Executive Summary

Cajalco Road Widening and Safety Enhancement Project
SCH#: 2011091015

CEQA Lead Agency: Riverside County Transportation Department
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Location: Riverside County (unincorporated)

S.1 Project Overview

The Riverside County Transportation Department (County), serving as lead agency under the California Environmental Quality Act (CEQA), in cooperation with the California Department of Transportation (Caltrans), serving as lead agency under the National Environmental Policy Act (NEPA), proposes to widen Cajalco Road, or a combination of Cajalco Road and El Sobrante Road, between Temescal Canyon Road to the west and Interstate 215 (I-215) to the east. A Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) has been prepared and will be circulated for public review.

The proposed project is located in Riverside County, California and covers a distance of approximately 15.7 miles. In general, Cajalco Road and El Sobrante Road through the project area are two-lane undivided roadways with one 12-foot lane in each direction and shoulders of varying widths. The proposed project includes the widening of Cajalco Road, or a combination of Cajalco Road and El Sobrante Road, between the I-215 southbound ramps and Temescal Canyon Road in the County of Riverside. A limited portion of the westernmost part of the alignment is located in the City of Corona. The project would widen Cajalco Road, or a combination of Cajalco Road and El Sobrante Road, to four lanes between Harvill Avenue and Temescal Canyon Road, and to six lanes between the I-215 southbound ramps and Harvill Avenue, to improve east-west mobility and to provide increased capacity and improved traffic flow and safety. (See Figure S-1, Regional Location, and Figure S-2, Project Vicinity Map).

S.2 Purpose

The purpose of the Cajalco Road Widening and Safety Enhancement Project (project) is to:

- Improve the transportation facility to address anticipated growth and mobility needs;
- Improve interregional travel by improving east-west mobility in Riverside County; and
- Improve roadway alignment and intersection design to enhance safety.

S.3 Proposed Action

Several project alternatives have been developed and refined based on public and agency input, and minimizing environmental impacts. Alternatives that were considered but eliminated from further analysis are discussed in the EIR/EIS in Section 2.2.3, *Alternatives Considered Eliminated from Further Discussion*. The following project alternatives carried forward are described below. The alternatives are:

- **Build Alternative 1 – Cajalco Alignment:** Cajalco Road would be widened from Temescal Canyon Road at the west to I-215 at the east, replacing the two-lane roadway that currently

exists. Minor alignment changes would be constructed between Temescal Canyon Road and Gustin Road. The estimated cost for this alignment is $358,699,000.

- **Build Alternative 2C – Modified Cajalco Alignment:** Cajalco Road would be widened from Temescal Canyon Road at the west to La Sierra Avenue, and from just west of Lake Mathews Drive to Interstate 215. A new four-lane segment of Cajalco Road would be constructed between La Sierra Avenue and just west of Lake Mathews Drive. The estimated cost for this alignment is $401,379,000.
- **Build Alternative 4 – El Sobrante Alignment:** Cajalco Road would be widened from Temescal Canyon Road at the west to La Sierra Avenue, and from Gustin Road east to Interstate 215. Between Gustin Road and La Sierra Avenue, El Sobrante Road would be improved from the existing two-lane facility to a four-lane facility and would generally follow the existing El Sobrante Road from La Sierra Avenue to the east, to Cajalco Road. The estimated cost for this alignment is $514,615,000.
- **No-Build Alternative – No Project Alternative:** The existing two-lane segments of Cajalco Road and El Sobrante Road between I-215 and Temescal Canyon Road would remain as a two-lane roadway, and would not be widened or otherwise improved.

S.4 Areas of Controversy

Based on comments received on the Notice of Preparation and Notice of Intent for project, as well as input received from the public, environmental advocacy groups, and resource agencies, areas of controversy may include changes in traffic circulation, trucking and traffic speed, community impacts, growth, business and residential relocations, impacts involving the WRC MSHCP, LM MSHCP, SKR HCP, including threatened/endangered species and wildlife crossing opportunities, impacts on cultural resources, and impacts involving greenhouse gas emissions.

S.5 Project Impacts

S.5.1 Summary of Potential Impacts

Table S-1 summarizes the potential impacts under CEQA and NEPA of the project alternatives and the proposed avoidance, minimization, and mitigation measures. This project also contains a number of standardized project measures commonly employed on Caltrans and/or Riverside County projects, as well as project design elements, collectively identified as project features (PF) or Standard Project Measures. While the Standard Project Measures are not required to mitigate otherwise significant impacts of the project, the project features enable to the project to comply with local and State design requirements, and are thus included in Table S-1 under each affected resource, as applicable.

Details for each environmental subject evaluated are presented in Chapters 3 (NEPA) and 4 (CEQA) of the EIR/EIS.

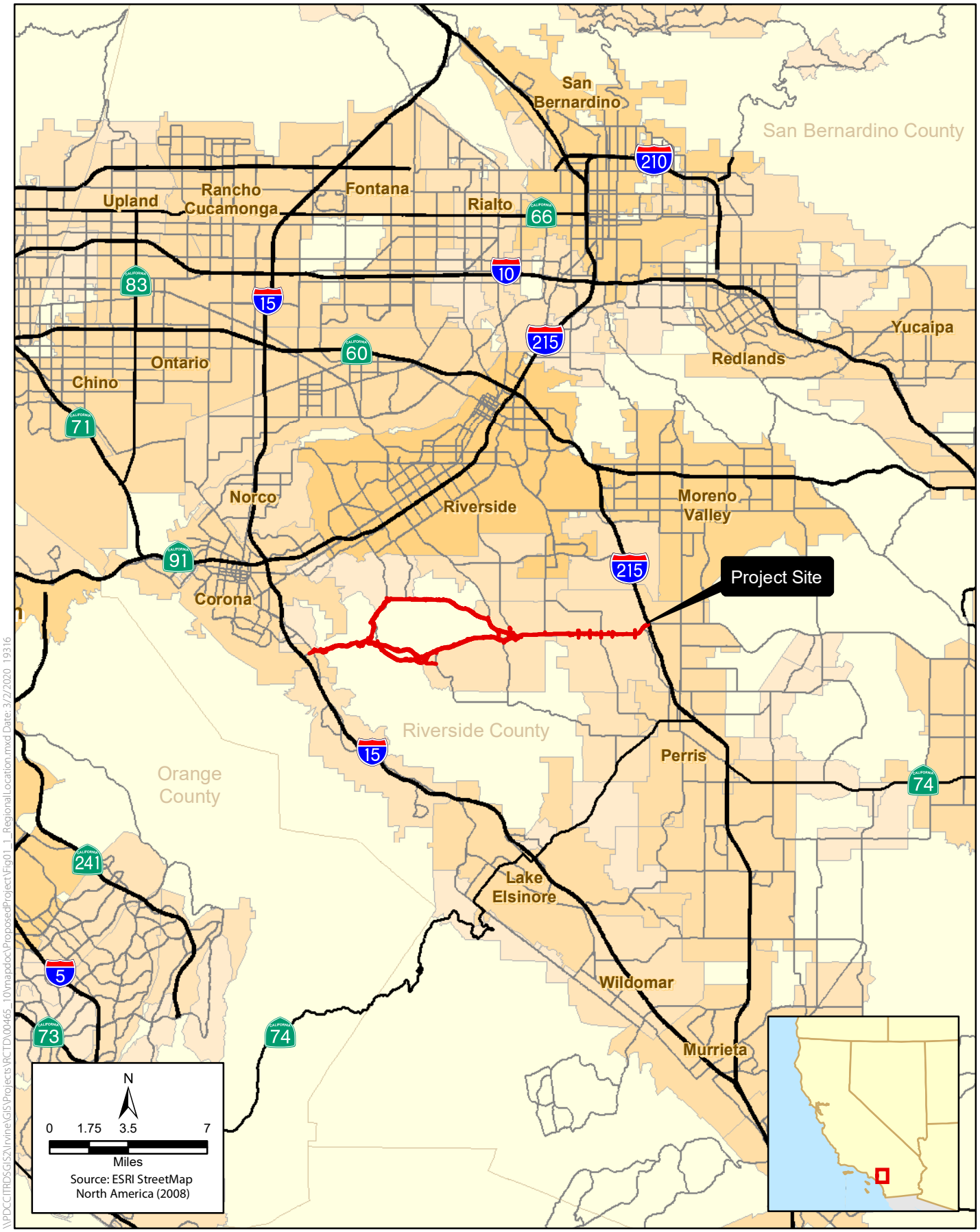

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Figure S-1
Regional Location
Cajalco Road Widening and Safety Enhancement Project

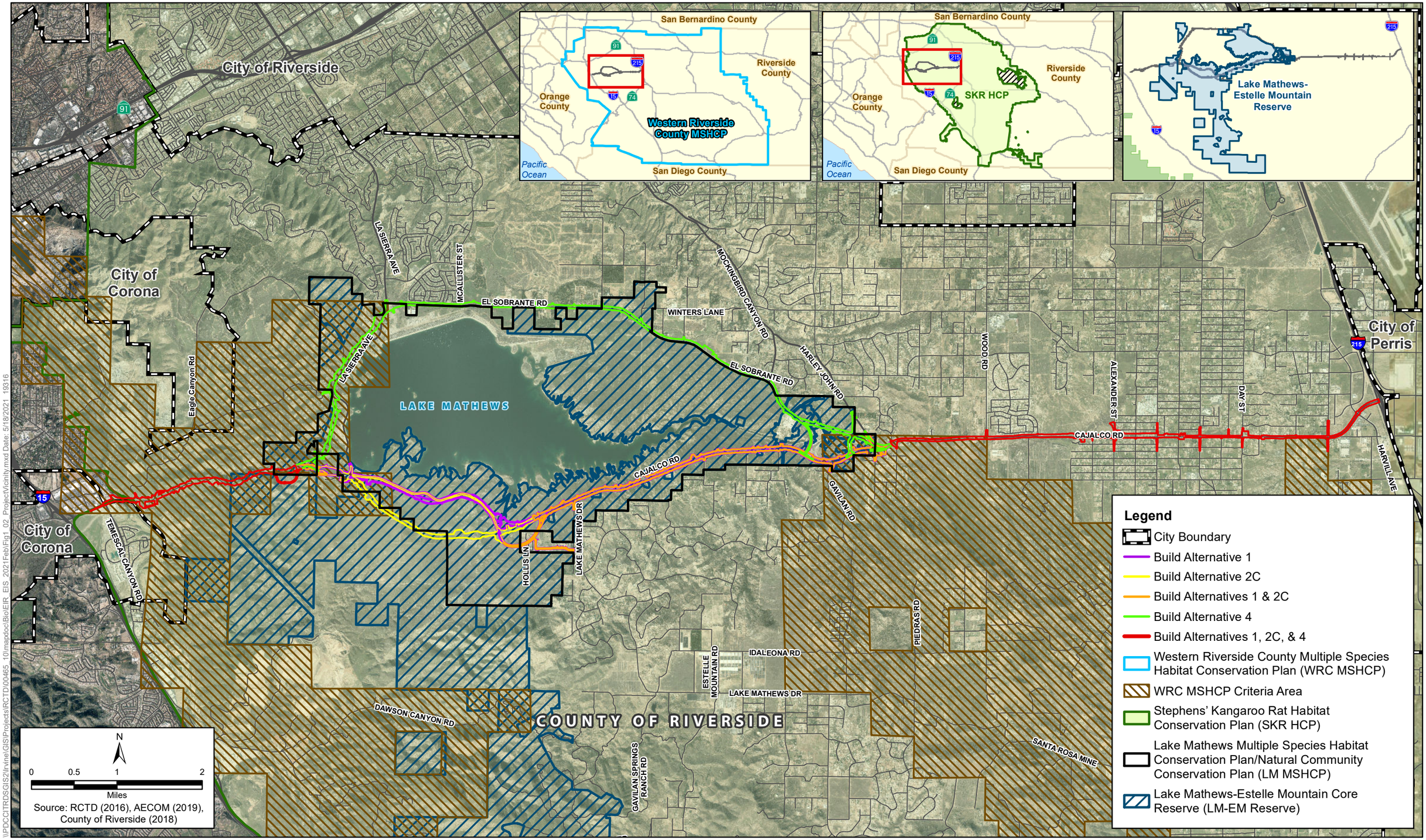

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Figure S-2
Project Vicinity Map
Cajalco Road Widening and Safety Enhancement Project

Table S-1. Summary of Potential Impacts and Proposed Measures by Alternative[1]

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
Cost	$358,699,000	$401,379,000	$514,615,000	No impact; does not preclude costs associated with necessary and ongoing maintenance of existing facilities.	None
Land Use	*Permanent:* 218 acres of permanent acquisitions required, including 122.85 acres from the LM MSHCP area. *SCAG RTP/SCS:* Consistent with funded project description and Plan goals. *County General Plan and Area Plans*: Consistent with applicable Circulation, Land Use, and Area Plan policies. *County Climate Change Action Plan:* Consistent with applicable greenhouse gas (GHG)-reduction policies, with the exception of Policy AQ 20.3. *County Comprehensive Trails Plan*: Consistent with applicable goals. *Cities of Corona and Perris General Plans*: Consistent with applicable goals and policies. *Western Riverside County MSHCP:* Generally consistent with applicable goals and policies. *Stephens' Kangaroo Rat HCP*: Inconsistent with applicable goals and policies; requires acquisition of land from Existing Core C of SKR HCP Core Reserve areas. *Lake Mathews MSHCP:* Inconsistent; does not accommodate proposed project. *Lake Mathews Reserve Management Plan*: Inconsistent with Goal 1; generally consistent with Goal 2; and consistent with Goal 3. *RCRCD Long-Range Objectives*: Generally consistent with Goal 2.	*Permanent:* 239 acres of permanent acquisitions required, including 114.44 acres from the LM MSHCP area. *SCAG RTP/SCS:* Mostly consistent with funded project description; consistent with Plan goals. *County General Plan*: Consistent with applicable Circulation and Land Use policies. *County Climate Change Action Plan:* Consistent with applicable GHG-reduction policies, with the exception of Policy AQ 20.3. *County Comprehensive Trails Plan*: Consistent with applicable goals. *Cities of Corona and Perris General Plans*: Consistent with applicable goals and policies *Western Riverside County MSHCP:* Generally consistent with applicable goals and policies. *Stephens' Kangaroo Rat HCP*: Inconsistent with applicable goals and policies; requires acquisition of land from Existing Core C of SKR HCP Core Reserve areas. *Lake Mathews MSHCP:* Inconsistent; does not accommodate proposed project. *Lake Mathews Reserve Management Plan*: Inconsistent with Goal 1; generally consistent with Goal 2; and consistent with Goal 3. *RCRCD Long-Range Objectives*: Generally consistent with Goal 2.	*Permanent:* 240 acres of permanent acquisitions required, including 110.98 acres from the LM MSHCP area. *SCAG RTP/SCS:* Inconsistent with funded project description and Plan goals. *County General Plan*: Consistent with applicable Circulation and Land Use policies. *County Climate Change Action Plan:* Consistent with applicable GHG-reduction policies, with the exception of Policy AQ 20.3. *County Comprehensive Trails Plan*: Consistent with applicable goals. *Cities of Corona and Perris General Plans*: Consistent with applicable goals and policies. *Western Riverside County MSHCP:* Generally consistent with applicable goals and policies. *Stephens' Kangaroo Rat HCP*: Consistent; would not conflict with applicable goals and policies. *Lake Mathews MSHCP:* Consistent; would not conflict with applicable goals and policies. *Lake Mathews Reserve Management Plan*: Inconsistent with Goal 1; generally consistent with Goal 2; and consistent with Goal 3. *RCRCD Long-Range Objectives*: Generally consistent with Goal 2.	No impact on land uses. *SCAG RTP/SCS:* Inconsistent with funded project description and Plan goals. *County General Plan and Area Plans*: Inconsistent with Policies C1.1, C3.2 and LU1.5, TCAP 11.1, TCAP 11.2, MVAP 9.1 and MVAP 9.2. *County Climate Change Action Plan:* Inconsistent with most applicable GHG-reduction policies. *County Comprehensive Trails Plan*: Consistent with applicable goals. *Cities of Corona and Perris General Plans*: Inconsistent with Corona General Plan Policies 1.1.3, 6.1.3 and 6.1.12, and Perris General Plan Goals I, II, VIII, and Policies I.A, II.B, and V.A. *Western Riverside County MSHCP:* Generally consistent with applicable goals and policies. *Stephens' Kangaroo Rat HCP*: Consistent with applicable goals and policies *Lake Mathews MSHCP:* Consistent; no changes would occur. *Lake Mathews Reserve Management Plan*: Generally consistent with goals, objectives, and strategies. *RCRCD Long-Range Objectives*: Generally consistent with Goal 2.	**PF FA-1**: Access to all farmland will be maintained once construction is complete, including to any field remnants that may be cut off by the new roadway. **PF FA-2:** Farmland temporarily affected during construction activities returned to conditions that allow for continued use and function. **PF VIS-4:** Apply Minimum Lighting Standards. All artificial outdoor lighting and overhead street lighting will be limited to only those locations where it is absolutely necessary for safety and security requirements, such as intersections. In most cases, lighting will consist of County lighting standards that are up to 35 feet in height, and the minimum required for driver safety. Lighting will be designed using the Illuminating Engineering Society's design guidelines and in compliance with International Dark-Sky Association–approved fixtures. All lighting will be designed to have minimum impact on the surrounding environment and will use downcast, cut-off type fixtures that are shielded and direct the light only toward objects requiring illumination. Therefore, lights will be installed at the lowest allowable height and cast low-angle illumination while minimizing incidental light spill onto adjacent properties or open spaces, or backscatter into the nighttime sky. The lowest allowable wattage will be used for all lighted areas, and the number of nighttime lights needed to light an area will be minimized. Light fixtures will have non-glare finishes that will not cause reflective daytime glare. **PF AQ-1:** The project would conform to Caltrans construction requirements, as specified in the Caltrans' Standard Specifications, Section 14-9.02 (Air Pollution Control). The contractor will comply with all air pollution control ordinances and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances, and statutes specified in Section 11017 of the Government Code. Includes grid-based electricity and/or onsite renewable electricity and/or practical powered generators, construction idle restrictions, and alternative fuels. Exhaust emissions control measures will also be employed. **PF LU-1:** Traffic Management Plan (TMP). The TMP will include the following elements: construction staging plans, public awareness campaign, analysis of impacts on traffic, options for lane closures, and alternate route strategies. In addition, the TMP will address access, circulation, parking, public transportation, and pedestrian and bicycle facilities. To compensate for the loss of natural lands on the LMR and in the WRC MSHCP plan area (which includes the SKR HCP), the County will coordinate with the Lake Mathews Reserve Management Committee (LMRMC), Western Riverside County Regional Conservation Authority (RCA), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) to develop a suite of mitigation measures that demonstrate biological equivalency to offset the loss. Refer to measures **NC-17 (NES BIO-17)**, **NC-18 (NES BIO-31)**, **NC-19 (NES BIO-15)**, and **NC-20 (NES BIO-21)**. Temporary impact areas will be addressed through preparation of a habitat mitigation and monitoring plan (HMMP) and onsite restoration to original conditions; see Measure NC-19. **NC-17 (NES BIO-17):** Replacement Lands for Permanent Impacts within the LM MSHCP Area. Compensation for permanent loss of habitat on the Lake Mathews Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (LM MSHCP) area will be accomplished through the acquisition of replacement lands; a ratio no less than 1:1 is

[1] Some measures listed in Table S-1 are summarized; refer to corresponding section of this EIR/EIS for full measures.

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
					currently proposed. The County will purchase lands which will provide equivalent or greater habitat value and be located adjacent to the existing LM MSHCP area to ensure the reserve remains whole. The replacement lands will be managed by the LMRMC and the Metropolitan Water District of Southern California (MWD) in perpetuity as part of the larger Lake Mathews Reserve. If adequate replacement lands are not available at the time of land acquisition, the remainder of the necessary lands will be purchased from a mitigation bank (if available), and supplemental actions identified in Measure **NC-18** (**NES BIO-31**) implemented in coordination with LMRMC and MWD. **NC-18 (NES BIO-31):** Funding Endowment for the LM MSHCP. To compensate for the loss of natural lands on the Lake Mathew Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (LM MSHCP) area, the County of Riverside will coordinate with LMRMC to develop a suite of mitigation measures that demonstrate biological equivalency to offset the loss, including the acquisition of adequate replacement and restoration of lands (Measures **NC-17 [NES BIO-17]** and **NC-19 [NES BIO-15]**), fencing to aid in management of the Lake Mathews Multiple Species Reserve (LMR) (Measure **NC-16 [NES BIO-19]**), and funding to be used toward LMR management. The County of Riverside will develop the funding mechanism with input from the LMRMC that will be used to support management of new reserve lands acquired for the LM MSHCP area and any existing reserve lands, along with shared maintenance and security costs for the LM MSHCP area. **NC-19 (NES BIO-15):** Restoration for Temporary Impacts within the LM MSHCP Area. Restoration of temporary impact areas on the LM MSHCP area will be accomplished through on-site restoration of those temporarily affected areas. A Habitat Mitigation and Monitoring Plan will be developed in consultation with LMRMC, USFWS, and CDFW. **NC-20 (NES BIO-21):** Replacement of Public/Quasi-Public (PQP) Lands. PQP lands in Existing Core C and Proposed Extension of Existing Core 2 and Proposed Linkage 3 that will be permanently removed are proposed to be replaced at a minimum 1:1 ratio. This will be coordinated with riparian-riverine compensation (**BIO-14**) and jurisdictional resources permitting (Measure **WET-1**), as feasible. An evaluation of existing functions and value of PQP conserved lands within the project area will be performed as part of the Project Equivalency Determination, to provide accurate estimate of potential impacts (direct and indirect) and ensure the proposed replacement lands are equivalent or superior to those lands proposed for impact. Prior to land acquisition, an equivalency report will be provided that analyzes the existing biological resources being permanently removed compared to the biological resources supported by the lands proposed for acquisition. The resource mitigation values will need to be equivalent or superior to what is being removed. The LMRMC will be consulted regarding mitigation lands proposed within LMR PQP conserved lands, and provided opportunity for input on the selection of lands. Execution of this mitigation measure will include compensatory mitigation needed for least Bell's vireo (refer to Measure **TE-2 [NES BIO-23]**) and Western Riverside County Multiple Species Habitat Conservation Plan (WRC MSHCP) riparian-riverine resources (Measures **NC-14 [NES BIO-13]**, **NC-15 [NES BIO-14]**, **NC-17 [NES BIO-17]**, and **NC-19 [NES BIO-15**]) as feasible. The Equivalency Determination will be reviewed by the RCA, USFWS, CDFW, and LMRMC, and approved by RCA, USFWS, and CDFW.
Farmlands/ Timberlands	*Permanent*: • Conversion of 7.69 acres (0.2%) of important farmland to nonagricultural use. • Farmland Impact Conversion Rating <160. *Temporary:* 10.8 acres of farmland during construction.	*Permanent:* • Conversion of 7.85 acres (0.2%) of important farmland to nonagricultural use. • Farmland Impact Conversion Rating <160 *Temporary:* 10.8 acres of farmland during construction.	*Permanent:* • Conversion of 23.44 acres (0.8%) of important farmland to nonagricultural use. • 4.79 acres of Williamson Act farmland converted to nonagricultural use; Williamson Act land converted <100 acres.	No impact	**PF FA-1** **PF FA-2** **PF COM-1:** Signage provisions shall be made available to businesses whose temporary or permanent visibility and vehicular access changes as a result of the project. **PF COM-2**: In accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended (42 United States Code Sections 4601–4655), provide compensation to eligible recipients for property acquisitions. Relocation assistance payments and counseling will

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			• Farmland Impact Conversion Rating <160 *Temporary:* 9.86 acres of farmland and 2.12 acres of Williamson Act land during construction.		be provided by the transportation agencies to persons and businesses in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees will be entitled to moving expenses. All benefits and services will be provided equitably to all residential and business displacees without regard to race, color, religion, age, national origins, and disability, as specified under Title VI of the Civil Rights Act of 1964. In addition, the Nonresidential relocation assistance program (RAP) provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement properties and reimbursement for certain costs involved in relocation.
Growth	Would improve accessibility of the area, allowing for higher traffic volumes and addressing anticipated growth.	Would improve accessibility of the area, allowing for higher traffic volumes and addressing anticipated growth.	Would improve accessibility of the area, allowing for higher traffic volumes and addressing anticipated growth.	Growth related impacts as a result of the No-Build Alternative would not be anticipated.	
Community Impacts	*Permanent:* • 62 complete acquisitions • 221 partial acquisitions • Displacement of 19 residential properties (62 residents) • Displacement of one commercial business (9 employees) • Displacement of one government facility (16 employees) • Community cohesion/character: - Changes semi-rural/suburban character to a more urbanized character with increased roadway pavement/lanes/structures/ lighting/traffic/truck traffic. - Would not introduce a new barrier that would divide any existing communities, separate residences from community facilities, result in substantial growth, or impede connectivity between neighborhoods. - Changes in access; changes to aesthetic character and aesthetics; local safety enhancements; proposed acquisitions and relocations would not substantially affect community character; would not introduce new land uses or facilities that would be incompatible with existing land uses. - Would not affect Victoria Grove or Lake Hills/Home Gardens communities. • Environmental Justice: - Potential disproportionately high and adverse to minority population involving property acquisitions and displacements. *Temporary:*	*Permanent:* • 62 complete acquisitions • 225 partial acquisitions • Displacement of 19 residential properties (62 residents) • Displacement of one commercial business (9 employees) • Displacement of one government facility (16 employees) • Community cohesion/character: - Changes semi-rural/suburban character to a more urbanized character with increased roadway pavement/lanes/structures/ lighting/traffic/truck traffic. - Would not introduce a new barrier that would divide any existing communities, separate residences from community facilities, result in substantial growth, or impede connectivity between neighborhoods. - Changes in access; changes to aesthetic character and aesthetics; local safety enhancements; proposed acquisitions and relocations would not substantially affect community character; would not introduce new land uses or facilities that would be incompatible with existing land uses. - Would not affect Victoria Grove or Lake Hills/Home Gardens communities. • Environmental Justice: - Potential disproportionately high and adverse to minority population involving property acquisitions and displacements. *Temporary:*	*Permanent:* • 76 complete acquisitions • 267 partial acquisitions • Displacement of 21 residential properties (69 residents) • Displacement of one commercial business (9 employees) • Displacement of one government facility (16 employees) • Community cohesion/character: - Changes semi-rural/suburban character to a more urbanized character with increased roadway pavement/lanes/structures/ lighting/traffic/truck traffic. - No development features are proposed that would divide an established community or limit movement, travel, or social interaction between established communities. - Changes in access; substantial changes to aesthetic character and aesthetics; local safety enhancements; proposed acquisitions and relocations would not substantially affect community character; would not introduce new land uses or facilities that would be incompatible with existing land uses. - Widening of El Sobrante Road and La Sierra Avenue from a two-lane roadway to a four-lane roadway would change the aesthetic character of the land adjacent to El Sobrante Road and La Sierra Avenue by making a roadway wider and more urban-like. In addition, realigning La Sierra Avenue could make the roadway feel more urban-like as well. The feel of the roadway would change for travelers and residents along the roadway,	No impact; no improvements would be implemented that would affect community character.	**PF LU-1** **PF COM-1** **PF COM-2** **COM-3:** Prior to any partial or full property acquisitions that would result in residential or business relocations and/or loss of business revenue, a Relocation and Reimbursement Mitigation Plan will be prepared by the County of Riverside in accordance with federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (42 United States Code Sections 4601–4655) requirements, and in conjunction with the Relocation Assistance Program. The purpose of the Relocation and Reimbursement Mitigation Plan is to minimize economic disruptions related to relocation and loss of property. The plan will include consultation with affected property owners to ensure full consideration of information related to property valuation, and disclosure of information regarding property rights, the relocation and reimbursement process, and available resources. **PF FA-1** **PF FA-2** **PF UT-1:** Coordination of utility relocation work with utility companies to ensure minimum disruption to customers in the service areas during construction **PF VIS-1:** Contouring and Replanting Disturbed Areas. Post-construction, any disturbed areas remaining as bare ground will be returned to natural contour grades and hydro-seeded with a County of Riverside–approved native plant seed mix. **VIS-2:** Replace or Relocate Site Features and Landscaping Affected by the Project. Where appropriate and to the degree possible, landscaping and related appurtenances, such as fencing, privacy walls, and other similar features, removed from private properties as a result of construction will be relocated, replaced, or restored in place and in kind to address visual impacts. Slopes will (1) be graded to 4:1 or flatter; (2) be gentle, smooth, and well transitioned with slope rounding, and topsoil and duff salvaged and reused; and (3) have contours naturally formed that tie gracefully into the existing adjacent roadside and landforms. Rock cut slopes will be irregular for a natural appearance, with rounding of the tops and ends of cut slopes. Steep, obvious cuts and fills will be avoided to improve project aesthetics associated with roadside slopes. Standard fence types (chain link, barbed wire, and/or wire mesh) will be used unless fences of special design need to be used in certain cases, such as for wild animal control. In special cases, alternative options such as powder-coating, the use of iron, and other enhancements will be considered. Replacement vegetation will reflect adjacent communities and natural surroundings, serve as a visual buffer for objectionable views of the roadway facility for adjacent land uses, soften visual impacts associated with graded slopes and large structures, and act to frame or enhance good views. For specific plant species within the limits of habitat conservation plan areas,

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	• Temporary, partial roadway closures, and construction-related noise and visual impacts.	• Temporary, partial roadway closures, and construction-related noise and visual impacts.	specifically the residents of the community north of Lake Mathews. • Environmental Justice: - Potential disproportionately high and adverse to minority population involving property acquisitions and displacements. *Temporary:* • Temporary partial roadway closures, and construction-related noise and visual impacts.		replacement vegetation will be reestablished in the ratios identified in Measure NC-15 (NES BIO-14): no less than 3:1 mitigation ratio for riparian, 1:1 for riverine resources, and 2:1 for permanent shading of riparian vegetation and wetlands. Temporary impacts on riparian-riverine vegetation may be replaced through restoration at their current locations at a not-less-than 1:1 ratio or through the purchase of In-lieu Fee Program or other permittee-responsible mitigation bank credits, or through another approved mitigation program. A Tree Avoidance, Minimization, and Replacement Plan will be developed in consultation with a certified arborist for trees removed during project construction. **PF VIS-3:** Design Proposed Noise Barriers to Be Visually Consistent with Existing Noise Barriers in the Project Vicinity. Existing noise barriers in the project vicinity utilize a combination of solid barriers and landscaping to improve site aesthetics. Any noise barriers constructed as a result of the proposed project will be designed and constructed in a manner that complements and blends with nearby existing noise barriers. Aesthetic treatments such as color and/or texture will be considered for the walls, and their compatibility with existing conditions, and with applicable goals and policies of the County, will be considered prior to final design. The County's Resident Engineer, or Project Engineer under contract to the County, will ensure that the aesthetic treatments included in the final Plans, Specifications, and Estimates (PS&E) are implemented by the County's Construction Contractor or Project Construction Contractor under contract to the County, during construction. **PF VIS-4** **PF VIS-5:** Basin and Flood Control Drainage Facility Treatments. New or expanded basins and the new flood control drainage facility would be soft-bottom where hydraulically feasible; however, some would need to be concrete-lined. The soft-bottomed basins would further be vegetated where vegetation would not interfere with the intended use of the facilities(i.e., conveyance of water). Seeding with appropriate species would be determined in coordination with a County-approved biologist, and consistent with the requirements of the WRC MSHCP, LM MSHCP, and/or SKR HCP, where applicable. **PF VIS-6:** Temescal Creek Bridge Design. Section 14.7.1 of the City of Corona El Cerrito Specific Plan Scenic Corridor Design Standards will be applied in the design and construction of the widened Temescal Creek Bridge. **PF VIS-7:** New Bridge Architectural Treatments. Aesthetic treatments that are consistent with County design and engineering standards, and complement area conditions, will be applied to new bridge structures. **VIS-8:** Replace Disturbed Vegetation along Landscaped Freeways. The County of Riverside will work with the appropriate Caltrans district landscape architect to determine which disturbed portions of landscaped freeways within the project limits require replanting and to what extent. At a minimum, replanting will follow the guidance in Section 92.3 of the Streets and Highways Code. Landscaping will be drought resistant whenever feasible. Recycled water will be used for irrigation when practicable. When appropriate and consistent with integrated pest management strategies as defined in subdivision (d) of Section 14717 of the Government Code, landscaping will include California native wildflowers and native and climate-appropriate vegetation as an integral and permanent part of the planting design, with priority given to those species of wildflowers and native and climate-appropriate vegetation that will help rebuild pollinator populations. **(a):** Detailed Site Investigation **(b):** Riverside County Department of Environmental Health Notification and Soil Remediation, if required **(c):** Health and Safety Plan

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
					(d): Soil Management Plan, if required **PF HAZ-2:** Health and Safety Plan (HASP). The HASP would provide direction for the identification, evaluation, and control of the wide variety of chemical, physical, biological, and ergonomic hazards that may be encountered during construction activities. The HASP will also address the management of potential health and safety hazards to workers and the public, and will be prepared and implemented prior to initiation of the construction activities. **PF HAZ-3:** Handling, Transport, and Disposal of Waste. Wastes and petroleum products used or encountered during construction will be collected, transported, and removed from the project site in accordance with Resource Conservation and Recovery Act regulations and federal/Occupational Health and Safety Administration standards, including Waste Management and Materials Pollution Control Best Management Practices (BMPs) – Spill Prevention and Control, Materials; and Waste Management BMPs, Hazardous Waste Management. **HAZ-4 (a–g):** 21020 Cajalco Road (APNs 318-061-027 and -030) **(a):** Continued Coordination with Oversight Agencies **(b):** Abandonment of Existing Monitoring Structures **(c):** Soil and Groundwater Investigation (Optional) **(d):** Health and Safety Plan **(e):** Soil Management Plan; prior to construction **(f):** SCAQMD Rule 1166 permitting and VOC monitoring **(g):** Groundwater Disposal **PF HAZ-5:** Handling, Transport, and Disposal of Creosote-treated Wood Waste **HAZ-6 (a–c):** Agricultural Land Uses **(a):** Preliminary Site Investigation (PSI) **(b):** Corrective Action (if PSI concludes contaminants present at levels above regulatory threshold standards) **(c):** Soil Management Plan – Agricultural Land Uses **HAZ-7:** Yellow thermoplastic and yellow-painted traffic stripes. Yellow paint and thermoplastic striping survey will be conducted along the project alignment for striping that will be removed. Handling of this material would be consistent with Caltrans Standard Special Provisions 36-4 and 14-11.12, or with 84-9.03C, as applicable. **HAZ-8:** Asbestos-Containing Material (ACM) and Lead-Based Paint (LBP). Surveys for hazardous building materials including ACM and LBP will be conducted for structures that will be removed in as part of the project. A certified contractor will be retained to abate any identified ACM or LBP in accordance with all applicable laws, including Occupational Health and Safety Administration guidelines. Handling of ACM waste would be conducted consistent with Caltrans SSP 14-11.16, and LBP would be handled according to SSP 36-4. **PF NOI-1:** Do not exceed 86 A-weighted decibels maximum noise level at 50 feet from job site activities between 9:00 p.m. and 6:00 a.m. (2018 Caltrans Standard Specifications [SSP], Section 14-8.02, Noise Control). **NOI-2:** Construct soundwall S-624 at the right of way at a height of 10 feet, provided that the survey process approves soundwall S-624. If soundwall S-624 is not approved, design and construct a soundwall 8 feet in height at the same location. (Barriers were determined to be feasible and reasonable under all build alternatives. **NOI-3:** For all build alternatives, construct soundwalls S-650 and S-652 at the property line with respective lengths of 330 and 285 feet, at heights of 8 feet, provided that the survey process approves. **NOI-4:** Inclusion of Quiet Pavement (CEQA Measure). The County will require the construction contractor to provide an asphalt mix that provides 5-

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					decibel minimum tire pavement noise reduction, and will include this mix during construction and paving of the proposed project.
Utilities/Emergency Services	All effects on utilities would be temporary and would be rectified when relocations of certain utilities and project construction are complete. No demand for new or expanded emergency facilities or services. Temporary, localized, site-specific disruptions to the utilities and emergency services in the project area, primarily related to construction-related traffic changes from trucks and equipment and partial and/or complete street and lane closures, some requiring detours.	All effects on utilities would be temporary and would be rectified when relocations of certain utilities and project construction are complete. No demand for new or expanded emergency facilities or services. Temporary, localized, site-specific disruptions to the utilities and emergency services in the project area, primarily related to construction-related traffic changes from trucks and equipment and partial and/or complete street and lane closures, some requiring detours.	All effects on utilities would be temporary and would be rectified when relocations of certain utilities and project construction are complete. No demand for new or expanded emergency facilities or services. Temporary, localized, site-specific disruptions to the utilities and emergency services in the project area, primarily related to construction-related traffic changes from trucks and equipment and partial and/or complete street and lane closures, some requiring detours.	No impact	**PF UT-1** **HYD-1:** The County of Riverside will coordinate directly with MWD to obtain approval for right of way acquisition involving the Cajalco Creek Dam and Detention Basin and Cajalco Creek Sedimentation Basin. The County will coordinate directly with MWD in the preparation of a site-specific Drainage Study to evaluate the changes in runoff and floodplain encroachment into the Cajalco Creek Dam and Detention Basin and the Cajalco Creek Sedimentation Basin, and determine whether the conversion of right of way would affect operation of the dam and basins. If operation of the basins is affected by the project, engineering recommendations will be provided, and implemented as necessary, to ensure continued operation of the dam and basins. **PF LU-1**
Traffic and Transportation/ Pedestrian and Bicycle Facilities	*Permanent:* Safety Improvements for 15.7-mile length of Cajalco Road. Vehicle miles traveled (VMT): 14,779,906 Vehicle hours traveled (VHT): 399,326 East-west corridor distance: 15.7 miles Improvements supporting roadway, pedestrian, and cyclist safety: medians; paved roadway shoulders; left- and right-turn pockets; restrictions on left turns from Cajalco Road onto local streets; improvement of curves between Temescal Canyon Road and El Sobrante Road; adding roadway signage; improvement of existing intersections varying from minor widening and turn pockets; installation of new traffic signals, object markers, and safety lighting at intersections; and designated crosswalks at improved and new intersections. Improvements along Cajalco Road from Harley John Road to Harvill Avenue include curb and gutter and 8-foot-wide shoulders that would serve as a combined shoulder/bike lane. Truck traffic percentages in the future year (2044) are forecast to increase up to 1.62 percent in comparison to 2044 no-build conditions. Truck percentages are projected to increase up to 0.14 percent as compared to the existing conditions. Projected truck traffic is not anticipated to result in an increased risk to pedestrian or cyclist safety, as the projected limited increases would be consistent with the overall projected traffic volumes through most of the project limits. Average speeds for traffic traveling along Cajalco Road are projected to average 37 mph and decrease by approximately 5–10 mph during peak hours. A cul-de-sac would be placed at the northern terminus of existing Gustin Road and Gustin Road would be realigned	*Permanent:* Safety Improvements for 15.7-mile length of Cajalco Road. VMT: 14,721,152 VHT: 399,326 East-west corridor distance: 15.7 miles Improvements supporting roadway, pedestrian, and cyclist safety: medians; paved roadway shoulders; left- and right-turn pockets; restrictions on left turns from Cajalco Road onto local streets; improvement of curves between Temescal Canyon Road and El Sobrante Road; adding roadway signage; improvement of existing intersections varying from minor widening and turn pockets; installation of new traffic signals, object markers, and safety lighting at intersections; and designated crosswalks at improved and new intersections. Improvements along Cajalco Road from Harley John Road to Harvill Avenue include curb and gutter and 8-foot-wide shoulders that would serve as a combined shoulder/bike lane. Truck traffic percentages in the future year (2044) are forecast to increase up to 1.62 percent in comparison to 2044 no-build conditions. Truck percentages are projected to increase up to 0.14 percent as compared to the existing conditions. Projected truck traffic is not anticipated to result in an increased risk to pedestrian or cyclist safety, as the projected limited increases would be consistent with the overall projected traffic volumes through most of the project limits. Average speeds for traffic traveling along Cajalco Road are projected to average 37 mph and decrease by approximately 5–10 mph during peak hours. A cul-de-sac would be placed at the northern terminus of existing Gustin Road and Gustin Road would be realigned	*Permanent:* Safety Improvements for 9 miles of Cajalco Road. VMT: 14,811,302 VHT: 398,527 East-west corridor distance: 16.8 miles Improvements supporting roadway, pedestrian, and cyclist safety: medians; paved roadway shoulders; left- and right-turn pockets; restrictions on left turns from Cajalco Road onto local streets; improvement of curves between Temescal Canyon Road and El Sobrante Road; adding roadway signage; improvement of existing intersections varying from minor widening and turn pockets; installation of new traffic signals, object markers, and safety lighting at intersections; and designated crosswalks at improved and new intersections. Improvements along Cajalco Road from Harley John Road to Harvill Avenue include curb and gutter and 8-foot-wide shoulders that would serve as a combined shoulder/bike lane. Truck traffic percentages in the future year (2044) are forecast to increase up to 1.07 percent in comparison to 2044 no-build conditions. Truck percentages are projected to increase up to 0.59 percent as compared to the existing conditions. Projected truck traffic is not anticipated to result in an increased risk to pedestrian or cyclist safety, as the projected limited increases would be consistent with the overall projected traffic volumes through most of the project limits. Average speeds for traffic traveling along Cajalco Road are projected to average 37 mph and decrease by approximately 3–7 mph during peak hours. A cul-de-sac would be placed at the northern terminus of existing Gustin Road and Gustin Road would be realigned	No safety improvements. VMT: 14,659,917 VHT: 396,569 East-west corridor distance: 15.7 miles Would not accommodate additional future lanes along Cajalco Road that would address projected deficiencies. No improvements supporting roadway, pedestrian, or cyclist safety.	**PF LU-1** **PF AQ-1**

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	through undeveloped parcels to intersect with Cajalco Road west of the cul-de-sac. This change would redirect traffic away from residences east of Gustin Road and closer to the Lake Mathews Market. Access to the undeveloped parcels exists under current conditions and would not be increased or decreased as a result of the Gustin Road realignment. Between west of La Sierra Avenue and Lake Mathews Drive, includes a new connection between Dirt Road and Richey Way south of the existing segment of Cajalco Road and west of Lake Mathews Drive. The new road connection would connect Dirt Road to Richey Way. This new road connection would provide emergency access for residences and businesses west of Lake Mathews Drive as well as improved connectivity and accessibility within the Lake Mathews community. Because Dirt Road and Richey Way are existing roadways that are accessible by the public, the new connection would not create new access to previously inaccessible areas; it would enhance access and circulation within the Lake Mathews community. Accommodates additional future lanes between Temescal Canyon Road and Harley John Road; if constructed in future, would address projected deficiencies along this segment of Cajalco Road. *Temporary:* Temporary impacts on circulation and access would result from construction activities that require detours and partial closures of Cajalco Road, which could temporarily affect businesses along the project corridor. Construction-related access and delays addressed with TMP.	through undeveloped parcels to intersect with Cajalco Road west of the cul-de-sac. This change would redirect traffic away from residences east of Gustin Road and closer to the Lake Mathews Market. Access to the undeveloped parcels exists under current conditions and would not be increased or decreased as a result of the Gustin Road realignment. Between west of La Sierra Avenue and Lake Mathews Drive, includes a new connection between Dirt Road and Richey Way south of the existing segment of Cajalco Road and west of Lake Mathews Drive. The new road connection would connect Dirt Road to Richey Way. This new road connection would provide emergency access for residences and businesses west of Lake Mathews Drive as well as improved connectivity and accessibility within the Lake Mathews community. Because Dirt Road and Richey Way are existing roadways that are accessible by the public, the new connection would not create new access to previously inaccessible areas; it would enhance access and circulation within the Lake Mathews community. Accommodates additional future lanes between Temescal Canyon Road and Harley John Road; if constructed in future, would address projected deficiencies along this segment of Cajalco Road. *Temporary:* Temporary impacts on circulation and access would result from construction activities that require detours and partial closures of Cajalco Road, which could temporarily affect businesses along the project corridor. Construction-related access and delays addressed with TMP.	through undeveloped parcels to intersect with Cajalco Road west of the cul-de-sac. This change would redirect traffic away from residences east of Gustin Road and closer to the Lake Mathews Market. Access to the undeveloped parcels exists under current conditions and would not be increased or decreased as a result of the Gustin Road realignment. Accommodates additional future lanes between Temescal Canyon Road and El Sobrante Road only; if constructed in future, would address projected deficiencies for Cajalco Road between Temescal Canyon Road and La Sierra Avenue. *Temporary:* Temporary impacts on circulation and access would result from construction activities that require detours and partial closures of Cajalco Road, La Sierra Avenue, or El Sobrante Road and La Sierra Avenue, which could temporarily affect businesses along the project corridor. Construction-related access and delays addressed with TMP.		
Visual/Aesthetics	*Permanent:* Visual impacts in response to viewer response and resource change rated High for Key Views #1, 2, and 6A; Moderate-High for Key Views #3 and 4; and Moderate for Key View #5. Approximately 83 additional acres of pavement and hardscape. Widened and realigned roads, resulting in removal of vegetation, including approximately 380 small trees and shrubs, and 105 large mature trees. Substantial additional hardscape (such as structures/concrete drainages/intersection and street light standards). Within the Rural Residential Visual Assessment Unit (VAU), impacts on the existing visual character and quality would range between moderate and high, even	*Permanent:* Visual impacts in response to viewer response and resource change rated High for Key Views #1, 2, and 6B; Moderate-High for Key Views #3 and 4; and Moderate for Key View #5. Approximately 84 additional acres of pavement and hardscape. Widened and realigned roads, resulting in removal of vegetation, including approximately 390 small trees and shrubs, and 105 large mature trees. Substantial additional hardscape (such as structures/concrete drainages/intersection and street light standards). Within the Rural Residential VAU, impacts on the existing visual character and quality would range between moderate and high, even with implementation of standard	*Permanent:* Visual impacts in response to viewer response and resource change rated High for Key Views #1 and 2; and, Moderate-High for Key Views #3, 4 and 7. Approximately 105 additional acres of pavement and hardscape. Widened and realigned roads, resulting in removal of vegetation, including approximately 400 small trees and shrubs, and 195 large mature trees. Substantial additional hardscape (such as structures/concrete drainages/intersection and street light standards). Within the Rural Residential VAU, impacts on the existing visual character and quality would range between moderate-high and high, even with implementation of project	No impact	**PF VIS-1** **VIS-2** **PF VIS-3** **PF VIS-4** **PF VIS-5** **PF VIS-6** **PF VIS-7** **VIS-8**

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	with implementation of project measures, and therefore result in adverse visual effects. Within the Open Space VAU, impacts on scenic views and existing visual character and quality would be moderate-high to high even with implementation of project measures, and therefore result in adverse visual effects. No scenic vistas would be affected under Build Alternative 1. Within the Suburban Residential VAU, impacts on the existing visual character and quality would be moderate with implementation of project measures, and therefore would not result in adverse visual effects. There are no scenic vista views within the Suburban Residential VAU; therefore, no scenic vistas would be affected. Within the Commercial VAU, impacts on the existing visual character and quality would be moderate with implementation of project measures, and therefore would not result in adverse visual effects. There are no scenic vista views within the Commercial VAU; therefore, no scenic vistas would be affected. No roadways within or near the project area are designated in federal or state plans as a scenic highway or route worthy of protection for maintaining and enhancing scenic viewsheds. However, portions of Cajalco Road, El Sobrante Road, and La Sierra Avenue are County-eligible scenic corridors. However, the proposed project would not result in adverse visual effects on County-eligible scenic roadways with implementation of the recommended standard measures. Views of scenic roadways would not be altered by the permanent visual changes associated with the project. Implementation of Measure VIS-2 and Standard Project Measure PF VIS-4 would ensure that project light and glare would not result in adverse visual effects. *Temporary:* Construction activities and equipment would affect views of and from the project site during the construction period.	measures, and therefore result in adverse visual effects. Within the Open Space VAU, impacts on scenic views and existing visual character and quality would be moderate-high to high even with implementation of project measures, and therefore result in adverse visual effects. In addition, Build Alternative 2C may result in adverse visual effects on scenic vistas within the Open Space VAU because roadway realignment would alter the availability of existing scenic vistas. However, the realignments may introduce new scenic vista views. Within the Suburban Residential VAU, impacts on the existing visual character and quality would be moderate with implementation of project measures, and therefore would not result in adverse visual effects. There are no scenic vista views within the Suburban Residential VAU; therefore, no scenic vistas would be affected. Within the Commercial VAU, impacts on the existing visual character and quality would be moderate with implementation of project measures, and therefore would not result in adverse visual effects. There are no scenic vista views within the Commercial VAU; therefore, no scenic vistas would be affected. No roadways within or near the project area are designated in federal or state plans as a scenic highway or route worthy of protection for maintaining and enhancing scenic viewsheds. However, portions of Cajalco Road, El Sobrante Road, and La Sierra Avenue are County-eligible scenic corridors. However, the proposed project would not result in adverse visual effects on County-eligible scenic roadways with implementation of the recommended standard measures. Views of scenic roadways would not be altered by the permanent visual changes associated with the project. Implementation of Measure VIS-2 and Standard Project Measure PF VIS-4 would ensure that project light and glare would not result in adverse visual effects. *Temporary:* Construction activities and equipment would affect views of and from the project site during the construction period.	measures, and therefore result in adverse visual effects. Within the Open Space VAU, impacts on scenic views and existing visual character and quality would be moderate-high to high even with implementation of project measures, and therefore result in adverse visual effects. The greatest visual change in this VAU would be the widening and realignment of La Sierra Avenue, which would require large areas of cut and fill to accommodate the widening and traverse the undeveloped, hilly terrain. In addition, an approximately 1,800-foot-long arch bridge would be constructed along the realigned section of La Sierra Avenue, introducing new bridge infrastructure where none presently exists. Within the Suburban Residential VAU, impacts on the existing visual character and quality would be moderate-high even with implementation of project measures, and therefore would result in adverse visual effects. There are no scenic vista views within the Suburban Residential VAU; therefore, no scenic vistas would be affected. Within the Commercial VAU, impacts on the existing visual character and quality would be moderate with implementation of project measures, and therefore would not result in adverse visual effects. There are no scenic vista views within the Commercial VAU; therefore, no scenic vistas would be affected. No roadways within or near the project area are designated in federal or state plans as a scenic highway or route worthy of protection for maintaining and enhancing scenic viewsheds. However, portions of Cajalco Road, El Sobrante Road, and La Sierra Avenue are County-eligible scenic corridors. However, the proposed project would not result in adverse visual effects on County-eligible scenic roadways with implementation of the recommended standard measures. Views of scenic roadways would not be altered by the permanent visual changes associated with the project. Implementation of Measure VIS-2 and Standard Project Measure PF VIS-4 would ensure that project light and glare would not result in adverse visual effects. *Temporary:* Construction activities and equipment would affect views of and from the project site during the construction period.		

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Cultural Resources	Adverse effects on NRHP- and CRHR-eligible Potential Prehistoric Archaeological District (PPAD), three NRHP- and CRHR-eligible individual archaeological sites, and two site loci. No adverse effects on three NRHP- and CRHR-eligible Traditional Cultural Properties (TCPs).	Adverse effects on NRHP- and CRHR-eligible PPAD, three NRHP- and CRHR-eligible individual archaeological sites, and two site loci. No adverse effects on three NRHP- and CRHR-eligible TCPs.	Adverse effects on NRHP- and CRHR-eligible PPAD, five individual archaeological sites, and two site loci. No adverse effects on three NRHP- and CRHR-eligible TCPs.	No impact	**PF CR-1:** Discovery of Human Remains. If human remains are discovered during construction, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the County Coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who, pursuant to Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendant (MLD). Further provisions of PRC 5097.98 are to be followed as applicable. **PF CR-2:** Unanticipated Discoveries. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. Unanticipated discoveries will be treated according to the Project Discovery and Monitoring Plan.
Hydrology and Floodplain	*Permanent:* • Four, nonsignificant floodplain encroachment locations: one at Temescal Creek and three at Cajalco Creek. • 4.95 acres (7% of basin) of the Cajalco Creek Dam and Detention Basin and 3.69 acres (12% of basin) of the Cajalco Creek Sedimentation Basin would be converted to roadway right of way. *Temporary:* Potential temporary impacts could occur during construction exposing soil to the potential for erosion and downstream transport of sediments to occur. A Storm Water Pollution Prevention Plan (SWPPP) and construction best management practices (BMPs) aimed at reducing pollutants of concern in stormwater runoff would be implemented under the Construction General Permit.	*Permanent:* • Four nonsignificant floodplain encroachment locations: one at Temescal Creek and three at Cajalco Creek. • 4.95 acres (7% of basin) of the Cajalco Creek Dam and Detention Basin and 3.69 acres (12% of basin) of the Cajalco Creek Sedimentation Basin would be converted to roadway right of way. *Temporary:* Potential temporary impacts could occur during construction exposing soil to the potential for erosion and downstream transport of sediments to occur. A SWPPP and construction BMPs aimed at reducing pollutants of concern in stormwater runoff would be implemented under the Construction General Permit.	*Permanent:* • Four nonsignificant floodplain encroachment locations: one at Temescal Creek and three at Cajalco Creek. • 0.12 acres (<1% of basin) of the Cajalco Creek Dam and Detention Basin and 3.55 acres (11.5% of basin) of the Cajalco Creek Sedimentation Basin would be converted to roadway right of way. *Temporary:* Potential temporary impacts could occur during construction exposing soil to the potential for erosion and downstream transport of sediments to occur. A SWPPP and construction BMPs aimed at reducing pollutants of concern in stormwater runoff would be implemented under the Construction General Permit.	No impact	**HYD-1** **PF WQ-1:** 401 Certification – The project proponent will obtain a 401 Certification from the Regional Water Quality Control Board (RWQCB) for activities that may result in impacts on State Water Quality Standards. **PF WQ-2:** 404 Permit – The project proponent will obtain a Section 404 permit from the U.S. Army Corps of Engineers (USACE) for activities that would discharge materials into waters of the U.S. **PF WQ-3:** Post-Construction BMPs – Post-construction BMPs will be implemented to the maximum extent practicable, consistent with the requirements of the NPDES permit and Waste Discharge Requirements for the County of Riverside's Municipal Separate Storm Sewer System Permit in place at the time of project approval. **PF WQ-4:** Construction SWPPP – The project will comply with the SWRCB Construction General Permit in effect at the time of the project goes to construction, by developing and implementing a SWPPP that calculates the site's risk level during construction, includes guidelines for monitoring and reporting, and provides Erosion Control Plan and BMP details for the construction site. **NC-6 (NES BIO-6):** Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to complete the proposed project and will be specified in the construction plans. Construction limits adjacent to sensitive resource areas will be demarcated using ESA fencing (e.g., orange snow fencing, silt fencing). The ESA fencing will be reviewed at a frequency deemed necessary by the biological monitor (as indicated in Measure **NC-5 [NES BIO-5]**) until the completion of all construction activities. For the ESA fencing installed within WRC MSHCP Core Reserve (RCHCA SKR Reserve and LM MSHCP area), the fencing must exclude reptiles and amphibians (to greatest extent feasible) from entering the LOD. Employees will be instructed that their activities are restricted to the construction areas (WRC MSHCP Volume I, Appendix C). Access to sites will be from pre-existing access routes to the greatest extent possible (WRC MSHCP Volume I, Section 7.5.3 and Appendix C). **NC-10 (NES BIO-10):** Plans for water pollution and erosion control (i.e., SWPPP) will be prepared in accordance with project aquatics permits. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans will be reviewed and approved by the County prior to construction (WRC MSHCP Volume I, Section 7.5.3). **NC-15 (NES BIO-14):** Compensation for permanent impacts on riparian-riverine resources will occur as a combination of enhancement, restoration, and/or creation, at a ratio that achieves no net loss of riparian-riverine resources. Compensation can also occur through the purchase of mitigation bank credits through the Riverside-Corona Resource Conservation District In-lieu Fee Program (ILFP), Santa Ana Watershed Association ILFP, a

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					permittee responsible mitigation bank, and/or other approved mitigation provider and/or creation of riparian-riverine resources, including federal and state jurisdictional water resources. For riparian resources a mitigation ratio of no less than 3:1 is proposed, and for riverine resources no less than a 1:1 ratio is currently proposed. A mitigation ratio of no less than 2:1 is proposed for permanent shading of riparian vegetation and wetlands[2] to address temporal loss of these habitats. Mitigation for all aquatic resources will be biologically superior or equivalent to resources occurring on site. The temporary impacts on riparian-riverine resources may be replaced through restoration of the temporarily affected area to pre-project conditions at a ratio of no less than 1:1, or through the purchase of mitigation bank credits, a permittee responsible mitigation bank, or other approved mitigation program. Details of the compensation for riparian-riverine resources will be provided in the Determination of Biologically Equivalent or Superior Preservation (Measure **NC-14 [NES BIO-13]**). Because the federally and state-listed as endangered least Bell's vireo occupies the riparian-riverine areas at Temescal Creek, Cajalco Creek, and other unnamed drainages proposed for impact, the compensation for both WRC MSHCP riparian-riverine and least Bell's vireo should also be integrated. Compensatory mitigation will be coordinated with USACE Clean Water Act (CWA) 404 authorization, RWQCB CWA 401 Certification, CDFW Fish and Game Code 1602 Streambed Alteration Agreement acquisition (measure **WET-1**), and WRC MSHCP riparian-riverine requirements to ensure efficiencies with the mitigation effort. Final mitigation ratios will be determined after consultation with the USACE, RWQCB, USFWS, and CDFW. **WET-1:** Compensation for direct permanent impacts on USACE and RWQCB wetland and non-wetland waters of the U.S. (WoUS)/waters of the State (WoS) and CDFW streambed and associated riparian habitat will occur as a combination of enhancement, restoration, and/or creation, at a ratio that achieves no net loss of wetland WoUS. Compensation can occur through the purchase of mitigation bank credits through the Riverside-Corona Resources Conservation District In-lieu Fee Program (ILFP), Santa Ana Watershed Association, a permittee responsible mitigation bank, and/or other agency-approved mitigation provider. No less than a 3:1 mitigation ratio is proposed for USACE/RWQCB wetlands and CDFW riparian vegetation and wetlands. A ratio of not less than 1:1 for USACE/RWQCB non-wetland WoUS/WoS and CDFW streambed is currently proposed. A mitigation ratio of no less than 2:1 is proposed for permanent shading of USACE wetlands and CDFW riparian vegetation (including CDFW-regulated wetlands)[3] to address temporal loss. Mitigation for all jurisdictional resources will be biologically superior or equivalent to resources occurring on site. Temporary impacts on USACE/RWQCB wetland and non-wetland WoUS/WoS and CDFW streambed, and associated riparian habitat, may be replaced through restoration of the temporarily affected area to pre-project conditions at a ratio no less than 1:1 or through the purchase of ILFP or mitigation bank credits, a permittee responsible mitigation bank, or other approved mitigation program. Compensatory mitigation will be coordinated with USACE CWA 404 authorization, RWQCB CWA 401 Certification, CDFW Fish and Game Code 1602 Streambed Alteration Agreement acquisition, and WRC MSHCP riparian-riverine requirements to ensure efficiencies with the mitigation effort. Final mitigation ratios will be determined after consultation with USACE, RWQCB, USFWS, and CDFW.
Water Quality and Stormwater Runoff	*Permanent:* • 83-acre increase in impervious surface area; stormwater runoff increased ~2.6	*Permanent:* • 84-acre increase in impervious surface area; stormwater runoff increased	*Permanent:* • 105-acre increase in impervious surface area; stormwater runoff	No impact	**PF WQ-1**. **PF WQ-2**

[2] Mitigation ratios may differ based on the location of riparian/riverine resources within the limits of disturbance. For example, riparian habitat within Temescal Wash may be mitigated at a higher ratio due to the quality of functions and values for wildlife movement, "live-in" habitat for sensitive species (i.e., least Bell's vireo), and water quality functions.

[3] Mitigation ratios may differ based on the location of riparian/riverine resources within the limits of disturbance. For example, riparian habitat within Temescal Wash may be mitigated at a higher ratio due to the quality of functions and values for wildlife movement, "live-in" habitat for sensitive species (i.e., least Bell's vireo), and water quality functions.

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	acre-feet. Flow rates would increase ~11.4 cubic feet per second (cfs). • Improvements to drainage system. • Potential increase in pollution from stormwater due to increased traffic. *Temporary:* Disturbance of 503 acres during construction would result in an increase in erosion and sedimentation and require control measures; construction may involve possible water contaminants.	~2.62 acre-feet. Flow rates would increase ~11.5 cfs. • Improvements to drainage system. • Potential increase in pollution from stormwater due to increased traffic. *Temporary:* Disturbance of 526 acres during construction would result in an increase in erosion and sedimentation and require control measures; construction may involve possible water contaminants.	increased ~3.22 acre-feet. Flow rates would increase ~14 cfs. • Improvements to drainage system. • Potential increase in pollution from stormwater due to increased traffic. *Temporary:* Disturbance of 505 acres during construction would result in an increase in erosion and sedimentation and require control measures; construction may involve possible water contaminants.		**PF WQ-3** **PF WQ-4** **PF VIS-1** **HYD-1** **NC-6 (NES BIO-6** **NC-10 (NES BIO-10)**. **NC-11 (NES BIO-11):** The limits of disturbance (LOD), including the upstream, downstream, and lateral extents on either side of any stream adjacent to the project impact footprint, will be clearly defined and marked in the field. **NC-12 (NES BIO-12):** During construction, the placement of equipment within a stream or on adjacent banks or adjacent upland habitats occupied by WRC MSHCP covered species that are outside of the project footprint will be avoided (WRC MSHCP Volume I, Section 7.5.3 and Appendix C). **NC-13 (NES BIO-9):** Post-construction, any disturbed areas remaining as bare ground will be returned to natural contour grades, decompacted to eliminate compressed soils and allow for plant establishment, and hydro-seeded with a County-approved native plant seed mix. This seed mix shall not contain any species listed on the California Integrated Pest Council Inventory. **NC-15 (NES BIO-14)** **WET-1**
Geology/Soils/ Seismicity/ Topography	*Permanent:* Liquefaction potential varies from very low to moderate in the project area. Scour could be an issue where the proposed project crosses any unlined channel, wash, drainage, or area that is subject to flooding. The project site is in a seismically active area; however, the site is not in a State of California Special Studies (“Alquist-Priolo”) Zone for fault rupture, and no known active faults are mapped as crossing or projecting toward the site. Potential for fault rupture is considered remote. *Temporary:* Construction activities would include grading, areas of cut and fill, and new slopes, exposing soil to potential erosion.	*Permanent:* Liquefaction potential varies from very low to moderate in the project area. Scour could be an issue where the proposed project crosses any unlined channel, wash, drainage, or area that is subject to flooding. The project site is in a seismically active area; however, the site is not in a State of California Special Studies (“Alquist-Priolo”) Zone for fault rupture, and no known active faults are mapped as crossing or projecting toward the site. Potential for fault rupture is considered remote. *Temporary:* Construction activities would include grading, areas of cut and fill, and new slopes, exposing soil to potential erosion.	*Permanent:* Liquefaction potential varies from very low to moderate in the project area. Scour could be an issue where the proposed project crosses any unlined channel, wash, drainage, or area that is subject to flooding. The project site is in a seismically active area; however, the site is not in a State of California Special Studies (“Alquist-Priolo”) Zone for fault rupture, and no known active faults are mapped as crossing or projecting toward the site. Potential for fault rupture is considered remote. *Temporary:* Construction activities would include grading, areas of cut and fill, and new slopes, exposing soil to potential erosion.	No impact	**PF GEO-1:** Caltrans’ procedures regarding seismic design, as detailed in Section 19, “Earthwork,” of the Caltrans Standard Specifications Manual, is also anticipated to prevent any adverse effects related to seismic ground shaking. Seismic design would also meet County of Riverside requirements for near-source design parameters under the Uniform Building Code. **PF GEO-2 (a-e):** Core Sample Tests. Borings will be taken in accordance with Table 10-1 of the American Association of State Highway and Transportation Officials’ Load and Resistance Factor Design Bridge Design Specifications for number, spacing, and depth of borings; rock core samples collected to estimate rock quality designation; seismic refraction survey and refraction microtremor survey to evaluate rock rippability and shearwave velocity, respectively; test pits or other methods to collect data for evaluation of the soil cover over the competent soil or bedrock and stability of the steep descending slope; and, sufficient field and laboratory testing to classify the subsurface materials and define liquefaction, shear strength, compressibility, and corrosion properties of the soils and rock encountered. **PF GEO-3 (a-c):** Excavation and Stabilization Techniques. Temporary excavations and installation of spread footing foundations will include techniques in accordance with Caltrans standards prior to placing fill. In the event that near-slope materials are not adequate to support spread footings, cast-in-drilled-hole piles socketing into the bedrock could be considered. Subgrade conditions and need for subgrade preparation or stabilization measures, particularly in the vicinity of the slope, should be evaluated in detail in the Plans, Specifications, and Estimates (PS&E)-level investigation. The need for foundation overexcavation or use of deep foundations should be addressed in the Foundation Report after performing the PS&E-level investigation. **PF GEO-4:** Appropriate backfill materials would be used in accordance with Caltrans standards. Select fill materials should be used for mechanically stabilized earth wall construction, and use of oversize materials generated in cuts screened prior to use as backfill materials. **PF GEO-5:** Structure approach embankment is that portion of the fill material within approximately 150 feet longitudinally of the structure in accordance with Figure 208.11 of the Highway Design Manual. Structure abutment embankment fill would be compacted to not less than 95 percent relative compaction in accordance with Section 19-5.03B of the Standard Specifications (2015). Poor quality material, such as expansive soils, would

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					be precluded from structure abutment embankments unless treated and placed in accordance with Caltrans Geotechnical Manual Section 3.1.2. **VIS-2** **PF WQ-4**
Paleontology	Areas of high sensitivity for paleontological resources, and therefore, could result in permanent impacts on paleontological resources. Existing fossil localities in nearby similar rock units have produced substantial vertebrate paleontological resources, so high sensitivity for resources, especially within the Lake Mathews Formation south of Lake Mathews.	Areas of high sensitivity for paleontological resources, and therefore, could result in permanent impacts on paleontological resources. Existing fossil localities in nearby similar rock units have produced substantial vertebrate paleontological resources, so high sensitivity for resources, especially within the Lake Mathews Formation south of Lake Mathews.	Areas of high sensitivity for paleontological resources, and therefore, could result in permanent impacts on paleontological resources. Existing fossil localities in nearby similar rock units have produced substantial vertebrate paleontological resources, so high sensitivity for resources. Would not affect the Lake Mathews Formation, which is the main source of fossil localities in the project vicinity.	No impact	**PAL-1:** A Paleontological Mitigation Plan (PMP) shall be prepared by a qualified paleontologist in accordance with Caltrans, County of Riverside Planning Department, and the Society of Vertebrate Paleontology guidelines during the final design phase of the project. The PMP will detail all the measures to be implemented in the event of paleontological discoveries.
Hazardous Waste/ Materials	Two Recognized Environmental Conditions (RECs), one Historical Recognized Environmental Condition (HREC), and Areas of Concern (AOCs): • REC: Mobil Baldwin located at 21020 Cajalco Road. Involved unauthorized release of gasoline affecting onsite soils. Undergoing remediation. • REC: located at 9001 Cajalco Road. Former red clay mine and rock quarry that contains elevated concentrations of arsenic. • HREC: Lake Mathews General Store, located at 17679 Cajalco Road. Formerly associated with soil and soil vapor contamination; site granted closure May 2017. • AOCs: – Existing structures proposed for removal may contain ACMs or LBP. – Existing yellow striping proposed for removal may contain lead and chromium. – Agricultural chemicals may be present in near-surface soils. – Creosote-treated wood waste may be generated during proposed removal / relocation of utility poles. – PCBs may be encountered during the disturbance of pole-mounted transformers.	Build Alternative 2C would be subject to the same RECs, HREC, and AOC identified for Build Alternative 1. Between east of Silverton Court and west of Lake Mathews Drive, Build Alternative 2C would be subject to additional agricultural AOC.	Build Alternative 4 would be subject to the same RECs and HREC identified for Build Alternative 4 would be subject to the AOCs identified for Build Alternative 1 between Temescal Canyon Road and west of Silverton Court, and between Gustin Road and I-215. Between east of Silverton Court and west of Gustin Road, the AOCs identified under Build Alternative 1 would be located along La Sierra Avenue and El Sobrante Road.	No impact	**HAZ-1 (a–d)** **PF HAZ-2** **PF HAZ-3** **HAZ-4 (a–g)** **PF HAZ-5** **HAZ-6 (a–c)** **HAZ-7** **HAZ-8**
Air Quality	*Permanent:* Particulate matter 10 micrometers or smaller (PM_{10}) and 2.5 micrometers or smaller ($PM_{2.5}$) predicted to increase by 1.3%. MSAT emissions at Horizon Year 2044 are anticipated to be considerably less than Baseline Year 2014 levels. *Temporary:* During construction, short-term degradation of air quality may occur during construction due to release of particulate emissions	*Permanent:* PM_{10} and $PM_{2.5}$ predicted to increase by 0.8%. MSAT emissions at Horizon Year 2044 are anticipated to be considerably less than Baseline Year 2014 levels. *Temporary:* During construction, short-term degradation of air quality may occur during construction due to release of particulate emissions (airborne dust) generated by excavation,	*Permanent:* PM_{10} and $PM_{2.5}$ to increase by 1.7%. MSAT emissions at Horizon Year 2044 are anticipated to be considerably less than Baseline Year 2014 levels. *Temporary:* During construction, short-term degradation of air quality may occur during construction due to release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction.	Less vehicular capacity resulting in greater operational emissions for some pollutants.	**PF AQ-1** **PF AQ-2:** South Coast Air Quality Management District Rule 403 (Fugitive Dust) further requires that fugitive dust control measures be applied to all construction projects in the South Coast Air Basin, unless said project is specifically exempted by the rule.

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	(airborne dust) generated by excavation, grading, hauling, and other activities related to construction.	grading, hauling, and other activities related to construction.			
Noise and Vibration	*Permanent:* Noise is expected to increase for receivers in close proximity to the roadway with the increased traffic. Three receivers would exceed the noise abatement criteria (NAC) of 67 A-weighted decibels (dBA) hourly noise equivalent level ($L_{eq[h]}$). Receivers M-93, M-105, and M-118 are predicted to have a design year noise level of 74, 74, and 69 dBA $L_{eq(h)}$, respectively. No other receivers are predicted to result in a substantial increase. For the benefit of the receptor associated with receiver M-93, Noise Barrier S-624 was found to be feasible and reasonable for heights of 6, 8, and 10 feet. For the benefit of the receptors associated with receivers M-105 and M-118, Noise Barriers S-650 Property Line and S-652 ROW would be reasonable and feasible at heights of 10, 12, 14, and 16 feet. *Temporary:* Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction; measures are proposed to reduce noise impacts from construction.	*Permanent:* Noise is expected to increase for receivers in close proximity to the roadway with the increased traffic. Three receivers would exceed the NAC of 67 dBA $L_{eq(h)}$. Receivers M-93, M-105, and M-118 are predicted to have a design year noise level of 74, 74, and 69 dBA $L_{eq(h)}$, respectively. No other receivers are predicted to result in a substantial increase. For the benefit of the receptor associated with receiver M-93, Noise Barrier S-624 was found to be feasible and reasonable at barrier heights of 6, 8, and 10 feet. For the benefit of the receptors associated with receiver M-105 and M-118, Noise Barriers S-650 Property Line and S-652 Property Line would be reasonable and feasible at heights of 8, 10, and 16 feet. *Temporary:* Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction; measures are proposed to reduce noise impacts from construction.	*Permanent:* Noise is expected to increase for receivers in close proximity to the roadway with the increased traffic. Four receivers would approach or exceed the NAC of 67 dBA $L_{eq(h)}$. Receivers M-93, M-99, M-105, and M-118 are predicted to have a design year noise level of 75, 66, 75, and 70 dBA $L_{eq(h)}$, respectively. Receiver M-98A would increase by 15 dB (48 dBA $L_{eq(h)}$ in the existing year and 63 dBA $L_{eq(h)}$ during the design year. For receiver M-98A, Noise Barrier S-565 was found to be feasible but not reasonable, therefore, this barrier is not recommended. For the benefit of the receptor associated with receiver M-93, Noise Barrier S-624 was found to be feasible and reasonable at barrier heights of 6, 8, and 10 feet. For the benefit of the receptors associated with receiver M-105 and M-118, Noise Barriers S-650 Property Line and S-652 ROW would be reasonable and feasible at heights of 10, 12, 14, and 16 feet. Noise Barrier S-650 (Property Line) and Noise Barrier S-652 (Property Line) were found to be feasible and reasonable at barrier heights of 8 and 10 feet. For the receptor associated with receiver M-99, noise abatement was not considered, as any noise abatement would remove access to the property's driveway. Impacts on receiver M-99 would be potentially significant. *Temporary:* Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction; measures are proposed to reduce noise impacts from construction.	*Permanent:* Noise is expected to increase for receivers in close proximity to the roadway with the increased traffic. Noise levels would range from 37 to 71 dBA $L_{eq(h)}$; three receivers would exceed the NAC of 67 dBA $L_{eq(h)}$. No noise abatement would be considered or implemented. *Temporary:* No project-related construction or noise would occur.	**PF NOI-1** **NOI-2** **NOI-3** **NOI-4** **PF NOI-5:** Construction noise would be temporary and limited to the duration of the construction. Noise control measures will also be incorporated into the project contract specifications in order to minimize construction noise effects.
Energy	*Permanent:* Annual Energy Consumption associated with long-term operational use would require 19,601,538 million British thermal units (MMBTU) and 156,812,301 Gallons of Gasoline Equivalent. *Temporary:* Temporary construction-period activities would require the consumption of the equivalent of 462,000 gallons of diesel fuel, or approximately 64,000 MMBTU.	*Permanent:* Annual Energy Consumption associated with long-term operational use would require 19,504,966 MMBTU and 156,039,730 Gallons of Gasoline Equivalent. *Temporary:* Temporary construction-period activities would require the consumption of the equivalent of 462,000 gallons of diesel fuel, or approximately 64,000 MMBTU.	*Permanent:* Annual Energy Consumption associated with long-term operational use would require 19,623,207 MMBTU and 156,985,653 Gallons of Gasoline Equivalent. *Temporary:* Temporary construction-period activities would require the consumption of the equivalent of 462,000 gallons of diesel fuel, or approximately 64,000 MMBTU.	Annual Energy Consumption associated with long-term operational use would require 19,429,723 MMBTU and 155,437,786 Gallons of Gasoline Equivalent.	**PF LU-1** **PF AQ-1:** **PF VIS-4** **PF SW-1:** Consistent with Caltrans Standard Specification 14-10, non-hazardous construction-period waste shall be recycled.
Natural Communities	*Permanent:* 210.04 acres permanent impacts on WRC MSHCP cores and linkages. 76.58 acres	*Permanent:* 215.39 acres permanent impacts on WRC MSHCP cores and linkages. 85.20 acres	*Permanent:* 82.32 acres permanent impacts on WRC MSHCP cores and linkages. 79.78 acres	No permanent or temporary impacts on natural communities of concern beyond those that would be expected to occur from the existing facility.	**NC-1 (NES BIO-1):** Clearing of natural vegetation (including sage scrub) will be performed outside of the active breeding season for birds, as defined in the WRC MSHCP (March 1 through June 30) (WRC MSHCP Volume I, Section 7.5.3), except for RSS habitat judged to be potentially suitable

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	permanent impacts on Natural Communities of Concern; 28.16 acres within LM MSHCP. *Temporary:* During construction, vegetation removal and increased human presence, as well as indirect impacts due to increased noise, dust, light, reduced water quality, edge effects, and vibration. 11.46 acres temporary impacts on Natural Communities of Concern.	permanent impacts on Natural Communities of Concern; 37.06 acres within LM MSHCP. *Temporary:* During construction, vegetation removal and increased human presence, as well as indirect impacts due to increased noise, dust, light, reduced water quality, edge effects, and vibration. 11.79 acres temporary impacts on Natural Communities of Concern.	permanent impacts on Natural Communities of Concern; 22.24 acres within LM MSHCP. *Temporary:* During construction, vegetation removal and increased human presence, as well as indirect impacts due to increased noise, dust, light, reduced water quality, edge effects, and vibration. 10.55 acres temporary impacts on Natural Communities of Concern.		and/or occupied by coastal California gnatcatcher and located within WRC MSHCP Criteria Areas and PQP lands. For these areas, the habitat removal restriction is extended from June 30 to August 15. In addition, for riparian-riverine vegetation occupied by least Bell's vireo (LBV), vegetation removal restrictions occur through September 15. Table 3.17-20 in Section 3.20, *Animal Species*, summarizes the clearing restrictions of sensitive vegetation communities. If clearing of vegetation needs to occur within these timeframes due to construction schedule, a preconstruction nesting bird survey will need to be performed prior to any vegetation removal activities (refer to Measure **AS-5 [NES BIO-27]**). **NC-2 (NES BIO-2):** Active construction areas will be watered regularly to control dust and thus minimize impacts on adjacent vegetation (WRC MSHCP Volume I, Section 7.5.3). **NC-3 (NES BIO-3):** When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to any natural vegetation communities, appropriate firefighting equipment (e.g., extinguishers, shovels, water tankers) will be available on the project site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires will advise contractors regarding fire risk from all construction-related activities (WRC MSHCP Volume I, Section 7.5.3). **NC-4 (NES BIO-4):** A qualified biologist will prepare and present an environmental training program for project and construction personnel (WRC MSHCP Volume I, Section 7.5.3) prior to grading or staging. All sensitive areas will be fenced as presented in Measure **NC-6 (NES BIO-6)**, below. **NC-5 (NES BIO-5):** The qualified project biologist will monitor construction activities to ensure that practicable measures are being employed and avoid incidental disturbance of habitat and species of concern outside the project footprint (WRC MSHCP Volume I, Section 7.5.3). Special attention will be provided to ensure that the ESA fencing required in Measure **NC-6 (NES BIO-6)** is maintained. Additionally, ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices. This will be done in concert with Measure **NC-6**, below, which includes the fencing of sensitive areas (e.g., riparian-riverine resources and jurisdictional waters and wetlands adjacent to the LOD and conserved lands). **NC-6 (NES BIO-6)** **NC-7 (NES BIO-7):** Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth (WRC MSHCP Volume I, Section 7.5.3). Vegetation removed from the project site will be covered while being carried on trucks, and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations. **NC-8 (NES BIO-8):** Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. The cleaning of equipment will occur at least 300 feet from ESA fencing to prohibit the spread of invasive species. **NC-9 (NES BIO-24):** The project site will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site(s) (WRC MSHCP Volume I, Appendix C). **NC-10 (NES BIO-10)** **NC-11 (NES BIO-11):** The limits of disturbance (LOD), including the upstream, downstream, and lateral extents on either side of any stream adjacent to the project impact footprint, will be clearly defined and marked in the field.

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					NC-12 (NES BIO-12): During construction, the placement of equipment within a stream or on adjacent banks or adjacent upland habitats occupied by WRC MSHCP covered species that are outside of the project footprint will be avoided (WRC MSHCP Volume I, Section 7.5.3 and Appendix C). **NC-13 (NES BIO-9):** Post-construction, any disturbed areas remaining as bare ground will be returned to natural contour grades, decompacted to eliminate compressed soils and allow for plant establishment, and hydro-seeded with a County-approved native plant seed mix. This seed mix shall not contain any species listed on the California Integrated Pest Council Inventory. **NC-14 (NES BIO-13) (Mitigation):** A Determination of Biological Equivalent or Superior Preservation (DBESP) report that provides analysis of direct and indirect impacts, avoidance, minimization, and compensatory mitigation, if necessary, along with the functions and values of the resources being affected as related to Section 6.1.2 of the WRC MSHCP Volume I will be prepared and submitted to RCA, USFWS, and CDFW for review and approval prior to finalization of the environmental document. **NC-15 (NES BIO-14)** **NC-16 (NES BIO-19):** A Wildlife Fencing Plan will be developed and implemented for the preferred build alternative. Prior to finalizing the wildlife fencing design, the impacts of and interaction between wildlife fencing and other fencing (e.g., Lake Mathews and other local fencing) in the project area of the preferred Build Alternative shall be fully assessed and analyzed. If it is determined that fencing in the project area (i.e., either project-related fencing or other fencing) will hinder or interfere with wildlife movement or the function and value of wildlife crossings, the wildlife fencing plan (and project design) shall include design considerations that will lessen these impacts. **NC-17 (NES BIO-17)** **NC-18 (NES BIO-31)** **NC-19 (NES BIO-15)** **NC-20 (NES BIO-21)**
Wetlands and Other Waters	*Permanent:* 3.61 acres direct impacts and 0.04 acre indirect shading effects on USACE and RWQCB jurisdictional waters. 10.2 acres of impacts and 0.18 acre indirect shading effects on CDFW streambed and associated riparian habitat. 0.08 acre of rehabilitation to USACE and RWQCB jurisdictional waters and 0.16 acre of rehabilitation on CDFW jurisdictional waters. Within the LM MSHCP, 1.19 acres of permanent impacts on USACE and RWQCB jurisdictional waters and wetlands. No permanent impact on wetlands within LM MSHCP area. *Temporary:* 2.08 acres of USACE and RWQCB jurisdictional waters (0.34 acre within LM MSHCP) temporarily affected. 5.67 acres temporary impacts on CDFW streambed and associated riparian habitat. There could be temporary impacts depending on the location of staging areas or any additional work needed for construction.	*Permanent:* 3.94 acres direct impacts and 0.04 acre indirect shading effects on USACE and RWQCB jurisdictional waters. 10.04 acres of permanent impacts and 0.17 acre indirect shading effects on CDFW streambed and associated riparian habitat. 0.07 acre rehabilitation to USACE and RWQCB jurisdictional waters and 0.17 acre of rehabilitation on CDFW jurisdictional waters. Within the LM MSHCP, 1.18 acres of permanent impacts on USACE and RWQCB jurisdictional waters and wetlands. No permanent impact on wetlands within LM MSHCP area. *Temporary:* 1.78 acres of USACE and RWQCB jurisdictional waters (0.34 acre within LM MSHCP) temporarily affected. 5.59 acres temporary impacts on CDFW streambed and associated riparian habitat. There could be temporary impacts depending on the location of staging areas or any additional work needed for construction.	*Permanent:* 1.44 acres direct impacts and 0.04 acre indirect shading effects on USACE and RWQCB jurisdictional waters. 7.08 acres of impacts and 0.17 acre of indirect shading effects on CDFW streambed and associated riparian habitat. There would also be 0.08 acre rehabilitation on USACE and RWQCB jurisdictional waters and 0.18 acre rehabilitation on CDFW jurisdictional waters. Within the LM MSHCP, 0.06 acres of permanent impacts on USACE and RWQCB jurisdictional waters. No permanent or temporary impacts on wetlands within LM MSHCP area. *Temporary:* 1.56 acres of USACE and RWQCB jurisdictional waters (0.02 acre within LM MSHCP) temporarily affected. 5.8 acres temporary impacts on CDFW streambed and associated riparian habitat. There could be temporary impacts depending on the location of staging areas or any additional work needed for construction.	No impacts	**WET-1**

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
Plant Species	*Permanent:* Impacts within WRC MSHCP area covered by WRC MSHCP. Within LM MSHCP area, 120.31 acres permanent impacts on natural vegetation communities and 0.14 acre roadbed removal (beneficial impact). LM MSHCP suitable habitat would be affected for: round-leaved filaree (97.15 acres), Coulter's matiljia poppy (28.99 acres), long-spined spineflower (100.47 acres), small-flowered morning glory (122.23 acres) would be affected. There would also be removal of 135.33 acres of suitable habitat for Palmer's grapplinghook, Parry's spineflower, smooth tarplant, and small-flowered microseris. *Temporary:* 20.79 acres temporary impacts on natural vegetation communities within LM MSHCP area.	*Permanent:* Impacts within WRC MSHCP area covered by WRC MSHCP. Within LM MSHCP area, 111.21 acres permanent impacts on natural vegetation communities and 0.16 acre roadbed removal (beneficial impact). LM MSHCP suitable habitat would be affected for: round-leaved filaree (64.99 acres), Coulter's matiljia poppy (38.86 acres), long-spined spineflower (82.38 acres), small-flowered morning glory (113.96 acres) would be affected. There would also be removal of 126.91 acres of suitable habitat for Palmer's grapplinghook, Parry's spineflower, smooth tarplant, and small-flowered microseris. *Temporary:* 22.44 acres temporary impacts on natural vegetation communities within LM MSHCP area.	*Permanent:* Impacts within WRC MSHCP area covered by WRC MSHCP. Within LM MSHCP area, 56.52 acres permanent impacts on natural vegetation communities and 0.70 acre roadbed removal (beneficial impact). LM MSHCP suitable habitat would be affected for: round-leaved filaree (27.10 acres), Coulter's matiljia poppy (24.14 acres), long-spined spineflower (33.87 acres), small-flowered morning glory (51.27 acres) would be affected. Direct impacts are anticipated over 6.80 acres on several thousand paniculate tarplant. There would also be removal of 63.03 acres of suitable habitat for Palmer's grapplinghook, Parry's spineflower, smooth tarplant, and small-flowered microseris. *Temporary:* 8.76 acres temporary impacts on natural vegetation communities within LM MSHCP area.	No impacts	Avoidance and minimization measures **NC-2 (NES BIO-2)** through **NC-8 (NES BIO-8) and NC-10 (NES BIO-10)** through **NC-13 (NES BIO-9)** would be implemented to reduce potential indirect impacts on special-status plant species under Build Alternatives 1, 2C, and 4, and to ensure consistency with the WRC MSHCP. Paniculate tarplant seeds will be collected prior to project construction and disseminated following construction (**PL-1 [NES BIO-22]**). Replacement for the loss of potentially suitable habitat for LM MSHCP covered species will be required by MWD within the LM MSHCP area; a 1:1 ratio is proposed (**NC-17 [NES BIO-17]**). Temporary impacts will be addressed through preparation of an HMMP and onsite restoration (**NC-19 [NES BIO-15]**). **PL-1 (NES BIO-22):** Paniculate Tarplant Seed Collection – Seeds for paniculate tarplant will be collected prior to construction activities. Seeds will be stored and redistributed after construction is completed.
Animal Species	*Permanent:* • Habitat permanently affected for the following species (acres): – Burrowing ow: 211.11 – Special-status bats: 241.30 – Southern California legless lizard: 87.45 – California glossy snake: 194.55 – Coast western patch-nosed snake: 194.55 – Two-striped garter snake: 7.18 – Least bittern: 0.06 – Long-eared owl: 9.39 – Short-eared owl: 116.76 – Vaux's swift: 4.99 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 148.05 – Yellow-headed blackbird: 0.94 – Southern grasshopper mouse: 69.19 – American badger: 176.41 • Habitat indirectly affected by shading effects for the following species (acres): – Burrowing owl: 0.58 – Special-status bats: 1.35 – Southern California legless lizard: 0.70 – California glossy snake and Coast western patch-nosed snake: 0.52 – Two-striped garter snake 0.40 – Long-eared owl: 0.35 – Short-eared owl: 0.22 – Vaux's swift: 0.32 – Oregon vesper sparrow: 0.57 – Southern grasshopper mouse: 0.26	*Permanent:* • Habitat permanently affected for the following species (acres): – Burrowing owl: 226.96 – Special-status bats: 256.76 – Southern California legless lizard: 96.02 – California glossy snake: 195.77 – Coast western patch-nosed snake: 195.77 – Two-striped garter snake: 5.77 – Least bittern: 0.06 – Long-eared owl: 8.41 – Short-eared owl: 123.33 – Vaux's swift: 4.43 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 154.82 – Yellow-headed blackbird: 16.27 – Southern grasshopper mouse: 79.56 – American badger: 176.75 • Habitat indirectly affected by shading effects for the following species (acres): – Burrowing owl 1.18 – Special-status bats 1.93 – Southern California legless lizard 1.01 – California glossy snake 1.12 – Coast western patch-nosed snake 1.12 – Two-striped garter snake 0.39 – Long-eared owl 0.38 – Short-eared owl 0.50 – Vaux's swift 0.34 – Oregon vesper sparrow 0.84 – Southern grasshopper mouse 0.58	*Permanent:* • Habitat permanently affected for the following species (acres): – Burrowing owl: 201.28 – Special-status bats: 216.37 – Southern California legless lizard: 103.11 – California glossy snake: 149.72 – Coast western patch-nosed snake: 149.72 – Two-striped garter snake: 5.08 – Least bittern: 0.06 – Long-eared owl: 6.36 – Short-eared owl: 54.95 – Vaux's swift: 2.42 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 106.62 – Yellow-headed blackbird: 2.21 – Southern grasshopper mouse: 85.91 – American badger: 138.12 • Habitat indirectly affected by shading effects for the following species (acres): – Burrowing owl: 3.97 – Special-status bats: 5.16 – Southern California legless lizard: 4.13 – California glossy snake and Coast western patch-nosed snake 4.02 – Two-striped garter snake: 0.39 – Long-eared owl: 0.38 – Short-eared owl: 0.28 – Vaux's swift: 0.35 – Oregon vesper sparrow: 0.78 – Southern grasshopper mouse: 3.56 – American badger: 3.83	No impacts	Measures **NC-1 (NES BIO-1)** through **NC-13 (NES BIO-9)**, and **TE-3 (NES BIO-30)**, will ensure the indirect effects on non-listed special-status species from construction activities are avoided and/or minimized. The following avoidance and minimizations measures address the direct and indirect impacts on non-listed special-status animals: **AS-1 (NES BIO-25):** A burrowing owl (BUOW) management plan will be developed to ensure avoidance of impacts on BUOW within WRC MSHCP BUOW survey areas. In the plan, the following information, at a minimum, will be included and performed during each phase of project construction: a) Focused Survey for BUOW – Performed following the WRC MSHCP protocol between the window of March 1 through August 31 and in the survey season prior to scheduled construction. The survey will include the LOD of the selected Build Alternative and up to a 300-foot buffer if performed between February 1 and August 31. b) Preconstruction Survey for BUOW – Performed within 30 days prior to ground disturbance regardless of whether the species is found during the focused survey. The survey area would be the LOD and at least a 300-foot buffer and required only within WRC MSHCP BUOW survey areas. c) Protocol for Presence – Steps necessary for handling the presence of BUOW (if found during either of the two surveys), which may include full avoidance, if feasible, or passive relocation by a qualified ornithologist. d) Agency Approval – The BUOW management plan will be submitted for review by RCA, USFWS, CDFW, and LMRMC (for the LMR area only). **AS-2 (NES BIO-16):** The WRC MSHCP requires that shielding be incorporated in project designs to ensure ambient lighting in WRC MSHCP conservation areas is not increased (WRC MSHCP Volume I, Section 6.1.4). Night lighting will be directed away from natural lands within existing and proposed WRC MSHCP conservation areas in order to support potential linkage and core functions during construction. This is intended to protect species within existing and proposed WRC MSHCP conservation areas from direct night lighting during construction, if activities occur at night. Table 3.20-7 provides the areas where night lighting restrictions applies for each build alternative. **AS-3 (NES BIO-28)**: Preconstruction clearance surveys for sensitive wildlife species will be performed within three days prior to construction to flush the species from the construction footprint following the installation of ESA fencing. ESA fencing must be sufficient to prevent the entry of animals into

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
	– American badger: 0.45 • Habitat beneficially affected for the following species (acres): – Burrowing owl 8.61 – Special-status bats 9.29 – Southern California legless lizard 3.08 – California glossy snake and Coast western patch-nosed snake: 8.81 ac.) – Two-striped garter snake 0.07 – Long-eared owl 0.38 – Short-eared owl 5.80 – Vaux's swift 0.06 – Oregon vesper sparrow 5.89 – Southern grasshopper mouse 3.01 – American badger 8.65 • Removal of 239.86 ac. suitable habitat, 1.35 ac indirect shading effects, and 9.29 ac. beneficial impacts, for WRC MSHCP covered, non-listed species. *Temporary:* • Habitat temporarily affected for the following species (acres): – Burrowing owl: 42.13 – Special-status bats: 53.97 – Southern California legless lizard: 15.89 – California glossy snake: 29.06 – Coast western patch-nosed snake: 29.06 – Two-striped garter snake: 4.12 – Least bittern: 0.06 – Long-eared owl: 5.17 – Short-eared owl: 18.18 – Vaux's swift: 3.08 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 35.11 – Yellow-headed blackbird: 0.59 – Southern grasshopper mouse: 7.18 – American badger: 23.37 • 53.61 ac suitable habitat for WRC MSHCP covered, non-listed species temporarily affected.	– American badger 1.06 • Habitat beneficially affected for the following species (acres): – Burrowing owl 12.26 – Special-status bats 12.85 – Southern California legless lizard 3.44 – California glossy snake and Coast western patch-nosed snake 12.38 – Two-striped garter snake 0.05 – Long-eared owl 0.37 – Short-eared owl 9.00 – Vaux's swift 0.05 – Oregon vesper sparrow 9.08 – Southern grasshopper mouse 3.38 – American badger 12.30 • Removal of 255.12 ac suitable habitat, 1.35 ac. indirect shading effects, and 12.85 ac beneficial impacts for WRC MSHCP covered non-listed species. *Temporary:* • Habitat temporarily affected for the following species (acres): – Burrowing owl: 45.28 – Special-status bats: 57.10 – Southern California legless lizard: 16.48 – California glossy snake: 31.41 – Coast western patch-nosed snake: 31.41 – Two-striped garter snake: 4.16 – Least bittern: 0.06 – Long-eared owl: 5.10 – Short-eared owl: 20.69 – Vaux's swift: 3.14 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 36.96 – Yellow-headed blackbird: 1.30 – Southern grasshopper mouse: 7.89 – American badger: 25.68 • 56.76 ac suitable habitat for WRC MSHCP covered, non-listed species temporarily affected.	• Habitat beneficially affected for the following species (acres): – Burrowing owl: 6.55 – Special-status bats: 7.39 – Southern California legless lizard: 4.36 – California glossy snake: 6.21 – Coast western patch-nosed snake: 6.21 – Two-striped garter snake: 0.06 – Long-eared owl: 0.37 – Short-eared owl: 1.91 – Vaux's swift: 0.05 – Oregon vesper sparrow: 2.60 – Southern grasshopper mouse: 3.16 – American badger: 5.06 • Removal of 216.16 ac suitable habitat, 4.99 ac indirect shading effects, and 7.28 ac. beneficial impacts for WRC MSHCP covered non-listed species. *Temporary:* • Habitat temporarily affected for the following species (acres): – Burrowing owl: 38.94 – Special-status bats: 48.04 – Southern California legless lizard: 14.28 – California glossy snake: 26.05 – Coast western patch-nosed snake: 26.05 – Two-striped garter snake: 2.32 – Least bittern: 0.06 – Long-eared owl: 3.36 – Short-eared owl: 15.23 – Vaux's swift: 1.57 – Clark's marsh wren: 0.06 – Oregon vesper sparrow: 30.43 – Yellow-headed blackbird: 0.75 – Southern grasshopper mouse: 10.02 – American badger: 24.27 • 47.57 ac suitable habitat for WRC MSHCP covered, non-listed species temporarily affected.		the LOD as feasible. No nesting birds will be flushed during the nesting season. Bats will not be flushed but will be protected as specified in **AS-4 (NES BIO-26)**. Burrowing wildlife will be relocated from the site as feasible during preconstruction clearance surveys. **AS-4 (NES BIO-26):** A bat management plan will be developed to ensure mortality to roosting bats does not occur to ensure CEQA compliance and consistency with the LM MSHCP. The following items will be included in the plan, at a minimum: a) For each location determined to be suitable for special-status bat species or large colonial roosts, a preconstruction survey will be conducted to determine if the location is occupied by roosting bats. b) For each location confirmed to be occupied by bats, the plan will provide details both in text and graphically where exclusion devices will need to be placed, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. c) Monitoring activities and schedule will be included, including frequency of monitoring, which structures would need to be monitored, and reporting requirements. d) Draft plan will be submitted for review to USFWS, CDFW, and LMRMC. **AS-5 (NES BIO-27):** A nesting bird management plan will be drafted to provide a comprehensive approach to addressing nesting birds prior to the commencement of construction phases. It will include, at a minimum, the following items: a) Project biologist and monitoring biologist qualifications. b) Methods for preconstruction surveys for nesting birds protected under the Migratory Bird Treaty Act and California Fish and Game Code, which will be performed prior to the start of all project phases during the bird breeding season. Preconstruction nesting bird survey requirements may be superseded by the Lake and Streambed Alteration Agreement. c) Methods and timing (including seasonal considerations) for addressing nesting birds, raptors, and colonial nesting birds (i.e., swallows), including avoidance buffers; avoidance measures to reduce disturbances to active nests; and deterrent methods. d) Reporting requirements. This nesting bird management plan will be coordinated with and submitted for review by USFWS, CDFW, and RMC (as the plan pertains to the LMR area). **AS-6 (NES BIO-29):** Construction staff will not be permitted to bring their pets in, or adjacent to, the construction area. **AS-7 (NES BIO-20):** ESA fencing must be sufficient to prevent the entry of animals into the LOD. Once the ESA fencing has been installed (**NC-6 [NES BIO-6]**), a preconstruction reptile and amphibian clearance survey will be conducted no more than three days prior to site grubbing and grading of lands in the area. If construction is to follow in stages, then the preconstruction clearance survey would be scheduled to follow just prior to site grubbing and grading. Clearance surveys will be conducted during the appropriate time of day when reptiles and amphibians are active. Table 3.20-8 in Section 3.20, *Animal Species*, describes where this measure is applicable for various species.
Threatened and Endangered Species	*Permanent:* Habitat would be permanently affected. Listed below the total acres affected by species: Arroyo Toad: 8.08 Coastal California Gnatcatcher: 67.09 Least Bell's Vireo: 7.85 Stephens' Kangaroo Rat: 125.29	*Permanent:* Habitat would be permanently affected. Listed below the total acres affected by species: Arroyo Toad: 6.66 Coastal California Gnatcatcher: 76.21 Least Bell's Vireo: 6.43 Stephens' Kangaroo Rat: 116.53	*Permanent:* Habitat would be permanently affected. Listed below the total acres affected by species: Arroyo Toad: 6.24 Coastal California Gnatcatcher: 88.40 Least Bell's Vireo: 5.75 Stephens' Kangaroo Rat: 63.11	No impact	In addition to the measures listed below, Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-9)** and Measures **AS-1 (NES BIO-25)** and **AS-7 (NES BIO-20)** would be implemented. **TE-1 (NES BIO-18):** Between March 15 and September 15, all heavy equipment will install and maintain mufflers or other noise-reducing features will be installed when working at Temescal Creek and Cajalco Creek. Additionally, a biological monitor shall be present for activities occurring within or adjacent to riparian habitats where the potential for noise levels to exceed 60 dBA may occur at the edge of suitable habitat. If construction noise is negatively affecting LBV, or other nesting birds, as determined by

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
	Habitat would be permanently beneficially affected through roadbed removal. Listed below the total acres affected by species: Coastal California Gnatcatcher: 2.85 Least Bell's Vireo: 0.07 Stephens' Kangaroo Rat: 5.80 Habitat would be indirectly affected by shading effects. Listed below are the total acres affected by species: Arroyo Toad: 0.41 Coastal California Gnatcatcher: 0.22 Least Bell's Vireo: 0.36 Stephens' Kangaroo Rat: 0.22 *Temporary:* Arroyo Toad: 3.74 Coastal California Gnatcatcher: 7.60 Least Bell's Vireo: 4.78 Stephens' Kangaroo Rat: 19.49	Habitat would be permanently beneficially affected through roadbed removal. Listed below the total acres affected by species: Coastal California Gnatcatcher: 3.30 Least Bell's Vireo: 0.05 Stephens' Kangaroo Rat: 9.00 Habitat would be indirectly affected by shading effects. Listed below are the total acres affected by species: Arroyo Toad: 0.39 Coastal California Gnatcatcher: 0.56 Least Bell's Vireo: 0.34 Stephens' Kangaroo Rat: 0.50 *Temporary:* Arroyo Toad: 3.77 Coastal California Gnatcatcher: 8.12 Least Bell's Vireo: 4.81 Stephens' Kangaroo Rat: 21.30	Habitat would be permanently beneficially affected through roadbed removal. Listed below the total acres affected by species: Coastal California Gnatcatcher: 4.30 Least Bell's Vireo: 0.06 Stephens' Kangaroo Rat: 3.30 Habitat would be indirectly affected by shading effects. Listed below are the total acres affected by species: Arroyo Toad: 0.40 Coastal California Gnatcatcher: 3.56 Least Bell's Vireo: 0.35 Stephens' Kangaroo Rat: 1.09 *Temporary:* Arroyo Toad: 2.38 Coastal California Gnatcatcher: 10.39 Least Bell's Vireo: 3.11 Stephens' Kangaroo Rat: 15.51		the biological monitor, work shall cease (unless authorized by the wildlife agencies) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. It may be most effective to construct noise barriers prior to March 15 to ensure construction delays do not occur. All noise barriers will need to be placed within the LOD. **TE-2 (NES BIO-23):** The permanent removal of occupied LBV habitat will be mitigated; a 2:1 ratio is proposed, with compensatory mitigation occurring as creation and/or restoration. For all LBV occupied habitat temporarily removed during construction, restoration would occur at the original location; a 1:1 ratio, including meeting performance criteria, is proposed. Temporal loss of riparian habitat will be addressed by mitigation for riparian-riverine resources (see Section 3.17, *Natural Communities*). Compensatory mitigation for LBV impacts should be coordinated with the riparian-riverine resources mitigation (**NC-15 [NES BIO-14]**), PQP lands mitigation (**NC-20 [NES BIO-21]**), and aquatics permitting mitigation (WET-1). **TE-3 (NES BIO-30):** Prior to the start of construction activities, an SKR management plan will be developed for project activities occurring on the Riverside County Habitat Conservation Agency (RCHCA) SKR Reserve to minimize direct impacts on the species. At a minimum this measure will include: (1) Preconstruction surveys by a qualified biologist; and (2) Avoidance and minimization measures to reduce impacts on SKR. The SKR management plan will be consistent with existing reserve management guidelines that will be coordinated with RCHCA. In addition, the management plan will submitted for review by RCHCA, USFWS, CDFW, and LMRMC (as the plan pertains to the LMR area).
Invasive Species	*Permanent:* Some affected areas within the right of way would remain undeveloped to serve as a shoulder and/or maintenance buffer. Areas left as bare ground could create favorable conditions for invasive plants and promote the spread of these species. *Temporary:* Construction vehicles and equipment could transport invasive plant species from previous work sites to project limits of disturbance and adjacent buffer areas.	*Permanent:* Some affected areas within the right of way would remain undeveloped to serve as a shoulder and/or maintenance buffer. Areas left as bare ground could create favorable conditions for invasive plants and promote the spread of these species. *Temporary:* Construction vehicles and equipment could transport invasive plant species from previous work sites to project limits of disturbance and adjacent buffer areas.	*Permanent:* Some affected areas within the right of way would remain undeveloped to serve as a shoulder and/or maintenance buffer. Areas left as bare ground could create favorable conditions for invasive plants and promote the spread of these species. *Temporary:* Construction vehicles and equipment could transport invasive plant species from previous work sites to project limits of disturbance and adjacent buffer areas.	No Impact	**NC-2 (NES BIO-2)** **NC-3 (NES BIO-3)** **NC-5 (NES BIO-5)** **NC-6 (NES BIO-6)** **NC-7 (NES BIO-17)** **NC-8 (NES BIO-8)**. **NC-10 (NES BIO-10)** **NC-12 (NES BIO-12)** **NC-13 (NES BIO-9)** **NC-19 (NES BIO-15)**
Short-Term Use – Long-Term Productivity	*Permanent:* Long-term losses would include: • Permanent removal of residential and nonresidential uses and a possible permanent loss of those uses in the community along the ultimate, Cajalco Road alignment if they are not relocated in the immediate project vicinity; • Permanent conversion of FMMP important farmland and open space to roadway use; • Permanent, limited impacts on residents, business patrons, and travelers such as altered viewsheds, the visual presence of noise barriers, and a change in the aesthetic character of the land adjacent to the corridor due to the wider roadway; • Permanent limited increases in noise and vibration at certain locations along the project corridor;	Long-term and short-term losses and gains would be the same as those identified for Build Alternative 1.	Long-term and short-term losses and gains would be the same as those identified for Build Alternative 1.	No impact	

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	• Permanent loss of archaeological sites and the values associated with those sites; • Permanent loss of paleontologically-sensitive land; • Permanent increase in impervious surfaces resulting in increased stormwater runoff and requiring new drainage facilities, and; • Permanent impacts on plant resources, wildlife resources and open space. Long-term gains would include: • An improved transportation facility to address anticipated growth and mobility needs, as identified in the County of Riverside General Plan Circulation Element Policy 1.5; • Improved interregional travel by improving east-west mobility in Riverside County; • Increased efficiency of the movement of people and goods along Cajalco Road, which is expected to provide regional economic benefits; • Reduction in travel times to community facilities due to roadway efficiency, and; • Improved roadway alignment and intersection design to enhance safety along Cajalco Road. *Temporary / Short-term:* Short-term losses would include: • Economic losses experienced by businesses from temporary displacements, relocations, or traffic detours; • Temporary construction impacts on residents and visitors such as increased noise, impaired air quality from dust and debris, blocked viewsheds, and motorized and non-motorized traffic delays or detours; • Temporary loss of productivity on and near sites used as temporary construction staging areas. • Temporary increase in travel time to community facilities; • Temporary, localized disturbance of FMMP important farmlands; • Temporary disturbance of soils during construction increasing the chance of erosion and temporary water quality impacts, and; • Temporary impacts on plant resources, wildlife resources and open space. Short-term benefits would include:				

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
	• Increased revenue for the local region generated during construction, and possibly limited temporary employment opportunities.				
Irreversible Commitments	Considerable amounts of fossil fuels, labor, public capital, and highway construction materials such as cement, aggregate, and bituminous material would be expended and would not be retrievable following construction. Large amounts of labor and natural resources would be used in the production of construction materials, and are generally not retrievable. However, they are not in short supply, and their use would not have an adverse effect upon continued availability of these resources. Lands currently committed to conservation, including those in the LM MSHCP, LM-EM Reserve, and RCRCD, would be converted to other uses. Construction would require a substantial, one-time expenditure of both state and federal funds; ongoing costs would also be required for roadway maintenance. Savings in travel time and improved transportation system efficiency would offset the use of these materials, labor, resources, and funds.	The commitment of resources would be similar to those identified for Build Alternative 1.	The commitment of resources would be similar to those identified for Build Alternative 1.	No impact	
4(f) Resources	Lake Mathews-Estelle Mountain Core Reserve: 127.16 acres of permanent use (1% of total Reserve) and 22.29 acres of temporary use. De minimis use. Lake Mathews Multiple Species Reserve: 121.51 acres of permanent use (2.4% of total Reserve) and 22.13 acres of temporary use. De minimis use. Mead Valley Potential Prehistoric Archaeological District (PPAD): 202.52 acres permanently incorporated to transportation and 55.08 acres of temporary use (0.88% of PPAD). Site CA-RIV-7843, Locus 816: 1.69 acres permanently incorporated to transportation and 0.24 acre of temporary use. Túu'uv, Qaxáalku Payómik, and Qaxáalku Kwíimik Traditional Cultural Properties (TCPs): 211.89 acres permanently incorporated to transportation and 61.7 acres of temporary use (0.96% of Traditional Cultural Properties). De minimis use.	Lake Mathews-Estelle Mountain Core Reserve: 148.08 acres of permanent use (1.22% of total Reserve) and 25.59 acres of temporary use. De minimis use. Lake Mathews Multiple Species Reserve: 113.2 acres of permanent use (2.2% of total Reserve) and 25.63 acres of temporary use. De minimis use. Mead Valley PPAD: 225.66 acres permanently incorporated to transportation and 55.08 acres of temporary use (0.97% of PPAD). Site CA-RIV-7843, Locus 816: 1.69 acres permanently incorporated to transportation and 0.24 acre of temporary use. Túu'uv, Qaxáalku Payómik, and Qaxáalku Kwíimik TCPs: 232.04 acres permanently incorporated to transportation and 65.08 acres of temporary use (1% of Traditional Cultural Properties). De minimis use.	Lake Mathews-Estelle Mountain Core Reserve: 62.51 acres of permanent use (0.51% of total Reserve) and 8.3 acres of temporary use. De minimis use. Lake Mathews Multiple Species Reserve: 58.39 acres of permanent use (1.1% of total Reserve) and 10.06 acres of temporary use. De minimis use. Mead Valley PPAD: 140.59 acres permanently incorporated to transportation and 34.96 acres of temporary use (0.6% of PPAD). PPAD Contributing features (CA-RIV-4403, -4407, -4408, and -4409): 5.98 acres permanently incorporated to transportation and 0.78 acre of temporary use. Site CA-RIV-7843, Locus 816: 1.69 acres permanently incorporated to transportation and 0.24 acre of temporary use. Túu'uv, Qaxáalku Payómik, and Qaxáalku Kwíimik TCPs: 234.03 acres permanently incorporated to transportation and 62.67 acres of temporary use (1% of Traditional Cultural Properties). De minimis use.	No impact	**BIO-1:** Seasonal Vegetation Clearing Restrictions (NC-1 [NES BIO-1]) **BIO-2:** Watering for dust control. Active construction areas will be watered regularly to control dust and thus minimize impacts on adjacent vegetation (NC-2 [NES BIO-2]) **BIO-3:** Use of appropriate firefighting equipment for construction-caused wildfires. Educate personnel on fire hazards and fire risk (NC-3 [NES BIO-3]) **BIO-4:** Biological resource training for construction personnel (NC-4 [NES BIO-4]) **BIO-5:** Biological construction monitoring (NC-5 [NES BIO-5]) **BIO-6:** Establish environmentally sensitive area fencing and avoid environmentally sensitive areas (NC-6 [NES BIO-6] and AS-7 [NES BIO-20]) **BIO-7:** Removal of vegetation and exotic species during construction (NC-7 [NES BIO-7]) **BIO-8:** Reduce potential for spread of noxious weeds (NC-8 [NES BIO-8]) **BIO-9:** Hydroseeding bare ground after construction is completed (NC-13 [NES BIO-9], PF VIS-1) **BIO-10:** Water Pollution and Erosion Control Plans. Plans for water pollution and erosion control (i.e., Storm Water Pollution Prevention Plan [SWPPP]) will be prepared in accordance with project aquatics permits. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. (NC-10 [NES BIO-10], PF WQ-1, PF WQ-2, PF WQ-4) **BIO-11:** Defining the Limits of Disturbance. The limits of disturbance (LOD), including the upstream, downstream, and lateral extents on either side of any stream adjacent to the project impact footprint, will be clearly defined and marked in the field. Monitoring personnel (biology) will review the LOD prior to initiation of construction activities (NC-11 [NES BIO-11]) **BIO-12:** Placement of Construction Equipment. During construction, the placement of equipment within a stream or on adjacent banks or adjacent

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
					upland habitats occupied by WRC MSHCP covered species that are outside of the project footprint will be avoided (NC-12 [NES BIO-12]) **BIO-13:** Determination of Biologically Equivalent or Superior Preservation (DBESP) report (NC-14 [NES BIO-13]) **BIO-14:** Compensation for permanent impacts on riparian-riverine resources (NC-15 [NES BIO-14]) **BIO-15:** Restoration of temporarily affected lands on the Lake Mathews Reserve and creation of a Habitat Mitigation and Monitoring Plan (NC-19 [NES BIO-15]) **BIO-16:** Night light shielding within potential WRC MSHCP conservation areas (AS-2 [NES BIO-16]) **BIO-17:** Compensation for permanent loss of habitat within LM MSHCP (NC-17 [NES BIO-17]) **BIO-18:** Noise Reduction for Equipment. Between March 15 and September 15, all heavy equipment will install and maintain mufflers or other noise-reducing features will be installed when working at Temescal Creek and Cajalco Creek. Additionally, a biological monitor shall be present for activities occurring within or adjacent to riparian habitats where the potential for noise levels to exceed 60 A-weighted decibels may occur at the edge of suitable habitat. If construction noise is negatively affecting least Bell's vireo or other nesting birds, as determined by the biological monitor, work shall cease (unless authorized by the wildlife agencies) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. Do not exceed 86 A-weighted decibels maximum noise level at 50 feet from job site activities between 9:00 p.m. and 6:00 a.m. (TE-1 [NES BIO-18]; PF NOI-1) **BIO-19:** Wildlife Fencing Plan. A Wildlife Fencing Plan will be developed and implemented for the preferred build alternative. (NC-16 [NES BIO-19]) **BIO-20:** Environmentally sensitive area (ESA) fencing sufficient to prevent the entry of animals into the limits of disturbance will be installed prior to, and maintained during, construction. (AS-7 [NES BIO-20]) **BIO-21:** Replace PQP lands in Core C and Proposed Linkage 3 at a 1:1 ratio (NC-20 [NES BIO-21]) **BIO-22:** Collection of Paniculate Tarplant Seeds (PL-1 [NES BIO-22]) **BIO-23:** Apply Minimum Lighting Standards (PF VIS-4) **BIO-24:** Removal of trash and debris (NC-9 [NES BIO-24]) **BIO-25:** Post-construction best management practices (BMPs. Post-Construction BMPs will be implemented to the maximum extent practicable, consistent with the requirements of the National Pollutant Discharge Elimination System permit and Waste Discharge Requirements for the County of Riverside's Municipal Separate Storm Sewer System Permit in place at the time of project approval. (PF WQ-3) **BIO-26:** Exhaust emissions control measures during construction (PF AQ-1) **BIO-27:** Fugitive dust control measures (PF AQ-2) **BIO-28:** Handling, Transport, and Disposal of Wastes. Wastes and petroleum products used or encountered during construction will be collected, transported, and removed from the project site in accordance with Resource Conservation and Recovery Act regulations and federal/Occupational Health and Safety Administration standards, including Waste Management and Materials Pollution Control BMPs – Spill Prevention and Control, Materials; and Waste Management BMPs, Hazardous Waste Management. (PF HAZ-3) **BIO-29:** Pet Policy. No pets will be allowed in, or adjacent to, conserved lands (AS-6 [NES BIO-29]) **BIO-30:** Stephens' Kangaroo Rat Management Plan. Prior to the start of construction activities, a Stephens' kangaroo rat (SKR) management plan will be developed for project activities occurring on the RCHCA SKR Reserve to minimize direct impacts on the species. (TE-3 [NES BIO-30])

Affected Resources	Build Alternative 1 Cajalco Alignment	Build Alternative 2C Modified Cajalco Alignment	Build Alternative 4 El Sobrante Alignment	No-Build Alternative No Project Alternative	Avoidance, Minimization and Compensation Measures
					BIO-31: Preconstruction Surveys (AS-3 [NES BIO-28]) **BIO-32:** Funding for reserve management, maintenance, and security on Lake Mathews Reserve (NC-18 [NES BIO-31]) **BIO-33:** Cajalco Creek Dam and Detention Basin, and Cajalco Creek Sedimentation Basin (HYD-1) **CR-1:** Discovery of Human Remains **CR-2:** Unanticipated Discoveries **PF NOI-1** **NOI-2** **NOI-3** **NOI-4** **PF NOI-5**
Cumulative Impacts	Would not contribute to cumulative adverse impacts related to air quality, geology, hazardous materials/wastes, traffic, utilities and emergency services, energy, parks and recreational facilities, land use, community, environmental justice, noise, visual/aesthetics, hydrology, water quality, natural communities, wetlands and other waters, plant species, threatened and endangered species, animal species, and paleontological resources. Would contribute to a cumulative loss of farmlands and cultural resources. Anticipated cumulative impacts include the permanent loss of farmlands and adverse effects on cultural resources, as a result of construction and other future land development and infrastructure projects.	Would not contribute to cumulative adverse impacts related to air quality, geology, hazardous materials/wastes, traffic, utilities and emergency services, energy, parks and recreational facilities, land use, community, environmental justice, noise, visual/aesthetics, hydrology, water quality, natural communities, wetlands and other waters, plant species, threatened and endangered species, animal species, and paleontological resources. Would contribute to a cumulative loss of farmlands and cultural resources. Anticipated cumulative impacts include the permanent loss of farmlands and adverse effects on cultural resources, as a result of construction and other future land development and infrastructure projects.	Would not contribute to cumulative adverse impacts related to air quality, geology, hazardous materials/wastes, traffic, utilities and emergency services, energy, parks and recreational facilities, land use, community, environmental justice, hydrology, water quality, natural communities, wetlands and other waters, plant species, threatened and endangered species, animal species, and paleontological resources. Would contribute to a cumulative loss of farmlands and cultural resources, and cumulatively considerable contribution to impacts involving visual/aesthetics and noise. Anticipated cumulative impacts include the permanent loss of farmlands, adverse effects on cultural resources, increased ambient noise level and loss of scenic resources, as a result of construction and other future land development and infrastructure projects.	No impact	Measures for each resource affected are identified in Section 3.25, *Cumulative Impacts*. No new, additional avoidance, minimization, or mitigation measures are identified that would avoid cumulative impacts identified for the build alternatives.
Climate Change	*Permanent:* Annual GHG emissions estimated to increase 0.88 percent.[4] Carbon dioxide (CO_2) emissions predicted to be 1,377,419 metric tons per year by 2044; 0.88 percent increase over 2044 No-Build Conditions. *Temporary:* Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction.	*Permanent:* Annual GHG emissions estimated to increase 0.38 percent.[3] CO_2 emissions predicted to be 1,370,635 metric tons per year by 2044; 0.38 percent increase over 2044 No-Build Conditions. *Temporary:* Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction.	*Permanent:* Annual GHG emissions estimated to increase 0.99 percent. CO_2 emissions predicted to be 1,378,941 metric tons per year by 2044; 0.99 percent increase over 2044 No-Build Conditions. *Temporary:* Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction.	CO_2 emissions are predicted to be 1,365,350 metric tons per year by 2044.	**GHG-1:** The project will incorporate the use of energy efficient lighting, such as light-emitting diode (LED) traffic signals. LED bulbs—or balls, in the stoplight vernacular—consume less electricity than traditional lights, which will also help reduce the project's carbon dioxide emissions. **PF LU-1** **PF VIS-1** **VIS-2** **PF VIS-4** **VIS-8** **PF AQ-1** **NC-13 (NES BIO-9)** **NC-15 (NES BIO-14)** **WET-1** **PF SW-**1

[4] Differences in VMT and CO_2 emissions between Alternatives 1 and 2C based on results of traffic modeling conducted for each alternative.

S.5.2 Significant Impacts and/or Substantial Adverse Effects

As summarized in Table S-1, the following impacts of the build alternatives were determined to be significant, adverse, and unavoidable under CEQA, after implementation of avoidance, minimization, and mitigation measures, as well as project design features:

- Long-term aesthetic impacts
- Conflict with provisions of an adopted Habitat Conservation Plan and Natural Community Conservation Plan
- Long-term increase in ambient noise levels in the project vicinity above levels existing without the project (Build Alternative 4)
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) as it relates to evaluating a project's transportation impacts in the context of vehicle miles traveled.
- Impacts on cultural resources
- Generation of direct and indirect greenhouse gas emissions

Also summarized in Table S-1, the following impacts of the Build Alternatives were determined to be significant under CEQA, but with the incorporation of identified avoidance, minimization, and/or mitigation measures, the impacts have been avoided, minimized or reduced, thereby resulting in less-than-significant impacts:

- Long-term and short-term effects on species identified as a candidate, sensitive, or special-status species
- Long-term and short-term effects on state and federally protected wetlands, riparian habitat, and other sensitive natural community
- Impacts on native wildlife nursery sites
- Impacts on paleontological resources
- Hazards involving routine transport, use, or disposal of hazardous materials, and/or upset and accident conditions involving the release of hazardous materials
- Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect
- Long-term increase in ambient noise levels in the project vicinity above levels existing without the project (Build Alternatives 1 and 2C)
- Short-term exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- Short-term substantial or periodic increase in ambient noise levels in the project vicinity
- Redirection of flood flows through alteration of the existing drainage pattern of the site or area, or through the addition of impervious surfaces
- New source of substantial glare that would negatively affect day- or nighttime views in the area
- Short-term impacts on traffic and public services associated with the provision of new or physically altered governmental facilities
- Installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment

S.6 Unresolved Issues

The LM MSHCP does not currently accommodate the roadway widening and improvements through the LM MSHCP area, including the Lake Mathews Multiple Species Reserve (LMR), proposed by the build alternatives. Because the LM MSHCP does not currently accommodate roadway improvements or include a prescribed process to allow changes to the plan in response to public safety and/or access needs, an appropriate discretionary action coordinated between the County and LM MSHCP responsible parties is proposed as part of the project to accommodate the proposed roadway improvements. Coordination between the County, MWD, RCHCA, and Lake Mathews Reserve Management Committee (LMRMC), including member resource agencies, has been ongoing since 2011 to address concerns involving the design and placement of the build alternatives, wildlife crossing opportunities, protection of wetland resources, and the management and security of LMR and Lake Mathews facilities. As a result of the coordination, a number of design modifications have been made to the build alternatives to avoid or otherwise minimize impacts on Lake Mathews facilities and LMR wetland resources, and enhance wildlife crossing opportunities. Additional measures to aid in the management and security of LMR and Lake Mathews facilities have been discussed with MWD and RMC member agencies, and will be further coordinated as part of the discretionary action.

While no other specific unresolved issues are noted at this time for the project, through the public review of the Draft EIR/EIS, other issues may be identified that would require resolution prior to approval of the Final EIR/EIS, the Notice of Determination under CEQA, and the issuance of a Record of Decision under NEPA.

S.7 Trustee and Responsible Agencies

Trustee Agency: California Department of Fish and Wildlife

NEPA Lead Agency: California Department of Transportation

Responsible Agencies:

- California Department of Parks and Recreation - Office of Historic Preservation;
- Metropolitan Water District of Southern California;
- Western Riverside County Regional Conservation Authority;
- Riverside County Habitat Conservation Agency;
- U.S. Fish and Wildlife Service;
- U.S. Environmental Protection;
- U.S. Army Corps of Engineers Agency;
- Regional Water Quality Control Board, Santa Ana Region