Murrieta Creek Bridge at Overland Drive

Initial Study – Mitigated Negative Declaration

Federal Aid Project No. BR-NBIL (543)
City Project No. PW 16-05

prepared by

City of Temecula
Planning Division, Department of Community Development
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Acronyms and Abbreviations

AASHTO	Association of State Highway and Transportation Officials
AB	Assembly Bill
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
BMP	Best Management Practice
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
dB	decibels
DBESP	Biologically Equivalent or Superior Preservation
dBA	A-weighted sound pressure level
DNL	Day-Night Average Level
DPM	diesel particulate matter
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
GWP	global warming potential
I-15	Interstate 15
IPPC	Intergovernmental Panel on Climate Change
L_{ea}	equivalent noise level
LST	Localized Significance Thresholds
MSHCP	Multiple Species Habitat Conservation Plan
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission

NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
PBA	peak bedrock acceleration
$PM_{2.5}$	particulate matter with a diameter equal to or less than 2.5 microns
PM_{10}	particulate matter with a diameter equal to or less than 10 microns
PPV	peak particle velocity
RCA	Regional Conservation Authority
RMs	root mean squared
ROG	reactive organic gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SR	State Road
SWPPP	Stormwater Pollution Prevention Plan
SWP	State Water Project
TAC	toxic air contaminant
TNM	Traffic Noise Model
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound

Initial Study

1. Project Title

Murrieta Creek Bridge at Overland Drive (Project)

2. Lead Agency Name and Address

City of Temecula
Community Development Department
Planning Division
41000 Main Street
Temecula, California 92590

3. Contact Person and Phone Number

Contact: Nino Abad, Senior Civil Engineer, Project Manager
(951) 308-6385

4. Project Location

The proposed project is located in the City of Temecula, County of Riverside, California, west of Interstate 15 (I-15), north of Rancho California Road, west of Commerce Center Drive, south of Winchester Road, and east of Diaz Road (see Figure 1). The approximate longitude and latitude coordinates of the proposed bridge sites are 117.1658° W and 35.5239° N. The project is located 0.3 mile west of Interstate 15 and will extend Overland Drive across Murrieta Creek to connect to Avenida Alvarado at the Diaz Road intersection (see Figure 2).

5. General Plan Designation

Light Industrial, Service Commercial, and Open space

6. Zoning

The project is located in the Specific Plan 14 (SP-14) zone. Light Industrial (LI) is located adjacent to the west.

Figure 1 Regional Location

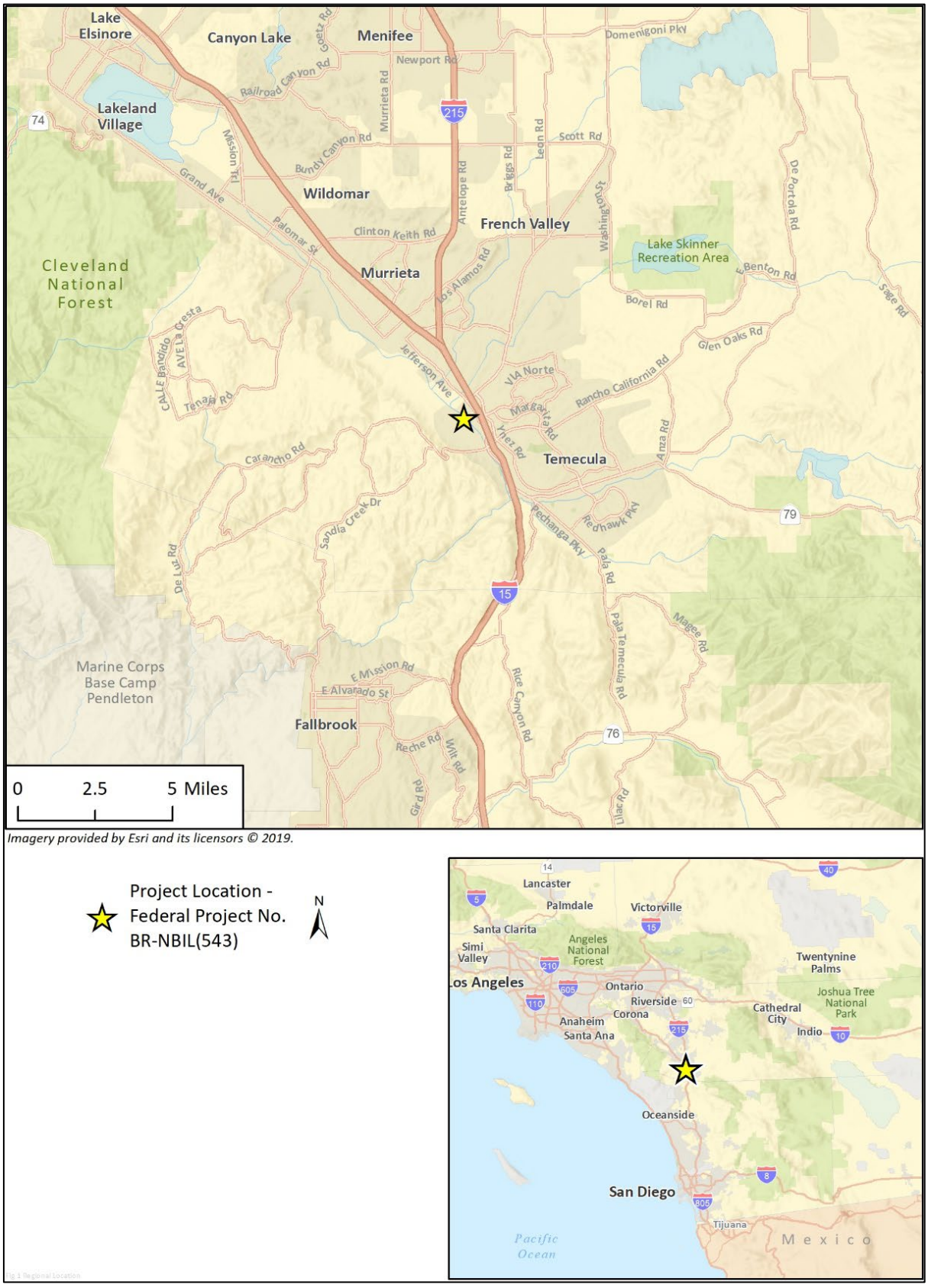

Figure 2 Project Location

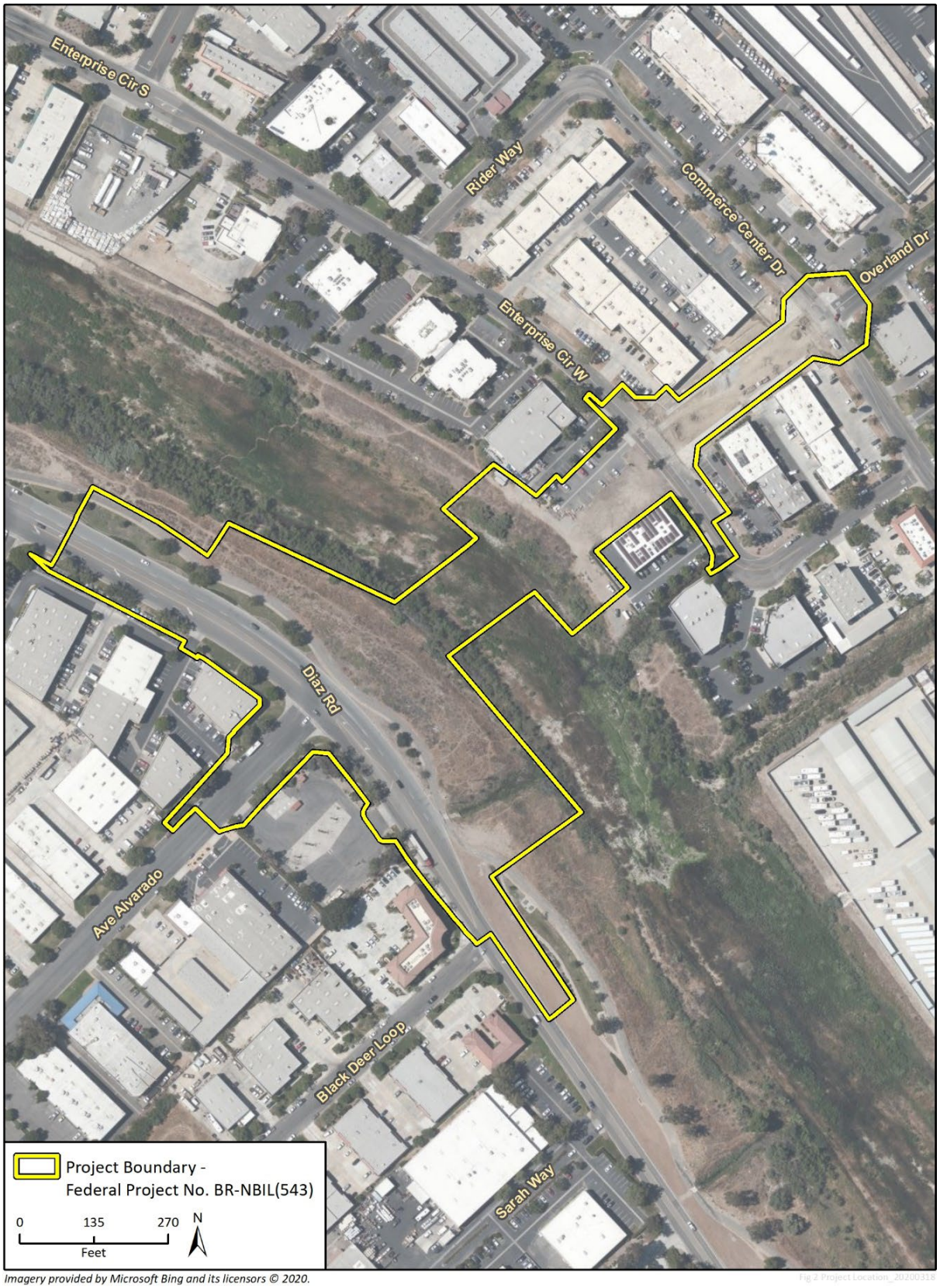

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Fig 2 Project Location_20200318

7. Description of Project

The project proposes to construct a bridge over Murrieta Creek to connect Avenida Alvarado with Overland Drive in the City of Temecula, Riverside County. The Murrieta Creek Bridge at Overland Drive is anticipated to be a concrete girder structure spanning approximately 348 linear feet over Murrieta Creek. The bridge would accommodate four through travel lanes (two lanes in each direction), left-turn lane(s), and two 5-foot-wide shoulders served as Class II bike lanes, for a curb-to-curb width of 68 feet. In addition, a 6-foot-wide sidewalk would be included on the southern side of the bridge for pedestrians to cross the creek. The existing bike trail on the west side of the creek will intersect with the extended Overland Drive by a signal-controlled at-grade crossing.

Upon completion of the Murrieta Creek Bridge Project, the proposed street configuration would be consistent with the four-lane roadway segment on Overland Drive to the east. In addition to the construction of the bridge, various roadway and utility improvements would occur at the western and eastern bridge approaches. In order to match the roadway section on Avenida Alvarado on the west side of the bridge, the project would transition the lane configuration in the eastern portion of Avenida Alvarado to be consistent with the four-lane configuration of the bridge. Intersection improvements to Overland Drive/Enterprise Circle West and Diaz Road/Avenida Alvarado would include the installation of traffic signals and associated signing, striping, streetlights, and utilities. Traffic signals and streetlights will be installed at the Overland Drive/Commerce Center Drive intersection as well. Reconstruction and roadway improvements along Diaz Road and Avenida Alvarado would include undergrounding electrical utilities, construction of curbs, gutters, and sidewalks, relocating sewer and water facilities, and adding traffic signage and striping. As a part of the bridge construction, one abutment would be constructed on each end of the bridge, along with two piers within Murrieta Creek. Earth embankments with concrete slope protection and cutoff walls buried underground for scour protection would also be installed on the east and west side of the Creek. The foundation of the bridge piers involving large-diameter cast-in-drilled-hole concrete piles will be installed below the channel bottom, which is deep enough for protection from scour. The channel bottom will remain earthen without any concrete or rip rap lining. The bridge girder would provide cell openings to accommodate future utilities and electrical conduits for streetlights and traffic signal communication.

The project will also include railing architectural treatment and landscaping modifications or improvements in the right-of-way along the bridge approach, at the Overland Drive/Enterprise Circle West and Diaz Road/Avenida Alvarado intersections, and on Diaz Road and Overland Drive.

During construction, best management practices (BMPs) are anticipated to include construction scheduling, streambank stabilization, wind erosion controls, gravel bag berms, gravel bag check dams, sediment sweeping and vacuuming, and material and waste handling and storage. Site Design BMPs would include preservation of existing vegetation and channel and slope protection (permanent soil stabilization including concrete slope protection under the bridge abutments and erosion control hydroseed mix on graded areas within the creek). In addition, all proposed slopes with slope gradient of 2:1 or flatter would be planted with deep rooted, drought tolerant erosion protection vegetation native to the area. Slopes steeper than 2:1 gradient would be lined with concrete for erosion protection and slope stability. Proposed Treatment Control BMPs, which are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters, include curb inlet media filters in the proposed catch basins. The proposed BMPs would target and reduce pollutants of concern from stormwater runoff from the project site.

8. Surrounding Land Uses and Setting

The surrounding urban land uses are predominately built out and consist of industrial and commercial uses. The project site is surrounded by industrial park uses to the west and service commercial uses to the east. The project will cross over the Murrieta Creek, which is designated as open space.

9. Other Public Agencies Whose Approval is Required

U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, Regional Water Quality Control Board, Riverside County Flood Control District, Western Riverside County Regional Conservation Authority.

10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

On March 12, 2020, the City of Temecula distributed AB 52 consultation letters, including project information, map, and contact information, to each of the five (5) Native American tribes previously requesting to consult on City of Temecula projects. The tribal governments that were provided an AB 52 consultation letter include the following:

- Pechanga Band of Mission Indians
- Rincon Band of Luiseño Indians
- Soboba Band of Luiseño Indians
- Agua Caliente Band of Cahuilla Indians
- Torres-Martinez Desert Cahuilla Indians

Despite a July 8, 2020, follow up email from the City, the Torres-Martinez Desert Cahuilla Indians did not respond to the City's invitation to consult on the project. Each of the other four Tribes responded to the City's consultation letter. Responses are detailed in Section 18, *Tribal Cultural Resources*.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology and Soils	☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials
☐	Hydrology and Water Quality	☐	Land Use and Planning	☐	Mineral Resources
■	Noise	☐	Population and Housing	☐	Public Services
☐	Recreation	☐	Transportation	■	Tribal Cultural Resources
☐	Utilities and Service Systems	☐	Wildfire	■	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Nino Abad — 1/3/2024

Signature — Date

Nino Abad — Senior Civil Engineer

Printed Name — Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	■	☐
c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is usually a view of a valued resource, such as waterways, the ocean, hills, valleys, or mountains. The City has generally identified the conservation of the hills and Santa Ana Mountains to the west and southern ridgelines, the Santa Margarita River, the slopes in the Sphere of Influence located west and east of the City limits and other important landforms and historic landscape features as scenic vistas.

Interstate 15 (I-15) from Corona south to the San Diego County line has been designated as an Eligible State Scenic Highway. While this portion of the I-15 is eligible to be designated as a state scenic highway, it has not yet been recognized as such (Caltrans 2016).

From the project site, unobstructed views to the ridgelines and hills to the west are present. In addition, the southern hillsides are also visible but partially obstructed by development and trees. Murrieta Creek is visible from the surrounding area and travels through the project site. While there are no designated scenic resources, there are a number of resources within and visible from the

project which are considered aesthetically important to the City of Temecula. The proposed project is located below the western escarpment, which is considered a scenic vista pursuant to the City's General Plan; however, there will not be a significant adverse impact on the scenic vista of the escarpment, as the proposed bridge will be constructed generally at existing grade and will not block scenic vistas within the area. Therefore, views of the project area would not be substantially altered by this project and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project is not located within a designated scenic highway corridor. The nearest designated State Scenic Highways in Riverside County are along State Road (SR) 74 and SR-243. The portions of these highways that are designated are located about 26 miles northeast of the project area and are not visible from within the project area or surrounding areas. The project is located adjacent to the I-15, which is designated by Caltrans as an Eligible State Scenic Highway; however, it is not officially designated as a State Scenic Highway by Caltrans. Public views of the distant mountains (Cleveland National Forest) from I-15 would not be obscured by development of the project. The project is not located on a scenic highway and would not substantially damage scenic resources, including rock outcroppings or historic buildings.

The Open Space and Conservation Element of the City's General Plan states waterways provide for scenic enjoyment in the area. In addition, natural drainage courses provide a scenic setting for the community. The proposed project would add a bridge structure across Murrieta Creek, but would not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, views of the project area for passengers along I-15 would not be substantially altered by the project and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The viewers in the area consist of workers at their place of business, motorists and pedestrians traveling through the area, and recreational users of the Class I shared use path along Murrieta Creek. A majority of the viewers in the area would not be considered sensitive as they are at work or traveling through the area. However, people utilizing the shared use path would be considered sensitive viewers as they are utilizing and recreational amenity in the area.

The project site is currently undeveloped and is covered with riparian/riverine communities. The visual character of the project site would be altered; however, the proposed character would be consistent with existing bridges located 1,000 feet northwest and 2,300 feet southeast of the project site. The project would not substantially damage the surrounding natural scenic resources and visual character and would be similar to surrounding uses. In addition, the project would implement the following Avoidance and Mitigation Measures to ensure the project would not degrade the existing visual character or quality of public views:

- Existing landscaping impaired by the proposed project will be replaced with similar landscaping in the right-of-way along the bridge approach, Overland Drive/Enterprise Circle West and Diaz Road/Avenida Alvarado intersections, and along Diaz Road and Overland Drive.
- Street trees and landscaping of business parks impacted by the project shall be replaced with similar landscaping.
- Trees removed along the Class I shared-use trail shall be replaced at a 3:1 ratio.
- Bridge design would incorporate colored decorative metal railings for bicycle and pedestrian safety, and Caltrans standard fractured rib texture treatments on concrete railings to control graffiti.
- Murrieta Creek vegetation disturbed by construction will be treated for erosion control and re-seeding with native species seed mix.

Therefore, the project would result in a less than significant impact on the visual character of the area and no further analysis of this issue is necessary.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Light pollution is regulated by Chapter 17.22 Section 17.22.176 of the City of Temecula Municipal Code. Ordinance 655 requires lighting to be shielded, directed down to avoid glare onto adjacent properties, and emit low levels of glare into the sky. Existing sources of light or glare in the project area include vehicles on the surrounding roadways, lights on local streets and parking lots, and windows from the light industrial and office commercial buildings. The bridge would not result in additional vehicles on local roadways. New streetlights would be placed along the bridge for vehicle and pedestrian safety; however, lights would comply with City of Temecula outdoor light standards and would be similar to streetlights on the surrounding roadways. Therefore, the project would not create new sources of light or glare which would adversely impact the daytime or nighttime visual setting of the area. Compliance with the Municipal Code would result in compliance with the County of Riverside's Mount Palomar Light Pollution Ordinance, the project would result in a less than significant impact.

LESS THAN SIGNIFICANT IMPACT

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The project site is located within an urbanized area of the City. The surrounding area is developed for commercial and industrial uses, while the project site itself, which crosses Murrieta Creek, consists of riparian/riverine communities. The project site does not contain agricultural uses or related operations. According to Figure OS-3, of the City of Temecula General Plan, the project site is not located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No impact would occur.

NO IMPACT

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

The project site is currently zoned Specific Plan 14 (SP-14). No portion of the project site or surrounding land uses are zoned for agriculture and no nearby lands are enrolled under the Williamson Act. As such, future development of the project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur in this regard. In addition, the project will not involve changes in the existing environment, which would result in the conversion of farmland to non-agricultural uses. No impact would occur.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

As discussed above under Response 2.b, the project site is currently zoned SP-14. No forest land or timberland zoning is present on the project site or in the surrounding area. As such, future development of the project would not conflict with existing zoning for forest land or timberland and would not result in the loss of or conversion of forestland. No impact would occur.

NO IMPACT

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No forest land exists on the project site or in the surrounding area. As such, future development of the project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Since there are no agricultural or forest uses or related operations on or near the project site, future development of the project would not involve the conversion of farmland or forest land to other uses, either directly or indirectly. No impacts to agricultural land or use would occur. Further analysis of this issue is not necessary.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

Overview of Air Pollution

The federal and State Clean Air Acts mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[1] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

Air pollutant emissions are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term VOCi s used in this IS-MND.

- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources that may be legally operated on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Air Quality Standards and Attainment

The project site is located in the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As the local air quality management agency, the SCAQMD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SCAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants, and the human health impacts associated with these criteria pollutants, presented in Table 1, are already occurring in that area as part of the environmental baseline condition. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The portion of Riverside in the SCAB is designated nonattainment extreme for the 8-hour ozone NAAQS, nonattainment serious for the 24-hour $PM_{2.5}$ and annual $PM_{2.5}$ NAAQS; nonattainment for the 8-hour ozone CAAQS; nonattainment for the 24-hour and annual PM_{10} CAAQS; and nonattainment for the annual $PM_{2.5}$ CAAQS (SCAQMD 2016). This nonattainment status is a result of several factors, the topography and climate of Southern California, the large population growth, and anthropogenic sources, such as exhaust from vehicles driving on roadways (SCAQMD 2017a).

Table 1 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[1]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.

Source: United States Environmental Protection Agency 2022

Air Quality Management

States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS.

Since the SCAB currently exceeds ozone and $PM_{2.5}$ NAAQS standard, the SCAQMD is required to implement strategies to reduce pollutant levels to achieve attainment of the NAAQS. The SCAQMD 2022 Air Quality Management Plan (2022 AQMP) is a regional blueprint designed to meet the NAAQS and demonstrate how attainment will be reached. The 2022 AQMP represents a thorough analysis of existing and potential regulatory control options, includes available, proven, and cost-effective strategies, and seeks to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The prior AQMP, published in 2016, determined that, with implementation of the proposed control strategy, the SCAB could expect to reach attainment of the 1997 8-hour ozone standard by July 15, 2024, and the 2012 annual $PM_{2.5}$ by 2025. The 2006 24-hour $PM_{2.5}$ did not meet the attainment date of December 31, 2019, which required SCAQMD to revise the plan to meet standard as early as possible. SCAQMD's 2022 AQMP, an update to the 2016 AQMP, was developed to identify and implement strategies and control measures to meet the 2015 8-hour ozone NAAQS as expeditiously as practicable, but no later than the statutory attainment deadline of August 3, 2038 for the SCAB (SCAQMD 2022).

Air Pollutant Emission Thresholds

The SCAQMD has adopted guidelines for quantifying and determining the significance of air quality emissions (SCAQMD 2019).

The SCAQMD recommends quantitative regional significance thresholds for temporary construction activities and long-term project operation in the SCAB, shown in Table 2, are used to evaluate a project's potential air quality impacts (SCAQMD 2019).

Table 2 SCAQMD Regional Air Quality Significance Thresholds

Pollutant	Construction (Pounds per Day)	Operation (Pounds per Day)
NO_x	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
CO	550	550

NO_x = Nitrogen Oxides; VOC = Volatile Organic Compounds; PM_{10} = Particulate Matter with a diameter no more than 10 microns; $PM_{2.5}$ = Particulate Matter with a diameter no more than 2.5 microns; SO_x = Sulfur Oxide; CO = Carbon Monoxide

Source: SCAQMD 2019

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the California Environmental Quality Act (*CEQA)* Air Quality Handbook (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each SRA, distance to the sensitive receptor, and project size. LSTs have been developed for emissions within construction areas up to five acres in size. However, LSTs only apply to on-site emissions sources and are not applicable to off-site mobile sources, such as cars on a roadway (SCAQMD 2008a, 2009). For residential and retail projects the majority of operational emissions are associated with project-generated vehicle trips not stationary sources. Therefore, for these land use types, LSTs are typically applied only to construction emissions.

In order to minimize efforts, the SCAQMD developed mass rate lookup tables as a simple screening procedure. If a project's on-site emissions do not exceed the screening levels for any pollutant, it can be concluded that the project would not cause or contribute to an adverse localized air quality impact. Screening levels are provided for various distances between the project boundary and the nearest sensitive receptor and various project site acreages. Screening levels increase, as the project distance between the boundary and the nearest receiver increases. This is because air pollutant dispersion increases with distance. Screening levels increase, as the acreage increases. This is because the distance between construction sources and sensitive receptors increases with project acreage.

The LST mass rate lookup tables account for ambient pollutant concentrations based on the project's source receptor area. LSTs are provided for receptors at a distance of 82 feet (25 meters), 164 feet (50 meters), 328 feet (100 meters), 656 feet (200 meters), 1,640 feet (500 meters) from the project disturbance boundary to the sensitive receptors.

The site is located in SRA-26 (Temecula Valley). The project area totals approximately five acres. The nearest sensitive receptors are students attending Temecula Montessori Academy, and the receptors are approximately 480 feet from the nearest project site boundary. To be conservative, the LSTs at the distance of 328 feet (100 meters) are used for a two-acre site (LSTs become more

stringent with smaller project area acreages). The analysis uses the following LST values as shown in Table 3.

Table 3 SCAQMD LSTs for Construction

Pollutant	Allowable Emissions for a 2-Acre Site at 328 feet in SRA 26
Gradual conversion of NO_X to NO_2	363
CO	2,781
PM_{10}	38
$PM_{2.5}$	10

SRA = source receptor area; lbs/day = pounds per day; NO_x/NO_2 = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter 10 micrometers in diameter or less; $PM_{2.5}$ = fine particulate matter 2.5 micrometers in diameter or less
Source: SCAQMD 2009

Toxic Air Contaminants Thresholds

SCAQMD has developed significance thresholds for the emissions of toxic air contaminants (TAC) based on health risks associated with elevated exposure to such compounds. For carcinogenic compounds, cancer risk is assessed in terms of incremental excess cancer risk. A project would result in a potentially significant impact if it would generate an incremental excess cancer risk of 10 in 1 million (1×10^{-6}) or a cancer burden of 0.5 excess cancer cases in areas exceeding 1 in 1 million risks. Additionally, non-carcinogenic health risks are assessed in terms of a hazard index. A project would result in a potentially significant impact if it would result in a chronic and acute hazard index greater than 1.0 (SCAQMD 2019).

Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; Office of Environmental Health Hazard Assessment 2015). Some land uses considered more sensitive to air pollution than others due to the types of population groups or activities involved are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, religious facilities, and daycare centers. SCAQMD Risk Assessment Procedures define receptors as any location outside the boundaries of a facility at which a person could experience repeated, continuous exposure. The procedures further note that sensitive receptors include any residence (e.g., private homes, condominiums, apartments, and living quarters), schools (including preschools and daycare centers), health facilities (e.g., hospitals, retirement and nursing homes, long-term care hospitals, hospices), as well as prisons, dormitories, or similar live-in housing where children, chronically ill individuals, or other sensitive persons could be exposed to TACs (SCAQMD 2017).

The nearest sensitive receptors would be students attending the Temecula Montessori Academy, which provides programs for infants and preschool to third grade students.

Methodology

The following discussion is based on the Air Quality Report prepared for the project by Rincon Consultants dated August 2023 and is included as Appendix A. The report used project-specific information for construction and the VMT Analysis Technical Memorandum prepared by STC Traffic, Inc. in February 2021, which is included as Appendix B. The construction emissions were calculated using the Road Construction Emissions Model, Version 9.0.0. Refer to Appendix C for more details regarding the methodology.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP.

The 2022 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local city general plans and the Southern California Association of Governments (SCAG)'s 2020 RTP/SCS socioeconomic forecast projections of regional population, housing, and employment growth (SCAQMD 2022, SCAG 2020a). The project involves the construction of a bridge over and across Murrieta Creek to connect Avenida Alvarado at the intersection of Diaz Road with Overland Drive at the intersection of Enterprise Circle West in the City. The construction of this project would not generate new population, housing, or employment. Therefore, the project would not generate air pollution emission that would impede or conflict with the 2022 AQMP.

Additionally, the federal clean air act requires a demonstration that federal actions conform to the State Implementation Plan (SIP) and similar approved plans in areas that are designated as non-attainment or have maintenance plans for criteria pollutants. Transportation measures, such as the project, are analyzed for conformity with the SIP as part of the RTP and the Federal Transportation Improvement Program (FTIP). If the design concept and scope of a proposed transportation project are consistent with the project description in the applicable RTP and FTIP, and the assumptions in the regional emissions analysis for the RTP and FTIP, then the project would conform to the SIP, and no adverse regional air quality impact would occur as a result of the project.

SCAG, as the area's metropolitan planning organization, and the FHWA must make a determination that the applicable RTP and FTIP conform to the applicable SIP. Conformity to the SIP means that transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of the NAAQS. Federal regulations also require SCAG to conduct an air quality conformity analysis of all regionally significant projects that increase the transportation system capacity. All regionally significant capacity-increasing transportation projects, regardless of funding sources, must be included in the RTIP.

The currently applicable RTP and FTIP for the project area are the *Connect SoCal* 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and the 2023 FTIP (SCAG 2020a, 2023). Both plans were prepared by SCAG. The project is included in *Connect SoCal* and the 2023 FTIP under FTIP ID 991203A. The FHWA made a finding of conformity on the 2020-2045 RTP/SCS through Amendment #3 on June 9, 2023 (FHWA 2022). In addition, the FHWA approved the 2023 FTIP Consistency Amendment #23-03 and concurred that the associated conformity determination conformed to the applicable SIP in accordance with the provisions of 40 CFR Parts 51 and 93 on June 9, 2023 (FHWA 2023).

Therefore, the project is assumed to conform with the 2022 AQMP and the SIP. Furthermore, implementation of the project would ensure that the City would be consistent with the *Connect*

SoCal RTP/SCS and the 2023 FTIP. No adverse regional or local air quality impact would occur as a result of the project.

NO IMPACT

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction Emissions

The project would allow for the construction of a bridge that would accommodate four through travel lanes (two lanes in each direction), left-turn lane(s), and two 5-foot-wide shoulders served as Class II bike lanes, for a curb-to-curb width of 68 feet. In addition, a 6-foot-wide sidewalk would be included on the southern side of the bridge for pedestrians to cross the creek. The existing bike trail on the west side of the creek will intersect with the extended Overland Drive by a signal-controlled at-grade crossing.

Construction would involve grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving. Exhaust emissions would be associated with use of heavy-duty construction equipment and truck trips hauling debris, soils, and construction materials; fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from earthwork activities (e.g., grubbing/land clearing and grading) activities. The paving operations would release VOCs. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. According to the City of Temecula General Plan, the City shall require individual development projects to comply with the following measures to minimize short term, construction-related PM_{10} and NOx emissions, and to minimize off-site impacts:

- Water all active construction areas at least twice daily;
- Cover all haul trucks or maintain at least two feet of freeboard;
- Pave or apply water four times daily to all unpaved parking or staging areas;
- Sweep or wash any site access points within 30 minutes of any visible dirt deposition on any public roadway;
- Cover or water twice daily any on-site stockpiles of debris, dirt or other dusty material;
- Suspend all operations on any unpaved surface if winds exceed 25 mph;
- Hydroseed or otherwise stabilize any cleared area which is to remain in active for more than 96 hours after clearing is completed;
- Ensure that all cut and fill slopes are permanently protected from erosion;
- Require the construction contractor to ensure that all construction equipment is maintained in peak working order;
- Limit allowable idling to 10 minutes for trucks and heavy equipment;
- Encourage carpooling for construction workers;
- Limit lane closures to off-peak travel periods;
- Park construction vehicles off traveled roadways;
- Wet down or cover dirt hauled off site;
- Wash or sweep away access points daily;
- Encourage receipt of materials during non-peak traffic hours; and,
- Sandbag construction sites for erosion control.

In addition, demolition and grading for the project shall be performed in compliance with SCAQMD Rule 4032, Fugitive Dust. Contractor compliance with Rule 403 requirements would be mandated in the contractor's specifications and shall include the following measures:

- Land disturbance shall be minimized to the extent feasible. Grading activities shall be limited to the disturbance of no more than five acres in the course of one day.
- Haul trucks shall be covered when loaded with fill.
- Paved streets shall be swept at least once per day where there is evidence of dirt that has been carried onto the roadway.
- Watering trucks shall be used to minimize dust. Watering should be sufficient to confine dust plumes to the project work areas. Active, disturbed areas shall have water applied to them three times daily.
- For disturbed surfaces that will not be revegetated and that will be left inactive for four or more days, a chemical stabilizer shall be applied pursuant to the manufacturer's instruction.
- For unpaved roads, chemical stabilizers shall be applied or the roads shall be watered once per hour during active operation.
- Vehicle speed on unpaved roads shall be limited to 15 miles per hour. For open storage piles that will remain on site for two or more days, water shall be applied once per hour, or coverings shall be installed.
- For paved road trackout, all haul vehicles shall be covered or shall comply with the vehicle freeboard requirements of Section 23114 of the *California Vehicle Code* for both public and private roads. During high wind conditions (i.e., wind speeds in excess of 25 miles per hour), all earth-moving activities shall cease or water shall be applied to soil not more than 15 minutes prior to disturbing such soil.

Table 4 summarizes the estimated maximum daily emissions of VOC, NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions per phase of construction. All construction-related criteria pollutant emissions would be below the SCAQMD regional thresholds. Therefore, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

Table 4 Project Construction Emissions

	VOC (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)	CO (lbs/day)	SO_X (lbs/day)	NO_x (lbs/day)
Grubbing/Land Clearing	1.30	15.19	3.27	30.60	0.05	3.92
Grading/Excavation	2.28	15.35	3.37	44.14	0.08	5.15
Drainage/Utilities/Sub-Grade	4.74	15.68	3.68	106.23	0.17	12.31
Paving	3.46	0.44	0.36	71.72	0.12	8.82
Maximum Daily	**4.74**	**15.68**	**3.68**	**106.23**	**0.17**	**12.31**
SCAQMD Significance Threshold	75	150	55	550	150	100
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix C

Operational Emissions

As described in the Air Quality Report prepared for the project, the project would result in a reduction of operational emissions. While the VMT Analysis Technical Memorandum (STC Traffic, Inc. 2021, Appendix B) shows VMT increasing in the future (2,618 VMT per day in 2025 and 2,922 VMT per day in 2045), the analysis does not capture the fact that traffic would be redistributed on the local roadway network with the construction of the bridge. VMT within the study area would grow with or without the project due to population growth. The proposed project would improve traffic flow in the City and would not increase capacity. In actuality, the project would reduce VMT for current trips on the network as the new roadway segment lowers VMT for journeys from Overland Drive to Diaz Road and Avenida Alvarado. The distance from the Overland Drive/Enterprise Circle intersection to the Diaz Road/ Avenida Alvarado intersection is currently 0.7 mile. The distance between the two intersections across the creek is approximately 825 feet. This is an approximate reduction of 2,870 feet traveled per vehicle trip. With a reduction in overall trip distance for the area, the project would result in emissions reductions compared to the existing conditions. Therefore, project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Carbon Monoxide Hotspots

A carbon monoxide hotspot is a localized concentration of carbon monoxide that is above a carbon monoxide ambient air quality standard. Localized carbon monoxide hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local carbon monoxide concentration exceeds the federal one-hour standard of 35.0 ppm or the federal and state eight-hour standard of 9.0 ppm (SCAQMD 2016).

As described under criterion (b), the project would not generate new trips in the project area but provide another access point to improve connectivity for existing traffic traveling in between Overland Drive to Avenida Alvarado. The project would relieve congestion at other nearby intersections since the development of the bridge would create a new east to west roadway connection. Therefore, the project would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour CO standard. Therefore, impacts would be less than significant.

Localized Significance Thresholds

Table 5 summarizes maximum daily on-site emissions associated with construction of the project. The on-site construction emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD LST screening levels during any phase of construction. Therefore, the project would not expose sensitive receptors to substantial criteria pollutant concentrations and impacts would be less than significant.

Table 5 On-site Construction Emissions

Year	Maximum On-site Emissions (lbs/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	3.92	30.60	15.19	3.27
Grading/Excavation	5.15	44.14	15.35	3.37
Drainage/Utilities/Sub-Grade	12.31	106.23	15.68	3.68
Paving	8.82	71.72	0.44	0.36
Maximum Daily	**12.31**	**106.23**	**15.68**	**3.68**
Applicable LST; 2 acres at 100 meters	**363**	**2,781**	**38**	**10**

SRA = source receptor area; lbs/day = pounds per day; NO_x/NO_2 = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter 10 micrometers in diameter or less; $PM_{2.5}$ = fine particulate matter 2.5 micrometers in diameter or less

[1]Emissions only account for on-site construction emissions.

Source: Appendix C

Toxic Air Contaminants

Construction TAC

Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998 (CARB 2022). The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts and is therefore the focus of this analysis.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 17 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., 23 months) is approximately six percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District 2017).

The maximum exhaust PM_{10} and $PM_{2.5}$ emissions, which are used as surrogates for DPM, would occur during the drainage/utilities/sub-grade activities. These activities would last for approximately 11 months. PM emissions would decrease for the remaining construction period because construction activities, such as paving, would require less intensive construction equipment. While the maximum DPM emissions associated with demolition, site preparation, and grading activities

would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent three percent of the total 30-year exposure period for health risk calculation. Given the aforementioned discussion, DPM generated by project construction would not create conditions where the probability is greater than one in ten million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Therefore, project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Operational TAC

The development of the project would not site new mobile sources of TAC in the general vicinity. As a bridge development, the project would be a new access point for existing vehicles traveling near or on Overland Drive and Avenida Alvarado. Existing vehicles and motorists would use the bridge for easier east to west access. Therefore, the project would not include substantial mobile TAC sources, nor would it result in the exposure of off-site sensitive receptors to significant amounts of carcinogenic or toxic air contaminants. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

For construction activities, odors would be short-term in nature and are subject to SCAQMD Rule 402 Nuisance (SCAQMD 1976). Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed plan would not include any of these uses. The project would construct a bridge to connect vehicles traveling to and from Overland Drive and Avenida Avenue. The project would not generate new vehicle trips but add an additional access point access for existing vehicles, motorists, pedestrians, and bicyclists. This development is not considered a typical nuisance for odor. Therefore, operational odor impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	■	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	■	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	■	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	■	☐	☐

This section is based on the City of Temecula's prior Final Initial Study, dated May 28, 2013, the Jurisdictional Delineation Report, dated January 2013, and the Habitat Assessment for Murrieta Creek Bridge and Overland Drive Extension and related surveys for the project, prepared by BonTerra Consulting (September 2012), the Least Bell's Vireo Protocol Survey Report, dated September 2019, the Jurisdictional Waters Delineation, dated April 1, 2020, the MSHCP Consistency Analysis, dated July 2021, and the MSHCP Determination of Biologically Equivalent or Superior Preservation (DBESP), as amended March 2022, for the Murrieta Creek Bridge at Overland Drive (Avenida Alvarado Over Murrieta Creek) Federal Aid Project No. BR-NBIL (543), City Project No. PW 16-05, City of Temecula, Riverside County, California, prepared by Rincon Consultants, Inc. (Rincon). The DBESP was provided to the Western Riverside County Regional Conservation Authority, the California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service (USFWS) (collectively referred to as the "Wildlife Agencies") for comment, and the 60-day response period concluded on September 05, 2022. As such, the project is in compliance with the Western Riverside MSHCP and the DBESP is considered to be approved."

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The project site is located within Subunit 1 (Murrieta Creek) of the Western Riverside Multiple Species Habitat Conservation Plan's (MSHCP's) Southwest Area Plan. The project site is located in Criteria Area Cells 6783 and 6890, which contributes to Proposed Constrained Linkage 13 (Murrieta Creek). The land along Murrieta Creek is owned by the Riverside County Flood Control and Water Conservation District (District). The project site is not located in a Criteria Area Plant Species Survey Area or within the Narrow Endemic Plant Survey Area; therefore, focused plant surveys for these species are not required.

The project site is within a Burrowing Owl (*Athene cunicularia*) Survey Area. A Step I Habitat Assessment and Step II Part A Focused Burrow Survey were completed in the Study Area (all areas of potential project-related effects and a 500-foot buffer) on May 10, 2019 and May 20, 2019, respectively, in accordance with methods outlined in the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (County of Riverside 2006). This search identified marginally suitable habitat present in the Study Area along the banks of Murrieta Creek. This habitat is isolated and highly disturbed but contains a complex of several burrows of suitable size for burrowing owl. No burrowing owls or owl sign (e.g., prey remains, cast pellets, white-wash, or feathers) were observed in the Study Area during the Step I Habitat Assessment or Step II A focused Burrow Survey.

The project would impact Riparian/Riverine resources that are occupied by least Bell's vireo (*Vireo bellii pusillus*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), and yellow-breasted chat (*Icteria virens*), and potentially occupied by yellow warbler (*Setophaga petechia*), western pond turtle (*Emys marmorata*), and arroyo chub (*Gila orcuttii*). Specifically, the southern willow scrub and riparian scrub habitats in the Study Area provide habitat that is occupied by the least Bell's vireo. Updated focused surveys for this species were conducted between May 10 and July 19, 2019. The surveys were conducted in accordance with the USFWS *Least Bell's Vireo Survey Guidelines*, issued January 19, 2001. Eight (8) surveys were conducted during this time frame. The surveys occurred between dawn and 11:00 am each day within all portions of the Study Area containing potentially suitable riparian habitat. The proposed project would directly impact habitat for this species. Least Bell's vireo territories were observed within the arroyo willow thickets habitat along the banks of

Murrieta Creek in the Study Area. A Natural Environment Study was performed within the Biological Study Area and concluded that impacts to least Bell's vireo are expected to occur as a result of the project. As a result, a Biologically Equivalent or Superior Preservation (DBESP) report was prepared that described proposed mitigation for this impact (Appendix D). The removal of vegetation may also result in temporary impacts to nesting birds due to the temporarily reduced available nesting habitat. To reduce impacts to sensitive and special status species, mitigation measures in the DBESP report will be incorporated into the project and will result in less than significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Riparian habitats are those habitats located along banks or rivers or streams. Sensitive natural communities are natural communities that are considered rare in the region by the USFWS, CDFW, or local regulatory agencies; that are known to provide habitat for sensitive animal or plant species; or are known to be significant wildlife corridors. The Study Area contains freshwater marsh, riparian scrub, southern willow thickets, non-native grassland, and developed/ornamental areas. Freshwater marsh, riparian scrub, southern willow thickets meet the definition of a Riparian/Riverine community. Project implementation would result in unavoidable permanent impacts to 0.09 acre and temporary impacts to 0.78 acre of freshwater marsh, permanent impacts to 0.06 acre and temporary impacts to 0.08 acre of riparian scrub, and permanent impacts to 0.01 acre and temporary impacts to 0.36 acre of southern willow scrub. Project implementation would result in unavoidable permanent impacts to 0.16 acre of Riparian/Riverine area and temporary impacts to 1.22 acres of Riparian/Riverine area. The MSHCP recommends avoidance of Riparian/Riverine areas, if feasible. Since avoidance is not feasible based on the nature of the proposed project, a DBESP describing the mitigation strategy to provide Riparian/Riverine resources of equivalent or superior habitat value to those being impacted was prepared. The mitigation measures identified in the DBESP report will be incorporated into the project and will result in less than significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include areas such as swamps, marshes, bogs, mudflats, and vernal pools. Murrieta Creek is under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the CDFW, and Regional Water Quality Control Board (RWQCB) Region 9, San Diego Region. Project implementation would result in impacts to 0.96 acres (0.08 acre permanent, 0.88 acres temporary) of wetland waters of the U.S., and 2.48 acres (0.33 acre permanent, 2.15 acres temporary) of wetland waters of the State. The DBESP describes the mitigation strategy to provide Riparian/Riverine resources, which include jurisdictional wetland waters, of equivalent or superior habitat value to those being impacted. The mitigation measures identified in the DBESP report will be incorporated in the project and will result in less than significant impacts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

A variety of biological resources are known to exist within the vicinity of the project site. Implementation of future development of the project may have the potential to directly or indirectly impact sensitive species and habitats. The project is located within the Murrieta Creek Proposed Constrained Linkage 13, which connects core habitat at the Santa Rosa Plateau and Proposed Linkage 10 to conserved habitats in San Diego County. Murrieta Creek is constrained on all sides by existing urban development; therefore, wildlife is constrained to moving along the creek, which is used as a wildlife corridor. The proposed bridge across Murrieta Creek would be similar to the Winchester Bridge, approximately 1,000 feet northwest of the project site. It is assumed that wildlife species that currently move along the creek under the Winchester Road Bridge would continue along the creek as they currently do. However; night lighting and headlights on the proposed bridge could increase light levels within the creek, which could discourage nocturnal wildlife movement. Additionally, if vehicle noise and or the noise driving over the bridge substantially increases above ambient conditions in the creek, this could also discourage wildlife movement. As an MSHCP-covered roadway, the project is also subject to the guidelines provided in MSHCP Sections 7.5.1 and 7.5.3. Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a Conservation Area. Final project design will ensure BMPs are incorporated into the proposed project including the guidelines included in Section 6.1.4 of the MSHCP as well as maintenance and conveyance of seasonal clean water flows through the project site. In addition, BMPs would be implemented during construction in accordance with the Western Riverside County Final MSHCP, as described below (Dudek 2003).

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The City's General Plan includes a number of policies related to the protection of sensitive natural resources, including biological resources. The project will not conflict with any local ordinances or policies as they relate to the protection of biological resources. The City of Temecula has a Heritage Tree Ordinance designed to protect certain species of trees within the City. However, no trees designated in the ordinance are located within the project area. The City of Temecula General Plan outlines a number of policies which emphasize the interrelationship between the built and natural environment. The General Plan recognizes the importance of conserving important biological habitat and protecting plant and animal specifies of concern. As a result, the General Plan requires that development proposals identify significant biological resources. The MSHCP Consistency Analysis and DBESP report identified mitigation measures to reduce impacts to biological resources to less than significant. These mitigation measures will be incorporated into the project and will be consistent with the resources agencies' comments.

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f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The City of Temecula and project site are located within the Western Riverside County MSHCP, a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on the conservation of 146 species and their associated habitats in Western Riverside County. The Plan's overall goal is to maintain biological and ecological diversity within the rapidly urbanizing area. The Plan Area encompasses approximately 1.26 million acres and includes the City of Temecula within its boundaries. The City is a participant in the MSHCP. As such, impacts on special status species covered by the MSHCP are considered fully mitigated by the City's participation in the MSHCP. The project's consistency with the provisions in the MSHCP are described in the MSHCP Consistency Analysis, dated July 2021, prepared by Rincon. The proposed project will not conflict with the provisions of the MSHCP with implementation of the below mitigation measures.

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Mitigation Measures

Regulatory Agency Permits

Prior to construction, the City of Temecula shall obtain the required regulatory permits from the USACE, CDFW and San Diego RWQCB for project-related impacts that will occur in areas under the jurisdiction of these regulatory agencies.

Riparian/Riverine Resources

The project has been designed to minimize impacts on Riparian/Riverine Resources. Riparian/Riverine resources mapped in the survey area generally overlap with resources under the jurisdiction of the USACE, the CDFW, and the RWQCB. Therefore, the following mitigation would satisfy the MSHCP's requirements for the loss of Riparian/Riverine resources, and jurisdictional resources.

Prior to the initiation of any construction-related activities that result in any ground disturbances and subsequent direct and/or indirect impacts on areas within these agencies' jurisdictions, the City of Temecula shall obtain all required permits/agreements/certifications from the USACE, the CDFW, the RWQCB, and the RCFC&WCD.

The City shall obtain all appropriate permits for impacts on USACE, CDFW, and RWQCB jurisdictional areas. Mitigation for the loss of jurisdictional areas and Riparian/Riverine resources may include (1) preservation of existing riparian habitat (preferably within or adjacent to an area identified as a Criteria Area, Core, or Linkage by the MSHCP) or (2) restoration of riparian habitat (preferably within or adjacent to an area identified as a Criteria Area, Core, or Linkage by the MSHCP). If the City chooses to mitigate Riparian/Riverine habitat through purchase or restoration, acreage shall be of equivalent or superior quality habitat at no less than a 1:1 ratio. Currently, the proposed mitigation strategy would: (1) restore areas temporarily impacted by the project onsite at a 1:1 ratio; and (2) provide offsite restoration for areas permanently impacted by the project. The resource agencies, including the WRC RCA and the USFWS, will review the proposed acquisition during the permitting process to ensure that the lands to be acquired by the City of Temecula are of equivalent or superior quality to the resources impacted by the project. During site meetings, the resource agencies gave

preliminary approval to restoring Riparian/Riverine habitat along Temecula Creek as mitigation for the project (Appendix D).

If the project would mitigate for impacts on Riparian/Riverine resources through restoration of riparian habitat (as currently planned), a detailed restoration program shall be prepared for approval by the USACE and the CDFW prior to construction and shall contain the following items:

- **Responsibilities and Qualifications.** Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the City, specialists, and maintenance personnel that will supervise and implement the plan shall be specified.
- **Site Selection.** Site selection for restoration and enhancement mitigation shall be determined in coordination with the City and the resource agencies. The mitigation site(s) shall be located in a dedicated open space area. The restoration site selected is located along Temecula Creek.
- **Site Preparation and Planting Implementation.** Site preparation shall include (1) protection of existing native species; (2) trash and weed removal; (3) native species salvage and reuse (i.e., duff); (4) soil treatments (i.e., imprinting, decompacting); (5) temporary irrigation installation; (6) erosion-control measures (i.e., rice or willow wattles); (7) seed mix application; and (8) container species, if appropriate.
- **Schedule.** A schedule shall be developed which includes planting to occur in late fall and early winter, between October 1 and January 30.
- **Maintenance Plan/Guidelines.** The maintenance plan shall include (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; (6) replacement planting; and (7) biological monitoring during maintenance activities that occur during the breeding season.
- **Monitoring Plan.** The monitoring plan shall include (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) performance criteria as approved by the resource agencies; (4) monthly reports for the first year, and every other month for following years; and (5) annual reports for three to five years, which will be submitted to the resource agencies. The site shall be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the City may be released from monitoring requirements with the approval of the resource agencies.
- **Long-term Preservation.** Long-term preservation of the site shall also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future projects.

PERMANENT AND TEMPORARY PROJECT IMPACTS

To mitigate permanent impacts to 0.16 acre of Riparian/Riverine areas and temporary impacts to 1.22 acre of Riparian/Riverine areas (coterminous with CDFW jurisdiction), the City of Temecula shall perform habitat rehabilitation of a 1.23-acre area in the Temecula Creek Mitigation Parcel. The City of Temecula shall mitigate temporary impacts at a 1:1 ratio and permanent impacts at a 3:1 ratio for rehabilitation at the Temecula Creek mitigation site. Rehabilitation activities for permanent impacts would consist of 1) control of non-native weeds, and 2) replanting with appropriate native, riparian plant species that currently occur within the mitigation parcel. For temporary impacts, habitat shall be re-vegetated with a native seed mix suitable for use at each location after construction. This seed mix will be in addition to replanting cuttings, regular weeding and monitoring of the arroyo willow thicket that is currently on site.

All restoration activities shall be overseen by a qualified Restoration Specialist familiar with riparian habitat restoration implementation, monitoring, and reporting. The work will be performed by a Restoration Contractor. The Restoration Contractor is a qualified native landscape contractor with experience in riparian restoration, who is responsible for site preparation, installation, and maintenance of the mitigation area.

Table 6 Proposed Mitigation Site Acreage

Habitat Type	Permanent Impacts (acres)	Mitigation: Impact Ratio	Temporary Impacts (acres)	Mitigation: Impact Ratio	Acres Mitigated
Freshwater Marsh	0.09	3:1	0.78	1:1	1.05
Riparian Scrub	0.06	3:1	0.08	1:1	0.26
Southern Willow Scrub	0.01	3:1	0.36	1:1	0.39
Total	**0.16**	**–**	**1.22**	**–**	**1.7**

The Restoration Specialist shall identify the spatial distribution of native plantings for optimal habitat development based on various environmental factors, including, but not limited to, elevation and hydrology. Final quantities per species shall be determined based on site conditions after construction and as directed by the Restoration Specialist. Cuttings to be installed in the temporary impact areas shall be spaced irregularly and in clusters to emulate natural conditions. Actual species installed shall be dependent on those species that are available at the time of implementation. A vegetative cover consisting of desirable riparian plant species is expected to develop from the installed material with proper management. Plant spacing is designed to achieve dense native cover within three years or less. It is expected that native understory species will naturally colonize and establish.

Least Bell's Vireo

The limits of project construction shall be clearly delineated with the use of fencing (lathe and rope, orange snow fencing, or stakes and flagging) prior to the initiation of construction. All removal of riparian vegetation shall be conducted during the non-breeding season for this species (i.e., September 16 to March 14). Vegetation removal within the creek shall be monitored by a qualified Biological Monitor.

To the extent practicable, construction of the project shall be conducted during the non-breeding season for the least Bell's vireo (i.e., September 16 to March 14) in order to avoid indirect noise impacts on this species. If project construction begins during the vireo nesting season, a qualified Biologist shall survey all riparian habitat within 500 feet of the construction limits for the presence of least Bell's vireo nests/territories prior to the start of construction. Three surveys shall be conducted within one week prior to the initiation of construction within or adjacent to riparian habitat. Any active nests/territories shall be mapped on an aerial photograph by the Biologist, and the location information shall be given to the USFWS and CDFW. The location of any least Bell's vireo nests/territories shall be marked on applicable construction plans. If no active nests/territories are found, construction may proceed. Surveys shall be updated once per week as long as construction is within 500 feet of riparian habitat. Surveys may be discontinued after if no vireos have been detected after eight weekly visits; if a vireo territory is observed, monitoring surveys shall be continued until vireo leave for the wintering grounds (August/September). A pre-construction least Bell's vireo survey report (including mapping of any active territories) shall be prepared by a qualified Biologist and shall be submitted to the USFWS and CDFW.

Any active territories shall be protected as Environmentally Sensitive Areas (ESAs) until no longer occupied to ensure compliance with the Federal and State Endangered Species Acts and Migratory Bird Treaty Act. To protect any active territory sites, the following restrictions on construction are required between March 15 and September 15 (or until territories are no longer active, as determined by a qualified Biologist): (1) no clearing of habitat shall be allowed within Murrieta Creek and (2) access and surveying shall not be allowed within approximately 100 feet of nests/territories (or as otherwise determined by a qualified Biologist). Any construction activities that would occur within Murrieta Creek during the breeding season shall be monitored by a qualified Biologist.

If construction would result in noise readings greater than 60 A-weighted decibels (dBA) at the edge of least Bell's vireo habitat (Murrieta Creek), construction shall not be allowed during the breeding season (March 15 to September 15) unless appropriate noise measures are implemented, as approved by the USFWS and the CDFW. Noise measures may include, but would not be limited to, soundwalls to reduce noise between the construction site and the vireo territory; use of construction equipment with noise-reducing alterations; or delay of noise-intensive construction (e.g., pile driving, demolition) until after the breeding season. Soundwalls shall be installed, as-needed, to maintain a noise level of less than 60 dBA at the edge of riparian habitat. Installation of the noise barriers shall be monitored by a qualified Biologist to ensure that riparian habitat is not inadvertently affected.

A noise monitoring methodology shall be used during the breeding season for construction within 500 feet of occupied habitat along Murrieta Creek. Noise monitoring stations shall be monitored weekly between March 15 and September 15 to ensure that noise levels remain less than 60 dBA. If noise monitoring determines that the noise level exceeds 60 dBA, noise barriers shall be modified, as recommended by a qualified Acoustical Technician, to reduce noise levels below 60 dBA.

Burrowing Owl

A pre-construction survey for burrowing owl will be conducted 30 days prior to construction in accordance with Section 6.3.2 of the MSHCP. If burrowing owl is present in the impact area during the breeding season (March 1 to August 31), the burrow will be protected until nesting activity has ended. To protect the active burrow, a 500-foot buffer will be established around the active burrow. Any encroachment into the buffer area around the active burrow will only be allowed if the Biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest. If burrowing owl is present in the impact area during the non-breeding season (September 1 to February 28), the burrowing owl will be flushed from the burrow and the burrow will be closed using CDFW-approved burrow-closing procedures. If no burrowing owls are observed, construction may proceed.

Night Lighting

Permanent night lighting used to light the bridge shall use best engineering practices to direct lighting to the roadway and shall minimize spillage of light into adjacent habitat areas to the extent practicable. Additionally, approved wildlife-friendly night lighting will be used. Lighting designs shall be submitted to the City of Temecula Planning Department for review and approval prior to the issuance of a grading permit for the project.

Noise

The bridge concrete deck shall receive grinding and grooving treatment per Caltrans bridge design standards to reduce vehicular tire noise.

Guidelines for Covered Projects

As a Covered Roadway, the project is subject to guidelines outlined in Section 7.5.1 of the MSHCP. These guidelines include:

1. Planned roads shall be located in the least environmentally sensitive location feasible, including disturbed and developed areas or areas that have been previously altered. Alignments shall follow existing roads, easements, rights-of-way, and disturbed areas, as appropriate to minimize habitat fragmentation.
2. Planned roads shall avoid, to the greatest extent feasible, impacts to Covered Species and wetlands. If wetlands avoidance is not possible, then any impacts to wetlands shall require issuance of and mitigation in accordance with a federal 404 and /or state 1600 permit.
3. Design of planned roads shall consider wildlife movement requirements, as further outlined below under Guidelines for Construction of Wildlife Corridors.
4. Narrow Endemic Plant Species shall be avoided; if avoidance is not feasible, then mitigation as described in the Narrow Endemics Plant Policy shall be implemented.
5. Any construction, maintenance and operation activities that involve clearing of natural vegetation will be conducted outside the active bird breeding season (March 1 through June 30).
6. Prior to design and construction of transportation facilities, biological surveys shall be conducted within the study area for the facility including vegetation mapping and species surveys and/or wetland delineations. The appropriate biological surveys to be conducted will be based on field conditions and recommendations of the project manager in consultation with a qualified biologist. The results of the biological resources investigations will be mapped and documented. The documentation will include preliminary conclusions and recommendations regarding potential effects of facility construction on MSHCP Conservation Area resources and methods to avoid and minimize impacts to MSHCP Conservation Area resources in conjunction with project siting, design, construction and operation. The project biologist will work with facility designers during the design and construction phase to ensure implementation of feasible recommendations.

As a covered roadway, the project is also subject to the guidelines provided in MSHCP Section 7.5.3. and shall be required to implement the following guidelines:

1. Plans for water pollution and erosion control shall be prepared. The plans shall describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans shall be reviewed and approved by the County of Riverside and participating jurisdictions prior to construction.
2. Habitat clearing shall be avoided during the active bird breeding season defined as March 1 to June 30.
3. Sediment and erosion control measures shall be implemented until such time soils are determined to be successfully stabilized.

4. Short-term stream diversions shall be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions shall consider effects on wildlife.
5. Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
6. Settling ponds where sediment is collected shall be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds shall be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care shall be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
7. No erodible materials shall be deposited into water courses. Brush, loose soils, or other debris material shall not be stockpiled within stream channels or on adjacent banks.
8. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall occur on pre-existing access routes to the greatest extent possible.
9. Equipment storage, fueling and staging areas shall be sited on non-sensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.
10. The limits of disturbance, including the upstream, downstream and lateral extents, shall be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
11. During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by Covered Species that are outside of the project footprint shall be avoided.
12. Exotic species removed during construction shall be properly handled to prevent sprouting or regrowth.
13. Training of construction personnel shall be provided.
14. Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
15. When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
16. Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
17. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
18. Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

Urban/Wildlands Interface Guidelines

Urban/Wildlands Interface guidelines are presented in Section 6.1.4 of the MSHCP. Project design features that shall be implemented, pursuant to Section 6.1.4 of the Western Riverside County MSHCP, include:

1. Wildlife-friendly light emitting diode (LED) lighting will be installed and directed downward toward the bridge and away from adjacent habitat;
2. Quiet bridge decking technology will be use; and
3. A bird friendly barrier will be installed on the sidewalls of the bridge to prevent bird-vehicle collisions.

Best Management Practices

BMPs from the Western Riverside County Final MSHCP shall be implemented during construction (Dudek 2003). A qualified biologist shall be onsite during construction activities to ensure that these guidelines are followed.

1. A qualified biologist shall conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.
2. Water pollution and erosion control plans shall be developed and implemented in accordance with San Diego RWQCB requirements.
3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via preexisting access routes to the greatest extent possible.
4. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.
5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.
6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian bird species identified in MSHCP Global Species Objective No. 7 (Dudek 2003).
7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal in stream impacts. Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.
8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into

surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to the City of Temecula, USFWS, CDFW, and RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.
10. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to preexisting contours and revegetated with appropriate native species.
11. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
12. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
13. Construction employees shall 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) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits shall be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	■	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	■	☐	☐

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources, a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

An archaeological resource survey revealed that the project site consists of the undeveloped channel that is bordered by developed areas containing buildings and roadways. At the time of the survey, vegetation growth within the channel was dense, with poor ground visibility throughout (0-5 percent). No evidence of archaeological resources was identified during the survey.

On July 25, 2019, Rincon conducted a records search of the California Historical Resources Information System at the Eastern Information Center, located at University of California, Riverside. The records search and literature review identified no known archaeological resources within or immediately adjacent to the project site. However, eight archaeological sites, including six prehistoric archaeological sites were identified within a 1-mile buffer. These sites are located on elevated landforms at least 20 feet above the active channel and annual floodplain. In addition, no evidence of archaeological remains was found during the pedestrian survey of the project site. Although the presence of buildings and roadways precluded the inspection of the ground surface in portions of the project site, geoarchaeological data indicate that the area has a low potential to contain buried prehistoric and historic period cultural deposits and those that may be present are likely in a secondary context. Based on the results of the records search and literature review, survey, and geoarchaeological data, there is a low likelihood of encountering any archaeological resources within the project site. Though the potential is low that historic period or archaeological resources exist on site, there is a chance unanticipated discoveries of cultural resources would occur, resulting in a significant impact. Mitigation measures are included to reduce project impacts to a less than significant level.

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c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Evidence has been found that suggests human remains are present within ½ mile of the project site. In addition, Native American populations were known to bury remains along water courses such as Murrieta Creek. Therefore, it is possible that remains may be unearthed during construction activities. If human remains are discovered during construction activities, the mitigation measures below would reduce project impacts to a less than significant level.

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Mitigation Measures

CR-1 Retain a Qualified Archaeological Monitor

Prior to the issuance of a grading permit, the City shall retain a Riverside County qualified archaeological monitor to monitor all ground-disturbing activities in archaeological sensitive sediments in an effort to identify any unknown archaeological resources. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during project construction. The Project Archeologist shall attend the pre-grading meeting with the City, Pechanga Tribe, the construction manager and any contractors and shall conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The training shall include a brief review of the cultural sensitivity of the project site and surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the project following the initial Training shall take the Cultural Sensitivity Training prior to beginning work and the project archaeologist shall make themselves available to provide the training on an as-needed basis.

CR-2 Cultural Resources Treatment and Monitoring Agreement

At least 30 days prior to beginning project construction the City shall contact the Pechanga Tribe to notify the Tribe of grading, excavation and the monitoring program, and to coordinate with the City of Temecula and the Tribe to develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources, the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered on the site. Tribal monitors shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. The Pechanga Tribe shall attend the pre-grading meeting with the City, Project Archaeologist, the construction manager and any contractors and shall conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The training shall include a brief review of the cultural sensitivity of the project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols.

CR-3 Pre-grade Report

Prior to beginning project construction, the Project Archaeologist shall file a Cultural Resource Monitoring Plan (CRMP) with the City to document the proposed methodology for grading activity observation which will be determined in consultation with the Pechanga Tribe. Methodology shall include:

- Project description and location;
- Project grading and development scheduling;

- Roles and responsibilities of individuals on the project;
- The pre-grading meeting and Cultural Resources Worker Sensitivity Training details;
- The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project Archaeologist shall follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resource's evaluation;
- The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items; and,
- Contact information of relevant individuals for the project.

CR-4 Inadvertent Discovery of Human Remains

If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to their treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendant(s)" of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours of being granted access to the site, and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98 and the Treatment Agreement described in TCR-2.

CR-5 Ownership of Cultural Resources

The landowner shall relinquish ownership of all cultural resources, including sacred items, burial goods and all archaeological artifacts that are found on the project area to the appropriate Tribe for proper treatment and disposition.

CR-6 Avoidance of Sacred Sites

It is understood by all parties that, unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), parties, and Lead Agencies, shall be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).

CR-7 Inadvertent Discovery of Cultural Resources

If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, the Developer, the project archaeologist, and the Tribe shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. Pursuant to California Public Resources Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources. If the Developer, the project archaeologist and the Tribe cannot agree on the significance or the mitigation for such resources, these issues will be presented to the City's Planning Director for a decision. The Planning Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources and

shall take into account the religious beliefs, customs, and practices of the Tribe. Treatment of tribal cultural resources inadvertently discovered during the project's ground-disturbing activities shall be subject to the consultation process required by state law and AB 52:

- All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Project Applicant, the Project Archaeologist, the Tribal Representative(s), and the Community Development Director to discuss the significance of the find.
- At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.
- Further ground disturbance, including but not limited to grading, trenching etc., shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal Monitors, if needed.
- Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures.
- If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.
- Pursuant to Calif. Pub. Res. Code § 21083.2(b), avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall consider the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council." Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Temecula upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-8 Final Disposition of Inadvertent Discovery

In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries. One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Temecula Community Development Department:

- Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.
- Reburial of the resources on the project property. The measures for reburial shall include, at least, measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.
- If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid, shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to City of Temecula upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CR-9 Final Inspection

Prior to final inspection, the Project Archeologist is to submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with the Planning Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Planning Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Planning Department shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department.

6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The proposed project would use nonrenewable resources for construction of the project. The anticipated use of these resources is detailed in the following subsections. The Road Construction Emissions Model outputs for the air pollutant and GHG emissions modeling (Appendix C), were used to estimate energy consumption associated with the proposed project.

Construction Energy Demand

The project would require grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving. During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. As shown in Table 7, project construction would require approximately 9,768 gallons of gasoline and approximately 266,783 gallons of diesel fuel. These construction energy estimates are conservative because they assume that the construction equipment used in each phase of construction is operating every day of construction.

Table 7 Estimated Fuel Consumption during Construction

	Fuel Consumption (gallons)	
Source	Gasoline	Diesel
Construction Equipment & Hauling Trips	Not Applicable	266,783
Construction Worker Vehicle Trips	9,768	Not Applicable

See Appendix E for energy calculation sheets.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. Furthermore, per applicable regulatory requirements, such as the latest California Green Building Standard Codes standards, the project would comply with construction waste management practices to divert a minimum of 65 percent of construction debris. These practices would result in efficient use of energy necessary to construct the project. In the interest of cost-efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and construction impacts related to energy consumption would be less than significant.

Operational Energy Demand

Operation of the project would lead to a slight reduction in gasoline and diesel fuel consumption associated with vehicle trips. As described in Section 3, *Air Quality*, the construction of the bridge would reduce distance traveled by 2,870 feet per vehicle trip. Existing vehicles would be able to cut through the industrial park area using Overland Drive and Avenida Alvarado instead of using Winchester Road or Via Montezuma. Also, the proposed project would not add capacity. It would not result in an increase in traffic volumes or resulting energy use in the form of electricity, natural gas or petroleum following completion of construction. Therefore, project operation would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and no impacts would occur.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The SCAG *Connect SoCal* RTP/SCS contains transportation strategies to achieve the following: preserve and optimize the current and future system and implement capital improvement by mode to complete the system (2020b). These overarching transportations goals combined with the sustainable communities strategies for land use developments will help the SCAG achieve and exceed emissions reduction targets. The *Connect SoCal* RTP/SCS is intended to help to minimize energy consumption by improving the overall efficiency of the transportation system and land use patterns.

The proposed project would lead to the construction of a bridge that would provide safe all-weather access across Murrieta Creek; provide a reliable route for emergency vehicles, motorists, pedestrians, and bicyclists; and provide an additional access point to the City's industrial park. This would improve traffic operations at the project site by diverting traffic from other nearby intersections to this new access point, which would reduce congestion and improve vehicular traffic flow. This type of project supports the efforts of the *Connect SoCal* RTP/SCS. Therefore, implementation of the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

NO IMPACT

7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	■	☐
ii. Strong seismic ground shaking?	☐	☐	■	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
iv. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.i. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The seismically active region of Southern California is crossed by numerous faults. A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. Most faults are the result of repeated displacements over a long period of time. A fault trace is the line on the earth's surfacing defining the fault. Fault rupture is the displacement that occurs along the surface of a fault during an earthquake. The California Geological Survey has established earthquake fault zones known as Alquist-Priolo Earthquake Fault Zones around the surface traces of active faults to assist cities and counties in planning, zoning, and building regulation functions. These zones identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize hazards to habitable structures.

According to the report of Geotechnical Design Report, (Leighton Consulting, Inc., 2023) the proposed bridge structure does not fall within an Alquist-Priolo fault Zone; however, the easterly improvement consisting of street improvements outside the proposed bridge may fall within the Alquist-Priolo fault Zone. The nearest mapped trace of the Temecula/Wildomar trace of the Elsinore fault is located approximately 500 feet east of the proposed bridge. The Murrieta Creek fault associated with the Elsinore Fault zone is located approximately 2,000 feet west of the proposed bridge. The project does not include any occupiable structures, which would expose people to fault related hazards; however, Caltrans Guidelines for Structures Foundations Reports (Version 2.0, dated March 2006) requires active faults that have the potential to affect the project site be identified in accordance with Caltrans Seismic Hazard Map and Report 1996, or latest revision. The calculated Peak Ground Acceleration (PGA) was approximately 0.54g for this site using Caltrans ARS online tool V3.0.2. The project will incorporate all recommendations contained in the Geotechnical Design Report prepared for the project. Compliance with the applicable site preparation and design standards will ensure potential impacts related to strong seismic ground shaking would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.ii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

According to the City of Temecula General Plan and various published earthquake hazard maps, the Elsinore fault, which is located to the east and west of the project site, traverses the City. Other faults surrounding the City include the San Andreas, San Jacinto, San Gabriel, Newport-Inglewood, Sierra Madre-Santa Susana-Cucamonga, Rose Canyon, Coronado Banks, San Diego Trough, and San Clemente Island faults. Several nearby faults, including the Elsinore and San Jacinto fault zones, are capable of generating strong ground motions at this location. The San Andreas Fault is located further away to the northeast but is capable of generating larger magnitude earthquakes. The project site is located in a seismically active area, as is the majority of Southern California. The project would be constructed to the standards of the most recent seismic Uniform Building and Safety Code and Caltrans Seismic Design Criteria, and will incorporate all recommendations contained in the Geotechnical Design Report prepared for the project (Leighton Consulting, Inc.,

2023). Compliance with the applicable site preparation and design standards will ensure potential impacts related to strong seismic ground shaking would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.iii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when the shock waves from an earthquake of sufficient magnitude and duration compact and decrease the volume of the soil; if drainage cannot occur, this reduction in soil volume will increase the pressure exerted on the water contained in the soil, forcing it upward to the ground surface. This process can transform stable soil material into a fluid-like state. This fluid-like state can result in horizontal and vertical movements of soils and building foundations from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials. Liquefaction occurs when three general conditions exist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion.

According to the Geotechnical Design Report (2023), the project area is in a liquefaction zone. Geotechnical exploratory borings were obtained for evaluation of potential dry seismic settlement and liquefaction induced settlement. The estimated total seismically induced settlement is expected to be less than two (2) inches along the bridge alignment. The differential settlement is expected to be less than one (1) inch over a horizontal distance of 100 feet or between adjacent bridge piers/abutments. Compliance with the applicable design standards will ensure potential impacts related to liquefaction would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.iv. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Landslide hazard areas are generally considered to exist when substantial slopes are located on or immediately adjacent to a subject property. There are no substantial slopes located within or near the project site that could potentially create a hazard associated with landslides. The channel slope stability was analyzed as part of the Geotechnical Design Report and the results of the technical analyses indicate adequate factor of safety against slope instability (Leighton Consulting, Inc., 2023). Consequently, the potential for landslides to occur at the site is considered less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Soil erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the project site where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses.

The site may be susceptible to soil erosion during the short-term construction activities. As discussed in further detail in Section 10, *Hydrology and Water Quality*, short-term erosion effects during the construction phase of the project would be prevented through implementation of a

Storm Water Pollution Prevention Plan (SWPPP), which is required in accordance with the Countywide National Pollutant Discharge Elimination System (NPDES) Stormwater Permit. The SWPPP specifies the Erosion Control and Sediment Control Best Management Practices (BMPs) that would be implemented during construction to control on-site and off-site erosion. Therefore, with implementation of an approved SWPPP, impacts resulting from erosion during construction would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As previously discussed under Responses 7.a.iii and 7.a.iv above, the project site is in a liquefaction zone, but the potential for surface manifestation of liquefaction is considered to be low. Subsidence occurs when a void is located or created underneath a surface, causing the surface to collapse. Common causes of subsidence include withdrawal of groundwater or oil resources or wells beneath a surface. Subsidence is not known to have occurred in the project area and is unlikely to occur at the project site. Compliance with recommendations from the Report of Geotechnical Investigation will reduce risk of geologic hazards at the site to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with repeated cycles of wetting and drying. expansive soils, if encountered within the project site, would be removed and/or replaced as part of standard construction practices pursuant to the City and/or 2016 California Building Code building requirements.

The Report of Geotechnical Investigation noted that two types of soils were encountered onsite including artificial alluvial consisting of silty sand and older alluvium consisting of loose to very dense silty sand, poorly graded sand and sand with silt. The Report did not specifically discuss the expansive potential of these soils, but it is assumed to be low given the lack of clays within subsurface soils. The Report of Geotechnical Investigation recommends soil materials below the subgrade be over excavated and replaced as compacted fill in accordance with Caltrans standard Specifications to reduce risk due to differential settlement. Compliance with recommendations for ground preparation from the Report of Geotechnical Investigation will reduce risk of any geologic hazards to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project will not require the use of septic tanks or other wastewater disposal systems.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

Rincon evaluated the paleontological sensitivity of the geologic units that underlie the project site to assess the project's potential for significant impacts to scientifically important paleontological resources. The analysis was based on the results of a paleontological locality search and a review of existing information in the scientific literature regarding known fossils within geologic units mapped at the project site. According to the SVP (2010) classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the project site. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units.

The project is located in the *Murrietta, California* United States Geological Survey 7.5-minute topographic quadrangle(s). The geology of the region surrounding the project site was mapped by Morton and Miller (2006) who mapped two geologic units, Quaternary young axial channel deposits and Quaternary young alluvial-valley deposits, at the surface within the project site.

Quaternary young axial channel deposits are found within Murrietta Creek and consist of slightly to moderately consolidated silt, sand, and gravel (Morton & Miller 2006). Quaternary young alluvial-valley deposits underlie the banks and roadways on either side of Murrietta Creek and consist of unconsolidated clay, silt, and sand. Both of these geologic units are Holocene in age and generally considered too young (i.e., less than 5,000 years old) to contain paleontological resources. Therefore, Quaternary young axial channel deposits and Quaternary young alluvial-valley deposits have low paleontological sensitivity. However, the project's geotechnical investigation encountered older (i.e., Pleistocene-aged) alluvium and the Pauba Formation during test borings conducted within the project site (Leighton Consulting, Inc. 2023). Older alluvium was encountered at approximately 1,000 feet above sea level in areas mapped as Quaternary young axial channel deposits (i.e., approximately 10 feet below the surface) and Quaternary young alluvial-valley deposits (i.e., approximately 25 feet below the surface). Sediments corresponding to older alluvium or the Pauba Formation were encountered 20 feet below the surface in areas mapped as Quaternary young axial channel deposits and 45 feet below the surface in areas mapped as Quaternary young alluvial-valley deposits. Pleistocene-aged alluvium and the Pauba Formation are

known to produce significant paleontological resources within Riverside County (Jefferson 2010; Paleobiology Database 2023). Therefore, Pleistocene-aged alluvium and the Pauba Formation have high paleontological sensitivity.

Rincon requested a paleontological locality search from the Western Science Center on November 7, 2023. The records search recovered no known fossil localities within the project site (McDonald 2023). However, one known fossil locality from Quaternary-aged sediments occurs within one mile of the project site, and several others are known elsewhere in the Temecula Valley in areas mapped as Quaternary young axial channel deposits (Morton & Miller 2006).

Ground-disturbing activities within previously undisturbed sediments with high paleontological sensitivity could result in significant impacts to paleontological resources. Impacts would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Ground-disturbing activities for this project will include drilling for the bridge piers and abutments; excavations for the new and rerouted underground utilities within Avenida Alvarado, Diaz Road, and Overland Drive; and grading/excavations for channel improvement and stabilization. Drilling for the bridge abutments (within areas mapped as Quaternary young alluvial-valley deposits) and piers (in areas mapped as Quaternary axial channel deposits) are expected to reach approximately 60 feet and 135 feet below the surface, respectively. At these depths, these activities will impact high-sensitivity sediments (i.e., older alluvium and/or Pauba Formation) and, therefore, could significantly impact paleontological resources. Excavations for the new and rerouted underground utilities will reach up to 20 feet below the surface in areas mapped as Quaternary young alluvial-valley deposits, meaning that these excavations will not impact high-sensitivity sediments and are not expected to significantly impact paleontological resources. Ground disturbance for channel improvement is expected to only impact the uppermost layers of sediments and is not expected to significantly impact paleontological resources.

Mitigation Measure GEO-1 would reduce potential impacts to paleontological resources resulting from the drilling of the bridge piers and abutments to less than significant level and would effectively mitigate the project's impacts to these resources through paleontological monitoring to aid the recovery, identification, and curation of previously unrecovered fossils.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Mitigation Measures

GEO-1 Paleontological Resource Monitoring

- **Qualified Professional Paleontologist.** Prior to excavation, the project applicant shall retain a Qualified Professional Paleontologist, as defined by the Society of Vertebrate paleontology (SVP; 2010). The Qualified Professional Paleontologist shall draft a Paleontological Resources Mitigation and Monitoring Plan, which shall direct all mitigation measures related to paleontological resources.
- **Paleontological Worker Environmental Awareness Program.** Prior to the start of construction, the Qualified Professional Paleontologist or their designee shall conduct a paleontological Worker Environmental Awareness Program (WEAP) training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction personnel.

- **Paleontological Monitoring.** Full-time paleontological monitoring shall be conducted during drilling for the bridge piers that reaches more than 10 feet below the surface or for the bridge abutments that reaches more than 25 feet below the surface. Paleontological monitoring shall be conducted by a paleontological monitor with experience with collection and salvage of paleontological resources and who meets the minimum standards of the SVP (2010) for a Paleontological Resources Monitor. The Qualified Professional Paleontologist may recommend that monitoring be reduced in frequency or ceased entirely based on geologic observations. Such decisions shall be subject to review and approval by the City of Temecula. In the event of a fossil discovery by the paleontological monitor or construction personnel, all construction activity within 50 feet of the find shall cease, and the Qualified Professional Paleontologist shall evaluate the find. If the fossil(s) is (are) not scientifically significant, then construction activity may resume. If it is determined that the fossil(s) is (are) scientifically significant, the following shall be completed:
  - **Fossil Salvage.** The paleontological monitor shall salvage (i.e., excavate and recover) the fossil to protect it from damage/destruction. Typically, fossils can be safely salvaged quickly by a single paleontological monitor with minimal disruption to construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically sensitive deposits. After the fossil(s) is (are) salvaged, construction activity may resume.
  - **Fossil Preparation and Curation**. Fossils shall be identified to the lowest (i.e., most-specific) possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the Qualified Professional Paleontologist.
- **Final Paleontological Mitigation Report.** Upon completion of ground-disturbing activities (or laboratory preparation and curation of fossils, if necessary), the Qualified Professional Paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts. The report shall include a summary of the field and laboratory methods employed; an overview of project geology; and, if fossils were discovered, an analysis of the fossils, including physical description, taxonomic identification, and scientific significance. The report shall be submitted to the City of Temecula and, if fossil curation occurred, the designated scientific institution.

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8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Overview of Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gas (GHG) emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions.

GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).[2]

The United Nations IPCC expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to

[2] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (USEPA 2021). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018).

Regulatory Framework

In response to climate change, California implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 required the reduction of statewide GHG emissions to 1990 emissions levels (essentially a 15 percent reduction below 2005 emission levels) by 2020 and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the Governor signed Senate Bill (SB) 32 into law, extending AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program and the Low Carbon Fuel Standard, and implementation of recently adopted policies and legislation, such as SB 1383 (aimed at reducing short-lived climate pollutants including methane, hydrofluorocarbon gases, and anthropogenic black carbon) and SB 100 (discussed further below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050 (CARB 2017).

Other relevant state laws and regulations include:

- **SB 375.** The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. Metropolitan Planning Organizations are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the Metropolitan Planning Organization's Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in per capita GHG emissions from passenger vehicles by 2020 and a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035 (CARB 2018). In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Significance Thresholds

Individual projects do not generate sufficient GHG emissions to influence climate change directly. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

According to CEQA Guidelines Section 15183.5(b), projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (2016) in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions.

This analysis utilizes two thresholds to evaluate the significance of the project's GHG emissions: the SCAQMD-recommended bright-line threshold and consistency with applicable plans, policies, and regulations for the reduction of GHG emissions.

Considering that no specific GHG threshold or qualified GHG reduction plan has been recommended or adopted by the City of Temecula, it is appropriate to refer to guidance from other agencies when discussing GHG emissions. In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010 (SCAQMD 2010):

- **Tier 1.** If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- **Tier 2.** Consists of determining whether the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines Section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.
- **Tier 3.** Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 10,000 MT of CO_2e per year for industrial projects and 3,000 MT of CO_2e per year for non-industrial projects.
- **Tier 4.** Establishes a service population threshold to determine significance. The Working Group has provided a recommendation of 4.8 MT of CO_2e per year for land use projects.

The project would not be statutory or categorically exempt, and therefore Tier 1 does not apply. As previously stated, the City of Temecula does not have a local, qualified GHG reduction plan for the project to tier from, and Tier 2 would not apply. Service population is defined as employees plus residents. Since the project is related to the operation of a bridge for vehicular traffic, it would not generate any residents or require new employees; therefore, a service population threshold would not provide an accurate depiction of project GHG emission impacts. Thus, for the purposes of this analysis, the bright-line threshold developed by the SCAQMD of 3,000 MT of CO_2e per year for non-

industrial projects is used in this analysis to determine the significance of GHG emissions in accordance with Tier 3.

According to the CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem in the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of GHG emissions." Therefore, a lead agency can make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions. The proposed project's consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions is evaluated qualitatively. A project is considered consistent with the provisions of these documents if it meets the general intent in reducing GHG emissions in order to facilitate the achievement of local and state-adopted goals and does not impede attainment of those goals.

Therefore, this analysis utilizes two thresholds to evaluate the significance of the project's GHG emissions: the SCAQMD-recommended bright-line threshold and consistency with applicable plans, policies, and regulations for the reduction of GHG emissions.

Methodology

GHG emissions associated with project construction and operation were estimated using the Road Construction Emissions Model outputs with the assumptions described under Section 3, *Air Quality*, in addition to the following:

- **Amortization of Construction Emissions.** In accordance with SCAQMD recommendation, GHG emissions from construction of the proposed project were amortized over a 30-year period and added to annual operational emissions to determine the project's total annual GHG emissions (SCAQMD 2008b).

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction of the proposed project would generate temporary GHG emissions primarily as a result of operation of construction equipment on-site as well as from vehicles transporting construction workers to and from the project site and heavy trucks to transport building materials and soil export. As shown in Table 8, construction of the proposed project would generate an estimated total of 2,413 MT of CO_2e. Amortized over a 30-year period pursuant to SCAQMD guidance, construction of the proposed project would generate an estimated 80 MT of CO_2e per year. Neither the total construction emissions nor the amortized emissions would exceed the 3,000 MT CO_2e threshold. Furthermore, construction activities would cease upon completion and would not be a continuous source of GHG emissions. During project operations, the total amount of vehicle miles traveled would be reduced by providing a more direct connection for travelers in the area. Accordingly, mobile source GHG emissions would be reduced during project operations as compared to existing conditions. Impacts would be less than significant.

Table 8 Estimated Construction GHG Emissions

Year	Project Emissions (MT/yr CO_2e)
Grubbing/Land Clearing	74
Grading/Excavation	90
Drainage/Utilities/Sub-Grade	1,838
Paving	411
Total	**2,413**
Total Amortized over 30 Years	**80**

See Appendix C

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The SCAG *Connect SoCal* RTP/SCS was created to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars by 8 percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with SB 375, which is also part of the CARB 2017 Scoping Plan (2020b). The *Connect SoCal* RTP/SCS includes ten goals with corresponding implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies (2020b). As described in Section 3, *Air Quality,* under criterion (a), the project is included in *Connect SoCal* RTP/SCS under FTIP ID 991203A. The project would conform with the SCAG *Connect SoCal* RTP/SCS and support the efforts of SB 375 and subsequently the CARB 2017 Scoping Plan. Therefore, given the aforementioned, the project is consistent with state and local policies for reducing GHG emissions and no impacts would occur.

NO IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	■
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction or operation of the proposed project would not involve the routine transport, use, or disposal of hazardous materials. Therefore, the project would not create a hazard to the public or environment through the use, transport or disposal of hazardous materials.

NO IMPACT

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The proposed project will not create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment. The proposed project does not involve the use of hazardous materials and thus will not emit hazardous materials into the environment or impact the public through day-to-day operations. In addition, the project will not require the handling of hazardous or acutely hazardous materials, substances and waste.

NO IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The proposed project will not create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment. The proposed project does not involve the use of hazardous materials and thus will not emit hazardous materials into the environment or impact the public through day-to-day operations. In addition, the project will not require the handling of hazardous or acutely hazardous materials, substances and waste.

NO IMPACT

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The proposed project is not located on a site which is included on a list of hazardous materials sites pursuant to Government Code Section 65962.5 and, as a result, will not create a significant hazard to the public or the environment. A search of the California State Department of Toxic Substances Control EnviroStor database shows that the project is not located on or within a quarter mile of any

hazardous materials sites. The project would not create a significant hazard to the public in this regard.

NO IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The project is not located near any airports and therefore would not subject people to safety hazards associated with public or private airports.

NO IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project adds additional roadway connections from the west of Murrieta Creek to the east of Murrieta Creek and thus improved circulation and access across Murrieta Creek. The project does not interfere with emergency response and evacuation plans. Traffic Interference will be kept to a minimum during construction per standard City procedure to ensure consistency with emergency response and evacuation needs; therefore the proposed project would not result in a significant impact in this regard.

LESS THAN SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project does not involve any habitable structures and there are no wildland areas within the project vicinity which would create a significant fire hazard in the project area.

NO IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

The analysis in this section is based on the Water Quality Assessment Report (Engineering Resources of Southern California, Inc. [ERSC] 2019) and the Hydrology and Hydraulics Report (ERSC 2020) prepared for the project, included in Appendices F and H, respectively.

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction activities would disturb approximately 4.89 acres of soil. Soil disturbance would increase the potential for erosion and sedimentation. If construction activities occur during the rainy season, or in the event of heavy storms, soils from the site could be entrained, eroded, and transported off-site or to the downstream receiving waters. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported into Murrieta Creek via stormwater runoff.

Construction within Murrieta Creek would include channel grading, including slope excavation for the concrete slope protection and construction of the pier foundations. Construction within the creek would occur within the dry seasons. However, low flow may be present within the channel bottom that would require diversion to provide a dry area for construction activities. Water is anticipated to be diverted using barriers such as sandbags, k-rails, or plastic sheathing. For construction of the pier foundation piling, the contractor may use slurry to maintain the stability of the drilled holes.

Construction projects that disturb one or more acres of soil are subject to the requirements of the State Water Resource Control Board's (SWRCB's) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002 (Construction Stormwater General Permit), which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control the discharge of pollutants, including sediment, into surface water drainages. The City would be required to obtain coverage under the Construction Stormwater General Permit and prepare and implement a SWPPP that specifies the stormwater monitoring and construction BMPs required to reduce pollutants in stormwater runoff. Construction BMPs would include, but would not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site, and Good Housekeeping BMPs to prevent spills, leaks, and off-site discharge of construction debris and waste. As discussed in the Water Quality Assessment Report prepared for the project, construction BMPs are anticipated to include construction scheduling, streambank stabilization, wind erosion controls, gravel bag berms, gravel bag check dams, sediment sweeping and vacuuming, and material and waste handling and storage. Additionally, construction activities such as staging or stockpiling of construction materials or waste in areas where pollutants can be discharged into storm drains would be prohibited in compliance with the City municipal code. Compliance with the Construction General Permit and City municipal code and implementation of BMPs to control pollutant discharge into Murrieta Creek would ensure that project construction would not violate water quality standards or substantially degrade surface water. Impacts would be less than significant. No mitigation is required.

According to the Geotechnical Design Report (Leighton Consulting, Inc., 2023), groundwater was encountered during geotechnical borings at approximately 2 to 11.5 feet below ground surface [bgs] in the bottom of Murrieta Creek and approximately 19 to 26 feet bgs along the top of the berms/slope. Due to the seasonal fluctuations of groundwater levels, groundwater could occur at depths as shallow as approximately 6 inches bgs. Therefore, groundwater dewatering is anticipated to be required during construction of the bridge abutments and piers. During excavation below the

groundwater table, groundwater levels would be lowered to the bottom of the excavation using a system of collection ditches and sump pumps to provide a workable condition. Slurry may be used for stabilization of the work area. Water or slurry from the drilled holes would be pumped into a tank on the creek bank. Dewatered groundwater is anticipated to be discharged into Murrieta Creek. Therefore, coverage under San Diego Regional Water Quality Control Board's General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region, Order No. R9-2015-0013, NPDES No. CAG919003, (Groundwater Dewatering Permit) would be required. Groundwater may contain elevated levels of total dissolved solids, nitrates, or other constituents that could affect surface water quality. However, groundwater dewatering would be conducted in accordance with the requirements of the Groundwater Dewatering Permit, which requires testing and treatment, as necessary, of groundwater prior to its release into surface waters to ensure that effluent limitations are not exceeded. The projects plans and specification would require that the contractor not discharge slurry into Murrieta Creek. As a result, groundwater dewatering during excavation activities would not violate water quality standards or waste discharge requirements. Impacts would be less than significant. No mitigation is required.

Operation

The project would result in an increase in impervious surface, which could potentially increase stormwater runoff, erosion, and pollutant discharge to Murrietta Creek. Generally, pollutants of concern associated with roadway/bridge projects include oil and grease, sediment, nutrients, nitrate discharges, litter, and metals.

Project design and operation would be required to comply with the requirements of the San Diego RWQCB's National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region, Order No. R9-2013-0001, as amended by R9-2015-0001 and R9- 2015-0100, NPDES No. CAS0109266 (San Diego MS4 Permit). The San Diego MS4 Permit] requires that a Water Quality Management Plan be prepared for projects that details the operational BMPs that would be implemented to capture, treat, and reduce pollutants of concern in stormwater runoff.

As discussed in the Water Quality Assessment Report (Appendix F) prepared for the project, Source Control, and Treatment BMPs proposed for the project. Source Control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into stormwater. Proposed Source Control BMPs would include education for property owners, drainage facility inspection and maintenance, street sweeping, and storm drain stenciling and slope protection. Site Design BMPs are stormwater management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a project site. Proposed Site Design BMPs would include preservation of existing vegetation and channel and slope protection (permanent soil stabilization including concrete slope protection under the bridge abutments and erosion control hydroseed mix on graded areas within the creek). In addition, all proposed slopes with slope gradient of 2:1 or flatter would be planted with deep rooted, drought tolerant erosion protection vegetation native to the area. Slopes steeper than 2:1 gradient would be lined with concrete for erosion protection and slope stability. Treatment Control BMPs are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters. Proposed Treatment Control BMPs include curb inlet media filters in the proposed catch basins. The proposed BMPs would target and reduce pollutants of concern from stormwater runoff from the project site in compliance with the San Diego MS4 Permit requirements. The curb

inlet media filters are specifically designed to capture and reduce fine to course sediments/pollutants, including trash and debris, total suspended solids, nutrients, metals, and hydrocarbons. In addition, street maintenance and vehicle washing and maintenance would be prohibited within the project area in areas that discharge to Murrieta Creek. The project includes concrete slope protection on the earthen embankments and the cutoff walls and bridge pier foundations would be buried underground to provide scour protection and reduce the potential for soil erosion. Compliance with NPDES requirements and City municipal code requirements, including incorporation of operational BMPs into the project design to target pollutants of concern, would ensure that potential impacts related to violation of water quality standards or waste discharge requirements or degradation of water quality during project operation would be less than significant. No mitigation is required.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Rancho California Water District's current service area represents 99,000 acres, and the District has 878 miles of water mains, 35 storage reservoirs, one surface reservoir (Lake Vail), 53 groundwater wells, and 36,759 service connections. Approximately 109,000 people are served by Rancho California Water District, which relies on imported water from Metropolitan Water District of Southern California to meet much of its water demands. Metropolitan Water District of Southern California obtains its water from the Colorado River and Northern California, via the State Water Project (SWP). Both sources are over-allocated and water supplies can be significantly limited during dry weather years and droughts. Additionally, water quality and Endangered Species Act requirements in the Sacramento-San Joaquin Bay Delta could further reduce Metropolitan Water District of Southern California's SWP allocations. Water delivered to homes and businesses is a blend of groundwater (35%) and import water (65%).

As discussed under Impact HWQ-1 above, groundwater dewatering is anticipated to be required during construction of the bridge abutments and piers. Dewatered groundwater would be discharged to Murrieta Creek. However, groundwater dewatering would be temporary during construction of the bridge abutments and pier foundations. In addition, dewatered groundwater would be discharged to Murrieta Creek, which is an earthen bottom. where some infiltration back to groundwater could occur. Due to the temporary nature of groundwater dewatering activities, impacts to groundwater supplies and recharge would be less than significant.

The project does not propose uses that would substantially deplete groundwater supplies. Water use during operation would be minimal and limited to irrigation for the proposed landscaping. In addition, according to the *Water Quality Assessment Report* (Appendix F) prepared for the project, the increase in impervious surface area would be minimal compared to the size of the overall watershed and would therefore not substantially interfere with groundwater recharge efforts during operation.

LESS THAN SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

As discussed further in checklist question c(iv), below, the construction of the bridge abutments and piers would provide adequate conveyance and would allow flood waters in Murrieta Creek to flow unimpeded. Therefore, the project would not substantially alter the course of a stream or river. The project will also allow the bridge and roadway flows to discharge to the Creek. It is anticipated that there will be no significant increase to the flow, volume, rate, depth or seasonal changes of 100-year storm flows due to the small amount of additional impervious surface compared to the overall size of the watershed. As discussed in checklist question a, above, BMPs would be implemented during project construction and operation to reduce the potential for erosion and siltation to occur. In addition, the project includes concrete slope protection on the earthen embankments and the bridge foundations would be designed to minimize scour. Potential for erosion and accretion due to the construction of the project is less than significant.

LESS THAN SIGNIFICANT IMPACT

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The project would introduce minimal impervious surfaces associated with construction of a new bridge over Murrieta Creek. In addition, as discussed in more detail in checklist question c(iv) below, the proposed bridge would provide adequate conveyance capacity for the 100-year flow in the Murrieta Creek. The project will include minimal drainage changes within the creek. Activities will include minor re-grading of the creek near the bridge, construction of bridge piers, and construction of concrete slope protection and cutoff wall to protect the bridge abutments from scour. The project would not substantially increase the water surface elevation within Murrieta Creek, and would therefore not substantially increase flooding during 100-year storm events. The project would not introduce impervious surfaces that would substantially increase the amount of surface runoff in a manner that would result in flooding on- or off- site. Impacts related to flooding would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As discussed in more detail in checklist question c(iv), the proposed bridge would not substantially alter the capacity of Murrieta Creek to convey flood flows during a 100-year storm event. The project includes storm drainage systems to convey stormwater from the bridge and new impervious areas to Murrieta Creek, which has sufficient capacity to accommodate increased stormwater discharge. Therefore, the project would not exceed the capacity of a downstream storm drain system. As discussed in checklist question a, above, BMPs would be implemented during project

construction and operation which would reduce pollutants in stormwater runoff. Therefore, the project would not provide substantial additional sources of polluted runoff. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

According to the City of Temecula General Plan and the Federal Emergency Management Agency Flood Insurance Rate Map (No 06065C2720G), the project site is located within the 100-year Flood Zone and Dam Inundation Area. Murrieta Creek has the potential to become flooded when major rainstorms cause stream overflows. Lake Skinner is a 42,800-acre feet reservoir located northeast of Temecula. Diamond Valley Lake is an 800,000 acre-feet reservoir located north of Temecula. The failure of Lake Skinner or Diamond Valley Lake could result in flooding along parts of Murrieta Creek. The bridge would be constructed to provide adequate conveyance of the 100-year flows. According to the Hydrology and Hydraulics Report (Appendix H) prepared for the project, the bridge itself would be constructed above the 100-year water surface elevation with enough freeboard[3] to allow flood water to pass beneath the bridge during a 100-year storm event. While the project would include construction of bridge piers within Murrieta Creek, the project would result in a minimal (up to 0.03 foot) increase in the water surface elevation during a 100-year storm event. In addition, backwater[4] caused by the project would not affect Winchester Road bridge, which is located approximately 1,200 feet upstream. Because the bridge would be designed to allow for conveyance of 100-year flood flows, impacts related to redirection of flood flows impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

According to the City of Temecula General Plan, the site is approximately 25 miles inland from the Pacific Ocean and at an elevation of greater than 1,060 feet above sea level and thus not subject to the effects of tsunamis. The site is not located near any large water bodies that would potentially be affected by a seiche. Therefore, the project site would not be inundated by either of these natural phenomena.

As discussed in checklist question c(iv) above, the project site has a potential to be inundated during a 100-year storm event or as a result of failure of Lake Skinner or Diamond Valley Lake dams. However, the bridge itself would be constructed above the 100-year water surface elevation and would therefore not be inundated during a 100-year storm event. In addition, the project does not involve use or storage of large quantities of hazardous materials or other pollutants that could be released as a result of inundation. The project includes concrete slope protection on the earthen embankments and the cutoff walls and bridge pier foundations would be buried underground to provide scour protection and reduce the potential for soil erosion and release of erosion-related

[3] Freeboard is the distance between the top of the water surface and the bottom of the bridge deck.
[4] Backwater is the increase in water surface elevation upstream of a bridge.

pollutants in the event inundation occurs below the bridge within Murrieta Creek. Impacts related to release of pollutants from inundation would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project site overlies the Temecula Valley Groundwater Basin, which is designated as a very-low priority basin by the Department of Water Resources (DWR) pursuant Sustainable Groundwater Management Act (SGMA), and development of a Groundwater Sustainability Plan (GSP) was not required. Therefore, there is no GSP that is applicable to the project. The project would therefore not conflict with a sustainable groundwater management plan.

The Water Quality Control Plan (Basin Plan), adopted by the San Diego RWQCB, is the water quality control plan applicable to the project site. The Basin Plan defines beneficial uses, establishes water quality objectives, and establishes programs to ensure the quality of surface water and groundwater is managed to achieve water quality objectives to protect beneficial uses. As discussed in checklist question a, above, the preparation of a SWPPP and WQMP would ensure the project would not result in excessive runoff or pollutant discharge during project construction BMPs would be implemented during construction and operation, which would reduce potential construction and operation impacts to water quality. Project adherence to the BMPs required by the SWPPP and WQMP would reduce potential water quality impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■

a. Would the project physically divide an established community?

The proposed project involves the extension of an existing roadway and the construction of a bridge across Murrieta Creek. The project adds additional connections from east and west across Murrieta Creek, and thus does not divide an established community.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project is part of a designated roadway on the General Plan. The project will not conflict with any land use policies. The project helps circulation as envisioned by the City's General Plan Circulation Element.

NO IMPACT

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12 Mineral Resources

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

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

According to the General Plan, the State Division of Mines and Geology has prepared a mineral resources report entitled Mineral Land Classification of the Temescal Valley Area, Riverside County, California, Special Report 165, which evaluated mineral deposits within the Temecula Planning Area. According to the Report, the Temecula Planning Area was classified as a Mineral Resources Zone-3a (MRZ-3a), which determined that the area contains sedimentary deposits, which have the potential to supply sand and gravel for concrete and crushed stones for aggregate; however, these areas are not considered to contain mineral resources of significant economic value. No impact is anticipated.

NO IMPACT

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

According to the General Plan, the State Division of Mines and Geology has prepared a mineral resources report entitled Mineral Land Classification of the Temescal Valley Area, Riverside County, California, Special Report 165, which evaluated mineral deposits within the Temecula Planning Area. According to the Report, the Temecula Planning Area was classified as a Mineral Resources Zone-3a (MRZ-3a), which determined that the area contains sedimentary deposits, which have the potential to supply sand and gravel for concrete and crushed stones for aggregate; however, these areas are not considered to contain mineral resources of significant economic value. In addition, the project would not restrict access to these resources. No impact is anticipated.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

The following analysis is based upon the project's Noise Study Report (Caltrans 2020; Appendix G).

Overview of Noise and Vibration

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

HUMAN PERCEPTION OF SOUND

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5 times the sound energy) (Caltrans 2013).

SOUND PROPAGATION AND SHIELDING

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions.

Sound levels are described as either a "sound power level" or a "sound pressure level," which are two distinct characteristics of sound. Both share the same unit of measurement, the dB. However, sound power (expressed as L_{pw}) is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers, such as an eardrum or microphone, which is the sound pressure level. Sound measurement instruments only measure sound pressure, and noise level limits are typically expressed as sound pressure levels.

Noise levels from a point source (e.g., construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidance indicates that modern building construction generally provides an exterior-to-interior noise level reduction of 10 dBA with open windows and an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011).

DESCRIPTORS

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed.

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (DNL or L_{DN}), which is the

24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL or L_{DEN}), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).[5] The relationship between the peak-hour L_{eq} value and the L_{DN}/CNEL depends on the distribution of noise during the day, evening, and night; however noise levels described by L_{DN} and CNEL usually differ by 1 dBA or less. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range (FTA 2018).

Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. Vibration may be felt, may manifest as an audible low-frequency rumbling noise (referred to as groundborne noise), and may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage.

Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020).

High levels of groundborne vibration may cause damage to nearby building or structures; at lower levels, groundborne vibration may cause minor cosmetic (i.e., non-structural damage) such as cracks. These vibration levels are nearly exclusively associated with high impact activities such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation. The American Association of State Highway and Transportation Officials (AASHTO) has determined vibration levels with potential to damage nearby buildings and structures; these levels are identified in Table 9.

Table 9 AASHTO Maximum Vibration Levels for Preventing Damage

Type of Situation	Limiting Velocity (in/sec)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5

Source: Caltrans 2020

[5] Because DNL and CNEL are typically used to assess human exposure to noise, the use of A-weighted sound pressure level (dBA) is implicit. Therefore, when expressing noise levels in terms of DNL or CNEL, the dBA unit is not included.

Numerous studies have been conducted to characterize the human response to vibration. The vibration annoyance potential criteria recommended for use by Caltrans, which are based on the general human response to different levels of groundborne vibration velocity levels, are described in Table 10.

Table 10 Vibration Annoyance Potential Criteria

	Vibration Level (in/sec PPV)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources[1]**
Severe	2.0	0.4
Strongly perceptible	0.9	0.10
Distinctly perceptible	0.25	0.04
Barely perceptible	0.04	0.01

in/sec = inches per second; PPV = peak particle velocity

[1] Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020

Regulatory Framework

City of Temecula Municipal Code

Section 9.20.060 of the Temecula Municipal states that no person shall engage in or conduct construction activity, when the construction site is within one-quarter mile of an occupied residence, between 6:30 p.m. and 7:00 a.m., Monday through Friday, and shall only engage in or conduct construction activity between the hours of 7:00 a.m. and 6:30 p.m. on Saturday. No construction activity shall be undertaken on Sunday and nationally recognized holidays. The City of Temecula does not have a quantitative standard for construction noise.

City of Temecula General Plan Noise Element

The Noise Element of the City of Temecula General Plan contains policies and programs that focus on protecting the quality of life for noise-sensitive uses from the persistent hazards of excessive noise. Relevant policies to the proposed project include:

- **Policy 1.2:** Limit the hours of construction activity next to residential areas to reduce noise intrusion in the early morning, late evening, weekends, and holidays.
- **Policy 4.4:** Coordinate with Caltrans to ensure the inclusion of noise mitigation measures in the design of new highways or improvement projects in the Planning Area.

Caltrans

Caltrans Standard Specifications Section 14-8.02 includes noise control requirements that state construction noise levels shall not exceed 86 dBA L_{max} at 50 feet from the job site activities between the hours of 9:00 p.m. to 6:00 a.m. (Caltrans 2018). Therefore, project construction noise impacts are analyzed against this standard.

For Caltrans projects, traffic noise impacts are considered to occur at receptor locations where predicted noise levels would be 12 dB or greater than existing ambient noise levels, or where predicted noise levels approach or exceed the noise abatement criteria (NAC) for the applicable activity category. Table 11 summarizes NAC corresponding to various land use activity categories.

Activity categories and related traffic noise impacts are determined based on the actual or permitted land use in a given area.

Table 11 Activity Categories and Noise Abatement Criteria (23 CFR 772)

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F			Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G			Undeveloped lands that are not permitted.

[1] The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

[2] Includes undeveloped lands permitted for this activity category.

Existing Noise Environment

The project site is surrounded by existing service commercial and light industrial development with a place of worship. A field noise study was conducted to measure the existing noise environment. Short-term monitoring was conducted at four locations on Wednesday, June 17, 2020, using an Extech 407780A Type 2 sound level meter (serial number 160507863). The calibration of the meter was checked before and after the measurement using an Extech 407744 professional acoustic calibrator (serial number H373147). Measurements were taken over a 20-minute period at each site. Short-term monitoring was conducted along the alignment. The short-term measurement locations are identified in Figure 3. A summary of noise measurements is provided in Table 12. The dominant noise source in the area was observed as vehicular traffic. Other noise sources associated with adjacent land uses include heating, ventilation, and air conditioning units, landscape maintenance machinery, pumps, and heavy equipment.

Figure 3 Noise Measurement Locations

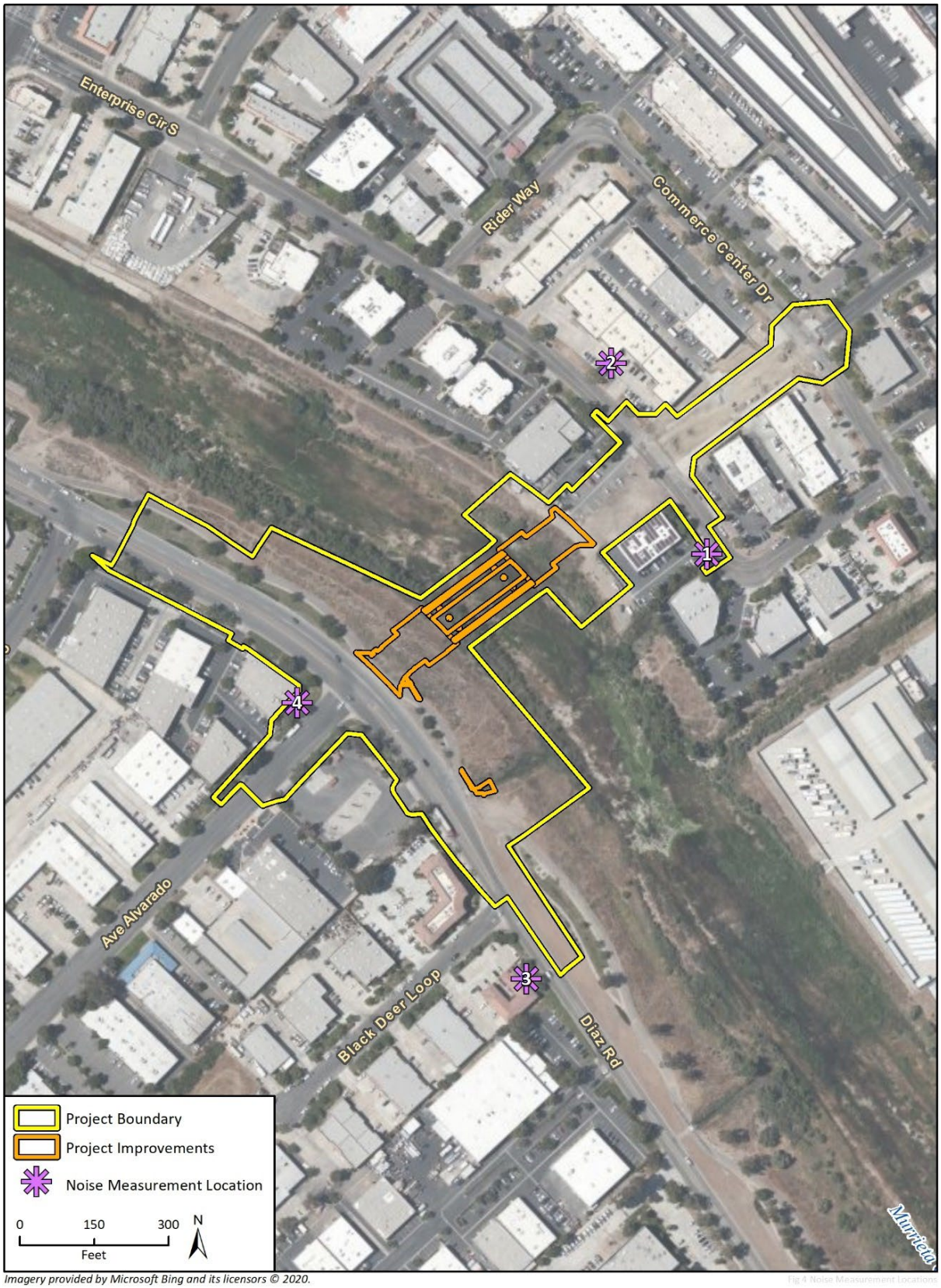

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Fig 4 Noise Measurement Locations

Table 12 Summary of Short-term Noise Level Measurements

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq (dBA)[1]	Lmin (dBA)	Lmax (dBA)
1	27525 Enterprise Circle West	10:00 – 10:20 a.m.	50 feet from Enterprise Circle West	58.2	54.4	76.3
2	27462 Enterprise Circle West	10:30 – 10:50 a.m.	50 feet from Enterprise Circle West	60.1	57.6	81.2
3	27495 Diaz Road	12:30 – 12:50 p.m.	50 feet from Diaz Road	70.1	56.9	83.4
4	41976 Avenida Alvarado	1:00 – 1:20 p.m.	60 feet from Diaz Road	69.8	57.1	85.6

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction noise would be associated with the use of heavy-duty construction equipment used for clearing and grading, trenching and installing underground utilities, spreading and compacting materials, and paving. In addition, drilled piles would be required in Murrieta Creek for the installation of piles.

Construction equipment with heavy-duty diesel engines typically generate maximum noise levels from 80 to 90 dBA at a distance of 50 feet (FHWA 2006). Table 13 summarizes typical construction equipment noise levels. Equipment goes through varying load cycles, and there are breaks for the operators and for non-equipment tasks, such as measurement. Thus, average hourly noise levels would be less than maximum noise levels. Typical noise levels from earthworks activities reach 82 dBA L_{eq} at 50 feet from the center of construction activity when assessing the loudest pieces of equipment working simultaneously.

Maximum noise levels would occur when the loudest construction equipment is nearest to a noise sensitive receiver. Due to the linear nature of roadway construction, noise levels would be intermittent and the intensity of construction activities in a given area varies substantially.

Based on previous experience, construction activities would progress at a rate of approximately 100 feet per day and would include an active work area of approximately 300 feet. Due to the length of the active work area, 300 feet, when the active work area is directly adjacent to a given receiver, construction activities throughout the day would be an average distance of 150 feet along an active portion of the alignment from the receiver. For example, the average distance from construction equipment to a receiver that is 50 feet from the centerline of alignment would be 158 feet. Although construction equipment may temporarily be located at the point on the alignment nearest to a receiver, over time equipment would move along the alignment. Therefore, the distance from a receiver to the centerline of the alignment is not the same as the average distance during a given day from the receiver to construction equipment. Thus, average noise levels correlate to the area of active construction.

Table 13 Typical Construction Equipment Noise Levels

Equipment	Noise Level at 50 Feet dBA L_{max}	Typical Duty Cycle
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Generator (25 kilovolt amps or less)	70	50%
Generator (more than 25 kilovolt amps)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
Impact Pile Driver (diesel or drop)	95	20%
In situ Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Roller	74	40%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%
Vibratory Pile Driver	95	20%

dBA = A-weighted decibels; L_{max} = maximum sound level

Source: Federal Highway Administration 2006

Construction along the project site would be characterized by hard site attenuation rate of 6 dBA per doubling of distance. This analysis conservatively assumes no attenuation from barriers and topography. The nearest receivers are approximately 50 feet from the road (e.g., Overland Drive). Thus, when assessing the loudest pieces of equipment working simultaneously on the proposed alignment, noise levels would attenuate to approximately 72 dBA L_{eq} at the nearest receivers. Therefore, construction noise levels would not exceed the Caltrans Standard Specifications Section 14-8.02 noise control requirements from job site activities between the hours of 9:00 p.m. to 6:00 a.m., and impacts would be less than significant.

Operation

Traffic noise levels were predicted using the FHWA Traffic Noise Model (TNM) Version 2.5 (TNM 2.5). Key inputs to TNM 2.5 were the locations of roadways, traffic mix and speed, shielding features (e.g., topography and buildings), noise barriers, ground type, and receptors. Three-dimensional representations of these inputs were developed using computer-aided design drawings, aerials, and topographic contours. Full model inputs are described in the project's Noise Study Report (Appendix G).

The City of Temecula does not have standards for traffic noise increases from a proposed project. Therefore, the Caltrans standard of a 12 dB increase or greater than existing ambient noise levels, or where predicted noise levels approach or exceed the NAC for the applicable activity category is used for this analysis. Commercial and light industrial land uses (Caltrans Activity Category F) and places of worship (Caltrans Activity Category C and D) were identified in the project area (see Figure 5 for locations).Table 14 summarizes the traffic noise modeling results for existing conditions and design-year conditions with and without the project. Predicted design-year traffic noise levels with the project are compared to existing conditions and to design-year no-project conditions. The comparison to existing conditions is included in the analysis to identify traffic noise impacts as defined under 23 CFR 772. The comparison to no-project conditions indicates the direct effect of the project. As shown in Table 14, traffic noise levels at modeled receivers range from 46 to 71 dBA L_{eq} for existing conditions and range from 48 to 72 dBA L_{eq} for design-year conditions.

Table 14 Summary of Noise Modeling

Receiver Number	Area	Land Use	Activity Category (NAC)	Units	Address	Loudest Hour Noise Level dBA L_{eq}					Potential Impact Type
						Existing	Without Project	With Project	Increase Over Existing	Direct Project Increase	
1	A	SC	F	1	27479 Enterprise Circle W.	54	56	61	7	5	None
2	A	PoW	C	1	27452 Enterprise Circle W.	58	59	60	2	1	None
3	A	SC	F	1	27495 Commerce Center Dr.	58	59	63	5	4	None
4	A	SC	F	1	27496 Commerce Center Dr.	59	60	62	3	2	None
5	**B**	**SC**	**F**	**1**	**27531 Commerce Center Dr.**	**56**	**57**	**63**	**7**	**6**	**None**
6	**B**	**SC**	**F**	**1**	**27515 Commerce Center Dr.**	**58**	**58**	**60**	**2**	**2**	**None**
7	**B**	**SC**	**F**	**1**	**27511 Commerce Center Dr.**	**61**	**62**	**65**	**4**	**3**	**None**
8	**B**	**SC**	**F**	**1**	**27516 Commerce Center Dr.**	**54**	**55**	**57**	**3**	**2**	**None**
9	C	Ind	F	1	42030 Avenida Alvarado	46	47	48	2	1	None
10	C	Ind	F	1	41976 Avenida Alvarado	68	69	69	1	0	None
11	C	Ind	F	1	27461 Diaz Rd.	68	69	70	2	1	None
12	**D**	**Ind**	**F**	**1**	**42011 Avenida Alvarado**	**59**	**60**	**60**	**1**	**0**	**None**
13	**D**	**Ind**	**F**	**1**	**43015 Black Deer Loop**	**71**	**72**	**72**	**1**	**0**	**None**
14	**D**	**Ind**	**F**	**1**	**43020 Black Deer Loop**	**71**	**72**	**72**	**1**	**0**	**None**

NAC = noise abatement criteria
dB(A) = A-weighted decibels
Leq(1) = equivalent sound level at one hour
Ind = Industrial
SC = Service Commercial
PoW = Places of Worship

Figure 4 Project Overview Map

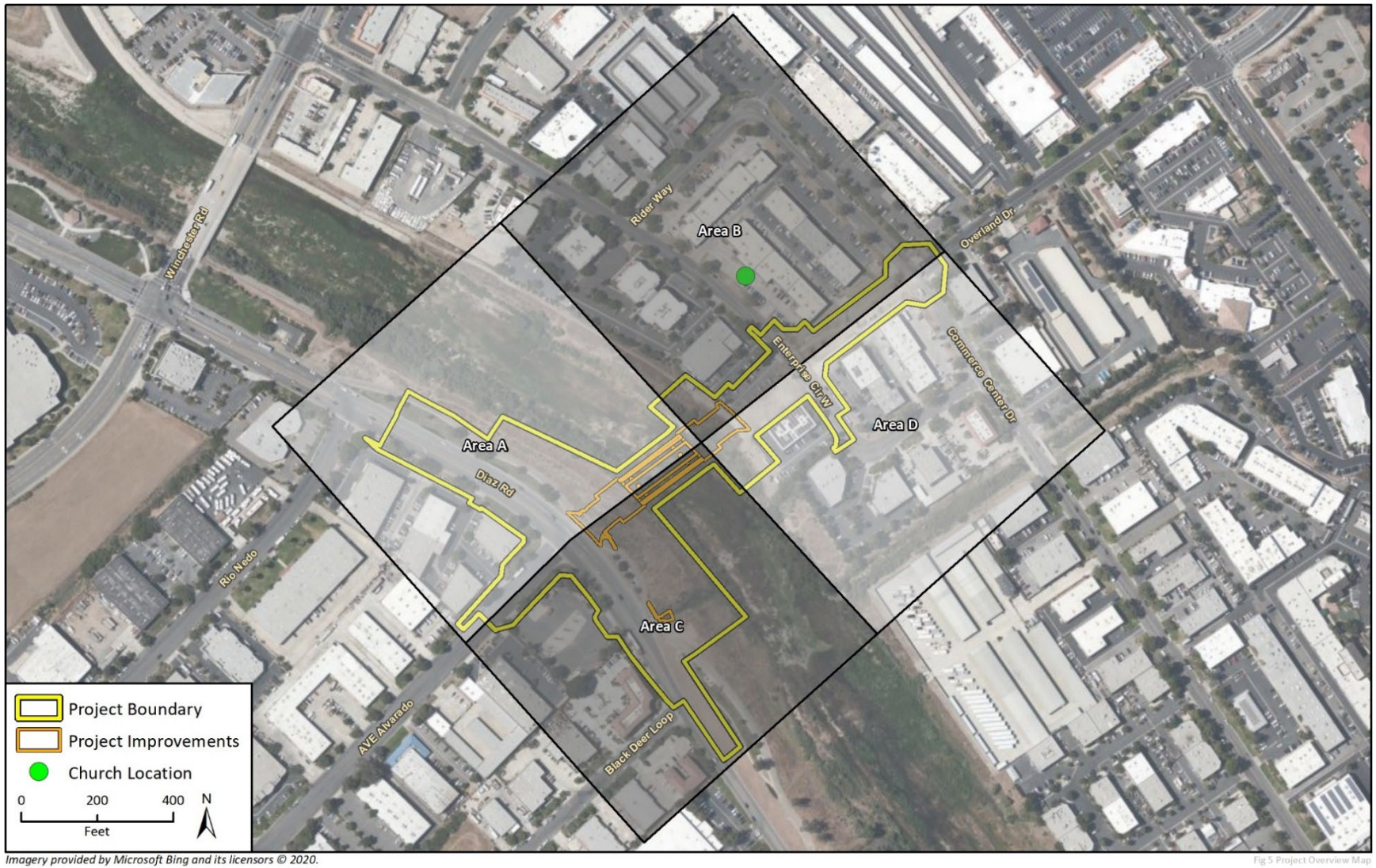

Fig 5 Project Overview Map

Figure 5 Impact Area A Receivers

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Fig 5 Noise Receiver Locations - Area A

Figure 6 Impact Area B Receivers

Figure 7 Impact Area C Receivers

Figure 8 Impact Area D Receivers

The traffic noise modeling results in Table 14 indicate that traffic noise levels at residences in Area A are predicted to be in the range of 60 to 63 dBA L_{eq} in the design-year. The results also indicate that the increase in noise between existing conditions and the design-year is predicted to be up to 7 dB. Because the predicted noise levels in the design-year are not predicted to approach or exceed the noise abatement criterion at the Calvary Church (Categories C and D) or result in a substantial increase in noise, no traffic noise impacts are predicted in Area A.

The traffic noise modeling results in Table 14 indicate traffic noise levels at residences in Area B are predicted to be in the range of 57 to 65 dBA L_{eq} in the design-year, and that the increase in noise will be up to 7 dB in the design-year. Because there is no noise abatement criterion for Category F uses in this area and because the project would not result in a substantial increase in noise, no traffic noise impacts are predicted to occur in this area and noise abatement does not need to be considered in Area B.

The traffic noise modeling results in Table 14 indicate traffic noise levels at commercial uses in Area C will be 48 to 70 dBA L_{eq} in the design-year. The results also indicate that the increase in noise between existing conditions and the design-year is 2 dB. Because there is no noise abatement criterion for Category F uses in this area and because the project would not result in a substantial increase in noise, no traffic noise impacts are predicted to occur in this area and noise abatement does not need to be considered in this area.

The traffic noise modeling results in Table 14 indicate traffic noise levels at commercial uses in Area C will be 60 to 72 dBA L_{eq} in the design-year. The results also indicate that the increase in noise between existing conditions and the design-year is 0 dB. Because there is no noise abatement criterion for Category F uses in this area and because the project would not result in a substantial increase in noise, no traffic noise impacts are predicted to occur in this area and noise abatement does not need to be considered in this area.

Because the church has an interior noise abatement criterion in addition to the exterior criterion, interior noise must be considered at the church as well. From Table 6 in the FHWA Highway Traffic Noise Analysis and Abatement Guidance document, the building noise reduction factor for standard construction with ordinary windows closed is 20 dB. The interior noise level in the church in the design-year is therefore predicted to be 40 dBA L_{eq}. Because this predicted design-year noise level does not exceed the interior NAC of 52 dBA L_{eq}, no interior traffic noise impacts are predicted at the church. Therefore, impacts would be less than significant from operational noise.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Project construction would not involve activities typically associated with excessive groundborne vibration such as pile driving or blasting. The equipment utilized during project construction that would generate the highest levels of vibration would include rollers, loaded trucks, and bulldozers. The City of Temecula has not adopted standards to assess vibration impacts during construction and operation. However, Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures from continuous and intermittent sources. The thresholds of significance used in this analysis to evaluate vibration impacts are based on these impact criteria, as summarized in Table 10.

Project construction may require operation of vibratory equipment such as vibratory rollers, loaded trucks, and bulldozers within 50 feet from the road (e.g., Overland Drive). As shown in Table 15, vibration levels from individual pieces of construction equipment would not exceed the threshold at which damage can occur to residential structures, 0.20 in/sec PPV, or the threshold at which transient vibration sources would be distinctly perceptible to 0.25 in/sec PPV. Construction vibration levels at all other buildings in the immediate vicinity would be less than the levels shown in Table 15 because vibration levels would further attenuate with distance. Therefore, vibration impacts would be less than significant.

Table 15 Vibration Levels at Sensitive Receivers

Equipment	Estimated in/sec PPV at Nearest Building (50 feet)
Vibratory Roller	0.098
Large Bulldozer	0.042
Loaded Truck	0.036
Threshold	**0.20**
Threshold Exceeded?	No

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The airport closest to the project site is the French Valley Airport, located approximately four miles northeast of the project site. The project site is not located within noise contours shown in Exhibit FV-5 of the River County Airport Land Use Compatibility Plan (County of Riverside 2011). In addition, the project site is not in close proximity to a private airstrip. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airport noise. No impact would occur.

NO IMPACT

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14 Population and Housing

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

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project would not induce substantial population growth in the area, as no homes are proposed. It is anticipated that the construction workers would be hired from nearby areas. The presence of construction workers would be temporary and would not lead to a demand for permanent housing, goods, or services in the area.

LESS THAN SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project alignment is located in an open space area adjacent to a creek. Therefore, the project would have no impact on the City's existing housing stock.

NO IMPACT

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15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	1 Fire protection?	☐	☐	☐	■
	2 Police protection?	☐	☐	☐	■
	3 Schools?	☐	☐	☐	■
	4 Parks?	☐	☐	☐	■
	5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Fire protection and emergency medical services are provided to the City and the project site by the Temecula Fire Department, who contracts with the Riverside County Fire Department. Implementation of the project would not require new fire protection services, and would provide a more direct travel connection which would improve emergency response; therefore, no impact would occur.

NO IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Police services for the City and the project site are provided by the City of Temecula Police Department (PD), who contracts with the Riverside County Sheriff Department. Implementation of the project would not increase the need for police protection services and would provide a more

direct travel connection that would improve emergency response; therefore, no impact would occur.

NO IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The project site is located within the Temecula Valley Unified School District. There is no housing or commercial component related to the project which would have any impact on local schools. Therefore, there will be no impact on school services.

NO IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, public facilities, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Operation of future development of the project would introduce temporary construction workers and residents on the project site. The project complements the City's trail system and would not have an impact on City parks.

NO IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The proposed project poses no uses which would result in an unusually heavy burden on maintenance on public facilities. Therefore, the project will not result in a significant impact on other public facilities.

LESS THAN SIGNIFICANT IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	■	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project would not have an impact to the existing parks; however, it will connect to an existing Class I trail that runs along the west bank of Murrieta Creek. The project will add an additional connection to the trail as a result of the project, improving access to recreational resources. No impacts are anticipated as a result of the project.

NO IMPACT

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project does not involve the construction of or expansion of a recreational facility. The project will provide an additional connection to the existing Class I trail that runs along the west bank of Murrieta Creek, which will have short-term impacts to the use of the trail. It is anticipated that construction would not result in an adverse effect on the environment, since construction would be short-term in nature and would not be intensive. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	■
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	☐	■
d. Result in inadequate emergency access?	☐	☐	☐	■

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project will not result in any activities that increase vehicular traffic on area roadways. The extension of Overland Road and the construction of the new bridge across Murrieta Creek are identified in the Temecula Five Year Capital Improvement Program in the City's General Plan Circulation Element. The project spans Murrieta Creek adding another east/west connection between two north/south arterials resulting in improved circulation for all transportation modes.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, VMT is identified as the most appropriate measure of transportation impacts. For the purposes of this CEQA section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Lead agencies are required to approve a VMT significance threshold by July 1, 2020. As discussed previously, the project will not result in any additional vehicular trips, as the project does not generate vehicle trips. The project also would provide a more direct travel connection that would shorten the average length of vehicle trips in the project area and therefore incrementally reduce VMT. The project will be consistent with CEQA Guidelines section 15064.3, subdivision (b).

NO IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The proposed project improvements would not include any sharp curves or hazardous roadway design elements. The project will be designed in accordance with Caltrans design standards, as a result, no impacts would occur.

NO IMPACT

d. Would the project result in inadequate emergency access?

Adequate emergency vehicular access will be provided during and after project construction via Commerce Center Drive and Diaz Road.

NO IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	■	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

As of July 1, 2015, California AB 52 of 2014 was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead Agency.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

The Native American Heritage Commission (NAHC) was contacted on January 21, 2020 for a search of its Sacred Lands File (SLF). The NAHC responded on January 30, 2020, stating that the search of the SLF was positive and recommended contacting the Pechanga Band of Luiseño Indians for more information.

On March 20, 2020, the following Native American Tribes were sent initial consultation letters:

- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- Soboba Band of Luiseño Indians
- Agua Caliente Band of Cahuilla Indians
- Torres-Martinez Desert Cahuilla Indians

Four responses were received, each of which is summarized below:

1. Tuba Ebru Ozdil, Cultural Resources Analysist for the Pechanga Band of Luiseño Indians, replied on March 20, 2020, requesting formal consultation with the City and additional detailed information about the proposed project. Additionally, Ms. Ozdil requested that the Tribe be formally notified and involved during the entire environmental review process for the duration of the project because the project area lies within the Tribe's aboriginal territory.
2. Cheryl Madrigal, Tribal Historic Preservation Officer of the Rincon Band of Luiseño Indians, replied on July 10, 2020. Ms. Madrigal requested copies of any geotechnical reports, cultural survey reports (including archaeological results and shapefiles), archaeological search results, and grading plans. Ms. Madrigal indicated the Tribe would be participating fully in the environmental review process for the project because the project area lies within the Luiseño territory and is within their specific area of historic interest.
3. Joseph Ontiveros, Tribal Historic Preservation Officer of the Soboba Band of Luiseño Indians, replied on July 8, 2020, deferring consultation for this project to the Pechanga Band of Luiseño Indians.
4. Patricia Garcia-Plotkin, Director of Historic Preservation for the Agua Caliente Band of Cahuilla Indians, replied on July 9, 2020, deferring consultation for this project to the Pechanga Band of Luiseño Indians.

Based on the positive results of the Sacred Lands File search coupled with ethnographic settlement patterns, the area is considered sensitive for tribal cultural resources. This sensitivity was echoed during confidential government-to-government consultation meetings that occurred between City and Pechanga representatives on November 7, 2022, and April 18, 2023. Both archaeological and Native American monitoring were requested during consultation. Therefore, Mitigation Measures CR-1 through CR-9 are required to bring impact to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple Dry years?	☐	☐	■	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	■

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project could require minor relocations of existing utility infrastructure associated with Rancho California Water District, Southern California Edison, Southern California Gas Company, Charter Communications, and Frontier Communications located near the Diaz Road and Avenida Alvarado intersection. Utility coordination will be initiated with each utility company in the final phase of design, prior to project implementation. Such coordination would ensure that any necessary utility relocations would not cause significant environmental effects. The project will not require the

construction of major new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities beyond those evaluates as part of the proposed project. Therefore, this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Water would be supplied to the project site by Rancho California Water District. According to their analysis of water supply reliability in the 2021 Water Shortage Contingency Plan, the District will have sufficient water supply to meet the projected demands through the year 2045 under all scenarios considered, including normal year, single dry year, and multiple dry years (Rancho California Water District 2021).

Project construction will result in minor water usage during construction for dust suppression but would be adequately served by existing water supplies. Long-term operation of the project would not require any water use. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The project will not result in the need for any new water or wastewater treatment facilities, nor would it add any demand to existing facilities.

NO IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Solid waste generated during project construction would be disposed of at Lamb Canyon Sanitary Landfill, which has an expected closure year of 2040 and is located at 16411 Lamb Canyon Road in Beaumont, CA, approximately 33 miles north of the project site. Operation of the project would not result in substantial generation of solid waste that would exceed standards or infrastructure capacity. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

All solid waste will be disposed of at an approved site in compliance with federal, state and county regulations.

NO IMPACT

20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located within or near an area designated as a state responsibility area (Cal Fire, 2007, 2011) nor is it classified as a very high fire hazard severity zone or located near a very high fire hazard severity zone (Cal Fire, 2007, 2011). The project site is mapped as Non-VHFHSZ per the California Department of Forestry and Fire Protection Fire Hazard Severity Zone Maps prepared

under the Fire and Resource Assessment Program. The nearest State Responsibility Area very high fire hazard severity zone is located along the hillside approximately 1.02 miles west of the project site. The nearest Local Responsibility Area very high fire hazard severity zone is approximately 0.44 miles southwest of the project site. No further analysis of this issue is required in the EIR.

NO IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The project would impact Riparian/Riverine resources that are occupied by least Bell's vireo, smooth tarplant, Pacific (western) pond turtle, and arroyo chub. Special Status Plant Surveys and surveys for least Bell's vireo and burrowing owl were conducted. Least Bell's Vireo territories were observed within the southern willow scrub habitat along the banks of Murrieta Creek in the survey area. A Natural Environment Study was performed within the Biological Study Area and concluded that impacts to least Bell's vireo are expected to occur as a result of the project. The removal of vegetation may also result in temporary impacts to nesting birds due to the temporarily reduced

available nesting habitat. To lessen impacts to sensitive and special status species, mitigation measures will be incorporated into the project and will result in less than significant impacts.

There is a high potential for cultural and paleontological resources in the area; however, identified mitigation measures to avoid or reduce impacts on these resources will be incorporated into the project such that important examples of the major periods of California history or prehistory would not be eliminated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As concluded in Sections 1 through 20, the project would have no impact, less than significant impact, or less than significant impact with mitigation incorporated, with respect to all environmental issues considered in this document. Cumulative impacts related to several resource areas have been addressed in the individual resource sections of this Initial Study, including air quality and GHG emissions (see CEQA Guidelines Section 15064(h)(3)). As discussed in Section 3, *Air Quality*, and in Section 8, *Greenhouse Gas Emissions*, the project would result in less than significant impacts associated with air quality and GHG emissions during project construction and operation. The impact analysis in these sections uses thresholds that already account for cumulative (regional impacts). Therefore, air quality and GHG emissions associated with operation and construction would be less than significant and would not be cumulatively considerable.

Cumulatively considerable impacts could occur if the construction of other projects occurs at the same time as the proposed project and in the same vicinity, such that the effects of similar impacts of multiple projects combine to expose a resource to greater levels of impact than would occur under the proposed project. For example, the proposed project and other cumulative projects could impact the same environmental resources, such as biological resources. The project may temporarily impact the habitat utilized by special status species, but the project would incorporate mitigation measures to reduce the project's contribution to cumulative impacts to a less-than-significant level.

This Initial Study determined that, for some of the other resource areas (e.g., agriculture and forestry resources, land use and planning, mineral resources, population and housing, recreation, etc.), the project would have no impact compared to existing conditions. Therefore, the project would not contribute to cumulative impacts related to these issues. Other issues (e.g., cultural resources, geology, hazards and hazardous materials, and tribal cultural resources) are by their nature project-specific and impacts at one location do not add to impacts at other locations or create additive impacts. As such, cumulative impacts would be less than significant (not cumulatively considerable).

LESS THAN SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in Section 3, *Air Quality*, the project would not result, either directly or indirectly, in substantial adverse effects related to air quality through construction or operation. As discussed in Section 9, *Hazards and Hazardous Materials*, project operation would not involve the routine use of extremely hazardous materials. Compliance with applicable regulations during project construction would reduce potential impacts on human beings related to hazards and hazardous materials to a less than significant level. During project construction, noise impacts would be limited to the daytime hours, and construction activities would not generate noise above the FTA threshold for construction noise at a sensitive land use; therefore, construction noise impacts would be temporary and less than significant. Project operation would not result in a substantial increase in noise. Consequently, operational noise would not significantly impact nearby sensitive receivers. Therefore, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. These impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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