INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

TEXAS STREET RESIDENTIAL DEVELOPMENT PROJECT

TENTATIVE TRACT MAP NO. 20520

CITY OF REDLANDS

SAN BERNARDINO COUNTY, CALIFORNIA

LSA

April 2023

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INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

TEXAS STREET RESIDENTIAL DEVELOPMENT PROJECT

CITY OF REDLANDS

SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

City of Redlands
Development Services Department, Planning Division
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Project No. CRX2201

LSA

April 2023

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APPENDICES

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1.0 INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

Section 1.0 of this Initial Study (IS) describes the purpose, environmental authorization, the intended uses of the IS, documents incorporated by reference, and the processes and procedures governing the preparation of the environmental document. Pursuant to Section 15367 of the State of California *Guidelines for Implementation of the California Environmental Quality Act* (*CEQA Guidelines*), the City of Redlands (City) is the Lead Agency under the California Environmental Quality Act (CEQA). The City has primary responsibility for compliance with CEQA and consideration of the Texas Street Residential Development Project (herein referred to as "Project" or "proposed Project").

The Initial Study is organized as follows:

Section 1.0 *Introduction and Purpose* provides a discussion of the Initial Study's purpose, focus, and legal requirements.

Section 2.0 *Project Description* provides a detailed description of the proposed Project.

Section 3.0 *Environmental Checklist* includes a checklist and accompanying analyses of the Project's effect on the environment. For each environmental issue, the analysis identifies the level of the Project's environmental impact.

Section 4.0 *References* details the references cited throughout the document.

Appendices Include the technical material prepared to support the analyses contained in the IS.

1.2 PURPOSE

CEQA requires that the proposed Project be reviewed to determine the environmental effects that would result if the Project were approved and implemented. The City is the Lead Agency and has the responsibility for preparing and adopting the associated environmental document prior to consideration of the approval of the proposed Project. The City has the authority to make decisions regarding discretionary actions relating to implementation of the proposed Project.

This IS has been prepared in accordance with the relevant provisions of CEQA (California Public Resources Code Section 21000 et seq.); the *State CEQA Guidelines,* [1] and the rules, regulations, and procedures for implementing CEQA as adopted by the City. The objective of the Initial Study is to inform City decision-makers, representatives of other affected/responsible agencies, the public and interested parties of the potential environmental consequences of the Project.

As established in *State CEQA Guidelines* Section 15063(c), the purposes of an IS are to:

- Provide the Lead Agency (City of Redlands) with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND);

[1] California Code of Regulations, Title 14, Chapter 3, Sections 15000 through 15387.

- Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for an ND or MND;
- Assist in the preparation of an EIR, if one is required;
- Facilitate environmental assessment early in the design of a project;
- Provide a factual basis for finding in an ND or MND that a project will not have a significant effect on the environment;
- Eliminate unnecessary EIRs; and
- Determine whether a previously prepared EIR could be used with the Project.

1.3 INTENDED USE OF THIS INITIAL STUDY

The City formally initiated the environmental process for the proposed Project with the preparation of this Initial Study. The IS screens out those impacts that would be less than significant and do not warrant mitigation, while identifying those issues that require further mitigation to reduce impacts to a less than significant level. As identified in the following analyses, Project impacts related to various environmental issues either do not occur, are less than significant (when measured against established significance thresholds) or have been rendered less than significant through implementation of mitigation measures. Based on these analytical conclusions, this IS supports adoption of an MND for the proposed Project.

CEQA[2] permits the incorporation by reference of all or portions of other documents that are generally available to the public. The IS has been prepared utilizing information from City planning and environmental documents, technical studies specifically prepared for the Project, and other publicly available data. The documents utilized in the IS are identified in Section 3.0 and are hereby incorporated by reference. These documents are available for review at the City of Redlands, Planning Division.

1.4 PUBLIC REVIEW OF THE INITIAL STUDY

The IS and a Notice of Intent (NOI) to adopt an MND will be distributed to responsible and trustee agencies, other affected agencies, and other parties for a 30-day public review period. Written comments regarding this IS should be addressed to:

Sean Reilly, Principal Planner
City of Redlands
Development Services Department, Planning Division
35 Cajon Street, Suite 20
Redlands, California 92373
(909) 798-7555
sreilly@cityofredlands.org

After the 30-day public review period, consideration of comments raised during the public review period will be taken into account and addressed before the City considers adopting the MND.

[2] *State CEQA Guidelines* Section 15150.

2.0 PROJECT DESCRIPTION

This section describes the proposed Texas Street Residential Project (Project) submitted by TTLC Redlands Texas St, LLC (Applicant) that is evaluated in this Initial Study/Mitigated Negative Declaration (IS/MND). The proposed Project includes the development of an approximately 14.7-acre property (Project site) northeast of the intersection of Texas Street and Domestic Avenue that is currently an undeveloped parcel (Assessor's Parcel Number [APN] 0167-041-01). The Project site is located at the end of Texas Street in the northern portion of the City of Redlands (City). The Applicant proposes to develop the Project site with 35 single-family residential homes; outdoor recreational space, including a recreation lawn, play area, and bike path connection to the Santa Ana River Trail; and associated circulation and infrastructure improvements.

Pursuant to Section 15124(c) of the *State CEQA Guidelines*, this section includes a description of the proposed Project's location, objectives, and technical and environmental characteristics, which are followed by a summary of the intended uses of the IS/MND, a list of required permits and other approvals required to implement the Project, and a list of related environmental review and consultation requirements required by federal, State, and local laws, regulations, and policies.

2.1 PROJECT LOCATION

The following describes the precise location and boundaries of the Project site, including its geographic context, and provides a brief overview of the existing land uses within and in the vicinity of the Project site.

2.1.1 Regional Location and Access

The approximately 14.7-acre undeveloped site is located on the northeast side of the terminus of Texas Street and approximately 500 feet north of Domestic Avenue in the northern area of the City of Redlands, San Bernardino County, California. The site itself is generally bounded by Texas Street to the west, with fallow agricultural land west of Texas Street. Existing parks and recreational areas, including Israel Beal Park, border the Project site to the east. The Santa Ana River wash borders the Project site to the north, and existing single-family residential uses border the Project site to the south. A shooting range (Redlands Shooting Park) is located northeast of the Project site. **Figure 1: Regional Location** shows the location of the Project site within the region.

The Project site is located approximately 0.5 mile east of State Route 210 (SR-210) and approximately 1.6 miles north of Interstate 10 (I-10). The City of Loma Linda is located southwest of Redlands, the City of Highland is located to the north, and the City of San Bernardino is located to the west. The City of Yucaipa is located to the east over the foothills of the San Bernardino Mountains. San Bernardino International Airport is located approximately 1.5 miles northwest of the Project site on the west side of SR-210.

Regional access to the Project site is provided by I-10 and SR-210. The Project site is directly accessible via Texas Street from Domestic Avenue.

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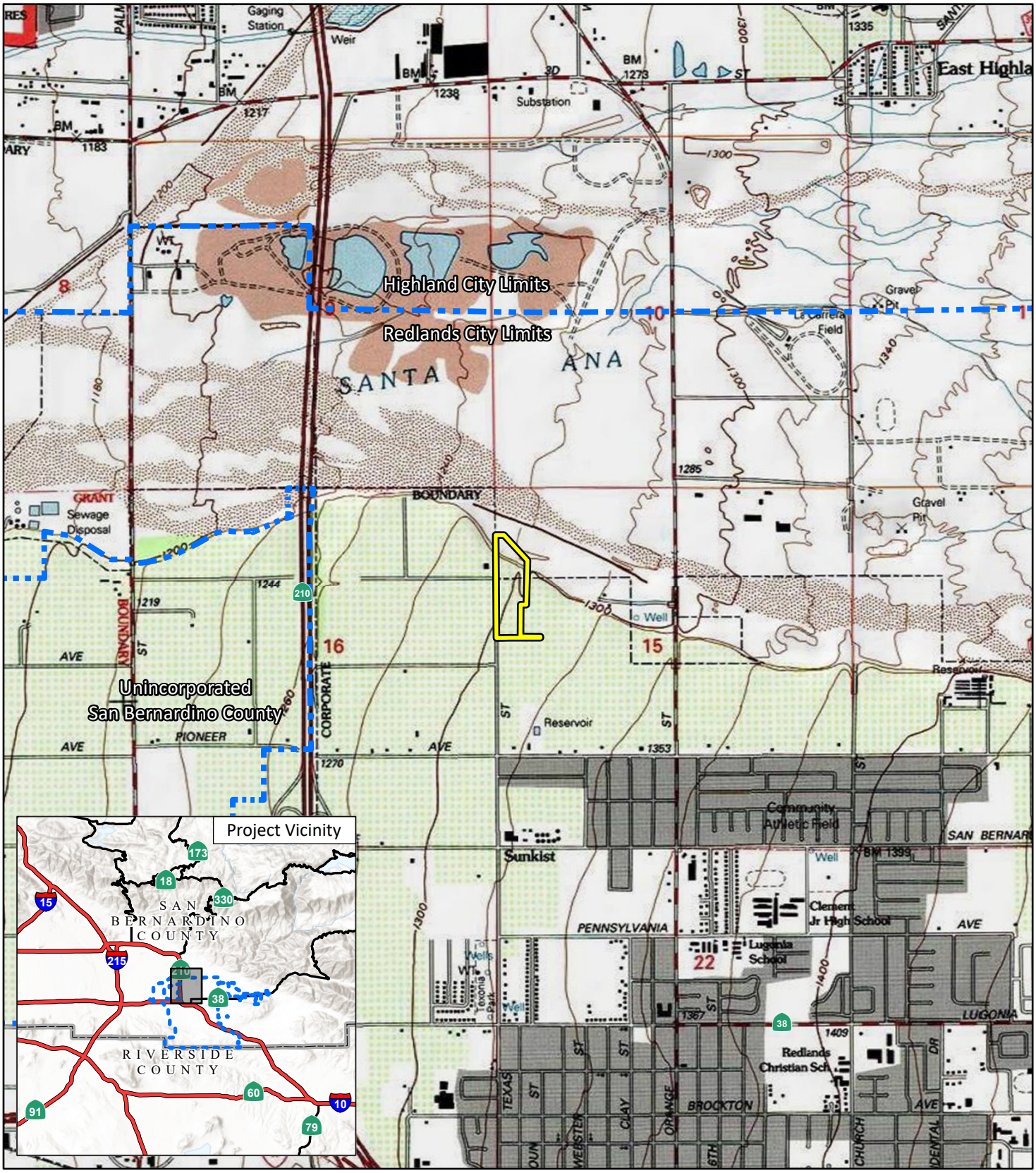

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FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - *Redlands (1988)*, CA

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Texas Street Residential Project

Regional Location

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2.1.2 Site Characteristics and Current Site Conditions

The Project site is currently undeveloped and generally rectangular in shape. Conditions on the site generally consist of disturbed vegetation, scattered trees, and power utility poles. An open storm drain along the western edge of the Project site runs parallel to Texas Street. A dirt road along the southern, eastern, and northern edges of the Project site provides a connection between Texas Street and an existing segment of the Santa Ana River Trail that runs along the bluff to the east of the Project site. The northernmost portion of the Project site slopes into the Santa Ana River wash, which generally consists of river sediment and brush vegetation. A gate across Texas Street controls vehicular access to the properties to the northwest of the Project site. **Figure 2: Project Location** depicts an aerial view of the Project site.

2.1.3 General Plan and Zoning

The Project site's current zoning designation is *A-1 Agricultural District*. The purpose of the A-1 zone is to provide for the proper utilization of such lands best suited for agricultural purposes, and to prevent the encroachment of incompatible uses. Under this zoning designation, single-family residences are allowed; however, no more than two dwelling units are allowed on each parcel of five acres or more. Only one dwelling unit per lot is permitted on parcels that are less than five acres in area, provided that the lot contains dimensions and an area equivalent to the closest single-family residential zone.[3] Although the *A-1* zoning district does not allow more than two dwelling units on each parcel of five acres or more, State Bill 330 (SB 330) allows residential density supported by the General Plan without a zone change.

The City's General Plan currently designates the Project site as *Very Low Density Residential*, which allows for the development of detached single-family dwellings at densities up to 2.7 dwelling units per acre (du/ac) on slopes of up to 15 percent and 0.4 du/ac on slopes between 15–30 percent. The Applicant is seeking approval of a Conditional Use Permit for a Planned Residential Development (PRD), which will utilize the Estate Residential (R-E) zoning district's development standards to design the Project with a density that is consistent with the underlying General Plan density. The proposed density (2.38 dwelling units per gross acre) would not exceed the density limit of *Very Low Density Residential* as established in the General Plan.

2.1.4 Surrounding Land Uses

The Project site is bordered by the Santa Ana River to the north, a public park to the east, a shooting range to the northeast, fallow agricultural land and Texas Street to the west, and existing single-family residential uses to the south. **Table A: Surrounding Land Uses and Setting** summarizes the existing land uses, General Plan designations, and zoning designations on the Project site and surrounding properties.

[3] City of Redlands Municipal Code. Section 18.20.030. Urban residential or UR zone.

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Project Site

FIGURE 2

N

0 100 200
FEET

SOURCE: Nearmap (2022)

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Texas Street Residential Project

Project Location

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Table A: Surrounding Land Uses and Setting

Direction	Existing Land Use	General Plan Designation		Zoning Designation	
Project Site	Undeveloped, Vacant	**Existing**	**Proposed**	**Existing**	**Proposed**
		Very Low Density Residential (VLDR)	Very Low Density Residential (VLDR)	Agricultural District (A-1)	Agricultural District (A-1)
North	Santa Ana River	Open Space (OS)		Open Land District (O)	
East	Park (Israel Beal Park)	Parks/Golf Courses (PG)		Planned Residential District/ Residential Estate District (PRD/R-E)	
South	Single-Family Residential	Very Low Density Residential (VLDR)		Planned Residential District/ Residential Estate District (PRD/R-E)	
West	Fallow Agricultural Land	Low Density Residential (LDR) & Very Low Density Residential (VLDR)		East Valley Specific Plan/Science Research Park (EV/SRP)	

Source: City of Redlands. April 11, 2022. Redlands General Plan Land Use Map. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/generalplan2035.pdf?1649693557 (accessed November 22, 2022).
Source: City of Redlands. April 11, 2022. City of Redlands – Zoning Map. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/zoning.pdf?1649714270 (accessed November 22, 2022).

2.2 PROPOSED PROJECT

2.2.1 Overall Development Concept

The proposed Project includes the development of 35 single-family residential homes, the extension and widening of Texas Street to the northern end of the Project site, the construction of three public streets that would end in cul-de-sacs, a water quality basin, a recreation lawn, and a play area. The Project would also construct an extension of the Santa Ana River Trail through the northern portion of the Project site. The Project would include a total of approximately 5.9 acres of open space. The Project would plant new street trees along the eastern side of Texas Street and along each of the new streets within the development.

The proposed Project would develop the site with 35 detached single-family residential homes, which would result in a proposed density of 2.38 dwelling units per gross acre.[4] **Figure 3: Tentative Tract Map** provides the proposed boundaries of the 35 numbered lots and the seven lettered open space lots.

Other discretionary actions required for the Project include approval of a Conditional Use Permit for the Planned Residential Development, approval of a Socio-Economic Cost Benefit Study, Tentative Tract Map, and related actions listed below in Required Actions.

2.2.2 Access, Circulation, and Parking

Vehicular access to the Project site would be provided from Texas Street at four locations. Implementation of the proposed Project would facilitate access to Pomelo Avenue (an existing unimproved public right-of-way that extends west of Texas Street). Three proposed public streets (Streets A, B, and C) ending in cul-de-sacs would provide driveway access to 33 of the 35 residential lots. A total of 112,830 square feet would be dedicated to public streets and represents all right-of-way dedications including the three cul-de-sacs and the portion of Texas Street that is within the Project site boundaries.

[4] 35 dwelling units / 14.69 acres = 2.38 du/ac

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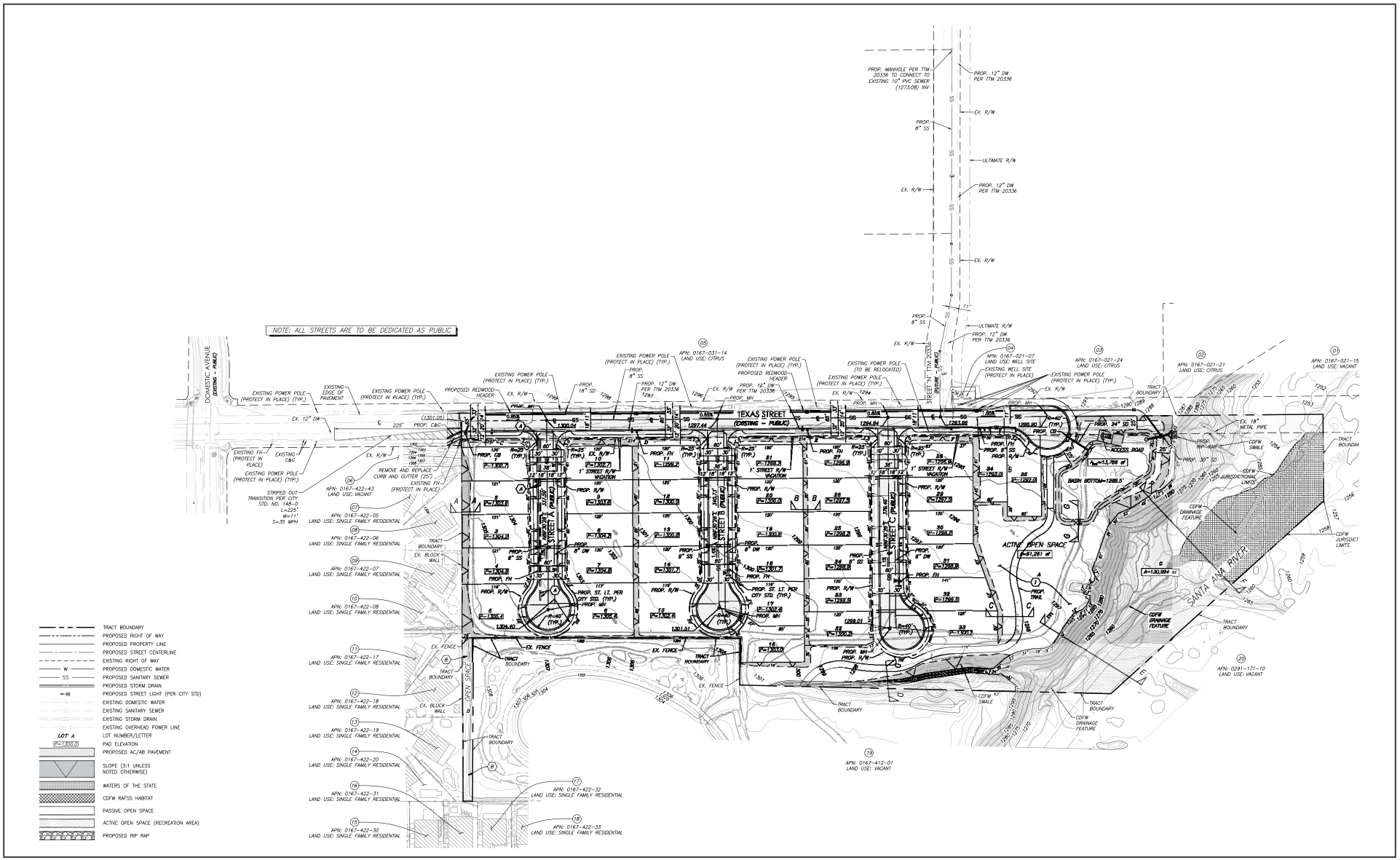

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FIGURE 3

0 120 240

FEET

SOURCE: Huitt-Zollars

Texas Street Residential Project

Tentative Tract Map

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Texas Street would be extended northward and widened from its existing terminus at the southwest corner of the Project site to the northern end of the Project site. A new cul-de-sac would be installed at the northern end of Texas Street. This cul-de-sac would provide driveway access to the two residential lots that would be located along Streets A, B, and C. The proposed homes would include two and three car garages. On-street parking would be permitted along the eastern side of Texas Street and along both sides of Streets A, B, and C.

Figure 4: Tentative Landscape Plan provides an illustrative view of the proposed landscape design, including the general locations of parkway and street tree plantings, the planned tree species mix, and the locations of proposed sidewalks and bike paths as well as the proposed recreation lawn and play area. As shown in Figure 4, pedestrian access within the Project site would be provided via sidewalks along Streets A, B, and C and the eastern side of Texas Street. The Project would also provide a 6-foot-wide pedestrian path and a 10-foot-wide fire access lane in the proposed open space area in the northern portion of the Project site.

A 10-foot-wide bike path would be provided along the eastern and northern areas of the Project site. The bike path would be built to the County of San Bernardino's design standards and would serve as a westerly extension of the Santa Ana River Trail, which currently terminates at the eastern boundary of the Project site. The bike path would connect to the existing trail system within Israel Beal Park and would provide a future trail connection point at the northern end of the Project site.

The Project would not modify the existing access road northwest of the Redlands Shooting Range.

2.2.3 Landscaping and Open Space

The Project's proposed plant palette would be comprised of plant materials and trees known to thrive in the local climate and soil conditions. As described above, **Figure 4** provides a description of the tree species that are proposed to be planted.

The Project would provide approximately 2.9 acres of active open space at the north end of the Project site. As shown in **Figure 4**, the active open space would include a play area and recreation lawn, as well as the pedestrian and bike paths described above. The Project would also include a 0.32-acre water quality basin at the northern end of the Project site. As outlined in **Figure 4**, approximately 3 acres at the northern tip of the Project site within the Santa Ana River Basin would be left in its natural state. Of that land, approximately 2.6 acres would serve as open space, with the remainder functioning as wildlife habitat or waters of the State.

The Project site currently includes a 19-foot-wide park maintenance easement along the south side of Israel Beal Park. The land subject to this easement is currently landscaped and serves as a buffer between Israel Beal Park and the single-family residential uses to the south. No changes to this 0.12-acre park maintenance easement are proposed as part of the Project.

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SITE PLAN LANDSCAPE KEY

1. PARKWAY PLANTING
2. SIDEWALK
3. 12' WIDE ASPHALT BIKE PATH
4. 12' WIDE CONCRETE BIKE & PEDESTRIAN PATH
5. RECREATION LAWN
6. "RIVER WASH" THEME PLANTING
7. PLAY AREA WITH FIBAR MULCH SURFACE SMALL STRUCTURES & SHADE TREES WITH SEATING
8. 12' WIDE FIRE ACCESS
9. PLAY LAWN AND SEATING AREA
10. CONNECTION TO EXISTING TRAIL
11. PARALLEL PARKING (9' X 18' TYP.)
12. PRIVATE OUTDOOR LIVING SPACE, 25' MIN. DIMENSION TYPICAL
13. 8' WIDE DECOMPOSED GRANITE
14. BASIN

TREE LEGEND

SYMBOL	SPECIES
	DECIDUOUS SKYLINE TREE PLATANUS RACEMOSA/ CALIFORNIA SYCAMORE
	DECIDUOUS FLOWERING TREE KOELREUTARIA BIPINNATA / CHINESE FLAME TREE
	DECIDUOUS SHADE TREE LAGERSTROEMIA INDICA / CRAPE MYRTLE
	DECIDUOUS SHADE TREE CHILOPSIS LINEARIS 'BUBBA' / DESERT WILLOW
	DECIDUOUS STREET TREE GINKGO BILOBA /GINKGO
	DECIDUOUS STREET TREE QUERCUS ENGELMANNII / ENGELMANN OAK
	STREET TREE TABEBUIA ROSEA / PINK TRUMPET
	NEIGHBORHOOD TREE PER OWNERS

0' 50' 100' 200' 300'
SCALE 1" = 50'

NORTH

LSA

FIGURE 4

0 200 400
FEET

SOURCE: RRM Design Group

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Texas Street Residential Project

Tentative Landscape Plan

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Although the existing Redlands Shooting Range access road in the northern portion of the Project site is categorized within the Project's open space area, no changes to the access road are proposed as part of the Project.

The various landscape elements are shown in **Figure 5: Tentative Open Space Diagram.**

2.2.4 Design Elements

Three architectural styles are proposed for the Project's single-family residential homes: Spanish, Cottage, and Modern Seaside. Each home would be no more than two stories in height and include an attached two-to-three car garage. The outside walls of each home would be stucco with either concrete flat tile or concrete low profile tile roofs. Three earth tone color schemes are proposed for each architectural style. The three architectural styles are presented in **Figure 6: Conceptual Architecture Renderings.**

2.2.5 Infrastructure and Utilities

The Project site is located in an urbanized area, and existing utilities and infrastructure are available for interconnection generally adjacent to or in close proximity to the site. The Project would require installation of the following utility connections to the satisfaction of the applicable utility providers: water, wastewater, stormwater drainage, electric, natural gas, and telecommunications services. Connections to existing utility infrastructure would occur within the adjacent public rights-of-way. An existing public right-of-way is located along Texas Street west of the Project site. The Project would extend Texas Street northward so that it terminates in a cul-de-sac on the northwest corner of the Project site. The Project would include three new public streets (Streets A, B, and C) that would connect to Texas Street and terminate in cul-de-sacs on the Project site. The Project also includes the vacation of 1 foot of public right-of-way on the east side of Texas Street adjacent to the Project site.

2.2.5.1 Water

Domestic water service to the Project site would be provided via an existing 12-inch water line located in Texas Street. Proposed Streets A, B, and C would each include 8-inch water lines that would tie into the existing water line in Texas Street. Historically, irrigation water came from the water well immediately west of the project site.

2.2.5.2 Wastewater

Sewer service to the Project site would be provided via two new 8-inch sewer lines that would be installed in Texas Street and Pomelo Avenue. The new sewer line in Pomelo Avenue would connect to an existing 10-inch sewer line approximately 400 feet west of the Project site. Proposed Streets A, B, and C would each include an 8-inch sewer line that would connect to the proposed sewer lines in Texas Street and Pomelo Avenue.

2.2.5.3 Stormwater and Water Quality

In its existing undeveloped condition, the Project site is covered entirely by pervious surfaces (237,910 square feet) and generally slopes northwesterly to the northwest corner of the Project site. Existing on-site runoff drains to the north via sheet flow toward several naturally formed gullies that outlet directly into the Santa Ana River.

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OPEN SPACE LEGEND

- ACTIVE OPEN SPACE
- UNDEVELOPED
- CDFW RAFSS HABITAT
- WATERS OF THE STATE
- ACTIVE OPEN SPACE RECREATION AREA FOR SHOOTING FACILITY

OPEN SPACE CALCULATIONS

OPEN SPACE	AREA S.F.	PERCENTAGE
ACTIVE OPEN SPACE	126,438	49%
UNDEVELOPED	83,199	33%
CDFW RAFSS HABITAT	29,185	11%
WATERS OF THE STATE	2,613	1%
ACTIVE OPEN SPACE RECREATION AREA FOR SHOOTING FACILITY	15,246	6%
TOTAL	**256,681**	**100%**

0' 50' 100' 200' 300'
SCALE 1" = 50'
NORTH

LSA

FIGURE 5

0 200 400
FEET

SOURCE: RRM Design Group

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Texas Street Residential Project

Tentative Open Space Diagram

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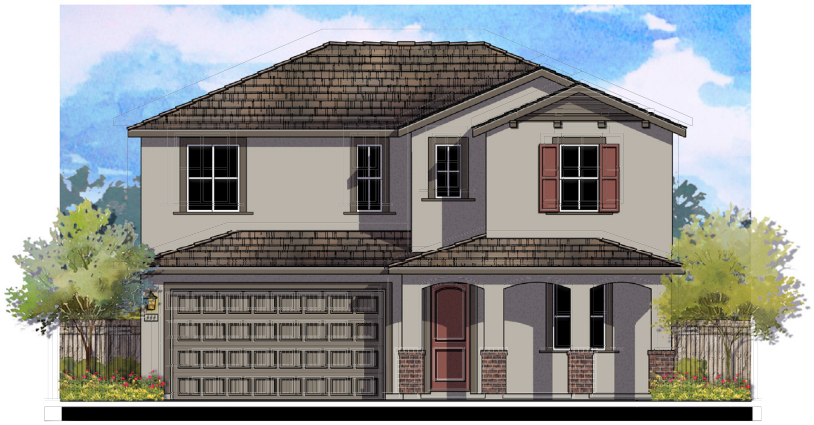
© 2022 Kevin L. Crook Architect, Inc. Refer to landscape drawings for wall, tree, and shrub locations

"A" SPANISH



© 2022 Kevin L. Crook Architect, Inc. Refer to landscape drawings for wall, tree, and shrub locations

"B" COTTAGE

© 2022 Kevin L. Crook Architect, Inc. Refer to landscape drawings for wall, tree, and shrub locations

"C" MODERN SEASIDE

0 2 4 8 12

LSA

FIGURE 6

0 7 14

FEET

SOURCE: RRM Design Group

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Texas Street Residential Project

Conceptual Architecture Renderings

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The proposed Project would increase the impervious surface coverage on the Project site compared to existing conditions. Upon completion of the Project, a total of 205,264 square feet would be covered by impervious surfaces such as roofs, streets, hardscape walkways and driveways, and 303,515 square feet would be covered by pervious surfaces such as open spaces and lawns.

The Project would install a catch basin at the southwest corner of the Project site that would direct off-site runoff from the areas south and west of the Project site into a new 18-inch storm drain along the western side of Texas Street. The 18-inch storm drain would convey the runoff northward before discharging to the Santa Ana River wash via a new 30-inch storm drain. Storm water from the Project site would sheet flow to the gutters in Streets A, B, and C and then run northward along the eastern side of Texas Street to a new catch basin at the northern end of the cul-de-sac. The catch basin would connect to a new 24-inch storm drain that would convey stormwater runoff from the Project site to an on-site water quality basin for infiltration into the subsurface soils. The proposed water quality basin would have an overflow structure that would allow discharges into the Santa Ana River to the north, if necessary, during large storm events.

2.2.5.4 Electricity and Gas

Electrical service would be provided by Southern California Edison Company (SCE) through connections to the existing overhead lines along Texas Street. All but one of the existing power poles along Texas Street would be protected in place. One power pole at the northwest corner of the Project site would be removed and replaced. Natural gas service would be provided by the Southern California Gas Company (SoCalGas) through connections to the existing lines in the surrounding streets.

2.2.5.5 Telecommunications

Telecommunications services would be provided by Verizon.

2.2.6 Construction and Phasing

Project construction would include site preparation, installation of utilities, paving, building construction, landscaping, and architectural coating. It is anticipated that the 35 homes would be built in three phases: 10 homes in Phase 1, 11 homes in Phase 2, and 14 homes in Phase 3. Construction activities are anticipated to occur between the hours of 7:00 a.m. and 5:00 p.m. Monday through Saturday. This is consistent with the City's Noise Ordinance which prohibits operation of construction equipment between weekday hours of 6:00 p.m. and 7:00 a.m. The preliminary Project construction phasing is presented below in **Table B: Preliminary Project Construction Phasing.**

Table B: Preliminary Project Construction Phasing

Phase	Begin Date	End Date
Site Preparation, Utility Installation	April 1, 2024	May 31, 2024
Paving & Landscaping	June 1, 2024	September 30, 2024
Building Construction (Phase 1 only)	September 1, 2024	January 31, 2025
Phase 2 Building Construction	November 1, 2024	March 31, 2025
Phase 3 Building Construction	January 1, 2025	May 31, 2025

Source: Preliminary Project Construction Phasing provided by Applicant. December 14, 2022.

2.2.7 Grading

The Project is anticipated to result in total estimated grading of 58,000 cubic yards of on-site soil. No import or export of soil is anticipated.

2.3 REQUIRED ACTIONS

While the City is the Lead Agency for the Project under CEQA, other agencies have jurisdictional authority related to the Project serve as a responsible and/or trustee agency in connection to the Project. As established in *State CEQA Guidelines* Section 15124(d)(2), "If a public agency must make more than one decision on a Project, all its decisions subject to CEQA should be listed." A list of these agencies and potential permits and approvals that may be required is provided in **Table C: Potential Permits and Approvals.**

Table C: Potential Permits and Approvals

Lead Agency	Permits/Approvals
City of Redlands	• Environmental review • Approval of Tentative Tract Map No. 20520 • Approval of a Conditional Use Permit for a Planned Residential Development • Design Review to approve the site plan, site improvements, landscaping plans, and architectural elevations • Approval of a Socio-Economic Cost Benefit Analysis • Approval of 1 foot street vacation on the east side of Texas Street
Other Agencies/Entities	**Permits/Approvals**
State Water Resources Control Board (SWRCB)	• Notice of Intent (NOI) to comply with the General Activity Construction National Pollutant Discharge Elimination System (NPDES) Permit and Municipal Separate Storm Sewer System (MS4) Permit
Santa Ana Regional Water Quality Control Board (RWQCB) (Region 8)	• NPDES Permit

Source: Compiled by LSA (2022).

3.0 INITIAL STUDY CHECKLIST

Project Title:

Texas Street Residential Development Project (TTM 20520)

Lead Agency Name and Address:

City of Redlands
Development Services Department, Planning Division
35 Cajon Street, Suite 20
Post Office Box 3005
Redlands, California 92373

Contact Person and Phone Number:

Sean Reilly, Principal Planner
(909) 798-7555
sreilly@cityofredlands.org

Project Location:

The Project site is located on the northeast side of the terminus of Texas Street and approximately 500 feet north of Domestic Avenue in the northern area of the City of Redlands, San Bernardino County, California. The Project site is generally bounded by Texas Street to the west, with fallow agricultural land west of Texas Street. Existing parks and recreational areas, including Israel Beal Park, border the Project site to the east. The Santa Ana River wash borders the Project site to the north, and existing single-family residential uses border the Project site to the south. A shooting range (Redlands Shooting Park) is located northeast of the Project site.

Project Sponsor's Name and Address:

Gordon Jones
The True Life Companies
4350 Von Karman Ave, Suite 200
Newport Beach, CA 92660

General Plan Designation:

Existing: *Very Low Density Residential*
Proposed: *Very Low Density Residential*

Zoning:

Existing: *A-1 Agricultural District*
Proposed: *A-1 Agricultural District*

Description of Property:

The 14.7-acre Project site is currently undeveloped and generally rectangular in shape. Conditions on the Project site generally consist of disturbed vegetation, scattered trees, and power utility poles. An open storm drain along the western edge of the Project site runs parallel to Texas Street. A dirt road along the southern, eastern, and northern edges of the Project site provides a connection between Texas Street and an existing segment of the Santa Ana River Trail that runs along the bluff to the east of the Project site. The northernmost portion of the Project site slopes into the Santa Ana River wash,

which generally consists of river sediment and brush vegetation. A gate across Texas Street controls vehicular access to the properties northwest of the Project site.

Surrounding Land Uses and Setting:

The Project site is bordered by the Santa Ana River to the north, a public park to the east, a shooting range to the northeast, fallow agricultural land and Texas Street to the west, and existing single-family residential uses to the south.

Other Public Agencies whose Approval is Required:

Approvals from other regulatory agencies may also be required and are listed as follows:

- City of Redlands: Environmental Review; Approval of Tentative Tract Map No. 20520; Approval of Conditional Use Permit for a Planned Residential Development; Design Review and Approval of the Site Plan; Site Improvements; Landscaping Plans; Architectural Elevations; Approval of a Socio-Economic Cost Benefit Analysis
- City of Redlands Building Division: Issuance of Building Permits for new home construction
- City of Redlands Development Services Engineering: Issuance of Final Map
- Redlands Fire District: Review and Approval of fire truck access and site fire flow design
- City of Redlands Water District: Connection to water systems, Connection to wastewater system
- California Department of Fish and Wildlife (CDFW): Review of CDFW drainage features occurring on Project site
- Southern California Edison Company (SCE) and Southern California Gas Company (SoCalGas): Connection of electricity and natural gas service

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Yes. Please refer to Checklist Section 3.17.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (See Public Resources Code Section 21083.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of the 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 in 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 "potentially significant unless mitigated" 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 potentially 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.

Signature:  _____ Date: April 18, 2023

Name and Title: Sean Reilly, Principal Planner

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3) (D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

3.1 AESTHETICS

Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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. In non-urbanized areas, substantially degrade the existing visual character or quality of public views? (Public views are those that are experienced from 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?

Less than Significant Impact

Discussion of Effects: Scenic resources and vistas in the City of Redlands consist of the scenic corridors and views to and from open spaces, canyonlands, hillsides, groves, historic districts and resources, and the San Bernardino Mountains to the north.

While the Project site was once occupied by an orchard, the existing vegetation of the site consists of grasses, weeds, and brush. The Project site is bounded on the north by the Santa Ana River and to the south by single-family residential neighborhoods. A public park exists to the east of the Project site with a shooting range to the northeast. Texas Street bounds the Project site to the west, followed by agricultural lands. The Project site is relatively level with no topographical features existing on the site. This provides a distant view of the San Bernardino Mountains to the north.

The proposed Project would result in the construction of 35 single-family dwellings. The residential units proposed for the Project would be no taller than two-stories in height, which would be below the maximum building height of two-and-a-half stories or 35 feet tall allowed under the R-E and A-1 zoning designations. Although the construction of these homes would partially obscure the view of the San Bernardino Mountains from the Project site itself, views of the San Bernardino Mountains would still exist from nearby public access points, including Texas Street to the west of the Project site, Israel Beal Park to the east, and the proposed and existing open spaces on the Project site.

The proposed Project would have a **less than significant impact** regarding scenic vistas. No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: According to the California Department of Transportation (Caltrans),[5] portions of Interstate 210 (I-210) between Redlands and Highland, and Interstate 10 (I-10) at its junction with I-210 approximately 0.5 mile west of the Project site are considered Eligible State Scenic Highways; however, neither of these highways are officially designated as State Scenic Highways, presumably due to their views of the San Bernardino Mountains to the north and east. Although the Project site is within the viewshed of the section of I-210 that is eligible for designation as a State Scenic Highway, the Project site is only partially visible from the portion of I-210 that crosses the Santa Ana River Wash. The San Bernardino Mountains dominate views in this section of I-210, with the visible portion of the Project site representing a very small portion of the overall panorama.

There are existing visual obstructions between the Project site and the closest eligible section of I-210, including citrus groves and a small berm adjacent to the eastern side of the highway that is planted with a row of trees, which preclude any views to the Project site while allowing views to the San Bernardino Mountains in the distance. Given that the Project site is not visible from most of the eligible sections of I-210 and the Project would not exceed the 35-foot building height limit that applies to the R-E and A-1 zones, the Project would not damage scenic resources within a State Scenic Highway. Therefore, impacts to scenic resources within a State Scenic Highway viewshed would be **less than significant**. No mitigation is required.

c. In non-urbanized areas, 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 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?

Less than Significant Impact

Discussion of Effects: The Project site is located on the edge of an urban neighborhood within the City of Redlands. Although the Project site is bordered by undeveloped land to the north and agricultural uses to the west, the proposed Project can be seen as an extension of the urban neighborhood to the south and east. In addition, as discussed above in Threshold 3.1(b), public views from publicly accessible vantage points, including Texas Street, Israel Beal Park, and the surrounding open spaces would not be substantially degraded as a result of the proposed Project actions.

The construction phase of the Project would introduce the use of machinery such as excavators and bulldozers and the presence of the construction equipment, as well as the construction activities, would temporarily alter the visual character of the Project site. Construction staging areas, including earth stockpiling, storage of equipment and supplies, and related activities would contribute to a disturbed site, which could be perceived by some viewers as a potential visual impact. Since construction activities would

[5] California Department of Transportation (Caltrans). 2022. *California Scenic Highway Mapping System.* Website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/ (accessed November 10, 2022).

be temporary, they would not create a significant permanent impact on the visual character or quality of the Project site and its surroundings.

Upon completion of the Project, public views of the Project site along Texas Street would include streetscape landscaping, Streets A, B, and C, and single-family dwellings, which would be developed to a similar mass, color, and height as surrounding existing residential uses. Public views of the Project site from Israel Beal Park and Riverview Drive to the east would change to be similar to the views of the existing residential communities to the south. The proposed recreation lawn, children's play area, and water quality basin at the northern end of the Project site would be visible from the publicly accessible open space to the north. The landscape frontage along Texas Street would provide a visual buffer that would allow for an aesthetically pleasing transition to the development within the Project site. On the Project site, along the northeastern border, open space occupied by trees and vegetation would be developed, providing a transitional view from a natural setting to an urbanized setting associated with the development on the Project site. The proposed Project would result in a change in the visual character of the site; however, such changes would not be out of line with the existing pattern of land uses surrounding the Project site. For these reasons, implementation of the proposed Project would not generate a substantial degradation of the existing visual character or quality of public views of the site and its surroundings.

The Project site would be developed on a site that is designated as *Very-Low Density Residential* land use pursuant to the City's General Plan and zoned as *A-1 Agricultural District* pursuant to the City's Zoning Code. Although the A-1 zoning district states that no more than two dwelling units are allowed on each parcel of five acres or more, Senate Bill 330 (SB 330) allows the residential density supported by the General Plan without a zone change. The General Plan also designates the Project site for *Very Low Density Residential* uses, which allows for the development of detached single-family dwellings at densities up to 2.7 dwelling units per acre (du/ac) on slopes of up to 15 percent and 0.4 du/ac on slopes between 15–30 percent. The Applicant is proposing to develop the site utilizing the City's R-E (Estate Residential) development standards, which would result in a density of 2.38 du/ac and would not exceed the density limit of *Very Low Density Residential* as established in the General Plan and pursuant to SB 330 would be allowable under the A-1 zoning designation. The residential units proposed for the Project would be no taller than two-stories in height, which would be under the maximum allowable building height of two-and-a-half stories or 35 feet tall, pursuant to the R-E and A-1 zoning designations.

Pertaining to development of fences, landscaping and walls on the Project site, the Applicant would develop such features in compliance with Chapter 18.168 of the Redlands Zoning Code. The proposed Project would be designed to be consistent with surrounding existing neighborhoods in the vicinity of the Project site. The housing on the site would include three design styles, including Spanish, cottage, and modern seaside architectural styles. Colored architectural exhibits of the proposed Project are shown in **Figure 6** in the Project Description. These design elements would be complementary of the surrounding visual character of the area and would be consistent with design guidelines in accordance with the City's General Plan. Therefore, impacts to the visual character or quality of the Project site and its surroundings would be **less than significant.** No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: Currently, nighttime lighting is produced by surrounding residential development, street lighting, and vehicles on adjacent roadways. Although the Project site is bordered by undeveloped land to the north and agricultural uses to the west, the proposed Project actions can be seen as an extension of the existing neighborhood to the south and east. The proposed Project would add residential uses and vehicle trips that would incrementally increase ambient nighttime illumination in the area. The proposed Project would incorporate street and pedestrian lighting at entrances and exits to the neighborhood, street lights, and lighting on individual residential units.

All lighting associated with the Project would be shielded such that it would minimize light spillage onto adjacent properties. Through compliance with City zoning and municipal code regulations, lighting would not substantially affect daytime or nighttime views in the Project vicinity.

Glare also can be produced during the daytime and is usually associated with reflective building materials, such as glass, stainless steel, aluminum, and photovoltaic panels. Building materials for the proposed residential development would generally consist of stucco facades, and wood or stone siding. Glass windows would be incorporated into the new home design to be consistent with the architectural style of the surrounding development in accordance with development Standards established for the residential land use and zoning designations of the City of Redlands. On January 1, 2020, the California Solar Mandate went into effect requiring all new residential development (single-family and multi-family development) up to three stories in height to install an individual solar panel system for each residential unit. The residential units developed on the proposed Project site would include rooftop photovoltaic panels that would be incorporated as part of the Project design. In the past, such photovoltaic panels were a source of glare that could potentially affect daytime views, especially for aircraft flying in such areas. However, solar panel design has advanced in recent years to increase the amount of sunlight that is absorbed and converted to electricity, thereby decreasing the amount of solar energy that is reflected. In general, since the whole concept of efficient solar power is to absorb as much light as possible, while reflecting as little light as possible, standard solar panels produce less glare and reflection than standard window glass. Technically, solar panels use “high transmission, low iron glass” which absorbs more light, producing a smaller amount of glare and reflectance than normal glass does.[6] Based on this, installation of rooftop solar photovoltaic panels on the Project’s residential units would not increase glare in the area.

The Project site perimeter would be developed with drought-tolerant street trees, decorative landscaping, architectural features, and other streetscape design techniques to minimize light spillage onto neighboring areas. Additionally, the proposed Project would not utilize high gloss or reflective materials that would cause glare or reflection or generate excessive light. Therefore, impacts from new sources of substantial light or glare would be **less than significant**. No mitigation is required.

[6] Colton, Rodger D., Sheehan Fisher, and Colton Public Finance and General Economics. 2014. Assessing Rooftop Solar PV Glare in Dense Urban Residential Neighborhoods: Determining Whether and How Much of a Problem. November 16, 2014. Website: https://ww5.cityofpasadena.net/planning/wp-content/uploads/sites/56/2017/10/Colton-Roger-Assessing-Rooftop-Solar-PV-Glare-in-Dense-Urban-Residential-Neighborhoods.pdf (accessed December 2022).

3.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the 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 the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less than Significant Impact

Discussion of Effects: The Project site is currently fallow. A review of historic photographs in Google Earth[7], indicates that the Project site was operated as an orchard as recently as 2003. However, the irrigation lines have since been removed and the site is no longer being cultivated.

In order to determine whether the Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, a Department of Conservation (DOC) Land Evaluation and Site Assessment (LESA) Model was prepared for the Project (**Appendix A: LESA Model Results**). LESA is a term used to define an approach for rating the relative quality of land resources based upon specific measurable features. The California Agricultural LESA Model is designed to make determinations of the potential significance of a project's conversion of agricultural lands during the Initial Study phase of the CEQA review

[7] Google Earth Pro version 7.3.6.9285. (December 2000-September 2022). 34°05'17.17" N, 117°11'22.90"W, 4380 feet eye altitude.

process. The California LESA Model is composed of the Land Evaluation (LE) portion, which measures soil resource quality, and the Site Assessment (SA) portion, which evaluates other factors that contribute to a site's agricultural importance, such as parcel size, water availability and surrounding agricultural and protected lands. A single LESA score is generated for a given project after all of the individual LESA factors have been scored and weighted. The Final LESA Score is based on a scale of 100 points, with a given project being capable of deriving a maximum of 50 points from the LE factors and 50 points from the SA factors. Scoring thresholds are based upon both the total LESA score as well as the component LE and SA subscores. In this manner the scoring thresholds are dependent upon attainment of a minimum score for the LE and SA subscores so that a single threshold is not the result of heavily skewed subscores (i.e., a site with a very high LE score, but a very low SA score, or vice versa). The LESA Model Thresholds are as follows:

- 0 to 39 Points – Not Considered Significant
- 40 to 59 Points – Considered Significant only if LE and SA subscores are each greater than or equal to 20 points
- 60 to 79 Points – Considered Significant unless either LE or SA subscore is less than 20 points
- 80 to 100 Points – Considered Significant

The Final LESA Score for the proposed Project was calculated at 57.25 total points, with an LE subscore of 40 points and an SA subscore of 17.25 points. Based on the Final LESA Score and the subscores, the LESA Model indicates that impacts pertaining to the conversion of the Project site to a non-agricultural use would be "not considered significant." Additionally, the Project site is classified as "Grazing Land" by the DOC (see **Figure 7, Farmland Mapping and Monitoring Program Designation**), which is not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). Due to the fact that the Project is "not considered significant" based on the LESA model and would not convert Farmland to non-agricultural uses, impacts would be **less than significant.** No mitigation measures are required.

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

No Impact

Discussion of Effects: The Project site's current zoning designation is *A-1 Agricultural District*. The purpose of the A-1 zone is to provide for the proper utilization of such lands best suited for agricultural purposes, and to prevent the encroachment of incompatible uses. Under this zoning designation, single-family residences are allowed; however, no more than two dwelling units are allowed on each parcel of five acres or more. Only one dwelling unit per lot is permitted on parcels that are less than five acres in area, provided that the lot contains dimensions and an area equivalent to the closest single-family residential zone.[8] The City's General Plan currently designates the Project site as *Very Low Density Residential*, which allows for the development of detached single-family dwellings at densities up to 2.7 dwelling units per acre (du/ac) on slopes of up to 15 percent and 0.4 du/ac on slopes between 15–30 percent. The proposed Project would result in a density of 2.38 du/ac on slopes that are less than 15 percent and, therefore, would not exceed the density limit of *Very Low Density Residential* as established in the General Plan.

[8] City of Redlands Municipal Code. Section 18.20.030. Urban residential or UR zone.

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LSA

Project Site

Important Farmland Categories

G - Grazing Land

FIGURE 7

N

0 100 200

FEET

SOURCE: Google Imagery (2021)

Texas Street Residential Project

Farmland Mapping and Monitoring Program Designation

J:\CRX2201\GIS\Pro\Texas Street Residential Project\Texas Street Residential Project.aprx (12/13/2022)

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Senate Bill (SB) 330, also known as the Housing Crisis Act of 2019, was signed by the Governor on October 9, 2019, and prohibits local jurisdictions from enacting new laws that would have the effect of reducing the legal limit on new housing within their borders or delay new housing via administrative or other regulatory barriers. The proposed Project was submitted under an SB 330 preliminary application. Under California Government Code (CGC) 65589.5(j)(4), "…a proposed housing development project is not inconsistent with the applicable zoning standards and criteria, and shall not require a rezoning, if the housing development project is consistent with the objective general plan standards and criteria but the zoning for the project site is inconsistent with the general plan…" Because the Project is consistent with the General Plan land use designation of *Very Low Density Residential*, pursuant to SB 330, it is not inconsistent with the existing zoning designation. The Project site is not under a Williamson Act Contract.[9] Development of the Project site would, therefore, not conflict with existing agricultural zoning or a Williamson Act contract. **No impact** associated with a conflict with existing agricultural zoning or a Williamson Act contract would occur. No mitigation is required.

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))?

No Impact

Discussion of Effects: The General Plan land use designation for the Project site is *Very Low Density Residential* and the zoning designation is *A-1 Agricultural District*. The Project site is not zoned as forest land, timberland, or timberland zoned for Timberland Production. Therefore, the proposed Project would not conflict with land zoned for forest land or timberland. **No impact** associated with forest land or timberland would occur. No mitigation is required.

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

No Impact

Discussion of Effects: No forest land use occurs on the Project site; therefore, the Project would not result in the conversion of forest land to a non-forest use. **No impact** associated with the loss of forest land or the conversion of forest land to non-forest use would occur. No mitigation is required.

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?

Less Than Significant Impact

Discussion of Effects: The Project site is bordered by the Santa Ana River to the north, a public park to the east, a shooting range to the northeast, Texas Street and fallow agricultural land to the west, and existing single-family residential uses to the south. No changes to the existing environment other than those analyzed as part of the proposed Project would result in the conversion of agricultural uses to non-agricultural uses. Projects that are growth inducing (i.e., large residential subdivisions or commercial uses) that are developed on agricultural land, particularly agricultural land surrounded by other agricultural uses, are an example of projects that would influence the conversion of agricultural land to a non-

[9] City of Redlands. July 21, 2017. Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan, Chapter 3.2 Agricultural Resources. Figure 3.2-1: Farmland Classifications.

agricultural use. However, the fallow agricultural land to the west of the Project site is not under agricultural production and is already zoned for future non-agricultural development; the land west of the Project site is zoned as East Valley Specific Plan/Science Research Park (EV/SRP), which means the City anticipates that this parcel will eventually be developed for urban uses. Therefore, implementation of the proposed Project would not influence the conversion of agricultural uses to non-agricultural uses because adjacent agricultural land has already been designated for conversion to urban uses through the City's General Plan and zoning code. Impacts involving other changes in the environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses, would be **less than significant.** No mitigation measures are required.

3.3 AIR QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

To evaluate air pollutant emissions from the construction and operation of the Project, modelers conducted the California Emission Estimator Model (CalEEMod) analysis, which is the current air quality and land use emissions model recommended by the California Air Resources Board (ARB) for evaluating emissions from land use projects. Emissions from construction were based on the CalEEMod default for the construction phase scenario and anticipated opening date schedule. Emissions from operation of the proposed Project include vehicle emissions, area source emissions, and energy use emissions. The construction and operational emissions were then compared with the CEQA air quality significance thresholds from the South Coast Air Quality Management District (SCAQMD). A climate action plan service population matrix evaluation was conducted to determine whether or not the proposed Project would be consistent with the City of Redlands's Climate Action Plan.

The proposed Project is located in the City of Redlands, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD.

The SCAQMD, together with the California ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the site are the Redlands[10] and San Bernardino[11] Monitoring Stations, which monitor most air pollutant data, except for sulfur dioxide (SO_2), which were obtained from the Fontana station.[12] The air quality trends from these two stations are used to represent the ambient air quality in the vicinity of the Project site. The ambient air quality data monitored at these stations within the past three years are listed in **Table D: Ambient Air Quality Monitored in the Project Vicinity**.

[10] 500 N. Dearborn Street, Redlands, California 92374.
[11] 24302 4th Street, San Bernardino, California 92302.
[12] 14360 Arrow Highway, Fontana, California 92335.

Table D: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2019	2020	2021
Ozone (O_3) – Redlands Monitoring Station				
Maximum 1-hour concentration (ppm)		0.137	0.173	0.145
Number of days exceeded:	State: > 0.09 ppm	73	104	74
Maximum 8-hour concentration (ppm)		0.118	0.137	0.120
Number of days exceeded:	State: > 0.07 ppm	111	145	118
	Federal: > 0.07 ppm	109	141	114
Coarse Particulates (PM_{10}) – Redlands Monitoring Station				
Maximum 24-hour concentration (µg/m^3)		42.4	82.9	41.8
Number of days exceeded:	State: > 50 µg/m^3	0	2	0
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		21.8	24.7	23.7
Exceeded for the year:	State: > 20 µg/m^3	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$) – San Bernardino Monitoring Station				
Maximum 24-hour concentration (µg/m^3)		60.5	56.6	57.9
Number of days exceeded:	Federal: > 35 µg/m^3	1	2	1
Annual arithmetic average concentration (µg/m^3)		ND	ND	11.9
Exceeded for the year:	State: > 12 µg/m^3	ND	ND	No
	Federal: > 12 µg/m^3	ND	ND	No
Carbon Monoxide (CO) – San Bernardino Monitoring Station				
Maximum 1-hour concentration (ppm)		1.3	1.9	2.0
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.1	1.4	1.6
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Nitrogen Dioxide (NO_2) – San Bernardino Monitoring Station				
Maximum 1-hour concentration (ppm)		0.059	0.054	0.056
Number of days exceeded:	State: > 0.18 ppm	0	0	0
	Federal: > 0.10 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.014	0.014	0.015
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2) – Fontana Monitoring Station				
Maximum 24-hour concentration (ppm)		0.0009	0.0009	0.0009
Number of days exceeded:	State: > 0.04 ppm	0	0	0
Maximum 1-hour concentration (ppm)		0.0024	0.0025	0.005
Number of days exceeded:	State: > 0.25 ppm	0	0	0
	Federal: > 0.075 ppm	0	0	0

Source: EPA. 2022. Air Data Air Quality Monitors. Website: http://www.epa.gov/airdata/ad_maps.html (accessed December 2022).
µg/m^3 = micrograms per cubic meter ND = no data
EPA = United States Environmental Protection Agency ppm = parts per million

As shown in **Table D**, the State 1-hour O_3 standard was exceeded 73 to 104 times per year in the past 3 years. The federal 8-hour O_3 standard was exceeded 109 to 141 days per year in the past 3 years, and the State 8-hour O_3 standard was exceeded 111 to 145 times per year in the past 3 years. The State 24-hour particulate matter less than 10 microns in size (PM_{10}) standard were exceeded at least twice in the past 3

years and the federal 24-hour particulate matter less than 2.5 microns in size ($PM_{2.5}$) standard were exceeded 1 to 2 times per year in the past three years.

The ARB coordinates and oversees both State and federal air pollution control programs in the State and oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the United States Environmental Protection Agency (EPA) and local air quality districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the Ambient Air Quality Standards (AAQS).

Attainment areas may be:

- Attainment/unclassified ("unclassifiable" in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status;
- Attainment/maintenance (National Ambient Air Quality Standards [NAAQS] only), which violated an NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially re-designated as attainment by the EPA with a maintenance State Implementation Plan (SIP); or
- Attainment (usually only for California Ambient Air Quality Standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

Additional restrictions are imposed on nonattainment areas as required by the EPA. The air quality data collected from monitoring stations are also used to monitor progress in attaining air quality standards. **Table E: Attainment Status of Criteria Pollutants in the South Coast Air Basin** lists the attainment status for the criteria pollutants in the Basin.

Table E: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	N/A
O_3 8-hour	Nonattainment	Extreme Nonattainment[1]
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Unclassified/Attainment (1-hour) Attainment/Maintenance (Annual)
SO_2	Attainment	Unclassified/Attainment
Lead	Attainment[2]	Unclassified/Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: ARB. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed December 2022).

[1] Area has a design value of 0.175 ppm and above.

[2] Except in Los Angeles County.

ARB = California Air Resources Board
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million
SO_2 = sulfur dioxide

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

Less than Significant Impact

Discussion of Effects: As discussed above, the Project site is in the South Coast Air Basin, which is managed by the SCAQMD. The EPA has designated the status of the Basin as nonattainment for O_3, PM_{10}, and $PM_{2.5}$ under the CAAQS. Under the NAAQS, the EPA has designated the status of the Basin as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. The applicable AQMP is the SCAQMD Final 2016 AQMP. The 2016 AQMP incorporates local General Plan land use assumptions and regional growth projections developed by SCAG to estimate stationary and mobile source emissions associated with projected population and planned land uses. If a new land use is consistent with the local General Plan and the regional growth projections adopted in the 2016 AQMP, then the added emissions are considered to have been evaluated, are contained in the 2016 AQMP, and would not conflict with or obstruct implementation of the regional 2016 AQMP.

The proposed Project is not considered a project of statewide, regional, or area-wide significance (e.g., large-scale projects such as airports, electrical generating facilities, petroleum and gas refineries, residential development of more than 500 dwelling units, or shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space) as defined in the California Code of Regulations.[13]

As previously noted, the proposed Project includes the development of 35 new single-family homes, the extension of Texas Street to the northern end of the Project site, the construction of three new public streets on the Project site, a water quality basin, a recreation lawn, and a play area. The Project would also construct an extension of the Santa Ana River Trail through the northern portion of the Project site. The City's General Plan currently designates the Project site as *Very Low Density Residential*, which allows for the development of detached single-family dwellings at densities up to 2.7 dwelling units per acre (du/ac) on slopes of up to 15 percent. Since the proposed Project is consistent with the City's General Plan land use designation for single family residential[14] and would not generate any increase in population beyond that which has already been planned for by SCAG and the City, the proposed Project is consistent with the 2016 AQMP. Impacts would be **less than significant,** and no mitigation is required.

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?

Less than Significant Impact

Discussion of Effects: The Basin is currently designated nonattainment for the federal and State standards for O_3 and $PM_{2.5}$. In addition, the Basin is in nonattainment for the PM_{10} standard. The Basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing

[13] California Code of Regulations Title 14, Division 6, Chapter 3, Article 13, §15206(b)).

[14] City of Redlands. 2020. Land Use Zoning. Website: https://www.cityofredlands.org/zoning (accessed in December 2022).

cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary. The following analysis assesses the potential project-level air quality impacts associated with construction and operation of the proposed Project.

The SCAQMD's *CEQA Air Quality Handbook* establishes suggested significance thresholds based on the volume of pollution emitted. According to the Handbook, any project in the Basin with daily emissions that exceed any of the following thresholds should be considered as having an individually and cumulatively significant air quality impact:

- 55 lbs. per day of VOC (volatile organic compounds) (75 lbs./day during construction);
- 55 lbs. per day of NOx (oxides of nitrogen) (100 lbs./day during construction);
- 550 lbs. per day of CO (carbon monoxide) (550 lbs./day during construction);
- 150 lbs. per day of PM_{10} (particulate matter with a diameter of 10 microns or smaller) (150 lbs./day during construction);
- 55 lbs. per day of $PM_{2.5}$ (particulate matter with a diameter of 2.5 microns or smaller) (55 lbs./day during construction); and
- 150 lbs. per day of SOx (oxides of sulfur) (150 lbs. /day during construction).

The most recent version of the CalEEMod (Version 2022.1) was used to calculate construction and operation emissions from development of the proposed Project (**Appendix B**).

No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the SCAQMD project-specific thresholds would also have a cumulatively considerable contribution to a significant cumulative impact.

***Construction Emissions*:** During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by site leveling, trenching, paving, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_X, VOC, directly-emitted $PM_{2.5}$ or PM_{10}, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. Construction emissions were estimated for the Project using CalEEMod Version 2022.1, consistent with SCAQMD recommendations for the proposed Project. For purposes of air quality analysis, it is assumed that construction would happen in three phases and would include the following construction activities: site preparation, grading, building construction, paving, and architectural coatings (painting). Construction of the proposed project is anticipated to begin in April 2024 and be completed in May 2025, for a total of 13 months. Phase 1 would include the construction of 10 homes (September 2024 to January 2025), Phase 2 would construct 11 homes (November 2024 to March 2025), and Phase 3 would

construct 14 homes (January 2025 to May 2025). The maximum daily disturbance on any day during construction is 5.00 acres during the grading phase. The net Project build area is 14.7 acres for the open space and proposed homes. CalEEMod modeling and defaults are assumed for the construction activities, off-road equipment, on-road construction fleet mix and trip lengths. This analysis also assumes the use of Tier 2 construction equipment. Fugitive dust emission control measure such as watering the exposed surface area would occur at least two times daily in accordance with the SCAQMD Rule 403. The proposed Project phases would begin construction in separate months to meet the proposed goal of operational use in 2025.

Table F: Short-Term Regional Construction Emissions identifies the maximum daily emissions associated with construction activities during each phase and indicates that no criteria pollutant emission thresholds would be exceeded from construction of the proposed Project.

Table F: Short-Term Regional Construction Emissions

Construction Phase	Maximum Daily Regional Pollutant Emissions (lbs/day)							
	VOCs	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Site Preparation	1.2	39.9	27.8	<0.1	7.9	1.1	4.0	1.0
Grading	1.4	48.9	37.0	<0.1	3.9	1.4	1.5	1.2
Building Construction	2.1	57.3	45.3	0.1	0.6	2.1	0.2	1.8
Paving	0.7	13.4	11.9	<0.1	0.2	0.6	<0.1	0.5
Architectural Coating	2.9	1.1	1.6	<0.1	0.1	0.1	<0.1	0.1
Peak Daily Emissions	**5.0**	**58.4**	**46.9**	**0.1**	**9.0**		**5.0**	
SCAQMD Thresholds	**75.00**	**100.00**	**550.00**	**150.00**	**150.00**		**55.00**	
Significant?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA (December 2022).

Note: Numbers may appear to not sum correctly due to rounding. Building construction emissions represent the total from the 3 different construction phases. Peak emissions may occur due to overlap of building construction, architectural coating, and paving activities.

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = fine particulate matter less than 2.5 microns in size
PM_{10} = coarse particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in **Table F**, construction emissions associated with the Project would not exceed the SCAQMD's thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, and PM_{10} emissions. Therefore, construction of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State AAQS. Impacts would be **less than significant,** and no mitigation is required.

Operational Emissions: Long-term air pollutant emissions associated with operation of the proposed Project include emissions from area, energy, and mobile sources. Area sources include architectural coatings, consumer products, and landscaping. Energy source emissions result from activities in buildings

for which electricity and natural gas are used. Mobile-source emissions are from vehicle trips associated with operation of the Project.

Long-term operational emissions associated with the proposed Project were compiled. Trip generation rates used in CalEEMod for the proposed Project were based on the Project's trip generation estimates. The proposed Project is estimated to generate approximately 330 average daily trips (ADT). The Project's projected operational emissions of criteria pollutants from Area, Energy, and Mobile sources are shown in **Table G: Project Operational Emissions**.

Table G: Project Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Project Area Sources	11.1	0.8	19.8	0.1	2.5	2.5
Project Energy Sources	<0.1	0.3	0.1	<0.1	<0.1	<0.1
Project Mobile Sources	1.3	1.1	9.2	<0.1	0.7	0.1
Total Project Emissions	**12.4**	**2.2**	**29.1**	**0.1**	**3.2**	**2.6**
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (December 2022).

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compounds

The results shown in **Table G** indicate the proposed Project would not exceed the significance criteria for daily VOC, NOx, CO, SOx, PM_{10}, or $PM_{2.5}$ emissions. **Table G** also shows the Project's net increase in criteria pollutants would be minimal and not exceed the SCAQMD's significance criteria. In addition, the proposed Project would be consistent with regulatory measures such as Title 13-Section 2449 of the California Code of Regulations; and CalRecycle/Green Building Program regulations would also be implemented for the proposed Project. Through compliance with these regulations as part of applicable policy designed to reduce emissions, the proposed Project would not exceed any SCAQMD threshold or contribute to a substantial increase in regional air emissions. Therefore, operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State AAQS. Impacts would be **less than significant,** and no mitigation is required.

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

Less Than Significant Impact

Discussion of Effects: Localized Significance Thresholds (LSTs) are developed based upon the size or total area of the emissions source from the construction equipment activities, the ambient air quality levels in each Source Receptor Area (SRA) in which the emission source is located, and the distance to the sensitive receptor. The nearest residential homes (i.e., single-family residences) are located approximately 25 feet south of the Project site. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard,

and are developed based on the ambient concentrations of that pollutant for each SRA. As identified above, for the proposed Project, the appropriate SRA for the LST is SRA 35 (East San Bernardino Valley).

LSTs only apply to CO, nitrogen dioxide (NO_2), PM_{10}, and $PM_{2.5}$ emissions during construction and operation at the discretion of the lead agency. Screening-level analysis of LSTs is only recommended for construction activities at project sites that are approximately 5 acres or less. The Project site has a construction surface area of 14.7 acres, however; the maximum daily disturbance to the Project site on any given day during the grading phase would be 5 acres. Therefore, screening-level analysis of LSTs for 5 acres was used for construction and operational activities.

Localized significance is determined by comparing the on-site-only portion of the construction and operational emissions with emissions thresholds derived by the SCAQMD to ensure pollutant concentrations at nearby sensitive receptors would be below the LST threshold established by the SCAQMD. **Table H: Project Localized Construction Emissions** and **Table I: Project Localized Operational Emissions** indicate the construction and operational LST analyses of the CalEEMod results.

Table H: Project Localized Construction Emissions

Source	Pollutant Emissions			
	NO_X (lbs/day)	**CO (lbs/day)**	**PM_{10} (lbs/day)**	**$PM_{2.5}$ (lbs/day)**
On-Site Emissions	57.3	45.3	9.0	5.0
LST Thresholds	270.0	2,075.0	14.0	9.0
Significant?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (December 2022).
SRA 35, based on 5-acre construction disturbance daily area.

$\mu g/m^3$ =microgram per cubic meter air
CO = carbon monoxide
LST = localized significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm =parts per million
SRA = source receptor area

Table I: Project Localized Operational Emissions

Source	Pollutant Emissions			
	NO_X (lbs/day)	**CO (lbs/day)**	**PM_{10} (lbs/day)**	**$PM_{2.5}$ (lbs/day)**
On-Site Emissions	<1.0	1.0	<1.0	<1.0
LST Thresholds	270.0	2,075.0	4.0	3.0
Significant?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (December 2022).
SRA 35, based on 5-acre operational daily area

$\mu g/m^3$ =microgram per cubic meter air
CO = carbon monoxide
LST = localized significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm =parts per million
SRA = source receptor area

As detailed above in **Tables H and I**, emissions would not exceed LST thresholds. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations.

Although project-level NOx emissions would generate ozone precursor emissions, these levels would not exceed any established SCAQMD daily emission thresholds. The Project's peak operation NOx emissions amount to approximately 57.3 pounds per day. Due to the modest size of the proposed Project, the level of emissions is not sufficiently high to use a regional modeling program to correlate health effects on a basin-wide level. On a regional scale, the quantity of emissions from the Project is incrementally minor. Because the SCAQMD has not identified an accurate method to quantify health impacts from small projects; and due to the size of the Project, it is speculative to assign any specific health effects to small project-related emissions. Therefore, impacts related to substantial pollutant concentrations for construction and operation would **be less than significant**. No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: Other emissions, including nuisance odors, may occur during the operation of diesel-fueled equipment during construction of the Project. Heavy-duty equipment on the Project site during construction would emit odors, primarily from equipment exhaust. However, any objectionable odors would cease to occur after construction is completed. No other sources of objectionable odors have been identified for the proposed Project, and no mitigation measures are required.

SCAQMD Rules 402, 403, and 431.2, as well as Title 13, Section 2449(d)(d) of the California Code of Regulations (CCR), require the Applicant to include implementation of standard control measures for fugitive dust and diesel equipment emissions. Additionally, operators of off-road vehicles (i.e., self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on road) are required to limit vehicle idling to five minutes or less; register and label vehicles in accordance with the ARB Diesel Off-Road Online Reporting System; restrict the inclusion of older vehicles into fleets; and retire, replace, or repower older engines or install Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). Additionally, SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property." Adherence to these rules is standard regulatory policy for all development and would reduce impacts from other emissions such as nuisance odors to **less than significant** levels. No mitigation is required.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c. Have a substantial adverse effect on 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?	☐	☐	☐	☒

The information and analysis in this section have been prepared based on the Biological Resources Assessment for the proposed Project located within Assessor Parcel Number 167-041-01 in the City of Redlands, San Bernardino County, California, prepared by ELMT Consulting, Inc. (ELMT) in March 2023 (ELMT 2023)[15] (see **Appendix C-1: Biological Resources Assessment**) and the Delineation of State and

[15] ELMT Consulting, Inc. 2023. *Texas Street Project, City of Redlands, San Bernardino County, California (Assessor Parcel Number 0167-041-01) Biological Resources Assessment*. June 2021, Updated March 2023.

Federal Jurisdictional Waters report prepared by ELMT in December 2021 (ELMT 2021)[16] (**Appendix C-2: Jurisdictional Delineation Report**).

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?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effects: The Project site is currently undeveloped and generally rectangular in shape. Conditions on the site generally consist of disturbed vegetation, scattered trees, and power utility poles. The northernmost portion of the Project site slopes into the Santa Ana River wash, which generally consists of river sediment and brush vegetation.

The Biological Resources Assessment included in **Appendix C-1** included a literature review and records search for special-status biological resources potentially occurring on or within the vicinity of the Project site and a habitat assessment and field investigation conducted on June 9, 2021, to evaluate the condition of the habitat present within the Project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the Project site were determined through a query of the California Department of Fish and Wildlife's (CDFW) QuickView Tool in the Biogeographical Information and Observation System (BIOS), California Natural Diversity Database (CNDDB) Rarefind 5, and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California. The only sensitive wildlife species determined to have a moderate or high potential to occur on the Project site is the San Bernardino kangaroo rat (*Dipodomys meriamii*). Sensitive plant species determined to have a moderate or high potential to occur on the Project site include the Santa Ana River woolly star (*Eriastrum densifolium* ssp. *sanctorum*) and the slender-horned spineflower (*Dodecahema leptoceras*).

No special-status plant or wildlife species, or special-status plant communities were observed within the proposed limits of disturbance on the Project site (i.e., the generally flat upland area where the project improvements are proposed) during the field investigation. The portion of the Project site within the proposed limits of disturbance consists of existing disturbed and developed areas that have been subject to a high level of anthropogenic disturbances that have eliminated the natural plant communities that once occurred on site. As such, the majority of the Project site consists of nonnative, ruderal/weedy plant species. Plant species identified on the Project site include primarily nonnative and early successional/ ruderal plant species, including red brome (*Bromus rubens*), ripgut (*Bromus diandrus*), Mediterranean mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and elderberry (*Sambucus nigra*). The Project site provides minimal foraging and cover habitat for wildlife species adapted to a high degree of anthropogenic disturbance. Avian species observed during the field investigation include northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Cassin's kingbird (*Tyrannus vociferans*) and lesser goldfinch (*Spinus psaltria*). The only reptilian species observed during the field investigation was western side-blotched lizard (*Uta stansburiana elegans*). The only mammalian species observed during the field investigation was pocket gopher (*Thomomys* sp.). No fish or amphibian species were observed during the field investigation.

[16] ELMT Consulting, Inc. 2021. *Texas Street Project, City of Redlands, San Bernardino County, California (Assessor Parcel Number 0167-041-01) Delineation of State and Federal Jurisdictional Waters*. December.

Based on regional significance and listing status, the potential occurrence of burrowing owl (*Athene cunicularia*) was investigated as part of the Biological Resources Assessment. No burrowing owls or recent signs (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. No suitable burrows were observed during the field investigation..

Although no special-status species or plant communities were observed on the portion of the Project site within the proposed limits of disturbance, one sensitive wildlife species (San Bernardino kangaroo rat), one sensitive plant species (Santa Ana River woolly star), and one sensitive plant community (Riversidian Alluvial Fan Sage Scrub, or RAFSS) were observed in the northern portion of the parcel within the Santa Ana riverbed, outside the proposed limits of disturbance. Because these sensitive biological resources occur outside the portion of the Project site where development is proposed, they are not anticipated to be adversely affected by the proposed Project's actions. In addition, potential impacts to the San Bernardino kangaroo rat would be further reduced with implementation of **Mitigation Measure BIO-1**, which requires that a protocol focused trapping study for the San Bernardino kangaroo rat be conducted prior to ground-disturbing activities in order to determine the presence/absence of the species within the Project area and adjacent slope.

Although the Biological Resources Assessment determined that the Project site does not have the potential to support burrowing owl, the assessment recommended pre-construction surveys for burrowing owls be conducted as described in **Mitigation Measure BIO-2** prior to any ground-disturbing activities in order to reduce potential impacts to burrowing owls that may be present on or around the Project site.

Mitigation Measure BIO-1 To ensure no impacts to San Bernardino kangaroo rat (SBKR) occur from Project implementation, the following measures shall be implemented prior to ground-disturbing activities:

1. A protocol focused trapping study for SBKR shall be conducted prior to ground-disturbing activities to determine the presence/absence of SBKR within the Project area and adjacent slope, consistent with the United States Fish and Wildlife Service's (USFWS) approved Survey Protocol for Determining Presence of San Bernardino Kangaroo Rats and the California Department of Fish and Wildlife's (CDFW) Memorandum of Understanding.

    a. If no SBKRs are trapped on-site during the trapping study, the following avoidance and minimization measures shall be conducted prior to ground-disturbing activities.

        i. The limits of the Project disturbance shall be clearly marked with flagging or similar means. All mechanized equipment shall remain within the designated limits of disturbance. Construction personnel shall strictly limit their activities, vehicles, equipment, and construction materials to the designated work area.

ii. All contractors and personnel involved in the construction shall receive environmental awareness training. The training shall be developed in consultation with a biological monitor and consist of an on-site or training center presentation with supporting materials (i.e., photographs, pamphlets, slides). The training shall provide information about federally/State-listed species, special-status species, and sensitive habitats occurring within the vicinity of the proposed limits of disturbance (i.e., SBKR, and Riversidian Alluvial Fan Sage Scrub [RAFSS]).

iii. Immediately following the negative trapping results, a SBKR exclusion fence shall be installed around the proposed limits of disturbance. The exclusion fence shall be constructed to the following specification.

iv. An approximately 4-foot-tall fence with 2 feet above ground and 2 feet below ground shall be installed around the entire disturbance area. The erect portion of the fencing shall be covered in a material that cannot be climbed or chewed through by SBKR.

v. A qualified biological monitor, with SBKR experience, shall be present during initial clearing and grubbing activities and on a regular basis to ensure the exclusion fence is effective. The biological monitor shall have the authority to halt any and all construction activities.

vi. The biological monitor shall supervise the installation of the SBKR exclusion fence around the proposed limits of disturbance. The biological monitor shall ensure that no burrows are impacted by fence installation, by avoiding burrows within 5 meters, if any. The wildlife agencies will be consulted if there are burrows within 5 meters of the fence to avoid take.

vii. The biological monitor shall inspect the exclusion fence before leaving the job site in the evening and repair any opening in the fencing as necessary to exclude SBKR.

viii. The biological monitor shall supervise the removal of the SBKR exclusion fence to ensure no SBKR burrows, if any, are impacted by fence removal.

ix. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime work is necessary, lighting shall be shielded away from the Santa Ana River floodplain

north of the proposed limits of disturbance. Fixtures shall be shielded to downcast below the horizontal plane of the fixture height and mounted as low as possible.

x. All permanent lighting fixtures within the completed development shall be shielded and directed away from the RAFSS habitat on the Santa Ana River floodplain north of the proposed limits of disturbance.

b. If SBKR are trapped within the proposed limits of disturbance, Incidental Take Permits (ITPs) with the USFWS (Section 10 or Habitat Conservation Plan) and CDFW (Section 2081) shall be prepared and processed to allow for "take" authorization for SBKR and to mitigate for impacts to the species and loss of habitat. If SBKR are determined to be present, project construction shall not occur until "take" authorization and mitigation approval is received from the wildlife agencies.

Mitigation Measure BIO-2 Pre-construction surveys for burrowing owls on the Project site and in the surrounding area shall be conducted by a qualified biologist no more than 14 days prior to initiation of Project activities in accordance with guidelines identified by the CDFW 2012 Staff Report on Burrowing Owl Mitigation (State of California Natural Resources Agency, Department of Fish and Game, March 2012). If Project activities are delayed for more than 30 days (including the restarting of activities after Project/ground-disturbing delays of 30 days or more), additional surveys shall be completed, including but not limited to a take avoidance survey within 24 hours of ground disturbance.

If burrowing owl(s) are not observed on site during any pre-construction surveys, a letter shall be prepared by the qualified biologist documenting the results of the survey.

If burrowing owls are observed on the Project site during the pre-construction survey, a burrowing owl relocation plan shall be prepared by the Applicant and approved by the CDFW.

While no breeding or nesting birds or raptors were observed within the Project site and surrounding vicinity, the habitat assessment and field assessment were conducted outside the typical breeding season. The vegetation on the Project site could provide nesting habitat for birds protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Construction of the proposed Project is anticipated to occur during the bird breeding season (typically February 1 through August 31), which could result in ground-disturbing construction activities directly affecting birds protected by the MBTA and their nests through the removal of habitat on the Project site and indirectly through increased noise, vibration, and increased human activity. **Mitigation Measure BIO-3** requires that nesting bird pre-construction clearance surveys be conducted prior to any ground-disturbing activities.

Mitigation Measure BIO-3 Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey shall be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.

If construction occurs between February 1 and August 31, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground-disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey shall document a negative survey with a brief letter report indicating that no impacts to active avian nests would occur. If an active avian nest is discovered during the pre-construction clearance survey, the biologist shall establish protective buffers surrounding the nest site in which no disturbance activities shall occur until the nesting activity is completed and the nesting has either failed or the young have fledged. The size of the no-disturbance buffer shall be determined by the wildlife biologist and shall depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors shall be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the sensitivity of nest areas. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. As noted above, once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

With implementation of **Mitigation Measures BIO-1, BIO-2, and BIO-3**, the proposed Project would have a **less than significant** impact with mitigation incorporated on special-status species.

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, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact

Discussion of Effects: The Project site is bounded by the Santa Ana River Wash to the north. One sensitive plant community (RAFSS) was observed during the field assessment in the northern portion of the Project site within the Santa Ana riverbed, which is outside the proposed limits of disturbance. No development would occur in this portion of the Project site and, as such, the Santa Ana River Wash and RAFSS plant community are not anticipated to be adversely impacted by the proposed Project's actions.

No discernible drainage courses, inundated areas, or wetland features/obligate plant species that would be considered jurisdictional by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or the CDFW were observed within the Project site.

One erosional drainage feature was observed on the northwest boundary of the portion of the Project site within the proposed limits of disturbance. This drainage feature follows the slope that separates the area within the proposed limits of disturbance from the Santa Ana River Wash and drains into the Santa Ana River Wash north of the Project site. The Jurisdictional Delineation Report completed for the proposed Project determined that this drainage feature exhibits characteristics consistent with the RWQCB's methodology for identifying jurisdictional waters of the State and should be considered as such, but it did not qualify as waters of the United States. The drainage and associated RAFSS habitat also exhibited characteristics consistent with CDFW methodology for identifying a jurisdictional streambed and should be considered as such. As discussed previously, no development would occur in this portion of the Project site and as such, the drainage and associated RAFSS plant community are not anticipated to be adversely impacted by the proposed Project's actions. Impacts to riparian habitat or other sensitive natural communities would be **less than significant**.

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

No Impact

Discussion of Effects: As part of the Jurisdictional Delineation Report, the literature review of the Project site and the surrounding area did not identify any potentially jurisdictional features or wetlands present on the Project site. In addition, no jurisdictional drainages, stream courses, and/or other water features were identified on the Project site during the field assessment conducted in June 2021. As discussed above in Response 3.4(b), one erosional drainage feature was observed on the northwest boundary of the portion of the Project site within the proposed limits of disturbance; therefore, a Jurisdictional Delineation Report was completed.

An area must exhibit all three wetland parameters described in the USACE's 2008 Arid West Regional Supplement[17] to be considered a federal jurisdictional wetland. These parameters are: (1) the presence of wetland vegetation; (2) the presence of hydric soils;[18] and (3) the presence of wetland hydrology. Under the State Water Resource Control Board's (SWRCB) State wetland definition, an area is considered a State wetland if, under normal circumstances: (1) the area has continuous or recurrent saturation of the upper

[17] United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). J.S. Wakeley, R.W. Lichvar, and C.V. Noble, eds. ERDC/EL TR 08 28. Vicksburg, Mississippi: United States Army Engineer Research and Development Center.

[18] Hydric soils are defined by the U.S. Food Security Act of 1985 to mean "soil that, in its undrained condition, is saturated, flooded, or ponded long enough during the growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation." This term is part of the legal definition of a wetland.

substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes[19] or the area lacks vegetation. Based on the results of the field delineation, it was determined that no areas within the Project site meet all three federal wetland parameters or the State wetland definition. Therefore, no federal or State jurisdictional wetland features exist on the Project site. **No impact** would occur, and no mitigation is required.

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?

Less Than Significant Impact with Mitigation Incorporated

Discussion of Effects: Habitat fragmentation occurs when a single, contiguous habitat area is divided into two or more areas, or where an action isolates the two or more new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to another or to/from one habitat type to another. Habitat fragmentation may occur when a portion of one of more habitats is converted into another habitat, as when scrub habitats are converted into annual grassland habitat because of frequent burning. Wildlife movement includes seasonal migration along corridors, as well as daily movements for foraging. Examples of migration corridors may include areas of unobstructed movement for deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and between roosting and feeding areas for birds. The Santa Ana River Wash north of the Project site functions as a wildlife movement corridor that connects the valley floor to the nearby San Bernardino Mountains.

Although the Project site is immediately south of the Santa Ana River Wash, the Project would be confined to the upland portion of the Project site on the bluff above the Santa Ana River Wash. The proposed Project would not restrict or eliminate wildlife movement because, unlike the Santa Ana River Wash, the area within the proposed limits of disturbance on the Project site does not serve as a wildlife movement corridor. This is primarily due to its location adjacent to existing development. Although no riparian or other natural vegetation communities occur within the area of proposed disturbance, existing vegetation on the Project site may provide nesting habitat for migratory birds. Therefore, with implementation of **Mitigation Measure BIO-2** for the protection of birds pursuant to the MBTA, the proposed project would have a **less than significant impact with mitigation incorporated** on the movement of native resident or migratory fish or wildlife species, native or migratory wildlife corridors, or native wildlife nursery sites.

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

Less Than Significant Impact

Discussion of Effects: The City of Redlands General Plan outlines policies that protect biological resources. These policies pertain to important ecological areas in the City of Redlands, such as San Timoteo Canyon, Live Oak Canyon, the Crafton Hills, the Santa Ana River, Mill Creek, and other riparian areas within the City of Redlands. The Project site is bounded by the Santa Ana River Wash to the north; however, implementation of the proposed Project would not result in development in the northern portion of the

[19] Hydrophytes are plants that grow either partly or totally submerged in water.

Project site. As such, the Santa Ana River Wash is not anticipated to be adversely impacted by the proposed Project's actions.

Street trees and other trees in the public domain within the City of Redlands are managed pursuant to Redlands Municipal Code Chapter 12.52 (Trees and Tree Protection along Streets and in Public Places).[20] However, the City of Redlands does not have any local policies or ordinances pertaining to trees on private property.

The Project would not conflict with any policies protecting biological resources in the Santa Ana River Wash and would not require the removal of any street trees. Therefore, development of the proposed Project would not conflict with any local policies or ordinances protecting biological resources. Impacts would be **less than significant**, and no mitigation is required.

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?

No Impact

Discussion of Effects: The City has adopted the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan, which permits and mitigates construction and maintenance activities within the Santa Ana River Wash north of the Project site, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. The Project site is located outside the boundaries of the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan. As such, **no impact** or conflict would occur in regard to conservation plans, and no mitigation is required.

[20] City of Redlands Municipal Code Chapter 12.52. Trees and Tree Protection along Streets and in Public Places.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 formal cemeteries?	☐	☐	☒	☐

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

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Pursuant to §15064.5, the term "historical resource" shall include:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources [California Register] (Pub. Res. Code §5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

B. Is associated with the lives of persons important in our past.

C. 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.

D. Has yielded, or may be likely to yield, information important in prehistory or history.

A "substantial adverse change" to a historical resource, according to Public Resources Code (PRC) §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

A project-specific cultural resources assessment and historical resources evaluation was conducted for the Project site and included an archaeological and historical records search and an intensive pedestrian survey of the Project site (**Appendix D: Cultural and Historical Resources Evaluation**). The record search included a review of all recorded historic-era and prehistoric archaeological sites within the Project site and an 0.25-mile search radius, as well as a review of known cultural resource surveys and technical reports. The records search did not identify any previously recorded cultural resources within the Project site. The records search also revealed that portions of the northern half of the Project site and the eastern and southern edges of the Project site have been previously surveyed for cultural resources. Additionally, seven cultural resource studies have been completed for projects within a 0.25-mile radius of the Project site.

One historic-aged resource, CA-SBR-7052H, was recorded approximately 500 feet east of the Project site. This resource was an early twentieth century orange grove and irrigation system with two homes and was demolished in the early 2000s for a residential development.

The intensive pedestrian survey of the Project site did not identify any prehistoric or historical archaeological remains or built-environment resources. Nevertheless, there is always some potential for the proposed Project to unearth previously undocumented cultural resources during construction. Therefore, **Mitigation Measures CUL-1 through CUL-2**, which requires the retention of a qualified archaeologist on an on-call basis to assess the significance of any find and determine the appropriate treatment in the event that unanticipated cultural material is unearthed on the Project site.

Mitigation Measure CUL-1 Prior to the issuance of a grading permit, the Applicant shall provide the Director of the City of Redlands Department of Development Services, or designee, with evidence that it has retained the services of a qualified archaeologist that meets the Secretary of the Interior standards on an on-call basis. In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 100-foot buffer) shall cease and the Project archaeologist shall assess the find and determine appropriate treatment. Work on the other portions of the Project outside of the buffered area may continue during this assessment period.

Mitigation Measure CUL-2 If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the qualified archaeologist shall develop a Monitoring and Treatment Plan for the remainder of the Project site. The Monitoring and Treatment Plan shall be developed in coordination with the Applicant and the City. The Applicant shall secure a monitoring agreement with the archaeologist prior to the recommencement of work, and the archaeologist shall monitor during the remainder of the ground disturbance activities on the Project site and implement the Plan accordingly.

Implementation of **Mitigation Measures CUL-1 through CUL-2** would reduce impacts to known, unknown, or potential cultural resources that may be located within the Project site to **less than significant** levels.

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

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Please refer to the response to Threshold 3.5(a). Implementation of **Mitigation Measures CUL-1 through CUL-2** would reduce impacts to known, unknown, or potential archaeological resources that may be located within the Project site to **less than significant** levels.

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

Less Than Significant Impact

Discussion of Effects: No known human remains are present on the Project site and there are no facts or evidence to support the idea that Native Americans or people of European descent are buried on the Project site; however, buried and undiscovered archaeological resources, including human remains, may be present below the ground surface in portions of the Project site. Disturbing human remains could violate the State Health and Safety Code, as well as destroy the resource. In the unlikely event that human remains are encountered during Project grading, the construction contractor would be required to notify the proper authorities and adhere to standard procedures that would ensure the respectful handling of human remains during the earthmoving activities.

Construction contractors are required to adhere to California Code of Regulations (CCR) Section 15064.5(e), Public Resources Code (PRC) Section 5097, and Section 7050.5 of the State's Health and Safety Code. To ensure proper treatment of burials in the event of an unanticipated discovery of a burial, human bone, or suspected human bone, the law requires that all excavation or grading in the vicinity of the find halt immediately, the area of the find be protected, and the contractor immediately notify the County Coroner of the find. The construction contractor, the Applicant, and the County Coroner are required to comply with the provisions of CCR Section 15064.5(e), PRC Section 5097.98, and Section 7050.5 of the State Health and Safety Code. Compliance with these provisions (specified in **Regulatory Compliance Measure CUL-3**) would ensure that any potential impacts to unknown buried human remains would be **less than significant** by ensuring appropriate examination, treatment, and protection of human remains as required by State law.

Regulatory Compliance Measure CUL-3 In the event that human remains or funerary objects are encountered on the Project site during any construction activities associated with the Project, work within 100 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner

shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD).

With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the Applicant shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Redlands Department of Development Services, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Result in 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 potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact

Discussion of Effect: The Project's consumption of energy during construction and operation is calculated via CalEEMod, as detailed in **Appendix B**.

Construction-Period Energy Use. As described in Section 2.0 of this IS/MND, the anticipated construction schedule assumes that the proposed Project would be built in approximately 13 months. The proposed Project would require site preparation, grading, building construction, paving, and architectural coating activities during construction.

Construction of the proposed Project would require energy for the manufacture and transportation of construction materials, preparation of the site for grading and building activities, and construction of the building. All or most of this energy would be derived from non-renewable resources. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. However, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the Project. Energy (i.e., fuel) usage on the Project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Construction of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and construction-related impacts would be **less than significant**. No mitigation is required.

Operation: Energy use includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage for heating, while indirect sources include electricity generated by off-site power plants. Natural gas use in CalEEMod is measured in units of a thousand British thermal units (kBTU) per year; however, this analysis converts the results to natural gas in units of therms. Electricity use in CalEEMod is measured in kilowatt hours (kWh) per year.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24 (e.g., space heating, space cooling, water heating, and

ventilation). Non-Title 24 uses include all other end uses (e.g., appliances, electronics, and other miscellaneous plug-in uses). Because some lighting is not considered as part of the building envelope energy budget, CalEEMod considers lighting as a separate electricity use category.

For natural gas, uses are likewise categorized as Title 24 or non-Title 24. Title 24 uses include building heating and hot water end uses. Non-Title 24 natural gas uses include appliances.

Energy and natural gas consumption was estimated for the Project using CalEEMod. The proposed buildings would be constructed to CALGreen standards, which were included in CalEEMod inputs. The electricity and natural gas rates are from the CalEEMod analysis, while the gasoline and diesel rates are based on the traffic analysis in conjunction with USDOT fuel efficiency data. Electricity, natural gas, and gasoline usage estimates associated with the operation of the proposed project are shown in **Table J: Estimated Annual Energy Use of Proposed Project**.

Table J: Estimated Annual Energy Use of Proposed Project

Land Use	Electricity Use (kWh/year)	Natural Gas (Therms/year)	Gasoline (gallons/year)	Diesel (gallons/year)
Single Family Residential	266,337	10,951	31,860	22,676

Source: California Emissions Estimator Model (CalEEMod). Compiled by LSA. December 2022.
kWh = kilowatt hours
kBTU = Thousand British Thermal Units

As shown in **Table J**, the estimated electricity demand associated with the proposed Project is 266,337 kWh per year. According to the California Energy Commission (CEC), total electricity consumption in the Southern California Edison (SCE) service area in 2021 was 103,405 GWh.[21] Of this total, San Bernardino County consumed 16,180.8 GWh or 16,180,811,158 kWh.[22] Therefore, electricity demand associated with the proposed Project would be approximately 0.002 percent of San Bernardino County's total electricity demand.

Also shown in **Table J**, the estimated natural gas demand associated with the proposed Project is 10,951 therms per year. According to the CEC, total natural gas consumption in the Southern California Gas Company (SoCalGas) service area in 2021 was 6,755 million therms, while San Bernardino County consumed 561,360,617 therms.[23] Therefore, natural gas demand associated with the proposed Project would be 0.002 percent of San Bernardino County's total natural gas demand.

Furthermore, the proposed Project would result in energy usage associated with gasoline and diesel to fuel Project-related vehicle trips. The average fuel economy for light-duty vehicles (automobiles, pickups, vans, and SUVs) in the United States has steadily increased, from about 14.9 miles per gallon (mpg) in

[21] California Energy Commission (CEC). 2021a. *2021 Total System Electric Generation*. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation (accessed December 2022).

[22] CEC. 2021b. Electricity Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx and http://www.ecdms.energy.ca.gov/elecbyutil.aspx (accessed December 2022).

[23] CEC. 2021c. Gas Consumption by County and Entity. Website: http://www.ecdms.energy.ca.gov/gasbycounty.aspx and http://www.ecdms.energy.ca.gov/gasbyutil.aspx (accessed December 2022).

1980 to 22.9 mpg in 2020[24]. The average fuel economy for heavy-duty trucks in the United States has also steadily increased, from 5.7 mpg in 2013 to a projected 8.0 mpg in 2021[25].

Using the EPA gasoline fuel economy estimates for 2020, the California diesel fuel economy estimates for 2021, and the traffic data from the Project traffic analyses, the proposed Project would result in the annual consumption of 31,860 gallons of gasoline and 22,676 gallons of diesel fuel. In 2021, vehicles in California consumed approximately 13.8 billion gallons of gasoline. Therefore, gasoline demand generated by vehicle trips associated with the proposed Project would be a minimal fraction of gasoline and diesel fuel consumption in California and, by extension, in San Bernardino County.

In addition, vehicles associated with trips to and from the Project site would be subject to fuel economy and efficiency standards, which are applicable throughout the State. As such, the fuel efficiency of vehicles associated with Project operations would increase throughout the life of the proposed Project. Therefore, implementation of the proposed Project would not result in a substantial increase in transportation-related energy uses.

In summary, construction and operation of the proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Consumption of energy resources as a result of implementation of the proposed Project would be comparable to other recently built residential neighborhoods in the City of Redlands. Impacts would be **less than significant,** and no mitigation would be required.

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

Less than Significant Impact

Discussion of Effect**:** In 2002, the State Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access.

The CEC recently adopted the 2022 Integrated Energy Policy Report.[26] The 2022 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The 2022 Integrated Energy Policy Report covers a broad range of topics, including implementation of SB 350, integrated resource planning, distributed energy resources, transportation electrification, solutions to increase resiliency in

[24] U.S. Department of Transportation (USDOT). 2017. "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." April 14, 2017. Website: https://www.bts.dot.gov/bts/bts/content/average-fuel-efficiency-us-light-duty-vehicles (accessed November 2022).

[25] California Energy Commission (CEC). 2015. Medium and Heavy-Duty Truck Prices and Fuel Economy 2013–2026. Website: efiling.energy.ca.gov/getdocument.aspx?tn=206180 (accessed December 2022).

[26] CEC. 2022. *2022 Integrated Energy Policy Report Update*. California Energy Commission. Docket Number: 22-IEPR-01.

the electricity sector, energy efficiency, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to SB 1383), updates on Southern California electricity reliability, the natural gas outlook, and climate adaptation and resiliency.

As indicated above, energy usage on the Project site during construction would be temporary in nature. In addition, energy usage associated with operation of the proposed Project would be relatively small in comparison to the State's available energy sources, and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the Project's total impact on regional energy supplies would be minor, the proposed Project would not conflict with or obstruct California's energy conservation plans as described in the CEC's 2022 Integrated Energy Policy Report.

The proposed Project would be required to comply with the California Building Code (CBC) and California Green Building Standards Code (CALGreen Code) pertaining to energy and water conservation standards in effect at the time of construction. Therefore, the proposed Project would be consistent with applicable plans related to renewable energy and energy efficiency. Impacts would be **less than significant,** and no mitigation is required.

3.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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 18-1-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. Would the project expose people or structures to 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? Refer to Division of Mines and Geology Special Publication #42.

No Impact

Discussion of Effects: The Project site is within a seismically active region; however, it is not located within the boundaries of an Earthquake Fault Zone for fault rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1972. Additionally, according to the Geotechnical and Infiltration Evaluation Report prepared for the proposed Project (**Appendix E: Geotechnical and Infiltration Evaluation Report**),[27] there are no known active or potentially active faults that traverse the Project site. Although the nearest known active fault is the San Andreas Fault, which is located approximately 3.75 miles northeast of the Project site, the Geotechnical and Infiltration Evaluation Report does not identify an elevated potential for active fault rupture at the Project site. In the absence of any on-site active faults, **no impact** related to fault rupture would occur on the Project site, and no mitigation is required.

ii. Strong seismic shaking?

Less than Significant Impact

Discussion of Effects: The Project site is within a seismically active area, where earthquakes have the potential to produce very strong seismically related ground shaking during the anticipated operational life of the Project. The nearest known active fault is the San Andreas Fault located approximately 3.75 miles to the northeast of the Project site.[28]

The extent of ground shaking associated with an earthquake is dependent upon the size of the earthquake and the geologic material of the underlying area. All future construction and development within the Project site would be required to comply with applicable provisions of the California Building Code (CBC) and the City's building regulations in effect at the time when building permit applications are submitted. Proper engineering design and construction in conformance with the CBC standards and Project-specific geotechnical recommendations (**Standard Condition GEO-1**) would ensure that seismic ground shaking would be **less than significant.** No mitigation is required.

Standard Condition: No mitigation is required; however, the following Standard Condition is a regulatory requirement that would be implemented to ensure impacts related to seismic activity remain less than significant.

Standard Condition GEO-1 Compliance with applicable California Building Code and Project-specific Geotechnical Recommendations. Prior to the approval of grading and/or building permits, the Applicant shall provide evidence to the City of Redlands for review and approval that on-site structures, features, and facilities have been designed and will be constructed in conformance with applicable provisions of the California Building Code in effect at the time of City review and the recommendations cited in the Project-specific Geotechnical and Infiltration Evaluation Report. This measure shall be implemented to the satisfaction of the Director of the City of Redlands

[27] Geotek, Inc. 2021a. *Geotechnical and Infiltration Evaluation Proposed 35-Lot Residential Development APN 167-041-01 Northeast of the Terminus of Texas Street Redlands, San Bernardino County, California,* July 30, 2021.

[28] Ibid.

Department of Development Services, Building and Safety Division, or designee.

Adherence to the measures identified in the Geotechnical and Infiltration Evaluation Report as well as the current CBC in effect at the time of City review and other requirements identified and required by the City, would ensure ground shaking hazards remain **less than significant.** No mitigation is required.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact

Discussion of Effects: Liquefaction is a phenomenon that occurs when strong seismic ground shaking causes soils to collapse from a sudden loss of cohesion and undergo a transformation from a solid to a liquefied state. There are three basic factors that must exist concurrently in order for liquefaction to occur:

- A source of ground shaking, such as an earthquake, capable of generating soil mass distortions;
- A relatively loose silty and/or sandy soil; and
- A relatively shallow groundwater table (within approximately 50 feet below ground surface) or completely saturated soil conditions that would allow positive pore pressure generation.

According to the Project-specific Geotechnical and Infiltration Evaluation Report (**Appendix E**), the Project site is within a low liquefaction susceptibility zone. The historic high groundwater depth of the Project site was determined to be 30 feet. The earth underlying the Project site consists of fill from the site's historical use as an agricultural orchard and younger alluvial fan deposits, which has a "very low" expansion potential. Based on the lack of shallow groundwater and general soil conditions at the Project site, the potential for liquefaction to occur is considered very low. Accordingly, the potential for liquefaction-induced lateral spreading and settlement is also considered to be very low. Secondary effects of seismic activity which may occur at the site include ground subsidence, ground lurching and lateral spreading. The probability of occurrence of each type of seismically induced ground failure is dependent on the severity of the earthquake, distance from the fault, topography of the site, subsoil and groundwater conditions at the site. According to the Project-specific Geotechnical and Infiltration Evaluation Report the potential for ground lurching, lateral spreading and similar seismic-related ground failure is considered very low. Through incorporation of **Standard Condition GEO-1**, impacts from seismically induced ground failure would be **less than significant,** and no mitigation is required.

iv. Landslides?

No Impact

Discussion of Effects: According to the Project-specific Geotechnical and Infiltration Evaluation Report, evidence of landslides and/or slope instabilities was not observed on the Project site. Due to the Project site's flat topography, the absence of significant nearby slopes or hills in the area planned for development, and the planned site grading in accordance with **Standard Condition GEO-1**, **no impacts** from landslides or slope instabilities at the Project site would occur. No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: Construction at the Project site would disturb surface soils and make them susceptible to erosion from wind and water. In order to address the potential for erosion, the Project is required to implement Best Management Practices (BMPs) during the construction phase that would reduce erosion in accordance with National Pollutant Discharge Elimination System (NPDES) regulations. These BMPs would be selected as part of the Storm Water Pollution Prevention Plan (SWPPP), which is required to address erosion and discharge impacts associated with the proposed on-site grading.

The Project must also comply with the City's grading permit requirements, which would ensure that construction practices include measures to protect exposed soils such as limiting work to dry seasons, covering stockpiled soils, and use of straw bales and silt fences to minimize off-site sedimentation. In addition, the Project site would be covered with asphalt, concrete, and landscaping materials during operations; therefore, soil erosion would be none to minimal. Compliance with State and federal requirements, as well as with City grading permit requirements, would ensure that the proposed Project would have a **less than significant** impact related to soil erosion or loss of topsoil. No mitigation is required.

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?

Less than Significant Impact

Discussion of Effects: According to the Geotechnical and Infiltration Evaluation Report, evidence of landslides and/or slope instabilities was not observed on the Project site. Due to the property's flat topography, the absence of significant nearby slopes or hills, and the planned site grading in accordance with **Standard Condition GEO-1**, **no impacts** from landslides or slope instabilities at the Project site would occur. No mitigation is required.

The Geotechnical and Infiltration Evaluation Report studied the groundwater level at the Project site and in the vicinity of the Project site and estimated the historic high groundwater depth at the Project site to be more than 80 feet below the existing ground surface. Therefore, groundwater is not anticipated to adversely affect the Project's proposed improvements. Based on the lack of shallow groundwater underlying the Project site, the potential for liquefaction to occur is considered very low. Accordingly, the potential for liquefaction-induced lateral spreading and settlement is also considered to be very low.

The earth underlying the Project site consists of fill from the site's historical use as an agricultural orchard and younger alluvial fan deposits. According to the Project-specific Geotechnical and Infiltration Evaluation Report, these near surface soils have a very low expansion potential and are not susceptible to soil liquefaction during an earthquake event. Through incorporation of **Standard Condition GEO-1**, impacts from subsidence and/or collapse would be **less than significant,** and no mitigation is required.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact

Discussion of Effects: As described above in the response to Threshold 3.7(c), the near surface soils on the Project site have a very low expansion potential and are not anticipated to pose a hazard for the proposed Project. Therefore, the Project's impacts would be **less than significant,** and no mitigation is required.

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?

No Impact

Discussion of Effects: The proposed Project would be connected to existing wastewater collection and conveyance facilities owned and operated by the City. Therefore, septic tanks would not be necessary. Because the proposed Project would not include the installation of septic tanks or alternative wastewater disposal systems, **no impact** would occur. No mitigation is required.

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

Less than Significant with Mitigation Incorporated

Discussion of Effect: According to the City's General Plan EIR, paleontological resources, including fossils, have been found in the Redlands area, and there is potential for paleontological finds to occur in remaining, unexcavated open space areas within and adjacent to the City of Redlands. Paleontological resources are the fossil remains or traces of past life forms, including both vertebrate and invertebrate species, as well as plants. Vertebrate land mammal fossils have been discovered in parts of the City, including the fossils of a mammoth, ground sloth, camel, bison, horse, and deer. These resources are found in geologic strata conducive to their preservation, typically sedimentary formations. In the past, paleontological resources have been identified in the San Timoteo Canyon area.

The earth underlying the Project site consists of fill from the site's historical use as an agricultural orchard and younger alluvial fan deposits. Although the Project site is currently undeveloped, it was most likely subject to periodic ground disturbance associated with agricultural cultivation. In addition, the Project site is approximately 4.2 miles from San Timoteo Canyon, the nearest area of paleontological significance identified in the City's General Plan EIR. Therefore, it is unlikely that unique paleontological resources are present on the Project site.

No unique geologic features are present on the Project site and no unique geologic features would be destroyed, either directly or indirectly, as a result of the proposed Project's actions.

General Plan Objective OSC-7.1, Policy P3 requires the appropriate protection, evaluation, and recovery of any potential paleontological resource to a less than significant level. Although the Project site and surrounding area have been heavily disturbed due to past agricultural activities and no known paleontological resources are known to exist on site, because of the Citywide potential for paleontological conditions, unknown/undiscovered resources could be encountered during on-site grading or construction activities. **Mitigation Measure GEO-1** has been identified to reduce any paleontological resource impacts to a **less than significant** level.

Mitigation Measure GEO-1 Prior to commencement of any grading activity on the Project site, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the Director of the City of Redlands Department of Development Services, Planning Division, or designee. The qualified paleontologist shall attend the pre-construction meeting and be on site during all rough grading and other significant ground-disturbing activities.

In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP).

With implementation of **Mitigation Measure GEO-1** impacts to paleontological resources would be **less than significant**.

3.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

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

Less Than Significant Impact

Discussion of Effects: *State CEQA Guidelines Section 15064(b)* provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting." Climate change is a global issue and is described in the context of the cumulative environment. Therefore, the Project is considered in the context of multiple sectors and the combined efforts of many industries, including development. The primary greenhouse gas (GHG) emissions generated by the Project would be carbon dioxide (CO_2). This analysis represents an estimate of the Project's GHG emissions through the quantification of CO_2 emissions using the CalEEMod results provided in **Appendix B**. The following Project activities were analyzed for their contribution to global CO_2 emissions.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the SCAQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where it is not the lead agency:

- **Tier 1: Exemptions.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2: Consistency with a Locally Adopted GHG Reduction Plan.** If the project complies with a climate action plan, GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3: Numerical Screening-Level Threshold.** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant. For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, the SCAQMD requires an assessment of GHG emissions. The SCAQMD, under Option 1, is proposing a "bright-line"

screening-level threshold of 3,000 MT CO_2e/year for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MT CO_2e for commercial projects, 3,500 MT CO_2e for residential projects, or 3,000 MT CO_2e for mixed-use projects. This bright-line threshold is based on a review of the OPR database of CEQA projects. Based on SCAQMD's review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact related to GHG emissions.

- **Tier 4: Performance Standards.** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. The SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets.

For the purpose of this analysis, the proposed Project will be compared to the screening-level Tier 3 Numerical Screening Threshold of 3,000 MT CO_2e/yr for all land use types. The Project is also evaluated for compliance with the County of San Bernardino Greenhouse Gas Reduction Plan, the City of Redlands Climate Action Plan (CAP), the 2017 Scoping Plan, and the 2020–2045 RTP/SCS.

Construction and operation of the Project would generate GHG emissions. The following activities associated with the proposed Project could contribute directly or indirectly to the generation of GHG emissions:

- **Construction Activities:** During construction of the Project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO_2, CH_4, and N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment.

- **Motor Vehicle Use:** Transportation associated with the proposed Project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

- **Gas, Electricity, and Water Use:** Natural gas use results in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy intensive. CalEEMod defaults were used to estimate these emissions from the Project.

- **Solid Waste Disposal:** Solid waste generated by the Project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste and produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully and the carbon that remains is sequestered in the landfill and not released into the atmosphere. The proposed Project would implement the statewide goal of meeting the 75 percent recycling program on-site.[29]

[29] CalRecycle 2017. Website: https://www2.calrecycle.ca.gov/Publications/Details/1612 (accessed December 2022).

GHG emissions associated with Project construction would occur over the short term from construction activities and would consist primarily of emissions from equipment exhaust. Long-term regional emissions would also be associated with Project-related new vehicular trips and stationary-source emissions (e.g., natural gas used for heating and electricity usage for lighting). The calculations presented below includes construction emissions in terms of CO_2 and annual CO_2e GHG emissions from increased energy consumption, water usage, solid waste disposal, and estimated GHG emissions from vehicular traffic that would result from implementation of the proposed Project. The following Project activities were analyzed for their contribution to global CO_2e emissions.

Construction Emissions. Construction activities produce combustion emissions from various sources, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. The construction GHG emission estimates were calculated using CalEEMod Version 2022.1, which indicates the Project's GHG emissions during the anticipated 13 months construction period between April 2024 and May 2025. As indicated in **Table K: Estimated Construction Greenhouse Gas Emissions**, project construction would result in total emissions of 606 MT of CO_2e, which would be amortized to 20.2 MT of CO_2e over 30 years.

Table K: Estimated Construction Greenhouse Gas Emissions

Construction Year	Greenhouse Gas Emissions, CO_2e (Metric Tons per Year)
2024	357.0
2025	249.0
Total Project Emissions	**606.0**
Total Construction Emissions Amortized over 30 years	**20.2**

Source: Compiled by LSA (December 2022).
Note: Numbers may appear to not sum correctly due to rounding.
CO_2e = carbon dioxide equivalent

Operational Emissions. The operational GHG emissions estimates were also calculated using CalEEMod. Activities such as natural gas, electricity, water use, solid waste disposal, and motor vehicle use are expected to contribute directly and/or indirectly to the generation of GHG emissions from operation of the proposed Project. **Table L: Estimated Operational Greenhouse Gas Emissions** details the new operational emissions associated with the proposed Project.

As discussed above, a Project would have less than significant GHG emissions if it would result in operations-related GHG emissions of less than 3,000 MT CO_2e per year. As indicated in **Table L,** the proposed Project would have approximately 509.9 MT CO_2e per year, which is below the SCAQMD threshold of 3,000 MT CO_2e per year. Therefore, impacts related to the generation of GHG emissions, either directly, indirectly or cumulatively, that may have a significant impact on the environment would be **less than significant**. No mitigation is required.

Table L: Estimated Operational Greenhouse Gas Emissions

Emissions Source	Operational Emissions (Metric Tons per Year)			
	CO_2	CH_4	N_2O	CO_2e
Project Area Sources	11.4	<0.1	<0.1	11.8
Project Energy Sources	122.0	<0.1	<0.1	123.0
Project Mobile Sources	337.0	<0.1	<0.1	343.0
Project Waste Sources	3.1	0.3	0.0	10.7
Project Water Sources	0.2	0.1	<0.1	1.2
Total Project Operational Emissions				489.7
Amortized Construction Emissions				20.2
Total Net Annual Emissions				509.9
SCAQMD Threshold				3,000
Exceed?				No

Source: Compiled by LSA (December 2022).

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

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

Less than Significant

Discussion of Effects: The proposed Project was analyzed for consistency with the City of Redlands CAP, the goals of the 2017 Scoping Plan, and the 2020–2045 RTP/SCS.

City of Redlands CAP. On December 5, 2017, the City of Redlands adopted a Climate Action Plan to focus on adaptive GHG measures that reduce emissions through standard practice measures and help prepare the City for the impacts of climate change. The City of Redlands Climate Action Plan (CAP)[30] is designed to reinforce the City's commitment to reducing greenhouse gas (GHG) emissions and demonstrate how the City will comply with State of California's GHG emission reduction standards. The CAP was prepared concurrently with the updated Redlands General Plan 2035, which includes strategies to reduce GHG emissions such as transit oriented and mixed-use development, integrated transportation and land use planning, promotion of bicycle and pedestrian movements, and parking and transportation demand management. To further reduce emissions outlined in the General Plan, the CAP adds several measures in areas such as photovoltaic systems, energy efficiency retrofits, facility commissioning, efficient lighting standards, and increased zero-emission vehicle (ZEV) travel. The following proposed GHG emission reduction strategies from the CAP are applicable to the proposed Project:

[30] Redlands, City of. 2017. *City of Redlands Climate Action Plan.* December. Website: Microsoft Word - Final_Redlands CAP_2017_011718_CR.docx (cityofredlands.org) (accessed December 2022).

- Promote installation of residential PV systems to increase solar capacity by 19.8 megawatts (MW) per year, or the equivalent of 15 percent of projected residential electricity supplied by Southern California Edison (SCE).

- Replace 50 percent of incandescent or halogen light bulbs in City facilities with LED or similarly efficient lighting.

- Adopt requirements for ZEV parking for new developments.

The proposed Project would be consistent with the CAP goal of increasing energy efficiency in new buildings by complying with the latest California Building Code (Title 24), including the latest CALGreen Code standards. Construction of the Project would also include a diversion of construction waste from landfills to recycling consistent with current local and State standards and CAP goals to increase diversion and reduction of waste. As such, the proposed Project would be consistent with applicable CAP goals.

San Bernardino County Regional Greenhouse Gas Reduction Plan. The City of Redlands was a participant in the San Bernardino County Regional Greenhouse Gas Reduction Plan, which identifies the County's vision and goals on reducing GHG emissions in cities, communities, and local government facilities. **Table M: Project Consistency with City of Redlands Greenhouse Gas Reduction Measures** below presents the proposed Project's compliance with applicable reduction measures evaluated for the City of Redlands, as identified in the San Bernardino County Regional Greenhouse Gas Reduction Plan.

Table M: Project Consistency with City of Redlands Greenhouse Gas Reduction Measures

Measure	Description	Project Consistency
On-Road		
Policies	• **8-P.10:** Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction, and recycling, and by promoting efficient building design and use. • **8-A.7:** Seek alternatives to reduce non-renewable energy consumption attributable to transportation within the Planning Area. Seek funding and other assistance from the South Coast Air Quality Management District (AQMD) for installation of electric vehicle charging stations at appropriate locations throughout the City. • **4-P.44**: Provide choices for travel options, including walking, biking, vehicular, and transit. • **4-P.52**: Encourage stops of larger trains (Metrolink) in stations that can adequately accommodate their size and have greater availability of and access to parking. • **4-P.41**: Foster a connected, accessible, and active community by creating attractively designed pedestrian- and transit-oriented villages with a mix of uses in a compact area. • **4-A.105:** Create an active and compact transit-oriented core with a mix of residential and commercial/office uses. Allow for the reuse of commercial sites as office centers. San Bernardino Council of Governments Reduction Profiles—Redlands San Bernardino County Regional Greenhouse Gas Reduction Plan 3-156 March 2021 ICF λ	***Consistent.*** The proposed Project would include 35 single family homes and the construction of active open space, and three public streets. In addition, a 10-foot wide bike path would be provided along eastern and northern areas of the Project site.

Table M: Project Consistency with City of Redlands Greenhouse Gas Reduction Measures

Measure	Description	Project Consistency
	4-A.101: Implement bicycle route improvements that provide intra-City and regional connections, connecting to Loma Linda, the City of San Bernardino, and north to the Santa Ana River Trail. • **4-A.100**: Provide streetscape improvements along the major corridors of California Street and Redlands Boulevard to enhance comfort and safety for all modes of travel. • **4-A.116**: Implement bicycle route improvements that provide strong east-west connections to other Transit Villages as well as north-south connections to improve access to existing neighborhoods to the north. Routes would include the Orange Blossom Trail, the Lugonia Trail on New York Street, and a route along Texas Street. • **8-P.9:** Undertake initiatives to enhance sustainability by reducing the community's GHG emissions.	
Off Road		
Policies	• **8-P.9:** Undertake initiatives to enhance sustainability by reducing the community's GHG emissions.	***Consistent.*** The proposed Project would comply with the CALGreen Code regarding water conservation and green building standards.
Solid Waste Management		
Policies	• **8-P.10:** Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction, and recycling, and by promoting efficient building design and use. • **8-A.42:** Adopt a construction and demolition waste recycling ordinance that requires, except in unusual circumstances, all construction, demolition and renovation projects that meet a certain size or dollar value to divert from landfills 100 percent of all cement concrete and asphalt concrete, and an average of at least 75 percent of all remaining non-hazardous debris	***Consistent.*** The proposed Project would be consistent with County Solid Waste and State requirements for waste reduction.
Wastewater Treatment		
Policies	• **8-A.29:** Reduce consumption of carbon-based fuels for conveyance and treatment of water and wastewater. • **8-A.27**: Seek funding sources to implement renewable energy sources determined to be feasible for water and wastewater operations.	***Consistent.*** The proposed Project would comply with the CALGreen Code regarding water conservation and green building standards.

Source: Compiled by LSA (December 2022).
Note: The City would be responsible for implementing those policies related to building energy and water conveyance; therefore, they do not apply to the Project.
CALGreen Code = California Green Building Standards Code
GHG = greenhouse gas
sq ft = square feet

Scoping Plan. EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by EO B-30-15 and codified by Senate Bill 32 (SB 32). SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40

percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on Assembly Bill 32 (AB 32) and keeps the State on the path toward achieving its 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

In addition, the 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set EO B-30-15 and codified by SB 32 and AB 197. The measures applicable to the proposed Project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed Project would be required to comply with the latest Title 24 standards of the CCR, established by the CEC, regarding energy conservation and green building standards.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the proposed Project would be required to comply with the latest Title 24 standards of the CCR, which includes a variety of different measures, including reduction of wastewater and water use. Therefore, the proposed Project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the Project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed Project would not conflict with the identified transportation and motor vehicle measures.

2020–2045 RTP/SCS. SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2020–2045 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2020–2045 RTP/SCS contains

transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2020–2045 RTP/SCS, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2020–2045 RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the 2020–2045 RTP/SCS, but provides incentives for consistency for governments and developers.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. As stated above, the proposed Project would be consistent with the City's General Plan land use designation for the Project site; therefore, the proposed Project is already reflected in SCAG's RTP/SCS and would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. Furthermore, the proposed Project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets since those targets were established and are applicable on a regional level.

Based on the nature of the proposed Project, it is anticipated that implementation of the proposed Project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS.

The proposed Project would be determined to have a less than significant individual and cumulative impact related to GHG emissions. Therefore, the proposed Project would not generate GHG emissions that would have a significant impact on the environment, nor would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Associated impacts would be **less than significant,** and no mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials 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 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?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	☐	☐	☒	☐

The following hazards and hazardous materials analysis was obtained from the *Phase I and Limited Phase II Environmental Site Assessment* (*ESA*) (**Appendix F: Phase I and Limited Phase II Environmental Site Assessment**) prepared by Geotek, Inc. on July 23, 2021 (Geotek 2021b).

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

Less than Significant Impact

Discussion of Effects: Construction of the Project has the potential to create a hazard to the public or environment through the routine transportation, use, and disposal of construction-related hazardous materials such as fuels, soils, solvents, and other materials. These materials are typical of materials delivered to construction sites. The United States Department of Transportation regulates the transport of hazardous materials and waste in connection with construction of the Project and would require carriers to register with the Department of Toxic Substances Control (DTSC).

Occupation of the proposed residential uses is expected to utilize relatively small amounts of hazardous materials, such as chemicals associated with fuel for landscape maintenance equipment, solvents, cleaning products, pesticides/fertilizers, and other similar chemicals. These materials are substantially similar to household chemicals and solvents already in general and wide use throughout the City and in the vicinity of the Project site. Compliance with all applicable federal, State, and local regulations would ensure the Project would have a **less than significant impact** to the public or environment from the routine transportation, use, and disposal of hazardous materials. No mitigation is required.

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?

Less than Significant Impact

Discussion of Effects: *Phase I and Limited Phase II Environmental Site Assessment* (*ESA*) (**Appendix F**) was prepared for the Project site in accordance with the standards and procedures outlined in the American Society for Testing and Materials E 1527-13, as applicable. The Project site and a one-mile radius encompassing the Project site were evaluated via the State Water Resources Control Board (SWRCB) GeoTracker database, the Department of Toxic Substances Control's (DTSC) EnviroStor database, and the Hazardous Waste and Substances Sites (Cortese) list for the purposes of identifying recognized environmental conditions or historical recognized environmental conditions.

"Recognized environmental condition" means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions. "Historical Recognized environmental condition" means an environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. If a past release of any *hazardous substances or petroleum products* has occurred in connection with the property, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a case closed letter or equivalent), this condition shall be considered a *historical recognized environmental condition*.

Based on historic records, the Project site was utilized for agriculture between 1930 and 2002 and has remained vacant from 2006 to present day. The surrounding properties have historically been utilized for agriculture and residential uses from 1930 to present day. No evidence was identified indicating improper storage, disposal, or application of hazardous materials, and a review of available aerial photographs did not show improvements such as hangars, tanks, or large barns that would indicate significant storage, formulation, and handling of hazardous materials.

Due to the Project site's historical agricultural uses, GeoTek collected and analyzed near-surface soil samples for organo-chlorine pesticides (OCP) and arsenic. None of the samples from the Project site contained levels of OCP or arsenic that exceed accepted screening levels for residential applications. Therefore, the risk of existing chemicals on-site due to historic agricultural use and the need for cleanup is considered low at the Project site. Based on this information, there is no evidence of recognized environmental conditions in connection with previous uses at the Project site.

Two properties with historical recognized environmental conditions were identified within one mile of the Project site, as detailed in **Table N: Historical Recognized Environmental Conditions Near the Project Site.**

Table N: Historical Recognized Environmental Conditions Near the Project Site

Property	Historical Recognized Environmental Condition	Location Relative to the Project Site	Cleanup Status
Redlands Shooting Park	Removal-only site	Adjacent northeast, cross-gradient of Project site.	No site assessment work needed.
New High School No. 3 (Citrus Valley High School)	Lead-based paint	0.25 mile south-southwest of Project site.	No further action as of April 19, 2007.

Source: *Phase I and Limited Phase II Environmental Site Assessment*. Pages 14 and 15. (Geotek, Inc. 2021b).

Each of the sites listed in **Table N** have been granted environmental closure regarding potential contaminants of concern or appropriate cleanup activities. There are no active cases in the area that could potentially impact the Project site.

A review of the Hazardous Waste and Substances Sites (Cortese) List revealed one active federal superfund site, the Newmark Groundwater Contamination site. The site is an 8 square-mile area of groundwater contamination in the Bunker Hill Groundwater Basin in the City of San Bernardino. The site is defined by two contaminant plumes, the Newmark plume and the Muscoy plume. Remediation measures to inhibit migration of groundwater contamination into clean portions of the aquifer and limit the flow of additional contamination (groundwater extraction and treatment at the leading edge of the plume) are ongoing and are functioning as intended under federal, State, and municipal actions. Given that the Project site is located hydrogeologically up-gradient of the Newmark plume, the remedial actions have been in effect since 1998 and continue to be monitored frequently by federal, State, and local officials, shallow groundwater is not present beneath the Project site, and the fact that the Project would receive potable water from the City's water system rather than groundwater wells, the Project site's proximity to the Newmark Groundwater Contamination site does not represent an environmental concern to the Project. Therefore, there are no Cortese listings that could potentially impact the Project site.

None of the properties identified in the GeoTracker database, EnviroStor database, or the Cortese List occurs on the Project site or has any activities or materials that would represent a significant risk to public health or safety (e.g., on-site storage, leaking tanks, approaching groundwater contamination plume) on the Project site. The Project site does not currently contain any recognized environmental conditions or historical recognized environmental conditions, nor is it subject to vapor migration from any on-site or off-site sources. Therefore, impacts would be **less than significant**, and no mitigation measures would be required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact

Discussion of Effects: The nearest school facility in proximity to the Project site is Citrus Valley High School located at 800 West Pioneer Avenue in Redlands, approximately 0.2 mile to the southwest. The City works with the Redlands Unified School District (RUSD) concerning the design of roads and other public improvements in and around school sites, and is responsible for fire, police, and public safety concerns involving all facilities within the City, including both public and private schools.

For the purposes of this analysis, it is assumed the proposed Project would not handle substances that may be acutely hazardous. However, the handling of hazardous materials or emission of hazardous substances, if present, would be in accordance with the 2015 Redlands Hazard Mitigation Plan.

The Project site has been historically occupied by a citrus orchard. As part of the *Phase I and Limited Phase II ESA* prepared for the proposed Project, soil sampling was conducted to determine the levels of hazardous materials within the soil associated with the past agricultural use. The soil sampling indicated low levels of pesticides and arsenic within the on-site soils; however, the amounts were below residential screening levels. Based on these levels, construction activities associated with the proposed Project (i.e., grading, soil removal, etc.) would not release hazardous materials above threshold levels into the environment. As concluded by the *Phase I and Limited Phase II ESA* the historical usage of the Project site as citrus orchard is not considered an REC in connection with the Project site. The Project site did not show up on a list of hazardous materials sites pursuant to regulatory agencies databases that were researched.

The Project site does not currently contain any recognized environmental conditions or historical recognized environmental conditions, nor is it subject to vapor migration from any on-site or off-site sources. Overall, the proposed Project would not generate hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts would be **less than significant,** and no mitigation measures would be required.

d. Would the project be located on a site which is included on a list of hazardous materials 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?

No Impact

Discussion of Effects: Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by the California Environmental Protection Agency Hazardous

Materials Data Management Program. The DTSC compiles information from subsets of the following databases to make up the Cortese List:

1. The DTSC list of contaminated or potentially contaminated hazardous waste sites listed in the California Sites database, formerly known as ASPIS, is included;

The California State Water Resources Control Board listing of leaking underground storage tanks is included; and

The California Integrated Waste Management Board list of sanitary landfills that have evidence of groundwater contamination or known migration of hazardous materials (formerly WB-LF, now AB 3750).

None of the historical RECs identified in **Table N** occurs on the Project site or includes any activities or materials that would represent a significant hazard to the public or environment at the Project site. Therefore, **no impact** related to the Cortese List or other governmental databases would occur. No mitigation is required.

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 for people residing or working in the project area?

No Impact

Discussion of Effects: The Project site is located approximately 1.5 mile southeast of San Bernardino International Airport and approximately 2 miles west of Redlands Municipal Airport. The Project site is located outside the Airport Compatibility Zones of San Bernardino International Airport and Redlands Municipal Airport.[31] **No impacts** related to the Project's vicinity to a public airport would occur. No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: The proposed Project includes the design, construction, and maintenance of new homes, roadways, utilities, and park space in accordance with applicable standards associated with vehicular access, resulting in the provision of adequate emergency access and evacuation. Construction activities associated with the proposed Project would include improvements to Texas Street (i.e., intersections with proposed Streets A, B, C, and Texas Street extension). Such improvements are not expected to result in road closures; however, temporary lane closures may be required to complete construction activities. As a condition of Project approval, the Applicant would be required to provide lane closure requirements to the City and local emergency service responders in advance of such closures. The proposed Project would develop four access points onto the site from Texas Street. The design of the proposed Project would be reviewed by the City's Fire and Police Departments prior to the issuance of building permits. Adherence to the emergency access measures required by the City would ensure a **less**

[31] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Figure 3.7-2 (Airport Hazards). City of Redlands. July 21, 2017.

than significant impact related to implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

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

Less than Significant Impact

Discussion of Effects: The Project site is located in a Local Responsibility Area (LRA), but not located within a Very High Fire Hazard Severity Zone (VHFHSZ) according to CAL FIRE mapping.[32] The General Plan EIR, Figure 3.7-3, indicates that the Project site is located in an area designated as a Moderate Fire Level Threat.[33] Areas of High and Very High Fire Threat Level lands are located approximately 0.5 mile northeast of the Project site across the Santa Ana River wash.[34] Given the sparse vegetation cover within the Santa Ana River wash and the distance between the Project site and the areas of elevated fire hazard, the potential for the Project to expose people or structures to significant risks involving wildland fires is relatively low. Nevertheless, the proposed Project will be designed in accordance with current California Fire Code Standards, which include requirements for internal road widths, access points to the Project site, and construction fire suppression techniques. The Project would provide public access to the top of the bluff above the Santa Ana River wash via sidewalks and a bike trail. The sidewalks and bike trail on the northern end of the Project site are anticipated to attract additional users as other land in the northern part of the City is developed and other segments of the Santa Ana River Trail are completed. Although the attraction of additional pedestrians and cyclists to the Project's open space areas could raise the potential for accidental fire ignitions that could result in a wildland fire, it should be noted that a number of local regulations have been adopted by the City to reduce the threat of such ignitions. As described in Chapter 12.54 of the City's Municipal Code, smoking is prohibited within all public parks in the City. Chapter 12.44 of the City's Municipal Code prohibits the carry or discharge of firearms, firecrackers, rockets, or other types of explosives within City parks and also does not allow cooking at City parks, except at areas specifically designated for such purpose. Lastly, Chapter 12.46 of the Municipal Code makes it unlawful to start an open fire on public or private property accessible to the public except in an appropriate containment device provided or approved for that purpose by the City's fire marshal and building official. Proper enforcement of these existing regulations will ensure that implementation of the proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts would be **less then significant,** and no mitigation is required.

[32] CAL FIRE. Fire Hazard Severity Zones Maps. City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed December 13, 2022).

[33] City of Redlands. July 21, 2017. Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan. Chapter 3.7: Hazards and Hazardous Materials. Page 3.7-23. Website: https://www.cityofredlands.org/sites/main/files/file-attachments/redlands_deir_compiled_lo_071917_0.pdf?1554321669 (accessed December 13, 2022).

[34] City of Redlands, Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan, Chapter 3.7: Hazards and Hazardous Materials, Figure 3.7-3: Fire Hazards and Fire Safety Services.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede substantial 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 storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. Result in flood hazard, tsunami, or seiche zones, or 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 information and analysis in this section, prepared by Huitt-Zollars, Inc. (Huitt-Zollars), are based on the *Preliminary Drainage Report for Tentative Tract No. 20520,* September 13, 2022 (Huitt-Zollars 2022a), and the *Preliminary Water Quality Management Plan*, December 19, 2022 (Huitt-Zollars 2022b). These reports are provided in **Appendices G-1 and G-2** of this IS/MND, respectively.

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant Impact

Discussion of Effects: Pollutants of concern during construction include sediment, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction. Any of these pollutants have the potential to be transported via storm water runoff into receiving waters (i.e., Santa Ana River and the Pacific Ocean).

During construction, the total disturbed soil area would be approximately 11.68 acres. Because Project construction would disturb greater than 1 acre of soil, the Project would be subject to the requirements of the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit), which was adopted on September 8, 2022 and will become effective on September 1, 2023. The Project would also be required to comply with the City of Redlands Municipal Code Chapter 13.54. Chapter 13.54 prohibits land disturbance or construction activities without first obtaining coverage under the State Construction General Permit, development of a Storm Water Pollution Prevention Plan (SWPPP), and implementation of Best Management Practices (BMPs) to ensure that construction practices include measures to address pollutant discharge into storm drains. As specified in **Regulatory Compliance Measures HYD-1 and HYD-2** and as required by the Construction General Permit and City Municipal Code, the Construction Contractor would be required to prepare a SWPPP and implement construction BMPs detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, erosion and sediment control (designed to minimize erosion and retain sediment on site), and good housekeeping practices to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

According to the Geotechnical and Infiltration Evaluation Report prepared for the Project on July 30, 2021, by GeoTek, Inc., no groundwater was encountered to the maximum depth drilled of 51.5 feet below the existing ground surface and historic high groundwater depth is in excess of 80 feet below existing grade. Given the depth to groundwater, it is unlikely that excavation activities would have the potential to encounter groundwater. Therefore, groundwater dewatering is not anticipated to be required during construction activities.

With implementation of **Regulatory Compliance Measures HYD-1 and HYD-2**, including preparation and implementation of a SWPPP and construction BMPs, impacts associated with the violation of water quality standards or waste discharge requirements during project construction would be less than significant, and no mitigation is required.

During operation, anticipated pollutants of concern associated with the proposed project include pathogens (bacterial/virus), nutrients (phosphorous and nitrogen), sediments, metals, oil and grease, trash and debris, pesticides and herbicides, and organic compounds. The City of Redlands is a co-permittee under Santa Ana Regional Water Quality Control Board's (RWQCB) National Pollutant Discharge

Elimination System (NPDES) Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit).

The San Bernardino County MS4 Permit requires the preparation of project-specific WQMPs for priority projects. The proposed Project is considered a priority project because it involves the development of more than 10,000 square feet of impervious surface and because it includes more than 5,000 square feet of parking lots that would be exposed to stormwater runoff. As specified in **Regulatory Compliance Measure HYD-3** and as required by the San Bernardino County MS4 Permit, the Project would prepare a Final WQMP. The Final WQMP would specify the Site Design, Source Control, Low Impact Development (LID), and Treatment Control BMPs that would be implemented to capture, treat, and reduce pollutants of concern in storm water runoff. Site Design BMPs are storm water management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a site. Source Control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into storm water. LID BMPs mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to piped or impervious storm drains. Treatment Control BMPs are structural BMPs designed to treat and reduce pollutants in storm water runoff prior to releasing it to receiving waters.

A Preliminary WQMP has been prepared for the Project that details the following operational BMPs that would be implemented to reduce impacts to water quality from operation of the Project:

1. **Site Design BMPs** include minimizing impervious surface areas, maximizing natural infiltration capacity, disconnecting impervious surface areas, re-vegetating disturbed areas, minimizing soil compaction during construction, and preserving existing on-site drainage patterns.

2. **Non-Structural Source Control BMPs** include education of property owners regarding potential impacts to downstream water quality; activity restrictions; irrigation system and landscape management; BMP maintenance; compliance with City of Redlands stormwater ordinance (Chapter 13.54 of the City's Municipal Code); litter and debris control program; employee training on stormwater BMPs; catch basin inspection and cleanout program; and compliance with applicable NPDES permits.

3. **Structural Source Control BMPs** include storm drain signage and stenciling; trash and waste storage areas that are designed and constructed to reduce pollution introduction, efficient irrigation systems and landscape design; and protection of slopes and channels.

4. **LID BMPs** include a catch basin inlet and infiltration/water quality basin. The proposed water quality basin would store and infiltrate the entire Design Capture Volume (DCV) for the Project site in accordance with the County of San Bernardino's technical guidance for WQMPs. The DCV is the volume of stormwater runoff that must be captured and treated by stormwater BMPs.

As specified in **Regulatory Compliance Measure HYD-3**, a Final WQMP would be prepared in compliance with the San Bernardino County MS4 Permit prior to or during final design, which would ensure that the Project design would adequately target pollutants of concern in runoff from the Project site.

Infiltration of stormwater could have the potential to affect groundwater quality. The Project includes site design, source control, and LID BMPs to reduce pollutants of concern in storm water prior to infiltration. Furthermore, when storm water is infiltrated, soil and plants absorb and filter pollutants and reduce the potential for pollutants of concern to reach groundwater.

With implementation of **Regulatory Compliance Measure HYD-3**, which requires adherence to the County of San Bernardino MS4 Permit, including preparation of a Final WQMP to address pollutants of concern in storm water runoff, Project impacts associated with the violation of water quality standards or waste discharge requirements would be **less than significant**, and no mitigation is required.

Regulatory Compliance Measures. No mitigation is required; however, the following Regulatory Compliance Measures would be implemented to ensure that impacts related to water quality standards or waste discharge requirements would be **less than significant**.

Regulatory Compliance Measure HYD-1

Construction General Permit. Prior to issuance of a grading permit, the Applicant shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The Applicant shall provide the Waste Discharge Identification Number (WDID) to the Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the proposed Project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.

Regulatory Compliance Measure HYD-2

Prior to the commencement of any land disturbing activities, the Applicant shall obtain coverage under the Construction General Permit and develop a Stormwater Pollution

	Prevention Plan to the City for review and approval that incorporates Best Management Practices to protect water quality during construction activities pursuant to Section 13.54 of the City Municipal Code.
Regulatory Compliance Measure HYD-3	Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (Final WQMP) to the Director of the City of Redlands Department of Development Services review and approval in compliance with the requirements of the Santa Ana RWQCB's NPDES Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit). The Final WQMP shall specify the BMPs to be incorporated into the Project design to target pollutants of concern in storm water runoff from the Project site and the necessary operation and maintenance activity for each BMP. The City shall ensure that the BMPs specified in the Final WQMP are incorporated into the final Project design. The proposed BMPs specified in the Final WQMP shall be incorporated into the grading and development plans submitted to the City for review and approval. Project occupancy and operation shall be in accordance with the schedule outlined in the WQMP.

Compliance with all applicable federal, State, and local laws regulating surface and groundwater quality, as well as implementation of **Regulatory Compliance Measures HYD-1, HYD-2**, and **HYD-3**, the Project as designed would result in a **less than significant impact** associated with water quality standards and/or waste discharge, and no mitigation is required.

b. Substantially deplete groundwater supplies or interfere with groundwater recharge such that may impede substantial groundwater management of the basin?

Less than Significant Impact

Discussion of Effects: According to the Geotechnical and Infiltration Evaluation Report prepared for the Project, no groundwater was encountered to an exploration depth of 51.5 feet below the existing ground surface and historic high groundwater depth is in excess of 80 feet below existing grade. Based on depth to groundwater, groundwater dewatering activities are not anticipated during project construction. Furthermore, according to the project-specific *Preliminary Water Quality Management Plan,* soil compaction would be minimized during construction, which would promote natural infiltration during construction activities. Therefore, construction impacts related to a decrease in groundwater supplies or interference with groundwater recharge in a manner that may impede sustainable groundwater management would be **less than significant**, and no mitigation is required.

The proposed Project would increase the impervious surface are coverage of the Project site by approximately 4.3 acres. The Project site is 14.69 acres but includes approximately 3.13 acres that are within the Santa Ana River, so only 11.56 acres of the Project site are developable. The increase in impervious surface would decrease on site infiltration, which would interfere with groundwater recharge. However, the decrease in on-site infiltration will be offset by implementation of the proposed LID BMPs, including an infiltration basin, which would direct 100 percent of storm water from impervious surfaces into curbs and gutters, then into a catch basin, and then into an infiltration basin to infiltrate on site.

The Project site is located in Upper Santa Ana Valley Groundwater Basin. As discussed in Response 3.10(e) below, the Upper Santa Ana Valley Groundwater Basin is identified by the Department of Water Resources as a low priority basin and therefore is not required to prepare a Groundwater Sustainability Plan. While groundwater provides the City with approximately 70 percent of its water supply, the City has sufficient supplies to meet current and future development consistent with its General Plan through the year 2035.[35] Since the proposed Project is consistent with the City's General Plan, the proposed Project's water demand would not deplete groundwater supplies.

Therefore, development of the proposed Project would not deplete groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management. Impacts associated with groundwater supply and recharge are **less than significant,** and no mitigation is required.

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?

Less than Significant Impact

Discussion of Effect: During construction activities, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above in Response 3.10(a) and as specified in **Regulatory Compliance Measures HYD-1 and HYD-2**, the Applicant would be required to obtain coverage under the Construction General Permit, which requires preparation of a SWPPP. The SWPPP would detail Erosion Control and Sediment Control BMPs to be implemented during construction to minimize erosion and retain sediment on site. With compliance with the requirements of the Construction General Permit and with implementation of the construction BMPs, construction impacts related to on-site and off-site erosion or siltation would be **less than significant**, and no mitigation is required.

Currently, the entirety of the Project site is undeveloped. The proposed Project would retain the existing drainage patterns, with storm water sheet flowing north across the Project site and discharging to the Santa Ana River in two locations—north of Texas Street in the northwest corner of the Project site and north of Israel Beal Park in the northeast corner of the Project site. Implementation of the proposed Project would increase the amount of impervious surface area on the Project site by approximately 4.3 acres. An increase in impervious surface area increases the rate and volume of runoff during a storm,

[35] Ibid. Pages 3-15 through 3-17.

which can more effectively transport sediments to receiving waters. The 4.3 acres of impervious surface areas on the Project site would not be prone to on-site erosion or siltation because there would be no exposed soil. The remaining approximately 7.3 acres of pervious surfaces on the Project site would be landscaped with vegetation that would stabilize the soil and promote infiltration, thereby minimizing on-site erosion and siltation. Furthermore, the Project would be required to implement **Regulatory Compliance Measure HYD-3**, which requires the preparation of a Final WQMP, in compliance with the San Bernardino County MS4 permit, and the implementation of Site Design, Source Control, and LID BMPs that minimize stormwater runoff and increase infiltration.

With implementation of **Regulatory Compliance Measures HYD-1** and **HYD-2**, which require the Project to obtain coverage under the Construction General Permit and implement erosion and sediment control BMPs during construction, and **Regulatory Compliance Measure HYD-2**, which requires the preparation and implementation of a Final WQMP to capture, treat, and reduce pollutants of concern in storm water runoff, operational impacts related to on-site or off-site erosion or siltation would be **less than significant,** and no mitigation is required.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

iv. Impede or redirect flood flows?

Less than Significant Impact

Discussion of Effect: According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 06071C8704H (August 28, 2008)[36], the Project site is not within a 100-year floodplain. The northern portion of the Project site is mapped within Zone X, which is an area characterized by FEMA as having a 0.2 percent annual chance of flooding. In addition, the City's General Plan EIR identifies this area as a Reduced Risk Area due to the existence of a levee.[37]

As discussed above in Response 3.10(a), Project construction would comply with the requirements of the Construction General Permit and the City of Redlands Municipal Code. Furthermore, the Applicant would be required to prepare and implement a SWPPP (**Regulatory Compliance Measures HYD-1 and HYD-2**). The SWPPP would specify construction BMPs to control and direct on-site surface runoff to ensure that Project construction does not increase the rate or amount of surface runoff or impede or redirect flood flows in manner that would result in on-site or off-site flooding. With implementation of a SWPPP and associated BMPs (**Regulatory Compliance Measure HYD-1**), construction impacts related to a substantial increase in the rate or amount of surface runoff or impeding or redirecting flood flows in a manner that would result in on-site or off-site flooding would be **less than significant**, and no mitigation is required.

As stated in Response 3.10(c)(i) above, development of the Project would result in a total impervious surface area of 4.3 acres, which would increase stormwater runoff and could potentially result in flooding. However, as discussed above, the Project site is not within a 100-year floodplain and therefore would not impede or redirect flood flows. Additionally, the proposed infiltration basin has been designed to store and infiltrate the DCV consistent with the requirements of the San Bernardino County MS4 permit (**Regulatory Compliance Measure HYD-3**) to ensure that post-development stormwater runoff does not

[36] Federal Emergency Management Agency. August 28, 2008. National Flood Insurance Program, Flood Insurance Rate Map, City of Redlands, California. Panel Number 06071C8704H.

[37] City of Redlands. *General Plan 2035 EIR*, Chapter 3.9, Figure 3.9-2: Flood Hazards.

exceed stormwater runoff in the existing condition. Implementation of the proposed drainage system, which has been designed in compliance with the requirements of the San Bernardino County MS4 permit (**Regulatory Compliance Measure HYD-3**), would ensure that operational activities would not result in a substantial increase in the rate or amount of surface runoff in a manner that would result in on- or off-site flooding or impede or redirect flood flows, and impacts would be **less than significant**. No mitigation is required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact

Discussion of Effect: As discussed above in Response 3.10(a), Project construction would comply with the requirements of the Construction General Permit and the City of Redlands's Municipal Code. The Applicant would also be required to prepare and implement a SWPPP (**Regulatory Compliance Measures HYD-1 and HYD-2**). The SWPPP would specify construction BMPs to control and direct on-site surface runoff to ensure that storm water runoff from the construction site does not exceed the capacity of the stormwater drainage system and does not discharge polluted runoff during construction activities. With implementation of **Regulatory Compliance Measures HYD-1 and HYD-2**, construction impacts related to exceeding the capacity of the storm water drainage system or additional polluted runoff would be **less than significant**, and no mitigation is required.

In the existing condition, the Project site is undeveloped and there is no existing stormwater infrastructure. Stormwater runoff on the Project site sheet flows from south to north and discharges into the Santa Ana River in two locations. A majority of the Project site (10.27 acres) discharges into the Santa Ana River north of Texas Street. The remaining runoff from the eastern portion of the Project site (0.84 acre) flows through a CDFW swale and into the Santa Ana River north of Israel Beal Park.

The proposed Project would increase the impervious surface area by 4.3 acres compared to existing conditions, which would increase stormwater runoff from the Project site. The proposed Project would include the construction of on-site storm drain facilities, including curbs and gutters, an inlet, a catch basin, and an infiltration basin to collect, detain and infiltrate stormwater runoff from the majority of the Project site that drains north and west. The proposed infiltration basin would have a total storage volume of approximately 53,500 cubic feet (cf), which would fully retain the required Design Capture Volume (DCV) of 19,009 cf. Stormwater runoff in the eastern portion of the Project site., which would remain undeveloped, would continue to flow through a CDFW swale and into the Santa Ana River north of Israel Beal Park. As discussed in Response 3.10(a), the proposed Project would implement operational BMPs to reduce pollutants of concern in stormwater runoff in compliance with the County of San Bernardino MS4 permit (**Regulatory Compliance Measure HYD-3**).

With implementation of **Regulatory Compliance Measures HYD-1 through HYD-3**, operational impacts related to the creation or contribution of storm water runoff that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would be **less than significant**, and no mitigation is required.

d. Result in flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation?

No Impact.

Discussion of Effect: As discussed in Response 3.10(c)(ii) above, the Project site is not within a 100-year flood zone; therefore, there is no risk of pollutants from the Project site due to Project inundation.

The Project site is approximately 52 miles northeast of the Pacific Ocean, and the Santa Ana Mountains are between the Project site and the Pacific Ocean. Based on the distance from the Pacific Ocean and the presence of an intervening mountain range, the Project site would not be susceptible to inundation from a tsunami.

Seiches are oscillations in enclosed bodies of water that are caused by a number of factors, most often wind or seismic activity. The nearest major water feature is Lake Perris, which is located approximately 15 miles south of the Project site.[38] Given the distance of large standing bodies of water from the Project site, there is no risk of a release of pollutants from the Project site due to seiche-related flooding. Based on the fact that the Project site is not located within a 100-year flood zone and is located a substantial distance from the Pacific Ocean and closed bodies of water, implementation of the Project would not result in a flood hazard, tsunami, or seiche risking release of pollutants due to Project site inundation. **No impacts** would occur, and no mitigation is required.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact

Discussion of Effect: The Project site is within the jurisdiction of the Santa Ana RWQCB. The Santa Ana RWQCB adopted a Water Quality Control Plan (i.e., Basin Plan) (January 1995, updated June 2019) that designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. The proposed Project would comply with the Construction General Permit and the existing San Bernardino County MS4 Permit, which requires preparation of a SWPPP, preparation of a Final WQMP, and implementation of construction and operational BMPs to reduce pollutants of concern in storm water runoff. Therefore, the proposed Project would not result in water quality impacts that would conflict with the Santa Ana RWQCB Basin Plan. Impacts related to a conflict with or obstruction of the implementation of a water quality control plan would be **less than significant,** and no mitigation is required.

The Sustainable Groundwater Management Act (SGMA) was enacted in September 2014. SGMA requires governments and water agencies located within high- and medium-priority groundwater basins to halt overdraft of the basins. SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs), which are required to adopt Groundwater Sustainability Plans (GSPs) to manage the sustainability of the groundwater basins. The Project site is located within the Upper Santa Ana Valley Groundwater Basin. The

[38] It should be noted that the Seven Oaks Reservoir is 5.6 miles east of the Project site. The Seven Oaks Reservoir is considered a dry reservoir that serves mainly for flood protection to Orange, Riverside, and San Bernardino Counties. The reservoir is also used to impound water for groundwater recharge. If the Seven Oaks Reservoir was filled with enough water to experience a seiche during an earthquake, floodwaters would follow the Santa Ana River Wash, north of the Project site.

Upper Santa Ana Valley Groundwater Basin is identified by the Department of Water Resources as a very low priority basin; therefore, development of a GSP or an approved GSP alternative is not required.[39]

As discussed previously, due to the depth to groundwater, it is not expected that any storm water that may infiltrate during construction would affect groundwater quality because the groundwater table is deep, and pollutants would be filtered prior to reaching groundwater. In addition, the proposed Project would be required to implement operational BMPs to treat storm water before it could reach groundwater. Although the proposed Project would increase impervious surface area by approximately 4.3 acres, which would decrease on-site infiltration, the proposed Project would collect and infiltrate 100 percent of the stormwater flow from the impervious areas on the Project site. Therefore, the proposed Project would not substantially decrease on-site infiltration and groundwater recharge when compared to existing conditions. Therefore, the proposed Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan, and impacts would be **less than significant**. No mitigation is required.

[39] California Department of Water Resources. 2016. Groundwater Exchange. Website: https://groundwaterexchange.org/basin/upper-santa-ana-valley-3/ (accessed January 18, 2023).

3.11 LAND USE AND PLANNING

Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?

No Impact

Discussion of Effects: The Project site is located on the northern end of an established neighborhood within the City of Redlands. The Project site is bordered by the Santa Ana River to the north, a public park to the east, a shooting range to the northeast, fallow agricultural land and Texas Street to the west, and existing single-family residential uses to the south. The proposed Project includes the development of 35 single-family residential homes, the extension and widening of Texas Street to the northern end of the Project site, the construction of three public streets that would end in cul-de-sacs, a water quality basin, a recreation lawn, and a play area. The Project would also construct an extension of the Santa Ana River Trail through the northern portion of the Project site. The Project would include a total of approximately 5.9 acres of open space available for use by on-site residents, with portions publicly accessible. The proposed Project uses are consistent with the surrounding land uses, which are primarily residential, so the proposed Project would integrate uniformly with the established residential uses surrounding the Project site.

The proposed Project would be served by existing public streets (Texas Street) and other infrastructure. The proposed Project would develop the site with 35 detached single-family residential homes, which would result in a proposed density of 2.38 dwelling units per gross acre.[40] The City's General Plan currently designates the Project site and the residential land uses to the south as *Very Low Density Residential*, which allows for the development of detached single-family dwellings at densities up to 2.7 dwelling units per acre (du/ac) on slopes of up to 15 percent and 0.4 du/ac on slopes between 15–30 percent. The Project's proposed density is consistent with the General Plan designation for the Project site and with the density of the surrounding residential neighborhoods. As such, the proposed Project can be seen as an extension of the existing residential neighborhood to the south. The proposed Project would not physically divide an established community, but rather extend an established community. **No impact** would occur, and no mitigation is required.

[40] 14.69 acres/35 residential units

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?

Less than Significant Impact

Discussion of Effects: The Project site's zoning designation is A-1 Agricultural District. The purpose of the A-1 zone is to provide for the proper utilization of such lands best suited for agricultural purposes, and to prevent the encroachment of incompatible uses. Under this zoning designation, single-family residences are allowed; however, no more than two dwelling units are allowed on each parcel of five acres or more. Only one dwelling unit per lot is permitted on parcels that are less than five acres in area, provided that the lot contains dimensions and an area equivalent to the closest single-family residential zone.[41] Although it appears the proposed density of 2.38 du/ac is inconsistent with the allowable density for the A-1 zoning, Senate Bill 330 (SB 330) allows residential densities supported by the General Plan without a zone change. As described above in the response to Threshold 3.11(a), the Project's proposed density (2.38 du/ac) would not exceed the density limit of Very Low Density Residential established in the General Plan (2.7 du/ac).

Pursuant to SB 330, the Project's proposed density of 2.38 du/ac would be allowable on the Project site as it is consistent with the density allowed in the General Plan land use designation. As such, the proposed Project would not conflict with any land use plan, policy, or regulation adopted by the City. As detailed throughout this Initial Study, all impacts to the environment resulting from the proposed Project are subject to applicable mitigation and local, State and/or federal regulations, which would reduce those impacts to **less than significant** levels. Therefore, impacts related to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the General Plan, Specific Plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect are **less than significant**. No mitigation is required.

[41] City of Redlands Municipal Code. Section 18.20.030. Urban residential or UR zone.

3.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?

Less than Significant Impact

Discussion of Effects: Minerals are any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat and oil bearing rock, but excluding geothermal resources, natural gas and petroleum. Rock, sand, gravel and earth are also considered minerals by the Department of Conservation when extracted by surface mining operations. According to the *Redlands General Plan EIR* [42], the Project site is located within Mineral Resource Zone-2 (MRZ-2) where geologic data indicate that significant plain cement concrete (PCC)-grade aggregate resources are present. The Project site is also located in an aggregate resource sector designated by the State Mining and Geology Board (1987) as containing regionally significant PCC-grade aggregate resources. According to the City's General Plan EIR, the majority of the City's aggregate resources are concentrated along the Santa Ana River wash. In light of this, the City has adopted the Upper Santa Ana Wash Land Management and Habitat Conservation Plan, which accommodates the relocation and expansion of aggregate mining quarries, to help ensure long-term availability of high quality aggregate reserves located within the Santa Ana River Wash Planning Area for local and regional use. The Project site is outside the boundaries of the Upper Santa Ana Wash Land Management and Habitat Conservation Plan and not within an area designated for aggregate mining by the City, and access to the aggregate resources along the Santa Ana River wash would not be affected by proposed Project actions.

Any construction activities, such as grading or soil excavation, would not be at a depth where unknown mineral resources may be inadvertently discovered. Therefore, the development of the proposed Project would not result in the loss of available mineral resources. Therefore, development of the proposed Project would have less than significant impacts related to the availability of mineral resources. No mitigation is required.

[42] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Final, SCH #2016081041.* Figure 3.11-1 (Mineral Resources). City of Redlands. July 21, 2017.

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?

Less Than Significant Impact

Discussion of Effect: Please refer to the response to Threshold 3.11(a). **Less than significant impacts** related to locally important mineral resources would occur. No mitigation is required.

3.13 NOISE

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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?	☐	☐	☒	☐
b. Result in generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The discussion and analysis provided here describes the potential short-term construction noise and vibration impacts associated with the proposed Project, as well as long-term operational noise and vibration impacts. Supporting data, including short- and long-term noise level measurement survey sheets, the specific assumptions used in the noise analysis, and model printouts, are provided in **Appendix H.**

Characteristics of Sound

Sound is increasing in the environment and can affect quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations (or cycles per second) of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound and describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike units of measurement that use a linear scale (e.g., inches or pounds), decibels use a scale based on powers of 10.

For example, 10 decibels (dB) is 10 times more intense than 0 dB, 20 dB is 100 times more intense than 0 dB, and 30 dB is 1,000 times more intense than 0 dB. Thirty decibels (30 dB) represents 1,000 times as much acoustic energy as 0 dB. The decibel scale increases as the square of the change, representing the sound-pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in California are L_{eq} and the Community Noise Equivalent Level (CNEL) or the day-night average noise level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during relaxation hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance, when assessing the annoyance factor, include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Another noise scale often used together with L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category, audible impacts, refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally involve a change of 3 dB or greater because that level has been found to be barely perceptible in exterior environments. The second category, potentially audible impacts, refers to a change in the noise level between 1 and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category involves changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will potentially result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less-developed areas.

Table O: Definitions of Acoustical Terms and **Table P: Common Sound Levels and Their Noise Sources** follow.

Fundamentals of Ground-borne Vibration. Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible, but without the effects associated with the shaking of a building there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items sitting on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Although the perceptibility threshold is approximately 65 vibration velocity decibels (VdB), human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. A vibration level that causes annoyance is well below the damage risk threshold for typical buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.[43] When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed

[43] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed December 2022).

Table O: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of noise level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted unless reported otherwise.)
L_2, L_8, L_{50}, L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter during a designated time interval using fast-time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources from many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, time of occurrence, and tonal or informational content, as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris 1991).

Table P: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near-Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2004).

the impact criteria; however, construction of the Project could result in ground-borne vibration that may be perceptible and annoying. Ground-borne vibration has the potential to disturb people and damage buildings. Although it is very rare for most types of construction to cause even cosmetic building damage due to ground-borne vibration, it is not uncommon for certain construction processes (e.g., blasting and pile driving) to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The RMS velocity is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. The vibration velocity level in decibels is defined as the following:

$$L_v = 20 \log_{10} [V/V_{ref}]$$

where "L_v" is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10-6 inches/second (in/sec) used in the United States.

Regulatory Settings

Federal Guidelines

Federal Transit Administration. Vibration standards included in the FTA *Transit Noise and Vibration Impact Assessment Manual*[44] were used in this analysis because the City of Redlands does not have construction vibration damage criteria. **Table Q: Construction Vibration Damage Criteria** provides the criteria for assessing the potential vibration building damage associated with construction activities.

Table Q: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)	Approximate L_V (VdB)[1]
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Non-engineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) re 1 µin/sec.
µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inch/inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Local Regulations

City of Redlands General Plan Noise Element. The City of Redlands lists policies to meet the City's noise-related goals and has established a noise land use compatibility matrix shown in **Table R: Noise/Land Use Compatibility Matrix and Interpretation** to assess the compatibility of proposed land uses along with interior and exterior noise standards for specific land uses shown in **Table S: Interior and Exterior Noise Standards**. The following are the applicable City policies.

[44] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed December 2022).

Policy 9.0e Use the criteria specified in Table 7-10 (**Table R**) to assess the compatibility of proposed land uses with the projected noise environment, and apply the noise standards in Table 7-11 (**Table S**), which prescribe interior and exterior noise standards in relation to specific land uses. Do not approve projects that would not comply with the standards in Table 7-11 (**Table S**).

Policy 9.0v Consider the following impacts as possibly "significant":

- An increase in exposure of four or more dB if the resulting noise level would exceed that described as clearly compatible for the affected land use, as established in Table 7-10 (**Table R**) and Table 7-11 (**Table S**);
- Any increase of 6 dB or more, due to the potential for adverse community response.

Policy 9.0w Limit hours for all construction or demolition work where site-related noise is audible beyond the site boundary.

Table R: Noise/Land Use Compatibility Matrix and Interpretation

Land Use Categories		Community Noise Equivalent Level (CNEL)						
Categories	**Uses**	**<**	**60**	**65**	**70**	**75**	**80**	**85**	**>**
RESIDENTIAL	Single Family, Duplex Multiple Family	A	C	C	C	D	D	D
RESIDENTIAL	Mobile Homes	A	C	C	C	D	D	D
COMMERCIAL Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
COMMERCIAL Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theater	A	A	A	A	B	B	C
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Office Building, Research & Dev., Professional Offices, City Office Building	A	A	A	B	B	C	D
COMMERCIAL Recreation INSTITUTIONAL Civic Center	Amphitheater, Concert Hall, Auditorium, Meeting Hall	B	B	C	C	D	D	D
COMMERCIAL Recreation	Childrens Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	A	B	B	B
COMMERCIAL General, Special INDUSTRIAL, INSTITUTIONAL	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
INSTITUTIONAL General	Hospital, Church, Library, Schools Classroom	A	A	B	C	C	D	D
OPEN SPACE	Parks	A	A	A	B	C	D	D
OPEN SPACE	Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
AGRICULTURE	Agriculture	A	A	A	A	A	A	A

Zone A CLEARLY COMPATIBLE	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
ZONE B NORMALLY COMPATIBLE	New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.
ZONE C NORMALLY INCOMPATIBLE	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.
ZONE D CLEARLY INCOMPATIBLE	New construction or development should generally not be undertaken.

Source: City of Redlands General Plan Noise Element, Table 7-10 (December 2017).

Table S: Interior and Exterior Noise Standards

	Community Noise Equivalent Level (CNEL) Energy Average	
Land Use Categories	**Interior**[1]	**Exterior**[2]
Residential		
Single Family, Duplex, Multiple Family	45[3]	60
Mobile Home	---	60[4]
Commercial, Industrial, Institutional		
Hotel, Motel, Transit Lodging	45	65[3]
Commercial Retail, Bank, Restaurant	50	---
Office Building, Research & Development, Professional Offices, City Office Building	50	---
Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	---
Gymnasium (Multipurpose)	50	---
Sports Club	55	---
Manufacturing, Warehousing, Wholesale, Utilities	60	---
Movie Theaters	45	---
Institutional		
Hospitals, Schools classrooms	45	60
Open Space		
Parks	---	60

Source: City of Redlands General Plan Noise Element, Table 7-11 (December 2017).

[1] Indoor environment excludes bathrooms, toilets, closest, corridors.

[2] Outdoor environment limited to private yard of single family as measured at property line; multifamily private patio or balcony that is served by means of exist from inside; mobile home park; hospital patio; park picnic area; school playground; hotel and recreational area.

[3] Noise level requirement with open window, if they are used to meet natural ventilation requirements.

[4] Exterior noise levels should be such that interior noise levels will not exceed 45 CNEL.

[5] Expect those areas affected by aircraft noise.

City of Redlands Municipal Code. Section 8.06.070 of the City's Municipal Code outlines the exterior noise standards for stationary noise sources and are shown below in **Table T: Maximum Permissible Exterior Sound Levels by Receiving Land Use**.

Section 8.06.090(F) of the City's Municipal Code prohibits the operation or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 6:00 p.m. and 7:00 a.m., including Saturdays, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities, the City or another governmental entity. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order, or suitable to meet the standards set forth herein.

Table T: Maximum Permissible Exterior Sound Levels by Receiving Land Use

		Noise Level (dBA)					
Receiving Land Use Category	**Time Period**	**Noise Standard**	L_{50}[1]	L_{25}[2]	L_8[3]	L_2[4]	L_{max}[5]
Single-family residential districts	10:00 p.m. to 7:00 a.m.	50	50	55	60	65	70
	7:00 a.m. to 10:00 p.m.	60	60	65	70	75	80
Multifamily residential districts; Public space; institutional	10:00 p.m. to 7:00 a.m.	50	50	55	60	65	70
	7:00 a.m. to 10:00 p.m.	60	60	65	70	75	80
Commercial	10:00 p.m. to 7:00 a.m.	60	60	65	70	75	80
	7:00 a.m. to 10:00 p.m.	65	65	70	75	80	85
Industrial	Any time	75	--	--	--	--	--

Source: City of Redlands. Municipal Code, Section 8.06.070 (Exterior Noise Limits).

Note: If the measured ambient level exceeds the allowable noise exposure standard within any of the first 4 noise limit categories above, the allowable noise exposure standard shall be adjusted in 5 dBA increments in each category as appropriate to encompass or reflect said ambient noise level. In the event the ambient noise level exceeds the 5th noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level. The ambient noise shall be measured at the same location along the property line with the alleged offending noise source inoperative. If the alleged offending noise source cannot be shut down, the ambient noise shall be estimated by performing a measurement in the same general area of the source but at a sufficient distance that the noise from the source is at least 10 dBA below the ambient in order that only the ambient level be measured. If the difference between the ambient and the noise source is 5 to 10 dBA, then the level of the ambient itself can be reasonably determined by subtracting a one decibel correction to account for the contribution of the source. In the event the alleged offensive noise contains a steady, audible tone such as a whine, screech, hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits shall be reduced by 5 dBA.

[1] The noise standard for a cumulative period of more than 30 minutes in any hour.
[2] The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
[3] The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour.
[4] The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour.
[5] The noise plus 20 dBA or the maximum measured ambient level for any period of time.

dBA = A-weighted decibels
L_{eq} = Equivalent continuous sound level

Section 8.06.090(G) of the City's Municipal Code prohibits the operation or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The City's Municipal Code defines the perception threshold to be a motion velocity of 0.01 inches per second over the range of 1 to 100 Hz.

Section 8.06.100 of the City's Municipal Code states that it is unlawful to operate any air conditioning or air handling equipment that exceeds sound levels shown in **Table T.**

Section 8.06.120(G) of the City's Municipal Code states that the noise standards shall not apply to noise sources associated with new construction, remodeling, rehabilitation or grading of any private property, provided such activities take place between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, including Saturdays, with no activities taking place at any time on Sundays or federal holidays. All motorized equipment used in such activities shall be equipped with functioning mufflers.

Existing Settings

Surrounding Land Uses. Land uses surrounding the Project site include Santa Ana River to the north, a shooting range to the northeast, a public park to the east, single-family residences to the south, and fallow agricultural land and Texas Street to the west.

Overview of the Existing Ambient Noise Environment. The existing noise sources in the vicinity of the Project site include traffic noise on Texas Street, gun shots from the shooting range, and activities at the neighboring park. Noise from motor vehicles is generated by engines, the interaction between the tires and the road, and the vehicles' exhaust systems.

Ambient Noise Levels

Short-Term Noise Measurements. One short-term (20-minute) noise level measurement was conducted on December 6, 2022, using a Larson Davis Model 831 Type 1 sound level meter. **Table U: Short-Term Ambient Noise Level Measurement** shows the results of the short-term noise level measurement along with a description of the measurement location and noise sources that occurred during the measurement. As shown in **Table U**, the measured average noise level at ST-1 was 46.1 dBA L_{eq} and the instantaneous maximum noise level was 54.8 dBA L_{max}. The short-term noise level measurement survey sheet is provided in **Appendix H**. **Figure 8** shows the location where the short-term noise measurements were taken.

Table U: Short-Term Ambient Noise Level Measurement

Monitor No.	Location	Date	Start Time	Noise Level (dBA)			Noise Sources
				L_{eq}	L_{max}	L_{min}	
ST-1	Near the northern border of the Project site between the quarry and the shooting range.	12/6/22	12:30 PM	46.1	54.8	40.0	Gun shots from nearby shooting range northeast of the Project site.

Source: Compiled by LSA (2022).
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level
L_{min} = minimum instantaneous noise level

Long-Term Noise Measurements. Two long-term (24-hour) noise level measurements were conducted from December 6 to December 7, 2022, using Larson Davis Spark dosimeters. **Table V: Long-Term Ambient Noise Monitoring Results** summarizes the results of the long-term noise level measurements along with a description of the measurement locations and noise sources that occurred during the measurements. As shown in **Table V**, the daytime noise levels ranged from 44.1 to 53.3 dBA L_{eq} and nighttime noise levels ranged from 44.8 to 52.0 dBA L_{eq}. The daytime maximum instantaneous noise level ranged from 52.0 to 77.4 dBA and the nighttime instantaneous maximum noise level ranged from 54.9 to 69.8 dBA. Also, the calculated CNEL levels at LT-1 and LT-2 were 54.1 dBA and 57.0, respectively. The long-term noise level measurement survey sheets along with the detailed hourly L_{eq}, L_{max}, and minimum measured sound level (L_{min}) results are provided in **Appendix H**. Figure 3.13-1 shows the locations where the long-term noise measurements were taken.

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LSA

FIGURE 8

LEGEND

- Project Site Boundary
- ST-1 Short-term Noise Monitoring Location
- LT-1 Long-term Noise Monitoring Location

N

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FEET

SOURCE: Google Earth 2021

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Texas Street Residential Project

Noise Monitoring Locations

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Table V: Long-Term Ambient Noise Monitoring Results

Monitor No.	Location	Noise Level (dBA)					Noise Sources
		Daytime		Nighttime		CNEL	
		L_{eq}	L_{max}	L_{eq}	L_{max}		
LT-1	2035 Citron Court, in the backyard of the residence.	44.1-52.1	52.0-77.4	44.8-50.9	54.9-69.8	54.1	Faint construction vehicles, trucks for the quarry passing by, and gunshots at nearby shooting range.
LT-2	Northwest corner of Israel Beal Park, on a tree near the picnic tables.	46.0-53.3	58.3-70.3	47.4-52.0	55.8-65.5	57.0	Faint playground noise, gunshots at nearby shooting range, and people talking nearby (faint).

Source: Compiled by LSA (2022).
Note: Long-term (24-hour) noise level measurements were conducted from December 6, 2022, to December 7, 2022.
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level
CNEL = Community Noise Equivalent Level
L_{max} = maximum instantaneous noise level
ft = foot/feet

Existing Traffic Noise. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108)[45] was used to evaluate traffic-related noise conditions along roadway segments in the vicinity of the Project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2022) Average Daily Traffic (ADT) volumes were obtained from the *Traffic Circulation Analysis for the Single-Family Residential Development Project (Tentative Tract Map No. 20520)*[46]. The standard vehicle mix for Southern California roadways was used for the roadway segments in the vicinity of the Project site. **Table W: Existing (2022) Traffic Noise Levels** shows the existing (2022) traffic noise levels on the nearby roadways. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix H**.

Table W: Existing (2022) Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Texas Street North of Pioneer Avenue	5,685	< 50	< 50	57	60.1
Texas Street Between Pioneer Avenue and San Bernardino Avenue	6,010	< 50	< 50	59	60.4
Texas Street South of San Bernardino Avenue	4,673	< 50	< 50	80	62.3
Pioneer Avenue West of Texas Street	7,364	< 50	< 50	87	62.9
Pioneer Avenue East of Texas Street	6,849	< 50	< 50	83	62.5
San Bernardino Avenue West of Texas Street	8,730	< 50	81	175	67.4
San Bernardino Avenue East of Texas Street	9,186	< 50	84	181	67.7

Source: Compiled by LSA (2022).
ADT = average daily traffic
dBA = A-weighted decibels
CNEL = Community Noise Equivalent Level
ft = foot/feet

[45] FHWA 1977. *Highway Traffic Noise Prediction Model*, FHWA RD 77-108.
[46] TTLC Redlands Texas St, LLC. 2022. *Traffic Circulation Analysis for the Single-Family Residential Development Project (Tentative Tract Map No. 20520)*. October 14.

a. Would the project result in the 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?

Less than Significant Impact

Discussion of Effects: **Short-Term (Construction) Noise**

Two types of short-term noise impacts could occur during construction on the Project site. First, construction crew commutes and the transport of construction equipment and materials to the site for the Project would incrementally increase noise levels on roadways leading to the site. The pieces of construction equipment for construction activities would move on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the vicinity of the Project site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 feet would generate up to a maximum of 84 dBA), the effect on longer-term ambient noise levels would be small because the number of daily construction-related vehicle trips would be small compared to existing daily traffic volumes in the vicinity of the Project site. The proposed Project would generate a maximum of 118 construction-related vehicle trips per day based on the California Emissions Estimator Model (CalEEMod) (Version 2022.1) results contained in **Appendix B**. Roadways that would be used to access the Project site include Texas Street, Pioneer Avenue, and San Bernardino Avenue. Based on **Table W** data, Texas Street, Pioneer Avenue, and San Bernardino Avenue have estimated existing daily traffic volumes of 4,673, 6,849, 8,730, respectively, near the Project site. Based on the information above, construction-related traffic noise would increase by up to 0.1 dBA. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, no short-term construction-related impacts associated with worker commutes and transport of construction equipment and material to the Project site would occur, and no noise reduction measures would be required.

The second type of short-term noise impact is related to noise generated from construction activities. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. The Project anticipates site preparation and grading, building construction, paving, and architectural coating phases of construction. These various sequential phases change the character of the noise generated on a Project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. **Table X: Typical Construction Equipment Noise Levels** lists the L_{max} recommended for noise impact assessments for typical construction equipment included in the FHWA Highway Construction Noise Handbook[47], based on a distance of 50 feet between the equipment and a noise receptor.

[47] FHWA. 2006. FHWA Highway Construction Noise Handbook. Roadway Construction Noise Model, FHWA HEP-06-015. DOT-VNTSC-FHWA-06-02. NTIS No. PB2006-109012. August.

Table X: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor[1]	Maximum Noise Level (L_{max}) at 50 ft[2]
Backhoe	40	80
Compactor (ground)	20	80
Compressor	40	80
Crane	16	85
Dozer	40	85
Dump Truck	40	84
Excavator	40	85
Flatbed Truck	40	84
Forklift	20	85
Front-End Loader	40	80
Grader	40	85
Impact Pile Driver	20	95
Jackhammer	20	85
Pickup Truck	40	55
Pneumatic Tools	50	85
Pump	50	77
Rock Drill	20	85
Roller	20	85
Scraper	40	85
Tractor	40	84
Welder	40	73

Source: *FHWA Highway Construction Noise Handbook,* Table 9.1 (FHWA 2006).
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] The usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] The maximum noise levels were developed based on Specification 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

Table Y: Summary of Construction Phase, Equipment, and Noise Levels lists the anticipated construction equipment for each construction phase based on the CalEEMod (version 2022.1) results in **Appendix B.** Also, **Table Y** shows the combined noise level (L_{max} and L_{eq}) noise level at a distance of 50 feet for each construction phase along with the number of each construction equipment, acoustical usage factor, and the noise level (L_{max} and L_{eq}) for each construction equipment at a distance of 50 feet based on the quantity. As shown in **Table Y**, construction noise levels would reach up to 93.2 dBA L_{max} (98.2 dBA L_{eq}) at a distance of 50 feet.

The closest residential property line is located immediately south of the Project site and is approximately 605 feet from the center of the Project site. At a distance of 605 feet, noise levels would reduce by 21.7 dBA compared to the noise level measured at 50 feet from the source. In addition, the residences south of the Project site are located 6 feet higher in elevation than the proposed Project and a 6-foot-high property wall at the top of slope would provide a minimum noise reduction of 5 dBA. During the noisiest construction phase, the closest residential property line would be exposed to a construction noise level of 71.5 dBA L_{max} (93.2 dBA -21.7 dBA – 5 dBA = 66.5 dBA) or 67.5 dB L_{eq} (89.2 dBA – 21.7 dBA – 5 dBA = 62.5 dBA). Although construction noise would be higher than the ambient noise in the vicinity of the Project site, construction noise would cease to occur once the Project construction is completed.

Table Y: Summary of Construction Phase, Equipment, and Noise Levels

Construction Phase	Construction Equipment	Quantity	Reference Noise Level at 50 ft (dBA L_{max})	Acoustical Usage Factor[1] (%)	Noise Level at 50 ft (dBA)		Combined Noise Level at 50 ft (dBA)	
					L_{max}	L_{eq}	L_{max}	L_{eq}
Site Preparation	Dozer	3	85	40	89.8	85.8	91.3	87.3
	Front End Loader	4	80	40	86.0	82.0		
Grading	Excavator	2	85	40	88.0	84.0	93.2	89.2
	Grader	1	85	40	85.0	81.0		
	Dozer	1	85	40	85.0	81.0		
	Scraper	2	85	40	88.0	84.0		
	Front End Loader	2	80	40	83.0	79.0		
Phase 1	Crane	1	85	16	85.0	77.0	92.4	86.5
	Man Lift	3	85	20	89.8	82.8		
	Generator	1	82	50	82.0	79.0		
	Front End Loader	3	80	40	84.8	80.8		
	Welder / Torch	1	73	40	73.0	69.0		
Phase 2	Crane	1	85	16	85.0	77.0	92.4	86.5
	Man Lift	3	85	20	89.8	82.8		
	Generator	1	82	50	82.0	79.0		
	Front End Loader	3	80	40	84.8	80.8		
	Welder / Torch	1	73	40	73.0	69.0		
Phase 3	Crane	1	85	16	85.0	77.0	92.4	86.5
	Man Lift	3	85	20	89.8	82.8		
	Generator	1	82	50	82.0	79.0		
	Front End Loader	3	80	40	84.8	80.8		
	Welder / Torch	1	73	40	73.0	69.0		
Paving	Paver	2	85	50	88.0	85.0	92.8	87.6
	Pavement Scarifier	2	85	20	88.0	81.0		
	Roller	2	85	20	88.0	81.0		
Architectural Coating	Compressor (air)	1	80	40	80.0	76.0	80.0	76.0

Source: Compiled by LSA (2022).

[1] The acoustical usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

dBA = A-weighted decibels
ft = foot/feet
L_{eq} = equivalent continuous sound level
L_{max} = maximum instantaneous noise level

Compliance with the City's Noise Ordinance would ensure that construction noise impacts would be minimized to the greatest extent feasible. **Standard Condition NOI-1** would limit construction hours to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday provided all motorized equipment is equipped with functioning mufflers pursuant to Sections 8.06.090F (Noise Disturbances Prohibited) and 8.06.120 (Exemptions) of the City's Municipal Code.

The following Standard Condition is a regulatory requirement that would be implemented to ensure that Project construction noise would be minimized to the greatest extent feasible.

Standard Condition NOI-1 **Compliance with Sections 8.06.090F (Noise Disturbances Prohibited) and Chapter 8.06.120 (Exemptions) of the City of Redlands Municipal Code.** Construction activities, including operating or causing the operation of any tools or equipment used in site preparation, construction, drilling, repair, alteration, grading, paving, and/or architectural coating shall be restricted to the hours of 7:00 a.m. to 6:00

p.m. Mondays through Saturdays, and are prohibited at any time on Sundays and holidays.

All mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order and shall be maintained so that vehicles and their loads are secured from rattling and banging.

With implementation of **Standard Condition NOI-1**, construction noise impacts would be **less than significant.** No mitigation measures are required.

Long-Term (Operational) Traffic Noise

The FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108)[48] was used to evaluate traffic-related noise conditions along roadway segments in the vicinity of the Project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2022) Average Daily Traffic (ADT) volumes without and with Project were obtained from the Traffic Circulation Analysis for the Single-Family Residential Development Project (Tentative Tract Map No. 20520)[49]. The standard vehicle mix for Southern California roadways was used for roadways in the vicinity of the Project site. **Table Z: Existing (2022) Traffic Noise Levels without and with Project** shows the existing (2022) traffic noise levels without and with Project on roadways in the vicinity of the Project site. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the locations where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix H**.

As shown in **Table Z**, the Project-related traffic noise would increase by up to 0.3 dBA along Texas Street. Noise level increases less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from Project-related traffic on off-site sensitive receptors would be less than significant. No mitigation measures are required.

Long-Term (Operational) Stationary Noise

The proposed Project includes on-site ground-floor heating, ventilation, and air conditioning (HVAC) units for each residence that could potentially operate 24 hours per day. The specifications of typical HVAC equipment, including the reference noise level, are provided in **Appendix H.** Each HVAC unit would generate a noise level of 44.4 dBA L_{eq} at a distance of 50 feet. It is estimated that each off-site residence would be exposed to noise from up to two HVAC units, which would generate a noise level of 47.4 dBA L_{eq} at a distance of 50 feet. The closest off-site residential property line is approximately 25 feet from on-site ground floor HVAC units. At a distance of 25 feet, noise levels would increase by 6 dBA compared to the noise level measured at 50 feet from the source. In addition, off-site residences are located 6 feet higher in elevation than the proposed Project and a 6-foot-high property wall at the top of slope would provide a minimum noise reduction of 5 dBA. The closest off-site residential property line

[48] FHWA 1977. *Highway Traffic Noise Prediction Model*, FHWA RD 77-108.

[49] TTLC Redlands Texas St, LLC. 2022. *Traffic Circulation Analysis for the Single-Family Residential Development Project (Tentative Tract Map No. 20520)*. October 14.

Table Z: Existing (2022) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Texas Street North of Pioneer Avenue	5,685	< 50	< 50	57	60.1	5,982	< 50	< 50	59	60.4	0.3
Texas Street Between Pioneer Avenue and San Bernardino Avenue	6,010	< 50	< 50	59	60.4	6,277	< 50	< 50	61	60.6	0.2
Texas Street South of San Bernardino Avenue	4,673	< 50	< 50	80	62.3	4,732	< 50	< 50	80	62.4	0.1
Pioneer Avenue West of Texas Street	7,364	< 50	< 50	87	62.9	7,379	< 50	< 50	87	62.9	0.0
Pioneer Avenue East of Texas Street	6,849	< 50	< 50	83	62.5	6,864	< 50	< 50	83	62.6	0.1
San Bernardino Avenue West of Texas Street	8,730	< 50	81	175	67.4	8,908	< 50	82	177	67.5	0.1
San Bernardino Avenue East of Texas Street	9,186	< 50	84	181	67.7	9,216	< 50	84	181	67.7	0.0

Source: Compiled by LSA (2022).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet

would be exposed to noise levels of 45.4 dBA L_{eq} (45.4 dBA + 6 dBA – 5 dBA = 45.4 dBA). This noise level would not exceed the City's daytime and nighttime 30 minute (L_{50}) noise standard of 60 dBA and 50 dBA, respectively. Therefore, noise impacts from Project operations would be **less than significant**. No mitigation measures are required. Overall, the proposed Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project site in excess of standards established by the City of Redlands through its General Plan and Municipal Code. Noise impacts would be **less than significant,** and no mitigation measures are required.

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

Less than Significant Impact

Discussion of Effects:

Short-Term Construction Vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damage using vibration levels in PPV (in/sec). Vibration levels calculated in RMS velocity are best for characterizing human response to building vibration, whereas vibration levels in PPV are best for characterizing damage potential.

Table AA: Vibration Source Amplitudes for Construction Equipment shows the reference vibration levels at a distance of 25 feet for each type of standard construction equipment from the *Transit Noise and Vibration Impact Assessment Manual*[1]. Project construction is expected to require the use of large bulldozers and loaded trucks, which would generate ground-borne vibration levels of up to 0.089 in/sec (PPV) and 0.076 in/sec (PPV), respectively, when measured at 25 feet.

The greatest vibration levels are anticipated to occur during the site preparation and grading phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the Project site boundary (assuming the construction equipment would be used at or near the Project site boundary) because vibration impacts normally occur within the buildings.

The formula for vibration transmission is provided below:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

[1] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed December 2022).

Table AA: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer[2]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks[2]	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[2] The equipment shown in bold is expected to be used on site.

µin/sec = microinches per second
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
L_V = vibration velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Table AB: Potential Construction Vibration Annoyance lists the projected vibration levels from various construction equipment expected to be used on the Project site in the active construction area to the property line of the Project site. As shown in **Table AB**, the southern property line of the Project site is approximately 100 feet from the active Project construction area near the center of the Project site and would experience vibration levels of up to 0.008 in/sec (RMS). This vibration level would not result in community annoyance because it would not exceed the City's vibration annoyance threshold of 0.01 in/sec (RMS). Other structures that surround the Project site would experience lower vibration levels because they are farther away.

Table AB: Potential Construction Vibration Annoyance

Land Use	Direction	Equipment/ Activity	Reference Vibration Level at 25 ft	Distance to Structure (ft)[1]	Vibration Level
			PPV (in/sec)		RMS (in/sec)[2]
Residential	South	Large bulldozers	0.089	100	0.008
		Loaded trucks	0.076	100	0.007

Source: Compiled by LSA (2022).
Note: The City's vibration perception threshold is 0.01 in/sec (RMS) at the property line of the Project site.
[1] Distance from the active construction area near the center of the Project site to the property line of the Project site.
[2] The RMS value is approximately 0.71 of the peak value (Caltrans 2020).
ft = foot/feet
in/sec = inches per second
RMS = root mean square

Similarly, **Table AC: Potential Construction Vibration Damage** lists the projected vibration levels from various construction equipment expected to be used on the Project site at the Project construction boundary to the nearest buildings in the vicinity of the Project site. As shown in **Table AC**, the closest building is approximately 15 feet from the Project construction boundary and would experience vibration

Table AC: Potential Construction Vibration Damage

Land Use	Direction	Equipment/ Activity	Reference Vibration Level at 25 ft	Distance to Structure (ft)[1]	Vibration Level
			PPV (in/sec)		PPV (in/sec)
Residential	South	Large bulldozers	0.089	15	0.191
		Loaded trucks	0.076	15	0.164

Source: Compiled by LSA (2022).
Note: The FTA-recommended building damage threshold is 0.20 PPV [in/sec]) at the receiving non-engineered timber and masonry building.
[1] Distance from the Project construction boundary to the building structure.
ft = foot/feet
FTA = Federal Transit Administration
in/sec = inches per second
PPV = peak particle velocity

levels of up to 0.191 in/sec (PPV). This vibration level would not have the potential to result in building damage because the residential buildings are likely constructed of the equivalent to non-engineered timber and masonry and vibration levels would not exceed the FTA vibration damage threshold of 0.20 in/sec (PPV). Other structures that surround the Project site would experience lower vibration levels because they are farther away and are likely constructed equivalent to non-engineered timber and masonry.

Long-Term (Operational) Vibration. The Project would not generate vibration during operation. In addition, vibration levels generated from Project-related traffic on roadways within the vicinity of the Project site (Texas Street, Pioneer Avenue, and San Bernardino Avenue) would be unusual for on-road vehicles because the rubber tires and suspension systems of on-road vehicles provide vibration isolation.

Therefore, no vibration impacts from Project-related operations would occur, and no vibration reduction measures are required.

Overall, ground-borne vibration or ground-borne noise generated from proposed Project would be a **less than significant impact**. No mitigation measures are required.

c. For a project located within the vicinity of a private airstrip or 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?

No Impact

Discussion of Effect: The Project site is located approximately 2.5 miles west of the Redlands Municipal Airport and is located outside of the airport's 70 dBA CNEL noise contour as depicted in the City of Redlands General Plan. The proposed Project is located approximately 2.7 miles east of the San

Bernardino International Airport and is located outside of the airport's 65 dBA CNEL noise contour as depicted in the Airport Layout Plan Narrative Report for San Bernardino International Airport[1]. Therefore, the proposed Project would not expose people residing or working in the vicinity of the Project site to excessive noise levels generated from nearby airport operations. There would be **no impact**, and no mitigation measures are required.

[1] San Bernardino International Airport Authority (SBIAA). 2010. *Airport Layout Plan Narrative Report for San Bernardino International Airport*. November.

3.14 POPULATION AND HOUSING

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

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

Less than Significant Impact

Discussion of Effects: The Project site is currently undeveloped and does not contain any residential units. Based on a 2.77 persons per household estimate for the City of Redlands obtained from the United States Census Bureau, development of the Project's 35 single-family residential units is estimated to result in a total population of 97 residents on the Project site (96.95 rounded to 97).[1] As of July 1, 2022, the population in the City was estimated at 73,288. Therefore, implementation of the Project is anticipated to increase the City's population by approximately 0.13 percent.

On March 4, 2021, the Southern California Association of Governments (SCAG) released its final draft allocation of housing units for each jurisdiction in the region. For the current Regional Housing Needs Assessment (RHNA) cycle, SCAG provided the RHNA allocation number to the City of Redlands for the 2021-2029 period consisting of the following household income levels: 967 very-low-income units, 615 low-income units, 652 moderate income units, and 1,282 above-moderate income units for a total allocation of 3,516 units.[2] Implementation of the proposed Project would result in the development of 35 single-family units, all of which are expected to be sold at market rate (the above-moderate income level). The proposed Project would account for approximately 2.7 percent of the relevant RHNA allocation for the City[3] and approximately 1.0 percent of the total RHNA allocation for the City.[4]

1 United States Census Bureau. 2022. City of Redlands, QuickFacts. Persons per household, 2017-2021. Website: http://www.census.gov/quickfacts/reedlandscitycalifornia/ (accessed December 9, 2022). 2.77 persons per household * 35 units = 96.95.

2 Southern California Association of Governments (SCAG). 2021. SCAG 6th Cycle Final RHNA Allocation Plan, March 4, 2021.

3 35 planned units/ 1,282 above moderate income units= 0.0273.

4 35 planned units / 3,516 total RHNA = 0.0099.

The incremental increase in population at the Project site would be consistent with planned population growth and housing development in the City, as anticipated by the General Plan and regional planning documents. Additionally, the proposed Project would not entail construction of additional public roadways or infrastructure such as wastewater treatment facilities so as to indirectly induce population growth. Since population generated by the proposed Project would incrementally increase the population of the City and not exceed local and regional population growth projections, population growth generated by the proposed Project would not be substantial. Impacts are **less than significant,** and no mitigation is required.

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

No Impact

Discussion of Effects: As discussed above, the Project site is currently undeveloped and does not contain any residential units. Implementation of the Project would result in the development of 35 single-family residences. As such, the proposed Project would not displace existing housing, but create more housing for residents of the City. **No impact** would occur, and no mitigation is required.

3.15 RECREATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. 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. Include recreational facilities or require the construction or expansion of recreational facilities that 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?

Less than Significant Impact

Discussion of Effects: The proposed Project includes the construction of a 35-unit residential development on the Project site. As discussed in Section 3.14, Population and Housing, the proposed Project could add approximately 97 new residents to the City's population. Although the proposed Project would incrementally increase the public use of surrounding parks such as Israel Beal Park, this increase is not anticipated to be such that substantial physical deterioration of the facility would occur. It is anticipated that development of the 2.9-acre open space on the site would minimize the use of nearby parks as residents of the Project would more than likely use the on-site open space. Since the proposed Project would develop on-site open space, the proposed Project would nominally contribute to the increased use of existing neighborhood parks, regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Impacts would be **less than significant,** and no mitigation is required.

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

Less Than Significant Impact

Discussion of Effects: As discussed above under Threshold 3.15, the proposed Project would develop a 2.9-acre public open space area. This open space would include a tot lot, play field, an extension of the Santa Ana River Trail bike path, and miscellaneous recreation areas. An additional 3 acres of land within the Santa Ana River wash would be left in its natural state. The on-site open space would be accessible to the public as well as future residents of the Project site. The Project would fulfill its requirement to dedicate at least 0.49 acre of parkland to the City as described by the City's park standard of 5.0 acre of parkland for every 1,000 residents. The construction of these recreational facilities is part of the proposed Project, and any potential and adverse effects associated with implementation of the proposed Project's recreational facilities have been considered throughout the

analysis of this IS/MND. As discussed elsewhere in this document, all of the proposed Project's significant impacts can be mitigated to **less than significant** levels. As discussed above under Threshold 3.16(a), the proposed Project would not cause or accelerate the substantial physical deterioration of existing recreational facilities, so it would not require the construction or expansion of off-site recreational facilities. No mitigation is required.

3.16 PUBLIC SERVICES

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

Less than Significant Impact

Discussion of Effects:

Fire Protection. Fire protection services within the City are provided by the Redlands Fire Department (RFD). Development of the proposed Project may incrementally increase the demand for fire protection services as it would increase the site's population by 97 residents. In its review of new development plans, the RFD evaluates project plans on its ability to provide proper fire protection to the development. Additionally, the proposed Project would be required to pay service and development fees to the RFD. Such fees would be used to fund capital costs associated with acquiring land for new fire stations, constructing new fire stations, purchasing fire equipment, and providing for additional staff as needed and as identified by the City. Any construction of future fire protection facilities would require project-level environmental review and site-specific mitigation as appropriate in order to ensure significant environmental impacts are avoided or mitigated.

The RFD aims to meet National Fire Protection Association standards of a four-minute response time for first responders 90 percent of the time, but as of 2015, RFD 90 percent response time was approximately nine minutes.[1] Therefore, the City is pursuing a more realistic objective of arriving within seven minutes 90 percent of the time, in accordance with the 2008 High-Level Fire Department Review for the RFD.

The RFD has determined that it would need to increase the number of fire stations in order to meet increased future citywide service demands; however, as of February 2017, there are no plans to do so. The Project site is located adjacent to established residential neighborhoods in the City and in a Local Responsibility Area (LRA) Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ).[2] The closest fire station to the Project site is Redlands Fire Station 263 located at 10 West Pennsylvania Avenue,

[1] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.13-18. City of Redlands. July 21, 2017.

[2] CALFIRE, Fire Hazard Severity Zones Maps, City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed November 21, 2022).

approximately 0.9 miles southeast of the Project site. Average travel time between the nearest fire station and the Project site is approximately 4 minutes. Through compliance with California Vehicle Code 21806(A)(1), which requires all vehicles to yield to emergency vehicles, travel time between Fire Station 263 and the Project site is expected to be less than three minutes. Additionally, the City maintains mutual aid agreements with surrounding cities (i.e., Yucaipa and Loma Linda), as well as with the County of San Bernardino and the United States Forest Service, which allow for the services of nearby fire departments to assist the City during major emergencies.

Project design features incorporated into the structural design and layout of the residential units would keep service demand increases to a minimum. For example, the Project would be constructed in accordance with the current California Building Code (at the time of the writing the 2022 CBC), which requires all on-site structures to incorporate construction techniques and materials such as roofs, eaves, exterior walls, vents, appendages, windows, and doors resistant to and/or to perform at high levels against ignition during the exposure to fires. Fire sprinklers would be incorporated into each residential unit to further reduce fire risk and service demand. Access to the Project site would be from Texas Street and the internal streets on the Project site would be developed to City and Fire Code Standards to allow emergency vehicles ease of access and maneuverability. Finally, fire hydrants would be placed within the Project site, at specific distances required by fire service and City requirements.

Based on the proposed Project's location in a LRA Non-Very High Fire Hazard Severity Zone in proximity to existing RFD facilities capable of responding to emergencies at the Project site within the City's stated response time objective of seven minutes 90 percent of the time; the development of the proposed Project would not cause fire staffing, facilities, or equipment to operate at a deficient level of service. The Project itself would not require the construction of new or physically altered fire protection facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay Development Impact Fees (DIFs) to fund future fire facilities and services, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand fire protection services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Police Protection. Police protection services within the City are provided by the Redlands Police Department (RPD). Development of the proposed Project may incrementally increase the demand for police protection services due to the increased population of residents on the site. In its review of new development plans, the RPD evaluates project plans on its ability to provide proper police protection to the development. Additionally, the Applicant would be required to pay service and development fees to the RPD. Such fees would be used to fund capital costs associated with acquiring land for new police stations, constructing new police stations, purchasing crime-fighting equipment for new police stations, and providing for additional staff as needed and as identified by the City. Any construction of future police facilities would require project-level environmental review and site-specific mitigation as appropriate in order to ensure significant environmental impacts are avoided or mitigated.

The RPD does not base service standards on an industry standard; instead, the City aims for a response time of 4.5 minutes. The RPD has determined that it would need to increase the number of police stations in order to meet increased future citywide service demands. The Project site is located adjacent to established residential neighborhoods in the City, which are already served by the RPD.

The closest police station to the Project site is Redlands Police Department located at 1270 West Park Avenue, approximately 2.6 miles southwest of the Project site. Average travel time between the nearest police station and the Project site is approximately 10 minutes. Through compliance with California Vehicle Code 21806(A)(1), which requires all vehicles to yield to emergency vehicles, travel time between the nearest police station and the Project site is expected to be less than four minutes. Additionally, the City maintains mutual aid agreements with surrounding cities (i.e., Yucaipa and Loma Linda), as well as with the County of San Bernardino, which allow for the services of nearby police and sheriff departments to assist the City during major emergencies.

Based on the proposed Project's location in proximity to existing RPD facilities capable of responding to emergencies at the Project site within the City's stated response time objective of 4.5 minutes, development of the proposed Project would not cause law enforcement staffing, facilities, or equipment to operate at a deficient level of service. The Project itself would not require the construction of new or physically altered law enforcement protection facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay DIFs to fund future law enforcement facilities and services, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand law enforcement protection services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Schools. The Project site is located within the Redlands Unified School District (RUSD). RUSD currently has 16 elementary schools (serving kindergarten through fifth grade); four middle schools (servings grades sixth through eighth); and three high schools (serving grades ninth through twelfth). The three closest schools to the Project site are as follows:

- Lugonia Elementary School located at 202 East Pennsylvania Avenue approximately 1.2 miles southeast of the Project site;
- Clement Middle School located at 501 East Pennsylvania Avenue approximately 1 miles southeast of the Project site; and
- Citrus Valley High School located at 800 West Pioneer Avenue approximately 0.3 miles south of the Project site.

Based on the proximity of the above-mentioned schools to the Project site, students generated by the Project are anticipated to attend these three schools. **Table AD: Redlands Unified School District Enrollment and Capacity Data** shows the current enrollment and capacity of the Redlands School District, Lugonia Elementary School, Clement Middle School, and Citrus Valley High school.

As of the 2021–2022 school year, the Redlands Unified School District has capacity for an additional 5,963 students; Lugonia Elementary School has a capacity for an additional 217 students; Clement Middle School has a capacity for an additional 205 students; and, Citrus Valley High School has a capacity for an additional 725 students.

Table AD: Redlands Unified School District Enrollment and Capacity Data

District/School	Enrollment Capacity	Optimum Enrollment	2021-2022 Enrollment	Excess Room
Redlands Unified School District	26,125	20,302	20,162	5,963
Lugonia Elementary School	773	696	556	217
Clement Middle School	1,264	1,406	1,059	205
Citrus Valley High School	2,940	2,646	2,215	725

Source: Enrollment Capacity and Optimum Enrollment were obtained from the City of Redlands, *Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan*, Chapter 3.13: Public Facilities and Services, Table 3.13-3: Redlands Unified School District Enrollment, pg. 3.13-10. 2021-2022 Enrollment Data obtained from the California Department of Education, Data Quest Website: Enrollment by Grade - Redlands Unified (California Dept of Education) (accessed November 21, 2022).

The proposed Project would include the development of 35 single-family residential units which would generate school-aged children that would be anticipated to attend Redlands Unified School District's Lugonia Elementary School, Clement Middle School, and Citrus Valley High School. The proposed Project would increase the population in the community and would consequently add students to the local school system. The RUSD has accounted for the generation of its student population through its facilities planning activities based on the City's buildout; as such, RUSD does not anticipate further growth in its boundary that would exceed planned development associated with the City's buildout. The Project itself would not require the construction of new or physically altered educational facilities, the construction of which could result in an environmental impact. Additionally, because the proposed Project would be required to pay DIFs to fund future educational services provided by RUSD, which would be subject to project- and site-specific environmental review, impacts associated with the need to expand educational services and facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Parks/Recreational Facilities. The City of Redlands has 21 parks totaling approximately 424.2 acres of land. Israel Beal Park, a 7.8-acre neighborhood park, is located adjacent to the eastern edge of the Project site between the Santa Ana River wash and River View Drive. Israel Beal Park features open grassy areas, picnic areas, playground equipment, basketball courts, and trails. The City General Plan establishes a park standard of 5.0 acres of parkland for every 1,000 residents. As of 2021, the City had an estimated population of 73,288[1] residents, pursuant to the City's park standard, would require 366.44 acres of parkland within the City.[2] Under current conditions, the City of Redlands has a surplus of 57.76 acres of parkland, per the City's parkland standard.

The proposed Project is estimated to add 97 residents to the site and to the City's population. Based on the park standard of 5.0 acre of parkland for every 1,000 residents, the proposed Project would need to develop approximately 0.49 acres of parkland.[3] The proposed Project would develop a 5.9 acre open space area on the Project site. This open space would include a tot lot, play field, an extension of the Santa Ana River Trail bike path, and miscellaneous recreation areas. 3 acres of land

[1] United States Census Bureau. 2021. City of Redlands, QuickFacts. Estimated population, 2021. Website: http://www.census.gov/quickfacts/reedlandscitycalifornia/ (accessed November 21, 2022).
[2] 73,288 / 1,000 = 73.288 * 5 = 366.44.
[3] 97 / 1,000 = 0.097 * 5 = 0.485.

in the Santa Ana River wash would be left in its natural state. The on-site open space would be accessible to the public as well as future residents of the Project site. The dedication of the on-site park space would fulfill the Project's requirement to dedicate at least 0.49 acre of parkland to the City, and as such, the impacts associated with the need to expand park facilities in order to maintain acceptable levels of service would be **less than significant**. No mitigation is required.

Other Public Facilities. The proposed Project is estimated to generate approximately 97 additional residents, which would be added to the City of Redlands population. The proposed Project is consistent with the current General Plan land use designation for the Project site; therefore, the projected increase in population would be consistent with planned population growth in the City, as anticipated by the General Plan and regional planning documents. This minimal increase in population would incrementally increase the need for a number of public services including those listed above and others such as libraries and City administrative facilities, which would be offset through the payment of DIFs. However, the Project is not expected to result in the need to construct or expand such facilities. Therefore, impacts would be **less than significant,** and no mitigation is required.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

The *Traffic Circulation Analysis* and the *VMT Impact Assessment* for *TTLC Redlands Texas St., LLC Single-Family Residential Development Project* (VMT Impact Assessment) prepared by Linscott, Law & Greenspan, Engineers on January 9, 2023, contribute to the information and analysis in this section and are provided in **Appendices I-1 and I-2,** respectively.

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

Less than Significant Impact

Discussion of Effects: The proposed Project is forecast to generate approximately 330 daily trips in passenger car equivalents, including approximately 25 trips during the a.m. peak hour and approximately 33 trips during the p.m. peak hour. Since the proposed Project would generate less than 100 peak hour trips, and would not add 50 or more peak hour trips to any major intersection, a Traffic Impact Study (TIS) is not warranted. The proposed Project, due to the low daily trips contribution, would not contribute to a degradation of existing Level of Service (LOS) at nearby intersection and roadway segments, and would continue to operate at acceptable LOS C during the a.m. and p.m. peak hours. Sight distance evaluations at three cul-de-sacs along Texas Street revealed that sight lines at the proposed Project driveways are expected to be adequate as long as obstructions within the sight triangles are minimized. Therefore, the Project would remain compliant with the criteria and procedures set forth by the *Caltrans Highway Design Manual (HDM).*

The proposed Project would also remain compliant with the City of Redlands' Measure "U" *Principals of Managed Development*, which confirms that as a result of a development project, the following would remain true: (1) Levels of traffic service throughout the City shall be maintained, because all of the Project study intersections would operate at acceptable LOS C; (2) collector and local street standards shall be maintained, because the proposed Project would not impact the surrounding local

and collector roadways; (3) circulation patterns shall protect residential neighborhoods from increased traffic congestions, because the proposed Project would distribute traffic directly to the collector roadways; and (4) designated scenic highways within the City shall be maintained, because the proposed Project would not distribute traffic onto or impact the Scenic Highways within the City of Redlands. Additionally, pursuant to the requirements of the City of Redlands, Development Impact Fees (DIFs) will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements.

Therefore, the proposed Project would not conflict with a program, plan, ordinance or policy pertaining to transit, bicycle and pedestrian facilities. Final design plans would be subject to review and approval by City staff prior to issuance of building permits, and adherence to applicable City requirements would ensure the proposed Project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system and impacts would be **less than significant**. No mitigation is required.

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

No Impact

Discussion of Effects: As part of the *State CEQA Guidelines* 2019 updates, Section 15064.3 was added and codifies that project-related transportation impacts are typically best measured by evaluating the Project's vehicle miles traveled (VMT). Specifically, subdivision (b) focuses on specific criteria related to transportation analysis and is divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. Subdivision (b)(1) provides guidance on determining the significance of transportation impacts of land use projects using VMT; projects located within 0.5 mile of high quality transit should be considered to have a less than significant impact. Subdivision (b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. Subdivision (b)(4) stipulates that Lead Agencies have the discretion to formulate a methodology that would appropriately analyze a project's VMT. Therefore, the *City of Redlands CEQA Assessment VMT Analysis Guidelines*, adopted July 2020 (VMT guidelines) was used to determine the Project VMT impacts. The City's VMT Guidelines provide several screening criteria for projects within the City. Projects that cannot be screened out by the screening criteria should conduct further VMT analysis to identify Project related VMT impacts. One of the screening criteria included in the VMT guidelines is screening by project type and projects that are forecast to generate less than 3,000 MT CO2e (carbon dioxide equivalent) per year. The City's VMT Guidelines state the following:

> *Projects which generate less than 3,000 MT CO_2e per year can be presumed to have a less than significant impact on VMT. Projects which generate less than 3,000 MT CO_2e per year include the following: Single family residential – 167 dwelling units or fewer.*

As discussed previously, the proposed Project would develop 35 single-family residential units, which is significantly lower than the threshold of 167 units as stated in the City's VMT Guidelines. Therefore, based on the City's VMT Guidelines, the Project would not have any significant VMT impacts. **No impact** would occur, and no mitigation is required.

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

Less than Significant Impact

Discussion of Effects: Access to the Project site is proposed to be provided through three cul-de-sacs, Street A, Street B, and Street C, along Texas Street. Access for small service/delivery trucks and fire trucks for the Project site have been evaluated using *Turning Vehicle Templates* developed by Jack E. Leisch & Associated and *AutoTURN for AutoCAD* computer software. Overall, the turning maneuvers for both small delivery trucks and fire trucks are considered adequate. Roadway frontage improvements in and around the Project site would be designed and constructed to satisfy all City requirements for street widths, corner radii, and intersection control, as well as incorporate design standards tailored specifically to site access requirements.

All final site plans would be subject to review and approval by the City's Municipal Utilities & Engineering Department prior to issuance of building permits, and adherence to applicable requirements would ensure the proposed development would not include any sharp curves, dangerous driveway intersections, or visual obstructions for drivers negotiating roadway curves. Therefore, impacts related to a substantial increase in hazards due to a design feature or incompatible use would be **less than significant**. No mitigation is required.

d. Would the project result in inadequate emergency access?

Less than Significant Impact

Discussion of Effects: The developer of the proposed Project would be required to design, construct, and maintain structures, roadways, and facilities to provide for adequate emergency access and evacuation. Construction activities, which may temporarily restrict vehicular traffic, would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures.

Vehicular access to the Project site would be provided from Texas Street at four locations. Implementation of the proposed Project would result in future public access to Pomelo Street. Three proposed public streets (Street A, Street B, and Street C) ending in cul-de-sacs would provide driveway access to 33 of the 35 proposed homes. Texas Street would be extended northward and widened from its existing terminus at the southwest corner of the Project site to the northern end of the Project site. A new cul-de-sac would be installed at the northern end of Texas Street that would provide driveway access to the remaining two residential lots that would be located along Street A, Street B, and Street C. Final site plans would be subject to review and approval by the City's Fire and Police Departments to ensure adequate emergency vehicle access to and within the Project site prior the issuance of building permits. Adherence to the emergency access measures required by the City would ensure impacts related to inadequate emergency access would be **less than significant**. No mitigation is required.

3.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, 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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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)?	☐	☒	☐	☐
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

a. Would the project be 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)?

Less than Significant with Mitigation Incorporated

Discussion of Effect: Chapter 532, Statutes of 2014 (i.e., AB 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource."

Per AB 52 (specifically PRC 21080.3.1), Native American consultation is required upon request by a California Native American tribe that has previously requested that the City provide it with notice of such projects. Pursuant to provisions of AB 52, the City contacted the following Native American Tribes:

- Gabrieleño Band of Mission Indians – Kizh Nation;
- Morongo Band of Mission Indians;
- Soboba Band of Luiseño Indians;

- Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians); and
- Torres Martinez Desert Cahuilla Indians.

The Yuhaaviatam of San Manuel Nation (YSMN) expressed interest in the Project.[1] The YSMN stated that although the Project site exists within Serrano ancestral territory and, therefore, is of interest to the YSMN, due to the nature and location of the proposed Project, and given YSMN's present state of knowledge, YSMN does not have any concerns with the Project's implementation. No information or evidence has been provided to the City regarding any known or likely occurrence of tribal cultural resources on the Project site. The YSMN provided suggestions on mitigation measures in the event of any inadvertent discoveries. Given there is the potential for the proposed Project to inadvertently discover or unearth previously undocumented Native American tribal cultural resources during ground-disturbing activities, **Mitigation Measures TCR-1 and TCR-2** are proposed.

Mitigation Measure TCR-1 The Yuhaaviatam of San Manuel Nation (YSMN) Cultural Resources Department shall be contacted regarding any pre-contact cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. YSMN shall have the option of placing a tribal monitor on-site during ground-disturbing activities within previously undisturbed soil for the remainder of the Project.

Mitigation Measure TCR-2 Any and all archaeological documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or Applicant shall, in good faith, consult with YSMN throughout the life of the Project.

With implementation of **Mitigation Measures TCR-1 and TCR-2,** impacts to tribal cultural resources would be **less than significant**.

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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant with Mitigation Incorporated

As discussed above in Response 3.18(a), no information or evidence has been provided to the City regarding any known or likely occurrence of tribal cultural resources on the Project site. Nevertheless, there is the potential for the proposed Project to inadvertently discover or unearth previously undocumented Native American tribal cultural resources during ground-disturbing activities. With implementation of **Mitigation Measures TCR-1 and TCR-2**, impacts to tribal cultural resources would be **less than significant**.

[1] Email dated November 21, 2022, from the City of Redlands to LSA.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm drainage, electrical power, natural gas or telecommunication facilities, the construction 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.	☐	☐	☐	☒

The most recent version of CalEEMod (Version 2022.1) was used to estimate the Project's water demand and the amount of wastewater and solid waste that could be generated during operation of the proposed Project (**Appendix B**).

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

Less than Significant Impact

Discussion of Effects: Local governments and water districts are responsible for complying with federal regulations, both for wastewater plant operation and the collection systems (e.g., sanitary sewers) that convey wastewater to the wastewater treatment facility. Proper operation and maintenance are critical for sewage collection and treatment, as impacts from these processes can

degrade water resources and affect human health. For these reasons, publicly owned treatment works (POTWs) are subject to Waste Discharge Requirements (WDRs) to ensure that such wastewater facilities operate in compliance with water quality regulations set forth by the State. WDRs, issued by the State, establish effluent limits on the kinds and quantities of pollutants that POTWs can discharge. These permits also contain pollutant monitoring, recordkeeping, and reporting requirements. Each POTW that intends to discharge into the nation's waters must obtain a WDR prior to initiating its discharge.

All new development within the City is required to comply with all provisions of the NPDES program and the City's MS4, as enforced by the RWQCB. The proposed Project would result in typical wastewater discharges that would not require new methods or equipment for treatment that are not currently permitted for the Redlands Wastewater Treatment Facility, which would serve the proposed Project. Based on the CalEEMod results, the Project is expected to produce 1,620,934 gallons of wastewater a year (4,441.4 gallons per day). The City's wastewater treatment plant, Redlands Wastewater Treatment Facility, currently treats approximately 6 million gallons per day (mgd) and has the capacity to process up to 9.5 mgd.[1] The proposed Project would contribute approximately 0.07 percent [2] of the current wastewater treatment rates of the Redlands Wastewater Treatment Facility. The proposed Project would connect to existing wastewater infrastructure, which is currently operating within capacity. Sewer service to the Project site would be provided via two new 8-inch sewer lines that would be installed in Texas Street and Pomelo Avenue. The new sewer line in Pomelo Avenue would connect to an existing 10-inch sewer line approximately 400 feet west of the Project site. Proposed Streets A, B, and C would each include an 8-inch sewer line that would connect to the proposed sewer lines in Texas Street and Pomelo Avenue. Compliance with condition or permit requirements established by the City, WDRs outlined by the RWQCB, as well as requirements included in the NPDES permit, SWPPP, WQMP, and wastewater conveyance standards would ensure that wastewater discharges coming from the Project site and treated by the wastewater treatment facility system would not exceed applicable existing capacities. As such, implementation of the proposed Project would not require or result in the relocation or construction of new or expanded wastewater treatment infrastructure.

The City operates two surface water treatment plants and uses 15 wells, 37 booster pumps, 18 reservoirs, and 400 miles of transmission and distribution lines to provide water to its customers. Of this infrastructure, one booster station is used for non-potable water. The capacity of the City's 18 reservoirs is a total of 54.45 million gallons. The City's water treatment plants include the Henry Tate Water Treatment Plant and the Horace Hinckley Surface Water Treatment Plant. The Henry Tate Water Treatment Plant is a conventional water treatment plant built in 1967. The design capacity of the Tate plant is 20 million gallons per day (mgd). The City added enhancements to the Tate WTP to provide more water supply reliability by allowing State Water Project water to be mixed with Mill Creek water for treatment (MUED 2015). The Horace Hinckley Surface Water Treatment Plant started

[1] City of Redlands. Waste Water Treatment. Website. https://www.cityofredlands.org/post/wastewater-treatment (accessed December 2022).

[2] 4,441,4 gal per day / 6 mgd = 0.00074.

operation in 1987 and has a permitted capacity of 14.5 mgd. The 10-year average flow (up to and including 2016) is 6,363 af at the Henry Tate Plant, and 6,697 af at the Horace Hinckley Plant.[1]

The vast majority of potable water demand originated from single-family residential uses (47 percent of the total), with the next-highest demand coming from multi-family residential uses (12 percent of the total). In 2015, single-family residential water usage totaled 11,653 afy. The proposed Project would include the development of on-site water delivery infrastructure through 8-inch water pipes in proposed Street A, B, and C as well as laterals serving each of the 35 proposed residential units. The proposed Project would connect to existing 12-inch water line located in Texas Street. Based on the CalEEMod results, the Project's expected water usage would be 32.62 afy. The proposed Project would contribute approximately 0.3 percent of the total single family residential water usage for the City based on the 2015 water usage data.

As such, implementation of the proposed Project would not require or result in the relocation or construction of new or expanded water supply infrastructure.

Section 3.6, Energy, of this IS/MND discusses the Project's energy requirements (i.e., electricity, fuel consumption, and natural gas consumption). The proposed Project would consume nominal amounts of electricity and natural gas when compared to what is currently being generated and being consumed within the City of Redlands and within the region. The energy suppliers would have enough electricity and natural gas to adequately serve the proposed Project once it is developed and operational. According to the Project site plans, no existing electrical/natural gas infrastructure would need to be moved on site, and the proposed Project would connect into the existing utilities from off-site locations. As such, implementation of the proposed Project would not require or result in the relocation or construction of new or expanded electricity or natural gas supply infrastructure, and there would be **no impact.**

Overall, impacts would be **less than significant,** and no mitigation measures are warranted.

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?

Less than Significant Impact

Discussion of Effects: Water services are provided to the City and the Project site by the City's Municipal Utilities Department, which is party to the Upper Santa Ana River Watershed Integrated Regional Water Management Plan, which indicates the region is highly dependent on local water supplies. In particular, precipitation stored as groundwater provides approximately 67 percent of supplies during average years and over 70 percent of supplies during drought years.[2] Based on the CalEEMod results, the Project's expected water usage would be 32.62 afy.

[1] *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.13-18. City of Redlands. July 21, 2017.

[2] *Upper Santa Ana River Watershed Integrated Regional Water Management Plan.* Page ES-2. City of Redlands Municipal Utilities and Engineering Department, January 2015.

According to the City's General Plan EIR, during normal year water supply, the City would have a surplus of 28,383 acre feet in the year 2035.[1] During multiple dry years, the City would have a surplus of between 23,118 acre feet (third year) and 32,556 acre feet (first year) in the year 2035. Based on the Project's anticipated water demand of 32.62 afy, the proposed Project would demand up to 0.14 percent of the City's surplus water in 2035 during the third year of a worst-case multiple dry year scenario.[2] Since the City has sufficient water supplies to meet current and future development consistent with its General Plan through the year 2035, additional water storage and treatment facilities are not anticipated to be required through build out of the General Plan in 2035.[3] Impacts would be **less than significant,** and no mitigation is required.

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?

Less than Significant Impact

Discussion of Effects: Please refer to the discussion under Threshold 3.19(a) above. Based on modeled flows, the proposed Project would contribute approximately 0.12 percent of the current wastewater treatment rates of the Redlands Wastewater Treatment Facility. The Redlands Wastewater Treatment Facility would have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments, and impacts would be **less than significant.**

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? Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact

Discussion of Effects: Solid waste in the City of Redlands is primarily disposed of at the California Street Landfill which is operated by the City's Facilities and Community Services Department and the San Timoteo Sanitary Landfill operated by San Bernardino County. The California Street Landfill, located at 2151 Nevada Street in Redlands, accepts a maximum of 829 tons of solid waste per day, and as of July 25, 2018, has a remaining capacity of 5,168,162 cubic yards. The maximum permitted capacity is 11,400,000 cubic yards and it is anticipated to reach full capacity by 2042. This landfill currently accepts the following types of solid waste: construction/demolition debris, mixed municipal, other designated, and sludge (biosolids).[4] The San Timoteo Sanitary Landfill, located at San Timoteo Canyon Road in Redlands, accepts a maximum of 2,000 tons of solid waste per day, and as of April 30, 2019, has a remaining capacity of 12,360,396 cubic California Street Landfill's yards. The San Timoteo

1 *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Page 3.14-20. City of Redlands. July 21, 2017.

2 32.62 afy of project demand ÷ 23,118 afy water surplus in 2035 during the third year of a worst-case multiple dry year scenario = 0.14 percent of the City's surplus water.

3 *City of Redlands General Plan Update and Climate Action Plan Environmental Impact Report, Revised Draft, SCH #2016081041.* Pages 3.14-20, 3.14-27, and 3.14-28. City of Redlands. July 21, 2017.

4 CalRecycle. 2022. Solid Waste Information System (SWIS) Facility Detail, California Street Landfill (36-AA-0017). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1855?siteID=2637/ (accessed December 9, 2022).

Sanitary Landfill's maximum permitted capacity is 22,685,785 cubic yards and it is anticipated to reach full capacity by 2039.[1]

The Project site is currently undeveloped and under existing conditions, produces no solid waste. Implementation of the proposed Project would increase the site's population by 97 residents. Based on the CalEEMod results for the proposed Project, the proposed Project would generate an estimated 34.3 tons of solid waste per year (0.094 tons per day). The 0.091 tons per day of solid waste generated by the proposed Project would be 0.01[2] percent of the maximum solid waste accepted per day by the California Street Landfill and 0.005[3] percent of the maximum solid waste accepter per day at the San Timoteo Sanitary Landfill. Overall, the proposed Project solid waste generation contribution to these landfills would be nominal and would not exceed the daily permitted capacities of these facilities. Impacts would be **less than significant,** and no mitigation measures are warranted.

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

No Impact

Discussion of Effects: All land uses within the City that generate waste are required to coordinate with a waste hauler to collect solid waste on a common schedule as established in applicable local, regional, and State programs. Additionally, all development within the City, including the proposed Project, is required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), AB 939 (CalRecycle), and other local, State, and federal solid waste disposal standards.

The proposed Project would be required to comply with applicable provisions of AB 1327, AB 939, and AB 341 related to solid waste as a matter of policy. Impacts would be **less than significant,** and no mitigation measures are warranted.

[1] Ibid.
[2] 0.094 tons per day / 829 tons per day = 0.000113.
[3] 0.094 tons per day / 2,000 tons per day = 0.0000469.

3.20 WILDFIRE

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact

Discussion of Effect: Please refer to the Response 3.9(f) of this IS/MND for a discussion on impacts pertaining to the Project's potential to substantially impair an adopted emergency response plan or emergency evacuation plan. **Less than significant impacts** would occur, and no mitigation is required.

b. Would the project 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?

Less than Significant Impact

Discussion of Effect: The Project site is within a Local Responsibility Area (LRA) Non-Very High Fire Hazard Severity Zone according to CAL FIRE mapping.[1] The General Plan EIR, Figure 3.7-3, indicates that the Project site is located in an area designated as a Moderate Fire Level Threat.[2] Areas of High,

[1] CAL FIRE. Fire Hazard Severity Zones Maps, City of Redlands Map. Website: https://osfm.fire.ca.gov/media/5949/redlands.pdf (accessed November 21, 2022).

[2] City of Redlands, Revised Draft Environmental Impact Report for the Redlands General Plan Update and Climate Action Plan, Chapter 3.7: Hazards and Hazardous Materials, Figure 3.7-3: Fire Hazards and Fire Safety Services.

Very High and Extreme Fire Threat Level lands are located over 4 miles south and southeast of the Project site. Areas within the Santa Ana River wash, which is adjacent to the Project site, indicates a Little or No Threat for wildfire. No hillside areas or natural areas prone to wildfires are located in the immediate Project vicinity as this area of Redlands is urbanized with single-family residential neighborhoods. Although the Project site is adjacent to the natural area of the Santa Ana River wash, this area is not prone to wildfires. Winds may push wildfire smoke into the area of the proposed Project; however, these conditions would be temporary and if conditions warranted, the local air quality control district would warn residents of potential impacts due to wildfire smoke. The proposed Project would be required to implement and abide to Redlands General Plan policies (specifically Policies 7-A.83 through 7-A.106) that promote fire safety through agency cooperation and management of risk factors; adhere to applicable building and fire codes; and implement existing programs such as weed abatement and education under the Redlands Fire Department; all of which would reduce the wildfire risk at the Project site. Due to the nature of the Project vicinity, on-site and adjacent areas have minimal capability to support a wildfire. Impacts related to this issue would be **less than significant**; therefore, no mitigation is warranted.

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

No Impact

Discussion of Effect: The Project is located an urbanized area served by existing water and roadway infrastructure and does not require the installation or maintenance of wildland protection features such as fire roads, fuel breaks, or emergency water sources. In the absence of any need for such features, **no impact** (temporary or ongoing) would result from development of the proposed uses. No mitigation is required.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact

Discussion of Effect: Similar to adjacent properties, the Project site is generally flat. No hillside areas or natural areas prone to wildfire are located in the immediate Project vicinity. Although the Project site is adjacent to the natural area of the Santa Ana River wash, this area is not prone to wildfires. As the Project would not expose persons or structures to post-fire slope instability or post-fire drainage, **no impact** would occur. In the absence of any impact, no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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 that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

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

Less Than Significant with Mitigation Incorporated

Discussion of Effects: The proposed Project's impacts to biological resources and cultural resources were analyzed in this IS/MND, and all direct, indirect, and cumulative impacts were determined to have **no impact,** a **less than significant impact,** or reduced to a **less than significant impact** with implementation of mitigation. No endangered or threatened species were identified within the proposed limits of disturbance, and the implementation of the proposed Project would not cause fish or wildlife populations to drop below self-sustaining levels or restrict the movement/ distribution of rare or endangered species. With implementation of **Mitigation Measures BIO-1** and **BIO-2**, potential impacts to any threatened or endangered species or associated habitat would be

reduced to a **less than significant** level. In addition, potential impacts to migratory and nesting birds would be reduced to a **less than significant** level with implementation of **Mitigation Measure BIO-3**.

Development of the proposed Project would not affect known historic archaeological or paleontological resources. There are no known unique ethnic or cultural values associated with the Project site, nor are known religious or sacred uses associated with the Project site. Implementation of **Mitigation Measures CUL-1 and CUL-2** would reduce impacts to known, unknown, or potential cultural resources that may be located within the Project site to **less than significant** levels. Furthermore, **Mitigation Measures TCR-1 and TCR-2** have been identified to address potential impacts if subsurface tribal cultural resources are encountered during construction operations. Additionally, the Applicant is required to comply with California Code of Regulations (CCR) Section 15064.5(e), California Health and Safety Code Section 7050.5, and Public Resources Code (PRC) Section 5097.98 as a matter of policy in the event human remains are encountered at any time. To ensure an exclusionary buffer of 100 feet around any encounter with human remains**, Regulatory Compliance Measure CUL-3** is required. Adherence to **Mitigation Measures CUL-1, CUL-2, TCR-1, and TCR-2,** and **Regulatory Compliance Measure CUL-3**, as well as regulations governing human remains, would reduce potential impacts to cultural and paleontological resources to **less than significant with implementation of mitigation**.

With the aforementioned mitigation measures and regulatory compliance measures, impacts to biological resources and cultural resources would be **less than significant with mitigation incorporated**.

Mitigation: Previously identified **Mitigation Measures CUL-1, CUL-2, TCR-1, and TCR-2**.

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.)

Less Than Significant Impact

Discussion of Effects: The proposed Project has either no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues pursuant to CEQA. Due to the limited scope of direct physical impacts to the environment associated with the proposed Project, the Project's impacts are primarily project specific in nature.

The cumulative effects resulting from build out of the City's General Plan were previously identified in the General Plan EIR. The type, scale, and location of the proposed Project is consistent with the General Plan. Because of this consistency, the potential cumulative impacts of the proposed Project would fall within the impacts identified in the City's General Plan EIR. The Applicant is required to pay "fair share" development impact fees associated with the proposed Project. The proposed Project would have a **less than cumulatively considerable impact**.

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

Less Than Significant with Mitigation Incorporated

Discussion of Effects: Based on the analysis provided throughout this IS/MND, with incorporation of mitigation measures and regulatory compliance measures, the proposed Project would not result in any environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Potential impacts on human beings would be **less than significant with mitigation incorporated.**

4.0 MITIGATION MONITORING AND REPORTING PROGRAM

4.1 MITIGATION MONITORING REQUIREMENTS

Public Resources Code (PRC) Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that where significant effects have been identified, the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes that have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

- The lead agency shall specify the location and custodian of the documents or other materials that constitute the record of proceedings upon which its decision is based.

- A public agency shall provide measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents that address required mitigation measures or, in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.

- Prior to the close of the public review period for a Draft Mitigated Negative Declaration (MND), a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either (1) submit to the lead agency complete and detailed performance objectives for mitigation measures that would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or (2) refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures that mitigate impacts to resources that are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance with that requirement by a responsible agency or agency having jurisdiction over natural resources affected by a project shall not limit the authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

4.2 MITIGATION MONITORING PROCEDURES

This mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City of Redlands (City) to ensure that all mitigation measures adopted as part of the proposed Texas Street Residential Project (Project) will be carried out as described in the Final IS/MND.

Table AE: Mitigation and Monitoring Reporting Program lists each of the mitigation measures (MM) and regulatory compliance measures (RCM) specified in the Draft IS/MND and identifies the party or parties responsible for implementation and monitoring of each measure.

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)	Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
3.1: Aesthetics			
The proposed project would not result in any significant adverse impacts related to aesthetics. No mitigation is required.			
3.2: Agricultural and Forestry Resources			
The proposed project would not result in any significant adverse impacts related to agriculture and forestry resources. No mitigation is required.			
3.3: Air Quality			
The proposed project would not result in any significant adverse impacts related to air quality. No mitigation is required.			
3.4: Biological Resources			
MM BIO-1 To ensure no impacts to San Bernardino kangaroo rat (SBKR) occur from Project implementation the following measures shall be implemented prior to ground-disturbing activities: 1. A protocol focused trapping study for SBKR shall be conducted prior to ground-disturbing activities to determine the presence/absence of SBKR within the Project area and adjacent slope, consistent with the United States Fish and Wildlife Service's (USFWS) approved Survey Protocol for Determining Presence of San Bernardino Kangaroo Rats and the California Department of Fish and Wildlife (CDFW) Memorandum of Understanding. a. If no SBKRs are trapped on-site during the trapping study, the following avoidance and minimization measures shall be conducted prior to ground-disturbing activities. i. The limits of the Project disturbance shall be clearly marked with flagging or similar means. All mechanized equipment shall remain within the designated limits of disturbance. Construction personnel shall strictly limit their activities, vehicles, equipment, and construction materials to the designated work area. ii. All contractors and personnel involved in the construction shall receive environmental awareness training. The training shall be developed in consultation with a biological monitor and consist of an on-site or training center presentation with supporting materials (i.e., photographs, pamphlets, slides). The training shall provide information about federally/State-listed species, special-status species, and sensitive habitats occurring within the vicinity of the proposed limits of disturbance (i.e., SBKR, and Riversidian Alluvial Fan Sage Scrub [RAFSS]). iii. Immediately following the negative trapping results, a SBKR exclusion fence shall be installed around the proposed limits of disturbance. The exclusion fence shall be constructed to the following specification.	Qualified Biologist / Director of the City of Redlands Department of Development Services, or designee	Prior to any ground-disturbing activities.	☐

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)	Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
iv. An approximately 4-foot-tall fence with 2 feet above ground and 2 feet below ground shall be installed around the entire disturbance area. The erect portion of the fencing shall be covered in a material that cannot be climbed or chewed through by SBKR. v. A qualified biological monitor, with SBKR experience, shall be present during initial clearing and grubbing activities and on a regular basis to ensure the exclusion fence is effective. The biological monitor shall have the authority to halt any and all construction activities. vi. The biological monitor shall supervise the installation of the SBKR exclusion fence around the proposed limits of disturbance. The biological monitor shall ensure that no burrows are impacted by fence installation, by avoiding burrows within 5 meters, if any. The wildlife agencies will be consulted if there are burrows within 5 meters of the fence to avoid take. vii. The biological monitor shall inspect the exclusion fence before leaving the job site in the evening and repair any opening in the fencing as necessary to exclude SBKR. viii. The biological monitor shall supervise the removal of the SBKR exclusion fence to ensure no SBKR burrows, if any, are impacted by fence removal. ix. Construction activities shall be limited to daylight hours to the extent feasible. If nighttime work is necessary, lighting shall be shielded away from the Santa Ana River floodplain north of the proposed limits of disturbance. Fixtures shall be shielded to downcast below the horizontal plane of the fixture height and mounted as low as possible. x. All permanent lighting fixtures within the completed development shall be shielded and directed away from the RAFSS habitat on the Santa Ana River floodplain north of the proposed limits of disturbance. b. If SBKR are trapped within the proposed limits of disturbance, Incidental Take Permits (ITPs) with the USFWS (Section 10 or Habitat Conservation Plan) and CDFW (Section 2081) shall be prepared and processed to allow for "take" authorization for SBKR and to mitigate for impacts to the species and loss of habitat. If SBKR are determined to be present, project construction shall not occur until "take" authorization and mitigation approval is received from the wildlife agencies and approve the mitigation.			

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
MM BIO-2	Pre-construction surveys for Burrowing Owls on the Project site and in the surrounding area shall be conducted by a qualified biologist no more than 14 days prior to initiation of Project activities in accordance with guidelines identified by the CDFW 2012 Staff Report on Burrowing Owl Mitigation (State of California Natural Resources Agency, Department of Fish and Game, March 2012). If Project activities are delayed for more than 30 days (including the restarting of activities after Project/ground-disturbing delays of 30 days or more), additional surveys shall be completed, including but not limited to a take avoidance survey within 24 hours of ground disturbance. If burrowing owl(s) are not observed on site during any pre-construction surveys, a letter shall be prepared by the qualified biologist documenting the results of the survey. If burrowing owls are observed on the Project site during the pre-construction survey, a burrowing owl relocation plan shall be prepared by the Applicant and approved by the CDFW.	Qualified Biologist / Director of the City of Redlands Department of Development Services, or designee	No more than 14 days prior to initiation of Project activities.	☐
MM BIO-3	Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey shall be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment. If construction occurs between February 1 and August 31, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any vegetation removal or ground-disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey shall document a negative survey with a brief letter report indicating that no impacts to active avian nests would occur. If an active avian nest is discovered during the pre-construction clearance survey, the biologist shall establish protective buffers surrounding the nest site in which no disturbance activities shall occur until the nesting activity is completed and the nesting has either failed or the young have fledged. The size of the no-disturbance buffer shall be determined by the wildlife biologist and shall depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors shall be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel shall be instructed on the	Qualified Biologist / Director of the City of Redlands Department of Development Services, or designee	No more than 3 days prior to any vegetation removal or ground-disturbing activities.	☐

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
	sensitivity of nest areas. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. As noted above, once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.			
3.5: Cultural Resources				
MM CUL-1	Prior to the issuance of a grading permit, the Applicant shall provide the Director of the City of Redlands Department of Development Services, or designee, with evidence that it has retained the services of a qualified archaeologist that meets the Secretary of the Interior standards on an on-call basis. In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 100-foot buffer) shall cease and the Project archaeologist shall assess the find and determine appropriate treatment. Work on the other portions of the Project outside of the buffered area may continue during this assessment period.	Qualified Archaeologist / Director of the City of Redlands Department of Development Services, or designee	Prior to the issuance of a grading permit.	☐
MM CUL-2	If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the qualified archaeologist shall develop a Monitoring and Treatment Plan for the remainder of the Project site. The Monitoring and Treatment Plan shall be developed in coordination with the Applicant and the City. The Applicant shall secure a monitoring agreement with the archaeologist prior to the recommencement of work, and the archaeologist shall monitor during the remainder of the ground disturbance activities on the Project site and implement the Plan accordingly.	Qualified Archaeologist / Director of the City of Redlands Department of Development Services, or designee	Prior to the recommencement of work, and for the remainder of the ground-disturbing activities.	☐
RCM CUL-3	In the event that human remains or funerary objects are encountered on the Project site during any construction activities associated with the Project, work within 100 feet of the discovery shall be redirected and the County Coroner notified immediately consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e). State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a Most Likely Descendant (MLD). With the permission of the property owner, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the Applicant shall	Construction Contractor and County Coroner / Director of the City of Redlands Department of Development Services, or designee	During construction activities.	☐

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
	consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Prior to the issuance of grading permits, the Director of the City of Redlands Department of Development Services, or designee, shall verify that all grading plans specify the requirements of CCR Section 15064.5(e), State Health and Safety Code Section 7050.5, and PRC Section 5097.98, as stated above.			
3.6: Energy				
The proposed project would not result in any significant adverse impacts related to energy. No mitigation is required.				
3.7: Geology and Soils				
SC GEO-1	**Compliance with applicable California Building Code and Project-specific Geotechnical Recommendations**. Prior to the approval of grading and/or building permits, the Applicant shall provide evidence to the City of Redlands for review and approval that on-site structures, features, and facilities have been designed and will be constructed in conformance with applicable provisions of the California Building Code in effect at the time of City review and the recommendations cited in the Project-specific Geotechnical and Infiltration Evaluation Report. This measure shall be implemented to the satisfaction of the Director of the City of Redlands Department of Development Services, Building and Safety Division, or designee.	Applicant / City of Redlands, or designee	Prior to the approval of grading and/or building permits.	☐
MM GEO-1	Prior to commencement of any grading activity on the Project site, the Applicant shall retain a qualified paleontologist, subject to the review and approval of the Director of the City of Redlands Department of Development Services, Planning Division, or designee. The qualified paleontologist shall attend the pre-construction meeting and be on site during all rough grading and other significant ground-disturbing activities. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontology monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology (SVP).	Qualified Paleontologist / Director of the City of Redlands Department of Development Services, Planning Division, or designee	Prior to the commencement of any grading activities. During all rough grading and other significant ground-disturbing activities.	☐
3.8: Greenhouse Gas Emissions				
The proposed project would not result in any significant adverse impacts related to greenhouse gas emissions. No mitigation is required.				
3.9: Hazards and Hazardous Materials				
The proposed project would not result in any significant adverse impacts related to hazards and hazardous materials. No mitigation is required.				

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
3.10: Hydrology and Water Quality				
RCM HYD-1	**Construction General Permit.** Prior to issuance of a grading permit, the Applicant shall obtain coverage under the State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002) (Construction General Permit). This shall include submission of Permit Registration Documents (PRDs), including a Notice of Intent for coverage under the permit to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS). The Applicant shall provide the Waste Discharge Identification Number (WDID) to the Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee, to demonstrate proof of coverage under the Construction General Permit. Project construction shall not be initiated until a WDID is received from the SWRCB and is provided to the City, or designee. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the proposed Project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities. Upon completion of construction and stabilization of the site, a Notice of Termination shall be submitted via SMARTS.	Applicant / Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee	Prior to issuance of a grading permit.	☐
RCM HYD-2	Prior to the commencement of any land disturbing activities, the Applicant shall obtain coverage under the Construction General Permit and develop a Stormwater Pollution Prevention Plan to the City for review and approval that incorporates Best Management Practices to protect water quality during construction activities pursuant to Section 13.54 of the City Municipal Code.	Applicant / Director of the City of Redlands Department of Municipal Utilities and Engineering, or designee	Prior to the commencement of any land disturbing activities.	☐
RCM HYD-3	Prior to issuance of a grading permit, the Applicant shall submit a Final Water Quality Management Plan (Final WQMP) to the Director of the City of Redlands Department of Development Services review and approval in compliance with the requirements of the Santa Ana RWQCB's NPDES Permit Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County Within the Santa Ana Region Area-Wide Urban Stormwater Runoff Management Program (Order No. R8-2010-0036, NPDES No. CAS618036) (San Bernardino County MS4 Permit). The Final WQMP shall specify the BMPs to be incorporated into the Project design to target pollutants of concern in storm water runoff from the Project site and the necessary operation and maintenance activity for each BMP. The City shall ensure that the BMPs specified in the Final WQMP are incorporated into the final Project design. The	Applicant / Director of the City of Redlands Department of Development Services, Planning Division, or designee	Prior to issuance of a grading permit.	☐

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
	proposed BMPs specified in the Final WQMP shall be incorporated into the grading and development plans submitted to the City for review and approval. Project occupancy and operation shall be in accordance with the schedule outlined in the WQMP.			
3.11: Land Use and Planning				
The proposed project would not result in any significant adverse impacts related to land use and planning. No mitigation is required.				
3.12 Mineral Resources				
The proposed project would not result in any significant adverse impacts related to mineral resources. No mitigation is required.				
3.13: Noise				
SC NOI-1	**Compliance with Sections 8.06.090F (Noise Disturbances Prohibited) and Chapter 8.06.120 (Exemptions) of the City of Redlands Municipal Code.** Construction activities, including operating or causing the operation of any tools or equipment used in site preparation, construction, drilling, repair, alteration, grading, paving, and/or architectural coating shall be restricted to the hours of 7:00 a.m. to 6:00 p.m. Mondays through Saturdays, and are prohibited at any time on Sundays and holidays. All mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order and shall be maintained so that vehicles and their loads are secured from rattling and banging.	Construction Contractor / City of Redlands	During all construction activities.	☐
3.14: Population and Housing				
The proposed project would not result in any significant adverse impacts related to population and housing. No mitigation is required.				
3.15: Recreation				
The proposed project would not result in any significant adverse impacts related to recreation. No mitigation is required.				
3.16: Public Services				
The proposed project would not result in any significant adverse impacts related to public services. No mitigation is required.				
3.17: Transportation				
The proposed project would not result in any significant adverse impacts related to transportation. No mitigation is required.				
3.18: Tribal Cultural Resources				
MM TCR-1	The Yuhaaviatam of San Manuel Nation (YSMN) Cultural Resources Department shall be contacted regarding any pre-contact cultural resources discovered during Project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. YSMN shall have the option of placing a tribal monitor on-site during ground-disturbing activities within previously undisturbed soil for the remainder of the Project.	Construction Contractor / The Yuhaaviatam of San Manuel Cultural Resources Department	During ground-disturbing activities.	☐

Table AE: Mitigation and Monitoring Reporting Program

Draft IS/MND Mitigation Measures (MMs) or Regulatory Compliance Measures (RCMs)		Responsible Party/ Approving Agency	Timing for Mitigation Measure	Tracking
MM TCR-2	Any and all archaeological documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the Applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or Applicant shall, in good faith, consult with YSMN throughout the life of the Project.	Applicant and the City of Redlands / The Yuhaaviatam of San Manuel Cultural Resources Department	Throughout the life of the Project.	☐
3.19: Utilities and Service Systems				
The proposed project would not result in any significant adverse impacts related to utilities and service systems. No mitigation is required.				
3.19: Wildfire				
The proposed project would not result in any significant adverse impacts related to wildfire. No mitigation is required.				

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