pre-construction survey and relocation program shall require approval from the United States Fish and Wildlife Service (USFWS). Names and qualification statement(s) of prospective qualified biologist(s) shall be submitted for review and approval prior to the installation of any water diversion feature.	Project Engineer or Designee	Prior to the start of construction operations	Submittal of evidence the required pre-construction surveys and relocation program have been completed and approved by the USFWS.		Withhold grading or construction permit(s) and/or issuance of a stop work order
BIO-6 If Santa Ana sucker are found to be present, then exclusion nets shall be placed around the work area. Once diversion of flow is complete, exclusion nets shall be removed. Seining shall then be conducted inside the exclusion area to remove and relocate Santa Ana Sucker prior to the commencement of diversion activities. As the diversion of flow is taking place, the biologist(s) shall	Project Engineer or Designee and Qualified Project Biologist	Prior to the start of construction operations	Submittal of evidence the required exclusionary netting and removal of SAS conforms to the provisions of this measure		Withhold grading or construction permit(s) and/or issuance of a stop work

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**
Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
patrol the dewatering area in order to capture stranded fish. A combination of seining, dip netting, and hand capture shall be utilized					order
BIO-7 All captured Santa Ana sucker shall be placed into coolers filled with river water. Fish shall remain in coolers for the shortest time necessary. Air pumps shall be used to maintain oxygenated water supply. The coolers shall be kept shaded at all times. The water temperature in the coolers and condition of captured Santa Ana sucker shall be closely monitored. Ice (or frozen water bottles) shall be used, as necessary, to maintain cool water (similar to ambient or <85 degrees Fahrenheit). Any Santa Ana suckers removed from the site shall be relocated upstream or downstream of the project area, as determined appropriate by the qualified biologist, in consultation with the USFWS. A summary report shall be provided to the USFWS for all diversions resulting in relocation of Santa Ana sucker.	Project Engineer or Designee and Qualified Project Biologist	Prior to the start of construction operations	Submittal of evidence the relocation of SAS conforms to the provisions of this measure and evidence the required summary report has been submitted to USFWS		Withhold grading or construction permit(s) and/or issuance of a stop work order
BIO-8 If capture and relocation of Santa Ana sucker is necessary, it shall be achieved through one or more of the following methods: the use of fine mesh [2–4 mm (0.08–0.16 in)], knotless seine nets; fine mesh [4–6 mm (0.16–0.24 in] knotless hoop nets, modified hoop nets, or similar traps; or dip nets of 0.5 mm (0.20 in) or finer mesh for survey of larval Santa Ana sucker. The survey methods shall be selected to minimize the potential injury or mortality to Santa Ana suckers and potential disturbance or damage to breeding areas. If seines are used, particular care shall be taken to avoid incidental injury or mortality to Santa Ana sucker that may be	Project Engineer or Designee and Qualified Project Biologist	Prior to the start of construction operations	Submittal of evidence the relocation of SAS conforms to the provisions of this measure.		Withhold grading or construction permit(s) and/or issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
caught and suffocated in algal mats or sand. Care should also be taken to keep Santa Ana sucker in water as much as possible. Larval fishes should be kept submerged in a dip net until species is identified and released at the point of capture. Use of non-conventional sampling gear shall be approved by the USFWS.					
BIO-9 Prior to activities that may involve handling Santa Ana sucker, the qualified biologist shall ensure that all participants' hands are free of sunscreen, lotion, or insect repellent.	Qualified Project Biologist	Prior to the start of activity requiring handling of SAS	Inspection of person(s) handling and/or assisting in handling of SAS		Disallow participation of SAS handling activity
BIO-10 At the end of the relocation (or as otherwise stated in the Relocation Plan approved by the USFWS), the qualified biologist shall submit a report to the USFWS identifying the number of any native fish species that were relocated and any other measures that were taken to minimize effects to Santa Ana sucker.	Project Engineer or Designee	Upon completion of SAS relocation activities	Submittal of evidence the required report has been submitted to the USFWS		Issuance of a stop work order
BIO-11 If pile driving activities occur during spawning season (February 15 to July 31), underwater sound monitoring shall be conducted within the project footprint to gather data that may be used by the Wildlife Agencies in making appropriate recommendations for future construction activities. The data collection shall not impose any additional restrictions on this project. At the end of the underwater sound monitoring, a brief report summarizing the results of the monitoring shall be provided to Wildlife Agencies.	Project Engineer or Designee	During piling activities	Evidence the required underwater sound monitoring data has been collected and provided to the USFWS		Issuance of a stop work order

APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM
MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Santa Ana woollystar **BIO-12** Focused surveys shall be conducted to identify locations of Santa Ana River woollystar in the months of June and July preceding vegetation clearing or other grading activities.	Project Engineer or Designee	Prior to the start of ground clearance or grading operations	Submittal of evidence the required focused survey(s) have been conducted		Withhold issuance of grading or construction permit(s)
BIO-13 Santa Ana River woollystar is found, highly visible barriers (such as orange construction fencing) shall be installed around the occupied areas and designated as an Environmentally Sensitive Area (ESA) to be avoided.	Project Engineer or Designee	Prior to the start of ground clearance or grading operations	Submittal of evidence the barriers have been installed around occupied areas		Withhold issuance of grading or construction permit(s)
BIO-14 No construction activities, materials, or equipment shall be allowed within the ESAs, unless unforeseen circumstances require an alteration of the ESA boundaries. All construction equipment shall 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, shall be allowed within these protected zones.	Project Engineer or Designee and Qualified Project Biologist	Prior to the start and during construction operations	Submittal of evidence the construction documents include the stated measures The Qualified Project Biologist shall review operations within the area of construction to confirm adherence to these stated measures		Issuance of a stop work order
BIO-15 If it is not feasible to avoid effects to the Santa Ana River woollystar within the Public/Quasi-Public Lands, seed shall be collected during the summer and fall prior to vegetation clearing or other grading activities. Seed shall be collected once the plants have matured and seeds senesce. Additionally, soil shall be collected in a one-foot radius to a depth of one-inch around each plant.	Project Engineer or Designee and Qualified Project Biologist	Prior to the start of construction operations	Submittal of evidence the seeds have been collected pursuant to provisions of this measure		Withhold issuance of grading or construction permit(s)
BIO-16 Half of the collected seed and soil will be	Project	Prior to the start of	Submittal of evidence the seeds		Withhold

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
dispersed outside of the project footprint subsequent to seed collection and the other half of the collected seed and soil will be retained by a seed collection company (such as S&S Seed) for site restoration following project completion. Prior to seed dispersal, the location of the seed dispersal and revegetation activities shall be coordinated with representatives of the Riverside County Flood Control and Water Conservation District.	Engineer or Designee and Qualified Project Biologist	construction operations	have dispersed pursuant to provisions of this measure		issuance of grading or construction permit(s)
BIO-17 A biologist shall monitor construction within the vicinity of riparian and riverine areas for the duration of the project construction and to ensure that vegetation removal, Best Management Practices (BMPs), ESAs, and all avoidance and minimization measures are properly constructed and followed.	Qualified Project Biologist	During construction	The Qualified Project Biologist shall review operations within the area of construction to confirm adherence to these stated measures		Issuance of a stop work order

APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM
MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Burrowing Owl **BIO-18** A pre-construction burrowing owl shall be conducted within three days prior to the beginning of project construction to determine if the project site contains suitable burrowing owl habitat and to avoid any potential impacts to the species. The survey shall include 100 percent coverage of the project site. If the survey reveals no suitable habitat for burrowing owl is present, no additional action for this species is required.	Project Engineer or Designee and Qualified Project Biologist	Prior to the start of construction or clearing operations	Submittal of evidence the required burrowing owl survey has been completed		Withhold issuance of grading or construction permit(s)
If active burrowing owl burrows are determined to be present, the burrow(s) shall be flagged and up to an appropriate buffer (up to 500 feet) shall be created in accordance with MSHCP Species Conservation Guidelines. The buffer limits may vary depending on burrow location and burrowing owl sensitivity to human activity. Any relocation efforts must be coordinated with California Department of Fish and Wildlife (CDFW). In the even a buffer is not feasible, Mitigation Measure BIO-19 shall apply.	Qualified Project Biologist	As active burrows are identified prior to the start of construction or clearing operations	Submittal of evidence appropriate buffers have been established		Withhold issuance of grading or construction permit(s)
BIO-19 In the event it is not feasible for the project to avoid work within buffer identified for an active burrow; prior to the commencement of ground-disturbing activities, a burrowing owl relocation plan shall be prepared and submitted to the Wildlife Agencies for review and approval.	Qualified Project Biologist	Prior to the start of clearing of construction operations	Submittal of evidence the required relocation plan has been approved by the Wildlife Agencies		Withhold issuance of grading or construction permit(s)
Relocation of any burrowing owls within construction area shall be completed pursuant to the relocation plan .prior to the commencement of ground-disturbing	Qualified Project Biologist	Prior to the start of clearing of construction operations	Submittal of evidence that required relocation activities have been completed		Withhold issuance of grading or construction

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
activities.					permit(s)
Bats **BIO-20** During the project design phase, the following measures shall be implemented: • Alternative bat roosting habitat shall be incorporated into the design of the new bridge to replace crevice habitat lost due to removal of the existing Mission Boulevard Bridge. The specifications for this replacement habitat should be designed in consultation with a qualified bat biologist. • Due to presence of maternity-roosting habitat and potential vibratory impacts if pile driving occurs during maternity roosting season, alternative bat roosting habitat structures should be installed at a nearby structure prior to the complete eviction/exclusion of bats from the existing bridge structure. The design, numbers, and locations of these roost structures should be determined in consultation with a qualified bat biologist.	Project Engineer or Designee	Prior to finalization of project design	Review of project plans to ensure the appropriate bat accommodations have been provided in the bridge structure		Withhold approval of final design
BIO-21 The following measures shall be implemented during the project construction phase: • To avoid direct mortality, humane evictions and exclusions of roosting bats shall be	Project Engineer or Designee	September-October prior to the start of demolition operations			Withhold issuance of demolition

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**
Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
performed under the supervision of a qualified bat biologist in the fall (September or October) prior to bridge demolition activities. Eviction/exclusion may be implemented in one or two phases at the discretion of the qualified bat biologist and in coordination with the project design team.	Qualified Project Biologist		Submittal of evidence eviction/exclusion activity has been completed		permit or issuance of a stop work order
To avoid potential mortality of flightless juvenile bats, evictions and exclusions of bats shall not be performed during the general bat maternity season (April 1–August 31). Winter months (generally November through February, but specifically periods in which nighttime temperatures are consistently less than 50 degrees Fahrenheit) are also inappropriate for bat eviction because not all individuals in a roost will emerge on any given night. In addition, long-distance movements to other roost sites are more difficult during the winter when prey availability is scarce, resulting in high mortality rates of evicted bats.	Qualified Project Biologist	Prior to the start of demolition operations	--- Inclusion of this measure on the Construction Documents		Withhold issuance of demolition permit or issuance of a stop work order
• Demolition should be performed outside of the general bat maternity season (April 1–August 31) to the greatest extent feasible.	Project Engineer or Designee	---			---
• Should nighttime work for project construction be required, night lighting shall be used only on the portion of the structure actively being worked on and focused on the	Project Engineer or Designee and Construction Contractor	Prior to the start of construction operations	Review and approval of final design		Withhold issuance of construction or demolition permit(s)

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
direct area of work. Airspace access to and from the roost features of the structure shall not be obstructed except in direct work areas.					
• Following the construction of the replacement bridge, street lighting at the new bridge shall be directed away from the Santa Ana River drainage to the greatest extent feasible.	Project Engineer or Designee	Prior to final design	Confirmation of necessity by Qualified Project Biologist		Delay approval of final design
• The removal of mature trees and snags shall be minimized to the greatest extent practicable.	Construction Contractor	During construction operations	Monitoring by Qualified Project Biologist		Issuance of a stop work order
• If trimming or removal of mature trees and snags is necessary for project construction, tree trimming/removal activities should be performed outside of the general bat maternity season, which occurs from April 1 through August 31, to avoid direct effects to nonvolant (flightless) young that may roost in trees within the study area. This period approximately coincides with the bird nesting season of February 15 through August 31.	Construction Contractor	During construction Operations	Submittal of evidence of completion of required surveys		Issuance of a stop work order
• If trimming or removal of trees during the general bat maternity season (April 1 through August 31) cannot be avoided, a qualified biologist will monitor tree removal unless nighttime surveys conducted within one week of removal indicate no tree-roosting bat activity within the study area.	Construction Contractor and Qualified Project Biologist	Prior to the removal or trimming of trees during bat maternity season	Submittal of evidence of completion of monitoring		Issuance of a stop work order

APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM
MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Nesting Birds **BIO-22** To avoid potential effects to fully protected raptors, special-status bird species, and other nesting birds protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, the following measures shall be implemented:					
• If feasible, project construction, and vegetation removal shall be completed outside of bird breeding season (typically set as February 15 through August 31).	Project Engineer and Qualified Project Biologist	---	---		---
• In the event that vegetation removal cannot be conducted outside the bird breeding season, focused surveys shall be conducted by a qualified biologist three days prior to vegetation removal activities.	Qualified Project Biologist	Within three days prior to the start of construction/demolition operations	Submittal of evidence that the required surveys have been completed		Issuance of a stop work order
Should nesting birds be found, an exclusionary buffer shall be established by a qualified biologist and documented in a Nesting Bird Monitoring Plan. The buffer may be up to 500 feet in diameter depending on the species of nesting bird found and how it is addressed in the Nesting Bird Monitoring Plan. This buffer shall be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing shall not be conducted within this	Construction Contractor and Qualified Project Biologist	Prior to the start of and during construction operations	Submittal of evidence buffers have been established and maintained pursuant to the Monitoring Plan		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
zone until the qualified biologist determines that the young have fledged or the nest is no longer active.					
• If nesting birds are found within the Mission Boulevard Bridge structure, exclusionary devices and nest prevention methods, designed to prevent birds from utilizing the bridge, shall be identified and implemented by a qualified biologist. Exclusionary devices must be installed prior to the initiation of nesting season (February 15), and before any bridge demolition and other bridge construction activities begin.	Construction Contractor and Qualified Project Biologist	Prior the start of demolition operations	Submittal of evidence exclusionary devices have been installed as required		Issuance of stop work order
• Nesting bird habitat within the BSA shall be resurveyed during bird breeding season if there is a lapse in construction activities longer than seven days.	Project Engineer and Qualified Project Biologist	Prior to start of construction operations following a lapse of seven days or more	Submittal of evidence that the project area has been resurveyed as required		Issuance of a stop work order
Habitat Modification/Riparian-Riverine **BIO-23** The following avoidance, minimization, and mitigation measures will be incorporated for effects to riparian/riverine resources: • Prior to clearing or construction, highly visible barriers (such as orange construction fencing) shall be installed along the boundaries of the project footprint to designate Environmentally	Project Engineer or Designee, Construction Contractor and Qualified Project Biologist	Prior to the start of and during construction operations	Submittal of evidence the required measures have been incorporated into project plans		Withhold construction and/or demolition permit(s) or issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Sensitive Areas (ESAs). • No construction activities, materials, or equipment shall be allowed within the ESAs, unless unforeseen circumstances require an alteration of ESA boundaries. All construction equipment shall be operated in a manner to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, shall be allowed within these protected zones. Silt fence barriers shall be installed on either side of the low-flow channel to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities. • Bridge lighting will be shielded and will illuminate only the bridge facility. • All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in developed or designated non-sensitive upland habitat areas. The designated upland areas shall be located in such a manner as to prevent any spill runoff from entering waters of the U.S. • Weed abatement measures shall be implemented to minimize the importation of non-native plant material during and after construction. Eradication strategies shall be					

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
employed should an invasion occur. • Sediment and erosion control devices will be made of biodegradable materials to prevent a wildlife entanglement hazard. Fiber rolls will be specified to contain straw, coir, or other biodegradable materials bound into a tight tubular roll wrapped by photodegradable netting. Specific BMPs such as Biodegradable Erosion Control Matting and Compost Filter Sock perimeter controls will also be included in the specifications. • A biologist shall monitor construction within the vicinity of riparian and riverine areas for the duration of the project construction and to ensure that vegetation removal, Best Management Practices (BMPs), ESAs, and all avoidance and minimization measures are properly constructed and followed. • The portions of the Santa Ana River bottom temporarily affected by the project shall be recontoured to their original grades upon completion of construction.					
BIO-24 Compensatory mitigation for riparian/riverine areas will occur such that the project will be equivalent or superior to existing conditions. The identification of proposed compensatory mitigation areas shall be coordinated with representatives of the Riverside County Flood Control and Water Conservation District.	Project Engineer or Designee	Prior the start of construction operations	Submittal of evidence the mitigation requirements have been fully satisfied		Withhold construction and/or demolition permit(s)

APPENDIX M: MITIGATION MONITORING AND REPORTING PROGRAM
MISSION BOULEVARD BRIDGE REPLACEMENT PROJECT

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
On-site and off-site mitigation shall be provided based on the following: • New shade effects will be mitigated by weeding and revegetating at a 2:1 off-site mitigation ratio; • Effects beneath existing bridge footprint (excluding areas of open water and concrete) will be mitigated by weeding at a 1:1 ratio; and • Temporary effects to riparian/riverine areas will occur at a 1.25:1 ratio on site and off site.					
BIO-25 A Habitat Mitigation and Monitoring Plan (HMMP) will be prepared to monitor the proposed on-site and off-site mitigation for a total of five years. If a major storm washes away more than 30 percent of the plantings, the project shall continue to sponsor weeding for a total of five years; however, plants will not be replanted and monitored. Off-site mitigation will be implemented within one year of approval of environmental document in order to compensate in advance for the temporal loss of riparian habitat during construction.	Project Engineer or Designee and Qualified Project Biologist	Prior the start of construction activities and during/after construction per the requirements of the HMMP	Review and approval of the HMMP and monitoring pursuant to the requirements of the HMMP		Withhold construction and/or demolition permits(s) or issuance of a stop work order
BIO-26 Coordination with the Riverside County Flood Control and Water Conservation District shall occur prior to any revegetation activity that may take place	Project Engineer or Designee and Qualified	Prior the start revegetation activities	Evidence of required coordination with RCFCWCD		No sanction required

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
within any RCFCWCD property.	Project Biologist				
Cultural Resources					
CUL-1 Prior the commencement of construction activities, the construction Contractor(s) shall provide evidence to the County for review and approval that on-site work crews have been informed of the procedures to follow in the event an identified cultural resource is unearthed during construction, including contact information for the County and the qualified archeologist.	Construction Contractor and Project Engineer or Designee	Prior the start of construction or demolition operations	Submittal of evidence the measures have been fully incorporated into the construction documents and that on-site work crews have been informed of the appropriate measures		Withhold construction and/or demolition permit(s) or issuance of a stop work order
CUL-2 Prior to the commencement of construction activities, the Construction Contractor provide evidence to the County for review and approval that a qualified archeologist who meets Secretary of the Interior standards has been retained to provide as-needed monitoring or investigation of ground disturbing activities. In the event no such resource is identified during project-related construction activities, no further mitigation is required. If a potential or suspected cultural resource is encountered, **Mitigation Measures CUL-3** through **CUL-5** shall be required.	Construction Contractor	Prior to the start of construction or demolition operations	Submittal of evidence of a qualified project archeologist has been retained		Withhold issuance of construction and/or demolition permit(s)
CUL-3 In the event previously unidentified cultural resources are unearthed during construction, all work within a minimum of 100 feet of the discovery shall cease and the County and the qualified archeologist shall be contacted within twenty-four hours. Construction activities outside the exclusion area shall	Construction Contractor and Qualified Project Archeologist	During construction and ground clearing operations	Establishment of a buffer as determined necessary by the Qualified Project Archeologist		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
be permitted to continue.					
CUL-4 Any potential cultural/archaeological resource unearthed by project construction activities shall be evaluated to determine eligibility for the California Register of Historical Resources or qualification as unique archaeological resources pursuant to CEQA. If the resource is determined by the Qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or has a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Construction Contractor and the County to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any non-Native American historic cultural/archaeological resource shall be curated at a public, non-profit institution with a research interest in the materials.	Qualified Project Archeologist	As required during ground clearing operations	As required, submittal or a treatment plan to address any cultural material unearthed during ground clearing or construction operations		Issuance of a stop work order
CUL-5 The qualified archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of	Qualified Project Archeologist	Upon completion of required monitoring, survey and/or recovery	Submittal of a final report and appropriate DPR site forms		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
treatment and/or following archaeological construction monitoring. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources. The report and the site forms shall be submitted by the Applicant to the City, the South Central Coastal Information Center and representatives of other appropriate agencies.	and Project Engineer or Designee	activities			
Paleontological Resources					
PAL-1 A paleontologist from the Riverside County list of certified paleontologists shall be retained to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP) and include, but not be limited to, the following: 1. The paleontologist, or his/her representative, shall attend a preconstruction meeting. 2. Excavation and grading activities for roadway approach work and trenching in deposits with high paleontological sensitivity (Young Axial Channel Deposits beginning at a depth of more than 10 feet below the ground surface and Old Alluvial Fan Deposits, Unit 3) shall be monitored by a paleontological monitor following a PRIMP. 3. No monitoring is required for drilling the piles	Construction Contractor and Project Engineer or Designee	Prior to and during ground clearing and/or construction operations as required	Submittal of PRIMP and inclusion of PRIMP-required measures in the construction documents		Withhold construction permits or issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
or for excavations in rocks with no paleontological sensitivity (Artificial Fill; Very Young Wash Deposits, Undivided; Very Young Wash Deposits, Unit 3; Young Axial Channel Deposits from the surface to a depth of 10 feet; Granite of Mount Rubidoux; and Granite of the Riverside Area). 4. If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance. 5. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution. A determination of the appropriate institution shall be made if scientifically significant fossils are recovered.					
Tribal Cultural Resources					
TCR-1 Tribal Monitoring: At least thirty (30) days prior to the commencement of ground disturbing activity, the construction Contractor shall provide a Native American Monitoring Agreement with the Gabrieleño Band of Mission Indians - Kizh Nation to the County for review and approval. The Native American monitoring agreement shall be developed in consultation with appropriate Native American tribal contact(s). The Native American monitoring agreement shall identify (but not be limited to) the following: • The professional qualification(s) and/or	Construction Contractor	At least 30 days prior to the start of ground disturbing operations	Submittal of evidence to the County that notification has been made and that the required monitoring agreement has been established		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
approval of Native American monitor(s); • the professional standards and procedures to be following during archeological excavation and/or monitoring; • the construction schedule, term/schedule of on-site Native American monitor(s) and the extent of areas and activities to be monitored; • the responsibilities of Native American monitor(s) including any requirement for the completion of daily monitoring logs and end-of-monitoring reporting; • the authority of Native American monitor(s) to redirect construction activity in the vicinity of any inadvertent discovery; • the method and/or terms of compensation (if any) for Native American monitor(s). • any insurance, specialized training or safety requirement necessary for Native American monitor(s) working within the proposed construction area.					
TCR-2 Treatment and Final Disposition of Cultural Resources: Any archaeological resource unearthed during construction activities shall be evaluated by the Qualified Archaeologist and Native Monitor(s). If the	Qualified Project Archeologist and Native	During ground disturbing operations as required	Evidence that evaluation, preservation and/or recovery has been completed pursuant to provisions of this measure		Issuance of a stop work order

Project Name: Mission Boulevard Bridge Replacement **Applicant:** **County of Riverside**

Date: **November 2018**

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resource is determined to be Native American in origin, any such resource (including sacred items, burial goods, and all archaeological artifacts and non-human remains) shall be addressed through one or more of the following methods: • Preservation in place by accommodating on-site reburial of the discovered items with the consulting Native American tribe(s). This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and recordation efforts have been completed; • A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation. • If more than one Native American Tribe or band is involved with the project, consensus needs to be reached amongst all Tribes involved regarding the repository. If consensus cannot be reached, the County of Riverside will select an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR 79.	American Monitor(s)				

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TCR-3 Discovery of Human Remains: In the event that human remains (or remains that may be human) are discovered within the construction areas, all activity within 100 feet of the find shall be immediately halted. Any discovery of human remains shall be immediately reported by the Qualified Archeologist and Native American monitor(s) to the County Coroner. If the human remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendent in accordance with California Public Resources Code 5097.98. Funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains shall also be considered as associated funerary objects. Any such funerary objects shall be treated in the same manner as bone fragments. The discovery of any Native American human remains and/or funerary objects shall be kept confidential and secure to prevent any further disturbance. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains and associated funerary objects, sacred objects and/or objects of cultural patrimony shall be covered with an opaque material or placed in opaque cloth bags. A physical barrier (e.g., metal plate, concrete slab that	Qualified Project Archeologist and Native American Monitor(s)	During ground disturbing operations as required	Evidence that evaluation, preservation, treatment, and/or recovery has been completed pursuant to provisions of this measure. Submittal of a Final Report related to these activities to the NAHC		Issuance of a stop work order