CITY OF REDLANDS

CREST GROVE PROJECT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Prepared By:

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1.0 INTRODUCTION & PURPOSE OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1.1 Purpose and Scope of the Initial Study

In accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section 21000 et seq.) and its Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.), this Initial Study has been prepared to evaluate the potential environmental effects associated with the construction and operation of the Crest Grove Project (proposed Project or Project). Pursuant to Section 15367 of the State CEQA Guidelines, the City of Redlands (City) is the lead agency for the Project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As set forth in the State CEQA Guidelines Section 15070, an Initial Study leading to a Mitigated Negative Declaration (IS/MND) can be prepared when the Initial Study has identified potentially significant environmental impacts but revisions have been made to a project, prior to public review of the Initial Study, that would avoid or mitigate the impacts to a level considered less than significant, and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

1.2 Summary of Findings

Section 3.0 of this document contains the Environmental Checklist Form that was prepared for the proposed Project pursuant to CEQA requirements. The Environmental Checklist Form indicates that the proposed Project would not result in significant impacts with the implementation of mitigation measures, as identified where applicable throughout this document.

1.3 Initial Study Public Review Process

The Initial Study 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 MND should be addressed to:

Tamara Harrison, Contract Planner
Development Services Department, Planning Division
35 Cajon St., Ste. 20/P.O. Box 3005
Redlands, CA 92373
951.506.2061
tamara.harrison@mbakerintl.com

After the 30-day review period, comments raised during the public review period will be considered and addressed prior to adoption of the MND by the City.

1.4 Report Organization

This document has been organized into the following sections:

Section 1.0 – Introduction & Purpose of the Initial Study/Mitigated Negative Declaration. This section provides an introduction and overview describing the conclusions of the Initial Study.

Section 2.0 – Description of Proposed Project. This section identifies key project characteristics and includes a list of anticipated discretionary actions.

Section 3.0 – Initial Study Checklist. The Environmental Checklist Form provides an overview of the potential impacts that may or may not result from Project implementation.

Section 4.0 – Environmental Analysis. This section contains an analysis of environmental impacts identified in the Environmental Checklist Form.

Section 5.0 – References. The section identifies resources used to prepare the Initial Study.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Location, Setting, and Existing Conditions of Proposed Project

PROJECT LOCATION

The Project site is located north of Reservoir Road at Wabash Avenue, in the City of Redlands, County of San Bernardino, California, on Assessor Parcel Numbers (APNs) 0299-213-11, -12, -13, -14 and 21; and 0174-281-13. It is generally located in the eastern portion of the City, to the north of Interstate 10 (I-10) and approximately 2.2 miles south of State Route 38 (SR-38). The Project site can be found on the Redlands U.S. Geological Survey (USGS) 7.5-minute series quadrangle within Section 36 Township 1 South Range 3 West and Section 31 Township 1 South Range 2 West; refer to **Exhibit 1,** *Regional Location*.

Local access to the site is provided via Wabash Avenue which traverses the Project site in a north-south direction and Reservoir Road to the south. Regional access to the site is provided via the Wabash Avenue off-ramp from I-10; refer to **Exhibit 2,** *Project Vicinity*.

PROJECT SETTING, LAND USE, AND ZONING DESIGNATION

The Project site is an approximately 65-acre 'L'-shaped site composed of six parcels. The Project site is undeveloped and is bound by single-family residential uses, Sophia Court, and Buckingham Drive to the west; single-family residential uses to the north; Reservoir Road and vacant land to the south; and vacant land to the east. Electrical transmission lines are located along the southern property line along Reservoir Road, parallel to I-10.

Habitat on-site consists almost entirely of invasive grassland with patches of highly disturbed sage scrub in the center of the western portion scattered around utility access roads near Wabash Avenue. Nonnative tree species can be found in tree lines and sporadically throughout the site.

Site elevations vary with the rolling topography, but highest elevation can be found at the peaks on the eastern side of the Project site at approximately 1,990 feet (ft) above mean sea level (MSL) and the lowest in the valleys at approximately 1,750 ft above MSL on the western side of the Project site. Drainage across the site is by sheet flow and rill flow towards the south-southwest into reservoir Road.

The Project site is zoned Residential Estate (R-E) and has a Very Low Density Residential (VLDR) General Plan Designation, refer to **Exhibit 3**, *Existing Land Use and Zoning Designations* and **Table 1,** *Surrounding Land Uses and Zoning Designations*. **Table 1** identifies the land uses and zoning designations congruent with the City of Redland's General Plan.

Table 1: Existing Land Uses and Zoning Designations

Location	Existing Land Use Designation	Existing Zoning Designation	Existing Use	Proposed Land Use Designation	Proposed Zoning
Project Site	Very Low Density Residential (VLDR)	Residential Estate (R-E)	Vacant	Very Low Density Residential (no change)	R-E/PRD (Planned Residential Development)
North	VLDR	R-E	Single family Residential	No change	No change
South	Freeway, VLDR, and Resource Preservation	Specific Plan 23 (SP23) and R-E (City of Redlands); and RL-5 (County zoning)	City-owned Citrus Grove, Freeway, Vacant/Undeveloped, single-family residential neighborhoods	No change	No change
East	Unincorporated County area (Rural Living and VLDR designations)	RS-1 (County zoning)	Vacant/Undeveloped	No change	No change
West	VLDR	R-E	Single Family Residential	No change	No change

Source: City of Redlands. 2020. *Zoning Map*. Available at https://coredlands.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=7577aed247714a8ba8810c5f7357f7b2, accessed January 10, 2022
http://cms.sbcounty.gov/lus/Planning/GeneralPlan.aspx;
https://sbcounty.maps.arcgis.com/apps/MapSeries/index.html?appid=f5a50c44766b4c36a3ae014497aa430d.

2.2 Proposed Project Characteristics

The proposed Project would involve the subdivision of six existing parcels into 67 residential lots in two phases, totaling 27.49 acres. The Project also includes active and private open space totaling 28.16 acres. Additionally, the Project site would include nine new residential streets that connect the planned residential lots to Wabash Avenue; refer to **Exhibit 4**, *Site Plan,* and **Table 2**, *Proposed Project Structures and Other Components*.

PHASE I

Phase I of the Project would include the construction of lots #1-42, totaling 733,312 SF, as well as the creation of three drainage basins and one lot of natural and landscaped open space (Lettered Lots "A" through "D"). Phase 1 would take place on the westerly side of Wabash Avenue and involve the creation of connecting residential streets "A" through "F."

PHASE II

Phase II of the Project would occur on the easterly side of Wabash Avenue and involve the construction of the remaining 25 residential lots (Lots #43-67) as well as residential streets "G"

through "I." Phase II would also include the development of a bio-retention basin and four distinct open space lots purposed for public recreation (Lettered Lots "E" through "J"). The largest of these natural and landscaped open spaces would be located at the eastern and southern portions of the Phase II area and include designated dirt trails amongst the native vegetation.

Other amenities would include neighborhood parks, planted sidewalks with street trees, onsite and perimeter ornamental landscaping and fencing, designated trails throughout the native vegetated open space, shade structures with seating, and benches throughout, a lawn playground, a nature park with native plantings, drainage basins, and frontage improvements.

Table 2: Proposed Project Structures and Other Components

Project Element	Purpose/Grade	Avg. Lot Size	Lot Area (SF)
Phase 1			
Lots No. 1-42	Residential	17,460	733,312
(Lot "A") WQ Basin "A"	Basin Drainage	-	36,050
(Lot "B") WQ Basin "B-1"	Basin Drainage	-	130,446
(Lot "C") WQ Basin "B-2"	Basin Drainage	-	24,588
Natural and Landscaped Open Space (Lot "D")	Public Recreational	-	370,896
Phase 2			
Lots No. 43-67	Residential	18,569	464,217
(Lot "E") Bio-Retention Basin "C"	Basin Drainage	-	27,273
(Lot "F") Open Space	Public Recreational	-	19,944
(Lot "G") Natural and Landscaped Open Space	Public Recreational	-	380,342
(Lot "H") Open Space	Public Recreational	-	232,895
(Lot "I") Debris Basin	Open Area - Future Street Extension	-	9,320
(Lot "J") Natural and Landscaped Open Space	Public Recreational	-	489
		Total Square Feet	**2,429,772 (SF)**

Source: ACI Aguilar Consulting Inc. November 2020. *Tentative Tract Map No. 20320.*

Table 3: Proposed Project Detailed Summary

Project Element	Proposed Project
Existing General Plan Designation	Very Low Density Residential (VLDR)
Existing Zoning Designation	Residential Estate (R-E)
Existing Use	Vacant
Proposed Use	Residential Estate/Planned Residential Development (R-E/PRD)
Total Number of Parcels	67
Site Area	64.56 gross acres
Street Dedication	9.17 acres
Net Site Acreage	55.39 acres
Total Lot Coverage (structures, numbered and lettered lots)	7.9%
Common Open Space Gross Land Area	43.6%
Landscaped	856,294 square feet (30.4%)
Developed Gross Area in Common, Landscaped, and Recreational Open Space	16.3%
Gross Density	1.05 DU/AC
Usable Pad Area	27.5 acres
Minimum Lot Size	14,027 square feet
Average Lot Size	0.41 acres (147,887 SF)
Total Open Space (Active Common & Private)	28.16 acres
Soil Cut/Fill Cubic Yards (CY) *Total Cut:* *Total Fill:*	 *834,000 CY* *834,000 CY* Project will balance on site.
Source: ACI Aguilar Consulting Inc. November 2020. *Tentative Tract Map No. 20320.*	

SITE ACCESS AND CIRCULATION

Main vehicular access to the community would be provided via Wabash Avenue that traverses through the middle portion of the Project site and continues to the north and south of the site. The Project also proposes internal residential streets that will intersect Wabash Avenue to provide full access at three new intersections. Wabash Avenue is currently unpaved between Reservoir Road and Panorama Drive. The proposed Project will construct Wabash Avenue from Reservoir Road through the Project site at its ultimate alignment and full-section width (72 feet right-of-way), including parkway improvements and two travel lanes in each direction. Other on-site and project perimeter improvements (such as streets, sidewalks and trails, storm drains, water and sewer lines, public and private utilities, landscape and street trees, etc.) will be constructed in accordance with municipal code requirements and standard requirements from

the Municipal Utilities & Engineering Department, Development Services Department, and Facilities & Community Services Department.

LANDSCAPING AMENITIES

The proposed trees, shrubs, and accents, and ornamental grasses will be placed along the residential roadways, as well as within landscaped portions of the designated open space. Strategically landscaped drainage basins and slopes will be planted accordingly; low-growing, native grasses and shrubs would be planted for erosion control. As noted in **Table 3**, approximately 856,294 square feet (30.4%) of the site would be landscaped; refer to **Exhibit 5,** *Conceptual Landscape Plan.*

The Project would also comply with the City's Water Efficient Landscaping Requirements (Chapter 15.54 of the Redlands Municipal Code). The plant species are non-invasive per the California Invasive Plant Council.

COMMON AND PRIVATE OPEN SPACE

The Project would provide the following outdoor recreational amenities:

- Three neighborhood parks;
- Three shade structures;
- Picnic tables;
- Nature trails in naturalized settings;
- Nature park with native plantings;
- View overlooks;
- Open lawn play areas; and
- Benches along trails.

As noted in **Table 3**, the Project would include 28.16 acres composed of active common and private space. Grading and slopes would be constructed in compliance with Redlands Municipal Code Section 18.144.280 for Planned Residential Developments, generally with 3:1 slopes in most cases, or 2:1 slopes in the Hillside Development district with Planning Commission approval.

EXTERIOR LIGHTING

The Project would include onsite safety and security lighting placed in accordance with the California Building Code as well as Redlands Municipal Code Section 18.144.260 for Planned Residential Developments.

PERIMETER FENCING AND EXTERIOR WALLS

Individual residential lots will have fencing along the entire perimeter, excluding the front yard setback. Retaining walls will be placed along the southern portion of the Project site that is directly adjacent to Reservoir Road, and perimeter fencing will additionally be provided around planned drainage basins. Perimeter fencing will be provided in accordance with Municipal Code Chapter 18.168: Landscaping, Fences, Walls and Signs.

ELEVATIONS AND FLOOR PLAN

The maximum building height in the R-E District is 35 feet[1]. The proposed residential dwelling units would not exceed the allowed building heights; refer to **Exhibits 6a – 6c**, *Elevations*. Additionally, refer to **Exhibits 7a – 7c**, *Floor Plan*.

CONSTRUCTION

Construction activities are anticipated to commence the first quarter of year 2023 and would culminate on the second or third quarter of year 2025. The Project is anticipated to be fully operational by year 2025.

PERMITS AND APPROVALS

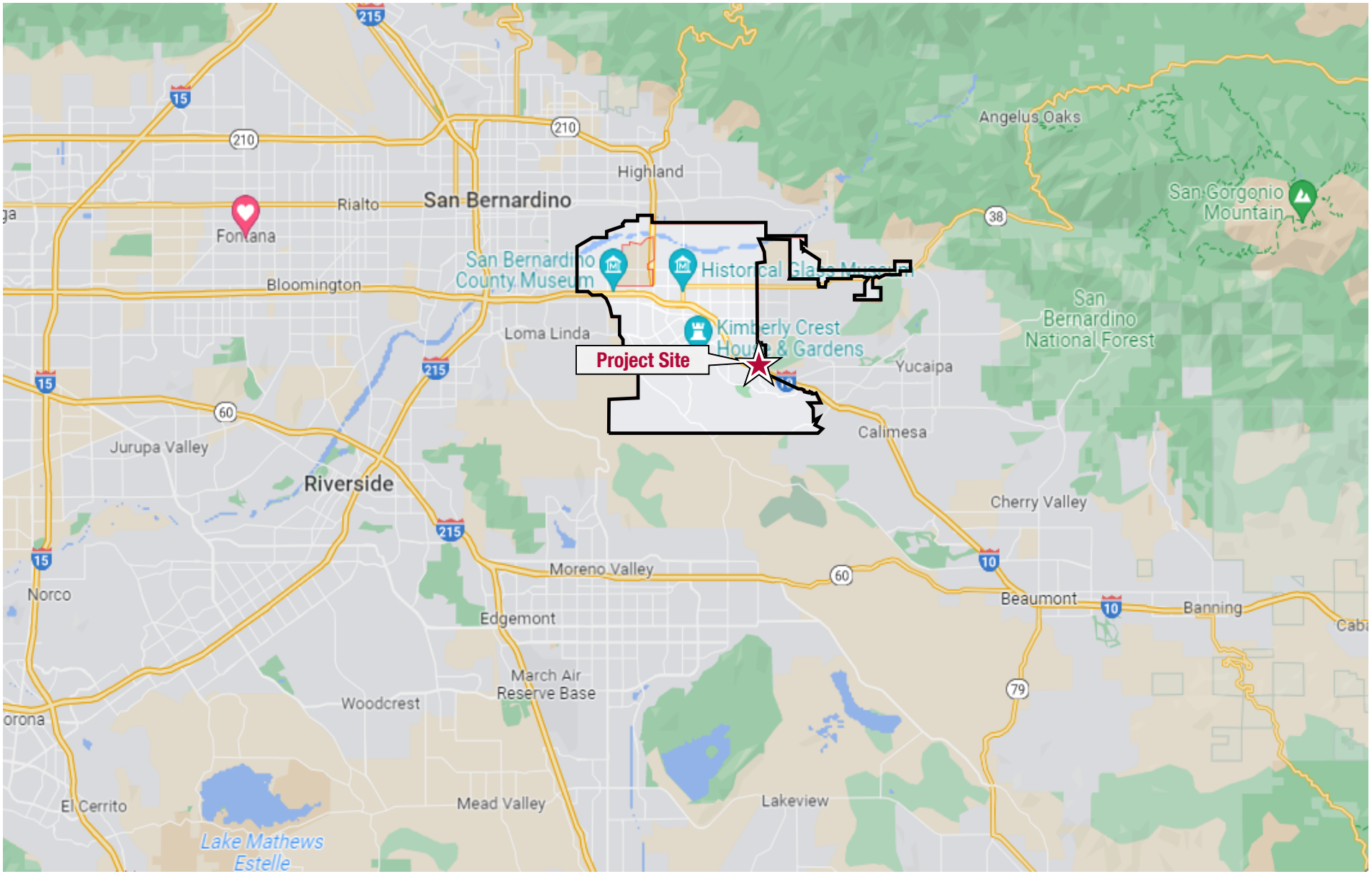
Conditional Use Permit (CUP): To build a residential neighborhood in the R-E, Residential Estate zone as a Planned Residential Development (PRD).

Tentative Tract Map (TTM): To consolidate six parcels and then subdivide into 67 individual parcels for sale, and ten lettered lots for open space and drainage features.

Development Agreement (DA): The developer may request a Development Agreement with the City for certain components of the necessary roadway and infrastructure improvements (off-site from the proposed Project site), and/or City's participation in an application to the Statewide Community Infrastructure Program for certain portions of roadways and infrastructure serving the project. Such related application(s) may be processed in conjunction with the entitlement approvals or filed and processed subsequent to the entitlement approvals for the proposed project.

The City of Redlands is the Lead Agency as set forth in CEQA Section 21067 and is responsible for reviewing and approving the Mitigated Negative Declaration. Additional permits may be required upon review of construction documents. Other permits required for the Project may include but are not limited to the following: issuance of encroachment permits for driveways, sidewalks, and utilities; security and parking area lighting; demolition permits; building permits; grading permits; tenant improvement permits; and permits for new utility connections.

[1] Municipal Code. 2022. *18.36.080 Building Heights*. https://codelibrary.amlegal.com/codes/redlandsca/latest/redlands_ca/0-0-0-16390#JD_18.36.080. (Accessed February 3, 2022).



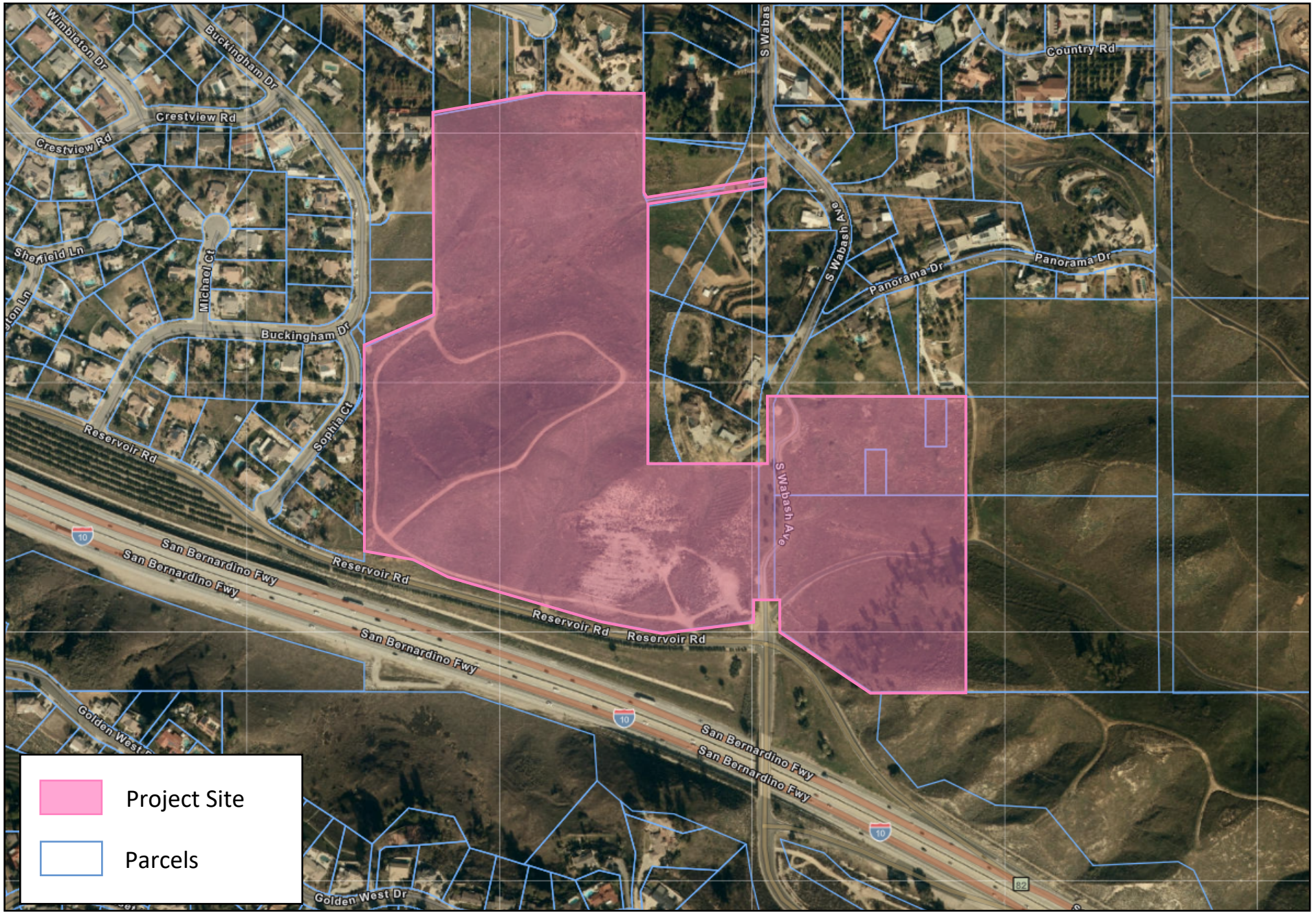
Source: Google Maps

Exhibit 1: Regional Location
City of Redlands
Crest Grove Project

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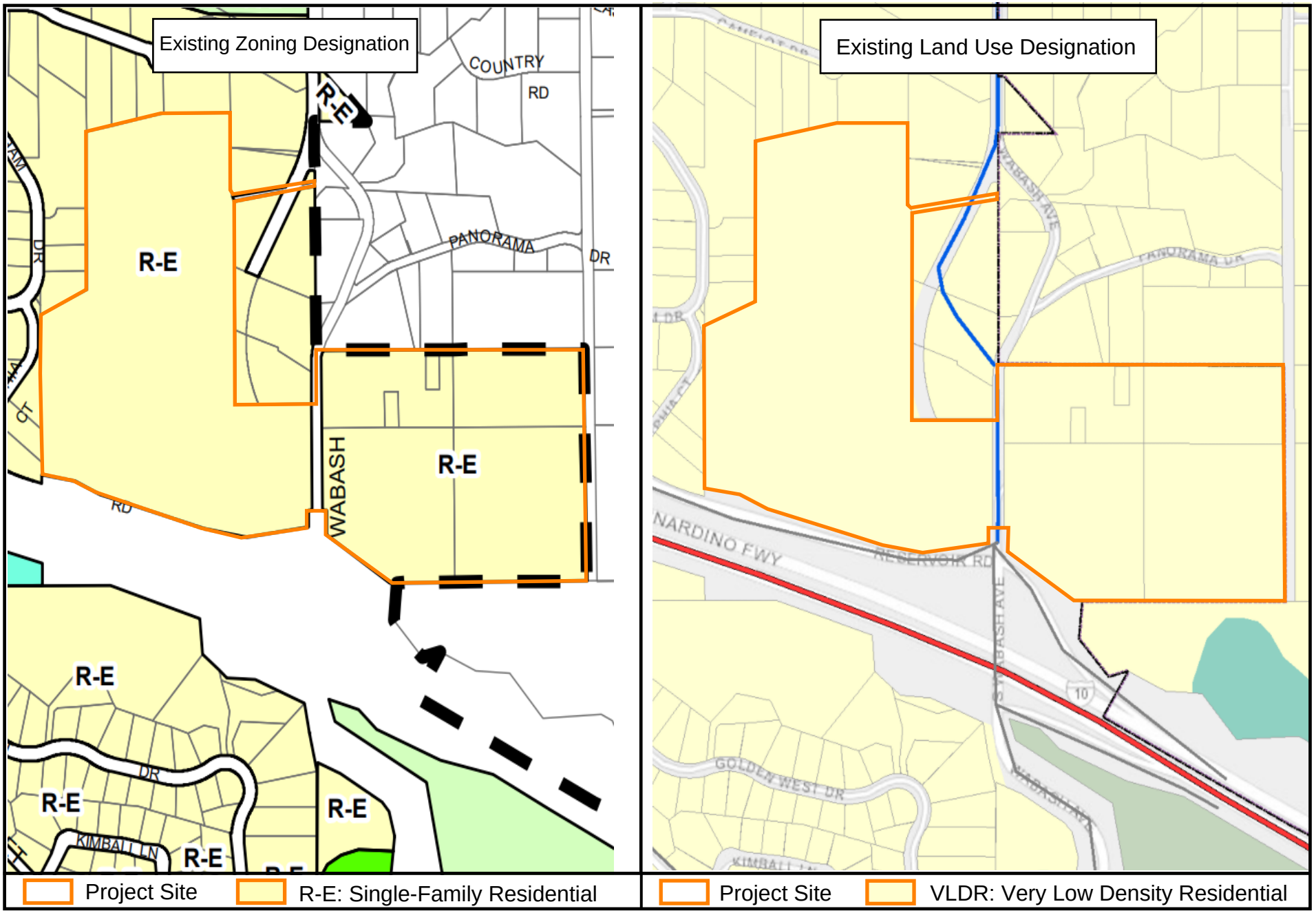
Source: Public San Bernardino County Parcel Viewer (2022).

Exhibit 2: Project Vicinity
City of Redlands
Crest Grove Project

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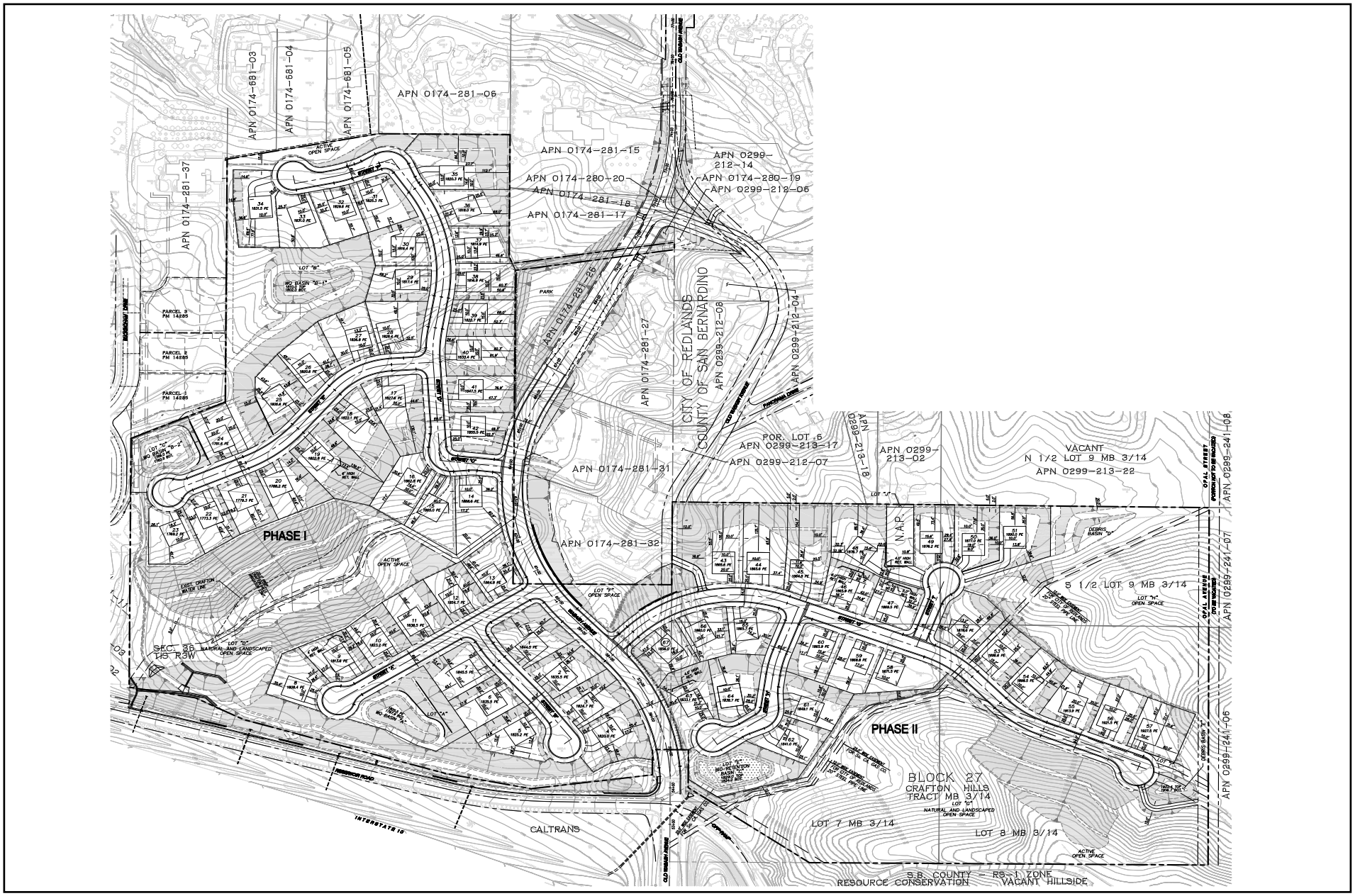
Source: City of Redlands Zoning Map (2021) and General Plan Land Use Map (2017)

Exhibit 3: Existing Land Use and Zoning Designations
City of Redlands
Crest Grove Project

Not to Scale

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Source: Aguilar Consulting, Inc. (2022) Tentative Tract Map

Exhibit 4: Site Plan
City of Redlands
Crest Grove Project

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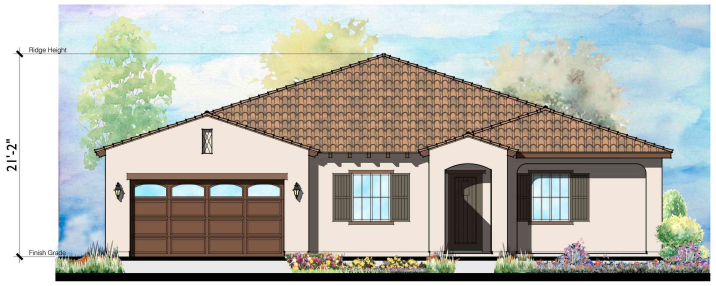
Source: STB Landscape Architects, Inc. (2022), Master Landscape Plan

Exhibit 5: Conceptual Landscape Plan
City of Redlands
Crest Grove Project

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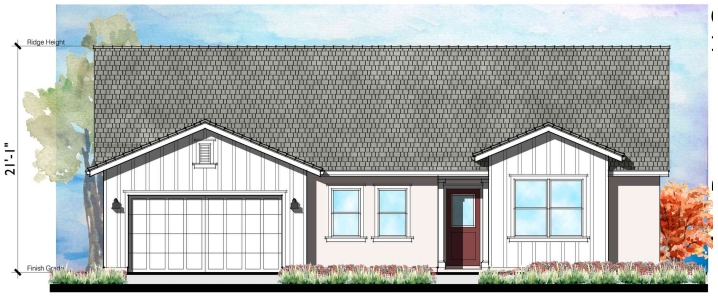
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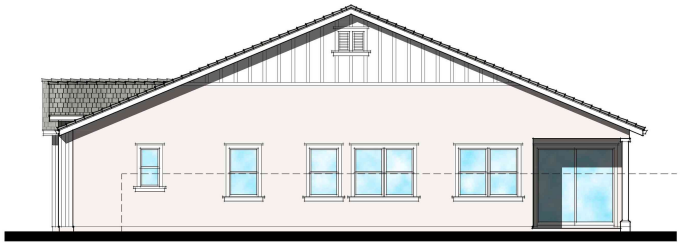
Plan 1 - Elevation 'A'
Front Elevation



Plan 1 - Elevation 'A'
Right Elevation



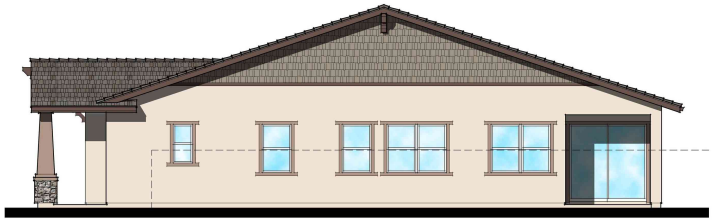
Plan 1 - Elevation 'B'
Front Elevation



Plan 1 - Elevation 'B'
Right Elevation



Plan 1 - Elevation 'C'
Front Elevation



Plan 1 - Elevation 'C'
Right Elevation

Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 6a: Elevations, Plan 1

City of Redlands

Crest Grove Project

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Plan 2 - Elevation 'A'
Front Elevation



Plan 2 - Elevation 'A'
Right Elevation



Plan 2 - Elevation 'B'
Front Elevation



Plan 2 - Elevation 'B'
Right Elevation



Plan 2 - Elevation 'C'
Front Elevation



Plan 2 - Elevation 'C'
Right Elevation

Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 6b: Elevations, Plan 2
City of Redlands
Crest Grove Project

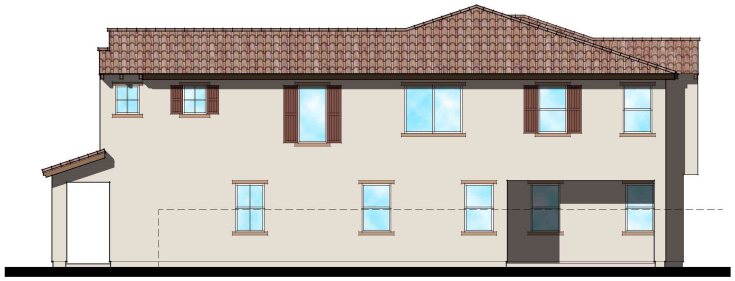
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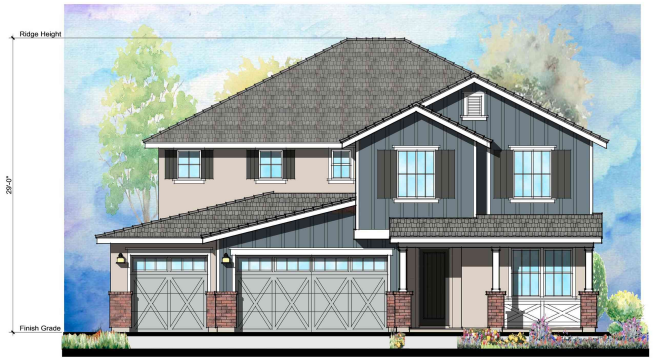
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Plan 3 - Elevation 'A'
Front Elevation



Plan 3 - Elevation 'A'
Right Elevation



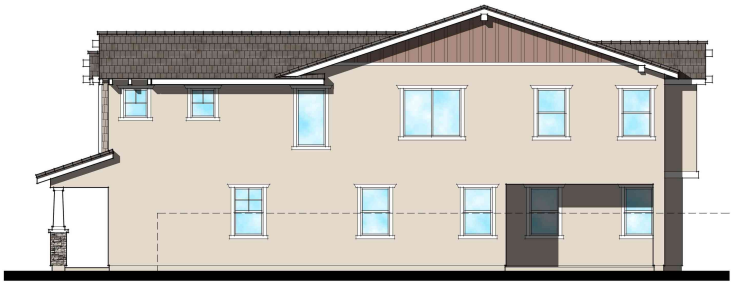
Plan 3 - Elevation 'B'
Front Elevation



Plan 3 - Elevation 'B'
Right Elevation



Plan 3 - Elevation 'C'
Front Elevation



Plan 3 - Elevation 'C'
Right Elevation

Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 6c: Elevations, Plan 3

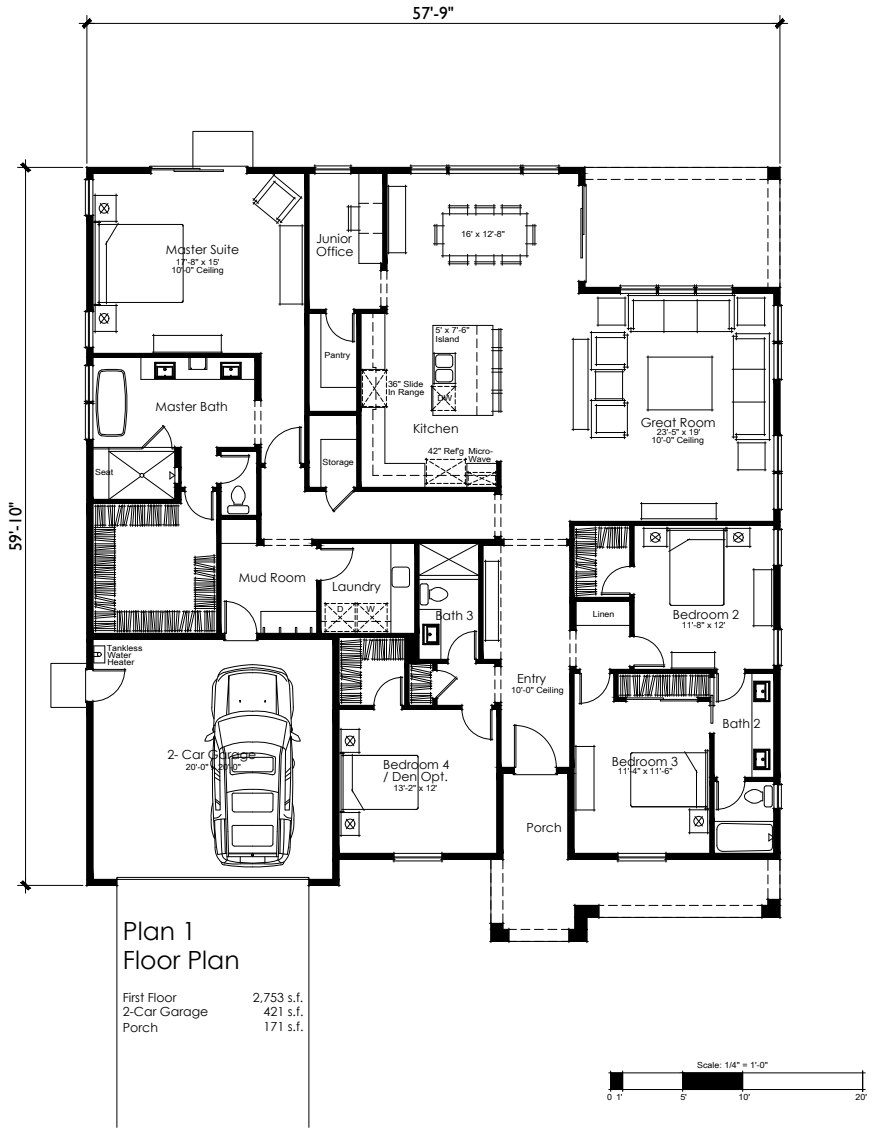
City of Redlands

Crest Grove Project

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Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 7a: Floor Plan 1

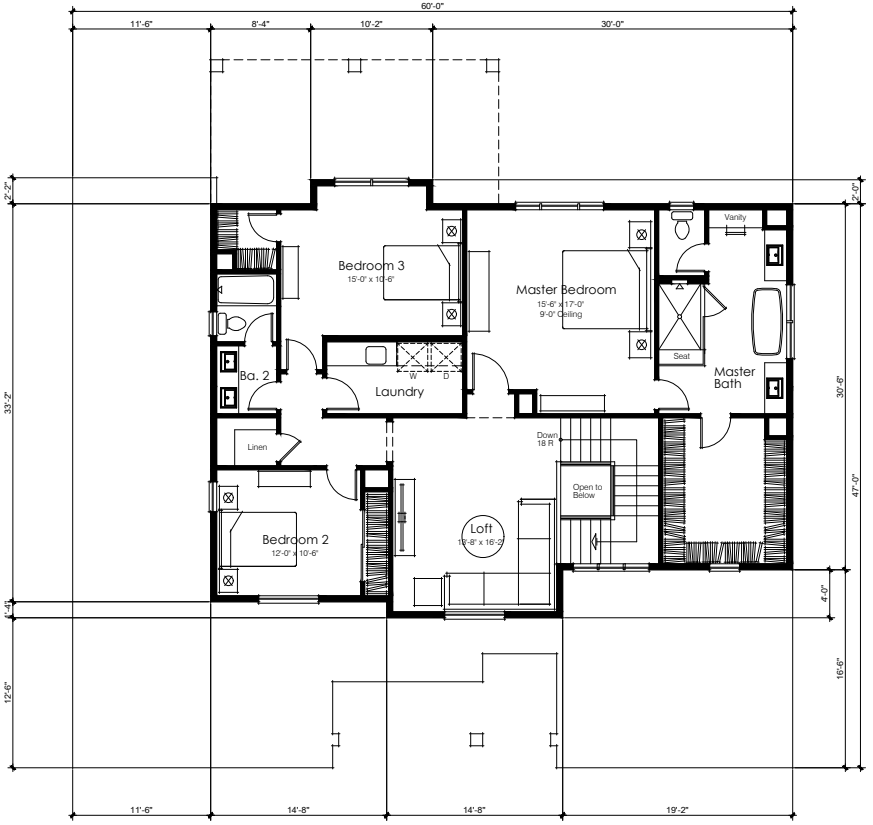
City of Redlands

Crest Grove Project

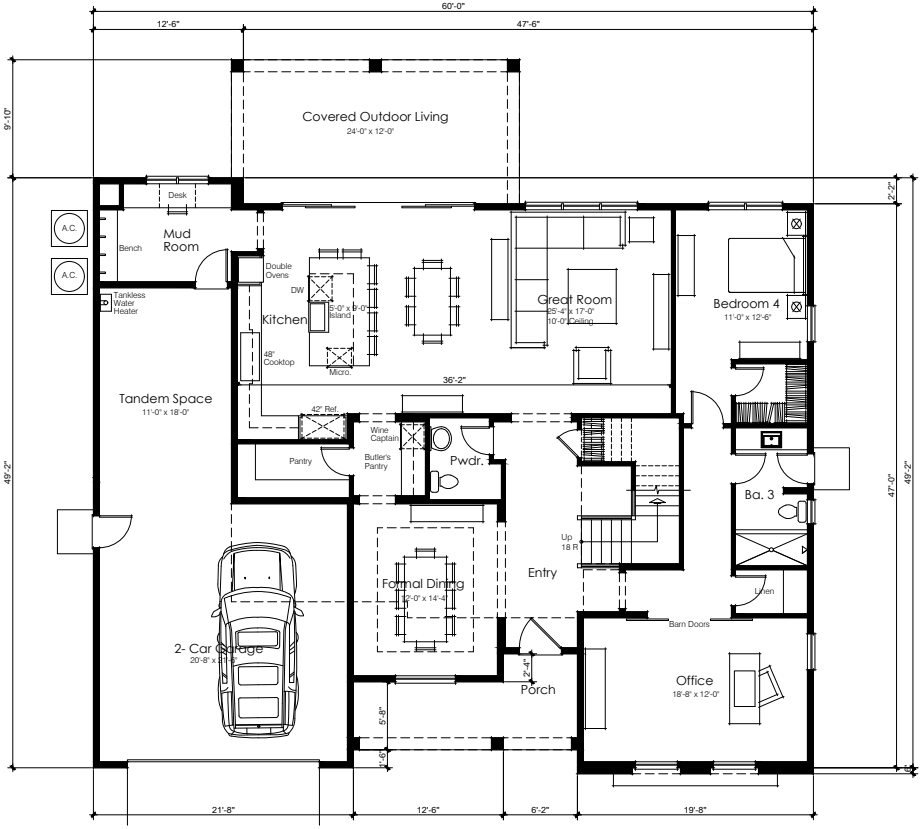
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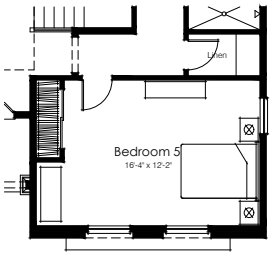


Plan 2
Second Floor Plan

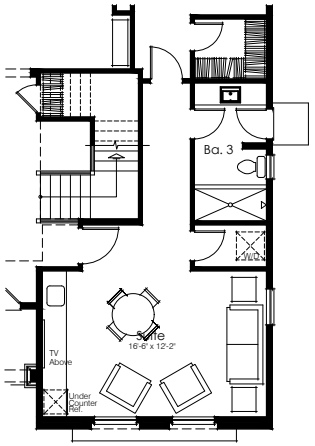


Plan 2
First Floor Plan

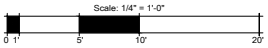
First Floor Plan	2,038 sq. ft.
Second Floor Plan	1,494 sq. ft.
Total:	3,532 sq. ft.
2-Car Garage	469 sq. ft.
Tandem Space	207 sq. ft.
Covered Outdoor Living	286 sq. ft.



Opt. Bedroom 5



Opt. Suite



Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 7b: Floor Plan 2

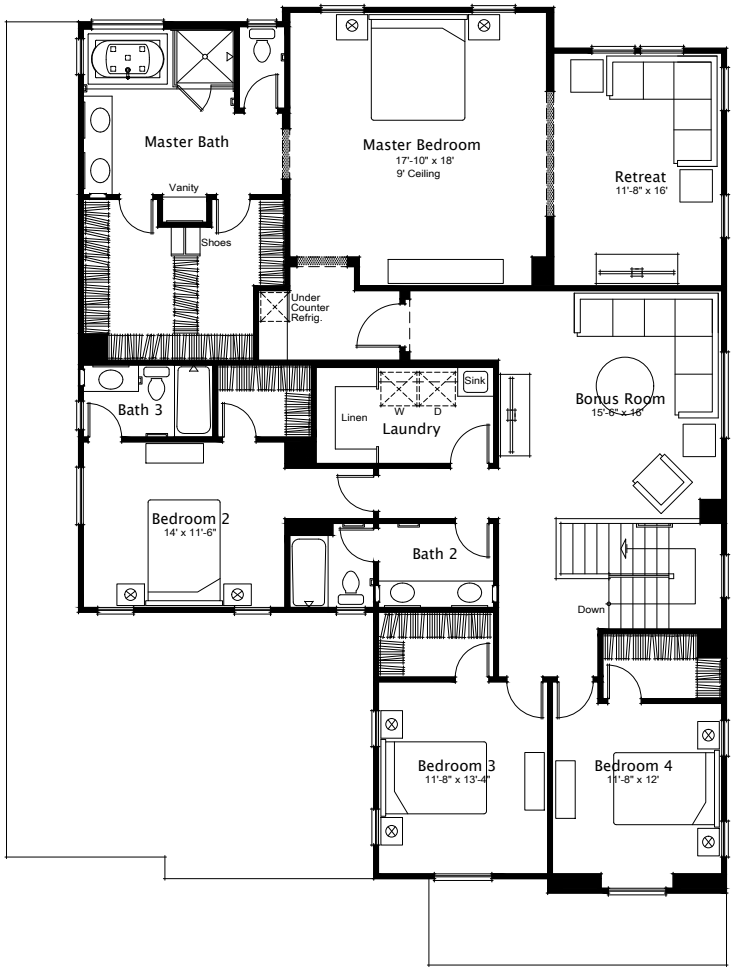
City of Redlands

Crest Grove Project

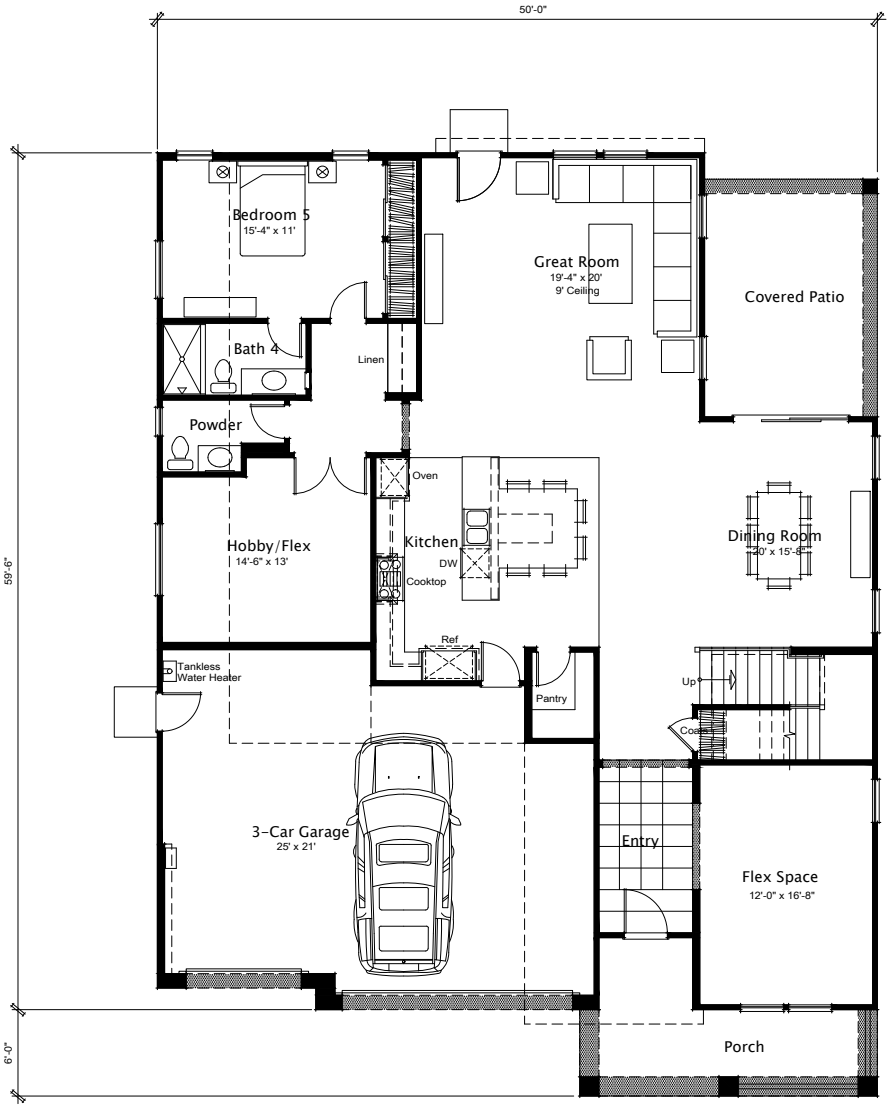
Not to Scale

Kimley»Horn

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Plan 3
Second Floor Plan



Plan 3
First Floor Plan

First Floor Plan	2,021 sq. ft.
Second Floor Plan	2,205 sq. ft.
Total:	4,226 sq. ft.
3-Car Garage	685 sq. ft.
Covered Patio	198 sq. ft.

Source: Mark Gross & Associates, Inc., June 21, 2021

Exhibit 7c: Floor Plan 3

City of Redlands

Crest Grove Project

Not to Scale

Kimley»Horn

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3.0 INITIAL STUDY CHECKLIST

1. **Project title:**

   Crest Grove Project

2. **Lead agency name and address:**

   City of Redlands
   Development Services Department, Planning Division
   35 Cajon Street
   Redlands, CA 93273

3. **Contact person and phone number:**

   Tamara Harrison, Contract Planner
   951.506.2061

4. **Project location:**

   The Project site is located north of Reservoir Road at Wabash Avenue, in the City of Redlands, California, County of San Bernardino on Assessor Parcel Numbers (APNs) 0299-213-11, -12, -13, -14 and 21; 0174-281-13.

5. **Project applicant's/sponsor's name and address:**

   Terracina Recovery, LLC.
   605 East Green Street, Suite 200
   Pasadena, CA 91101

6. **Existing General Plan Designation:**

   Very Low Density Residential (VLDR)

7. **Proposed General Plan Designation**

   No Change: VLDR

8. **Existing Zoning Designation:**

   Residential Estate District (R-E)

9. **Proposed Zoning Designation**

   Residential Estate District (R-E) / Planned Residential Development (PRD)

10. **Other public agencies whose approval is required:**

    Caltrans

11. Project summary:

The proposed Project would involve the subdivision of six existing parcels into 67 residential lots in two phases, totaling 27.49 acres. The Project also includes active and private open space totaling 28.16 acres. Additionally, the Project site would include nine new residential streets that connect the planned residential lots to Wabash Avenue.

Phase I

Phase I of the Project would include the construction of lots #1-42, totaling 733,312 SF, as well as the creation of three drainage basins and one lot of natural and landscaped open space (Lettered Lots "A" through "D"). Phase 1 would take place to the west of Wabash Avenue and involve the creation of connecting residential streets "A" through "F."

Phase II

Phase II of the Project would occur to the east of Wabash Avenue and involve the construction of the remaining 25 residential lots (Lots #43-67) as well as residential streets "G" through "I." Phase II would also include the development of a bio-retention basin and four distinct open space lots purposed for public recreation (Lettered Lots "E" through "J"). The largest of these natural and landscaped open spaces would be located at the eastern and southern portions of the Phase II area and include designated dirt trails amongst the native vegetation.

Other amenities would include neighborhood parks, planted sidewalks with street trees, onsite and perimeter ornamental landscaping and fencing, designated trails throughout the native vegetated open space, shade structures with seating, and benches throughout, a lawn playground, a nature park with native plantings, drainage basins, and frontage improvements.

12. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to PRC Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

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 PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's (NAHC) Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

On October 14, 2021, the City provided written notices to interested California Native American tribes on the City's list consistent with Assembly Bill (AB) 52. The following tribes were notified: the Gabrieleño Band of Mission Indians – Kizh Nation, San Manuel Band of Mission Indians (San Manuel),

Soboba Band of Luiseño Indians, Torres Martinez Desert Cahuilla Indians, and the Soboba Band of Luiseño Indians. Written responses were received from San Manuel on October 27, 2021, and from Gabrieleno Band of Mission Indians – Kizh Nation – on November 29, 2021. Please refer to **Section 18**, *Tribal Cultural Resources*, for further details on Tribal Consultation.

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3.1 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
- ☒ Air Quality
- ☐ Agricultural and Forestry Resources
- ☒ Biological Resources
- ☒ Cultural Resources
- ☐ Energy
- ☒ Geology/Soils
- ☐ Greenhouse Gas Emissions
- ☐ Hazards & 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:

On the basis of this initial evaluation (check one):

☐ 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.

CERTIFICATION:

Signature Date

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4.0 ENVIRONMENTAL ANALYSIS

AESTHETICS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
1. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the Project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, 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?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. Scenic vistas in the City consist of the scenic corridors and views to and from the open spaces, canyonlands, hillsides, groves, and the San Bernardino Mountains. Scenic views are also found in the urbanized part of the City, including along scenic and historic drives. As noted in **Section 2.2**, *Proposed Project Characteristics*, the Project proposes the development of 67 single-family residential dwelling units and associated residential development amenities such as streets, security lighting, street scape, common and private open space, among other associated amenities. Building heights would be within the allowed 35 feet maximum building height. There are exceptions in the Code to allow for architectural elements (18.152.030) which would be applicable if any of the structures exceeds the allowed building height and the applicable exception will be noted in the exception's sections; refer to **Exhibit 6**, *Elevations*.

As noted in **Section 2.1**, the Project site is vacant and is surrounded by residential development to the north, to the south beyond I-10, to the east, and northwest. The Project site also exhibits off-road trails and electricity poles (see site images below). Although the Project site is undeveloped, the Project site does not contain any known scenic vistas on or adjacent to the Project site. Most homes in the vicinity are two-stories in height and the proposed single family

residential units will be of similar height. Because the Project site and the vicinity do not contain a scenic vista and because the change in views of the Project site from the surrounding area would not cause a significant impact on a scenic vista. Impacts are less than significant, and no mitigation is required.



View of the Buckingham Drive (neighboring road) from the entrance of a utilities access road on the western edge of the site.



Access road for utilities maintenance.



Southern portion of the site with I-10 freeway visible in the background.



Graded access road and I-10 freeway in the background.

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact. According to the General Plan EIR, Lugonia Avenue SR-38 is located in and outside of the City of Redlands city limits. SR-38 is included on the Caltrans list of eligible scenic highways.[2] State Route 38 features views of forested mountainsides and distant views of the desert. However, this portion of State Route 38 is not visible from the Project site, nor has

[2] Caltrans. 2020. *California Scenic Highways*. Available at https://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=f0259b1ad0fe4093a5604c9b838a486a, accessed February 7, 2022.

Caltrans formally designated it as a State Scenic Highway. State Route 38 is located approximately 2.0 miles north of the Project site.

The Project site is vacant and as such, there are also no historically significant buildings. Additionally, the site is devoid of trees, and/or rock outcroppings on the site that could be affected by the proposed development. Therefore, no adverse impacts on scenic resources, including resources within a State scenic highway, would result from the proposed Project's implementation. Less than significant impacts would occur, and no mitigation is required.

c) In non-urbanized areas, 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. Refer to Response 1(a), above. Although the Project is vacant, it is located in a generally urbanized area; refer to **Table 1**. The visual characteristics of the Project site would change from vacant to a single-family residential development composed of 67 dwelling units and associated amenities. The Project would be consistent with the zoning through the approval of a CUP to allow for the development of a residential development within the R-E/PRD zone. Because the Project's vicinity is urbanized, and the general area is rapidly developing in the same manner, the proposed Project is not anticipated to damage the scenic quality. Therefore, the change in visual character due to the proposed Project would not significantly impact the site or the surrounding area. Impacts are less than significant, and no mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The Project site does not currently generate any light or glare as the site is vacant. However, existing light and glare sources in the immediate vicinity include night lights from adjacent streetlight and security lighting from single family residential units to the north, northeast and west, and passers-by traffic along I-10.

The Project would include the implementation of onsite street lighting, safety lighting, and other lighting typically associated with residential communities. Lighting levels would not exceed 1.0 candle/foot measured at ground level throughout the new community as required per Municipal Code Section 18.92.220. New lighting would also be reviewed by the City to ensure conformance with the 2019 California Building Code, Title 24 (California Code of Regulations), as well as the 2019 California Green Building Standards Code (Part 11 of Title 24, California Code of Regulations) such that only the minimum amount of lighting is used, and no light spillage occurs. For these reasons, lighting and glare impacts from the proposed Project would be less than significant and no mitigation is required.

Cumulative Impacts

The potential aesthetic impacts related to views, aesthetics, and light and glare are site-specific. As discussed above, Project-related impacts would be less than significant. Additionally, the type and intensity of development associated with the proposed Project site would be consistent with the area. The implementation of the proposed Project would change the appearance of the site. However, this Project type is allowed in this site and it's an anticipated change for the general area, including the Project site. All future development projects would be conditioned to follow applicable local planning and design guidelines. Therefore, aesthetic impacts are not expected to be cumulatively considerable, and no adverse impacts would occur.

AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:				
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
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))?			X	
d) Result in the loss of forest land or conversion of forest land to non-forest use?			X	
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?			X	

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?

Less than Significant Impact. The California Department of Conservation (DOC) delineates the Project site and land contiguous to the north, south, east, and west as Grazing Land. According to DOC, Grazing Land is typically where existing vegetation is suited to the grazing of livestock.[3] Additionally, the area is also surrounded by Urban and Built-Up Land. The Project site would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As such, the proposed Project is anticipated to cause a less than significant impact to farmland.

[3] DOC. 2020. *California Important Farmland Finder*. Available at https://maps.conservation.ca.gov/dlrp/ciff/, accessed on April 14, 2020.

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?

Less than Significant Impact (b-d). According to the DOC, the Project sites is not part of a Williamson Act contract. As noted previously in Response (a) above, the Project site is not currently designated or used as an agricultural site. The proposed Project would be consistent with the site's zoning with the approval of a CUP. Additionally, no forestry resources exist on or adjacent to the Project Site. A less than significant impact would occur, and no mitigation is required.

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?

Less than Significant Impact. Refer to Section 2, Responses (a). As noted above, the Project would not convert farmland to non-agricultural land. Additionally, the City of Redlands has zoned this site for residential use, consistent with the general development of the area, the Project would have a less than significant impact on agricultural land.

Cumulative Impacts

The proposed Project would have a less than significant impact on agricultural and forestry resources. the City of Redlands has zoned this site for residential use, consistent with the general development of the area.

AIR QUALITY

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?		X		
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?			X	

Ganddini Group Inc. prepared an Air Quality, Global Climate Change, Health Risk Assessment, and Energy Impact Analysis for the Project; refer to **Appendix A**.

Air Pollutants of Concern

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in **Table 4**, *Criteria Air Pollutants – Summary of Common Sources and Effects.*

Table 4: Criteria Air Pollutants - Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health and Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely, a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.

Pollutant	Major Man-Made Sources	Human Health and Welfare Effects
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROG) and nitrogen oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Ambient Air Quality

O_3, PM_{10}, and $PM_{2.5}$ are the pollutants most potentially affecting the Project region. Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. The California Air Resources Board (CARB) maintains more than 60 monitoring stations throughout California. The Redlands-Dearborn air quality monitoring station (500 N. Dearborn St., Redlands, CA), located approximately 1.4 miles north of the Project site, is the closest station to the site. The Redlands-Dearborn monitoring station monitors ambient concentrations of O_3 and PM_{10}. The nearest air quality monitoring station that monitors ambient concentrations of CO, NO_2, and $PM_{2.5}$ is the San Bernardino-4th Street monitoring station (24302 4th St., San Bernardino, CA), 8.8 miles northwest of the Project site. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations in the Project area. **Table 5**, *Summary of Ambient Air Quality,* summarizes the published data concerning O_3, $PM_{2.5}$, PM_{10} from the Redlands-Dearborn and San Bernardino-4th street monitoring stations for each year that the monitoring data is provided. As previously described, O_3, $PM_{2.5}$, and PM_{10} are the pollutants most potently affecting the Project region.

Table 5: Summary of Ambient Air Quality

Pollutant (Standard)[1]		Year		
		2018	2019	2020
Ozone:	Maximum 1-Hour Concentration (ppm)	0.136	0.137	0.173
	Days > CAAQS (0.09 ppm)	53	73	104
	Maximum 8-Hour Concentration (ppm)	0.114	0.117	0.136
	Days > NAAQS (0.070 ppm)	4	8	16
	Days > CAAQS (0.070 ppm)	95	109	141
Carbon Monoxide:[2]	Maximum 8-Hour Concentration (ppm)	*	*	*
	Days > CAAQS (9 ppm)	0	0	*
	Days > NAAQS (9 ppm)	0	0	*
Nitrogen Dioxide:[2]	Maximum 1-Hour Concentration (ppm)	0.057	0.059	0.054
	Days > CAAQS (0.18 ppm)	0	0	0
Inhalable Particulates (PM10):	Maximum 24-Hour Concentration (µg/m³)	74.2	44.9	87.7
	Days > NAAQS (150 µg/m3)	0	0	*
	Days > CAAQS (50 µg/m3)	2	0	2
	Annual Average (µg/m3)	26.0	26.0	25.0
Ultra-Fine Particulates (PM2.5):[2]	Maximum 24-Hour Concentration (µg/m3)	30.1	60.5	56.6
	Days > NAAQS (35 µg/m3)	0	1	2
	Annual Average (µg/m3)	*	*	*

Notes:
Source: http://www.arb.ca.gov/adam/topfour/topfour1.php. Data from the Redlands-Dearborn Monitoring Station, unless otherwise noted.
(1) CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million
* Means there was insufficient data available to determine value.
(2) Data taken from the San Bernardino - 4th Street Monitoring Station.

The U.S. Environmental Protection Agency (USEPA) and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the South Coast Air Basin (SoCAB) is included in **Table 6**, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (CARB 2020).

Table 6: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Maintenance (Serious)
Nitrogen dioxide	Attainment	Maintenance (Primary)
Sulfur dioxide	Attainment	Attainment/Unclassified
PM_{10}	Nonattainment	Maintenance (Serious)
$PM_{2.5}$	Nonattainment	Nonattainment (Moderate)

Regulations and Significance Criteria

Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the U.S. Supreme Court found that carbon dioxide (CO_2) is an air pollutant covered by the CAA; however, no NAAQS have been established for CO_2.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criterion air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. **Table 6** lists the federal attainment status of the SoCAB for the criteria pollutants.

State

California Clean Air Act

The California CAA (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The 2016 Air Quality Management Plan (2016 AQMP) is the SIP for the SoCAB. The 2016 AQMP

is a regional blueprint for achieving air quality standards and healthful air in the SoCAB and those portions of the Salton Sea Air Basin that are under South Coast Air Quality Management District's (SCAQMD) jurisdiction. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. The AQMP relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local level. These agencies (USEPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 AQMP includes integrated strategies and measures to meet the NAAQS.

Local

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for San Bernardino County and the urban portions of Los Angeles and Riverside Counties, including the Project site. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the SoCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction. The following is a list of noteworthy SCAQMD rules that are required of construction activities associated with the proposed Project:

- Rule 201 & Rule 203 (Permit to Construct & Permit to Operate) – Rule 201 requires a "Permit to Construct" prior to the installation of any equipment "the use of which may cause the issuance of air contaminants . . ." and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate.
- Rule 402 (Nuisance) – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that 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. This rule

does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of animals.

- Rule 403 (Fugitive Dust) – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.
  a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
  b) All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.
  c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
  d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
  e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.
- Rule 1113 (Architectural Coatings) – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.
- Rule 1401 (New Source Review of Toxic Air Contaminants) – This rule requires new source review of any new, relocated, or modified permit units that emit TACs. The rule establishes allowable risks for permit units requiring permits pursuant to Rules 201 and 203 discussed above.

South Coast Air Quality Management District Thresholds

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would:

- Conflict with or obstruct implementation of any applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in **Table 7**, *SCAQMD Regional Significance Thresholds – Pounds per Day*.

Table 7: SCAQMD Regional Significance Thresholds – Pounds per Day

Air Pollutant	Construction Activities	Operations
Reactive Organic Gas (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxide (NO_2)	100	55
Sulfur Oxide (SO_2)	150	150
Coarse Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55

By its very nature, air pollution is largely a cumulative impact. 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. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). LSTs represent the maximum emissions that can be generated at a project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb five acres or less on a single day. Redlands is located within SCAQMD SRA 35 (East San Bernardino Valley). **Table 8**, *Local Significance Thresholds (Construction / Operations),* shows the LSTs for a

one-acre, two-acre, and five-acre project site in SRA 35 with sensitive receptors located within 25 meters of the project site.

Table 8: Local Significance Thresholds (Construction / Operations)

Project Size	Pollutant (pounds per day)			
	NOx Construction/ Operations	CO Construction/ Operations	PM_{10} Construction/ Operations	$PM_{2.5}$ Construction/ Operations
1 Acre	118/118	775/775	4/1	4/1
2 Acre	170/170	1,174/1,174	7/2	5/2
3 Acre	270/270	2,075/2,075	14/4	9/3

Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for San Bernardino County.

The proposed Project involves construction of 67 single-family detached residential dwelling units. The proposed Project is anticipated to be fully operational by Year 2025. The Project is anticipated to be built in two phases; however, in order to be conservative and consistent with the Traffic Impact Analysis, the Project was assumed to be completed in one phase with construction starting no sooner than the beginning of February 2023 and being completed by mid-July 2025.

Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates from Ganddini Group, Inc. (2021).

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact.

Conflict with the 2016 Air Quality Management Plan

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project site is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans). The Project is subject to the SCAQMD's AQMP.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Criterion 1

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?

As shown in **Tables 9**, **10**, and **12** the proposed Project would result in emissions that would be below the SCAQMD regional and localized thresholds during both construction and operations. Therefore, the proposed Project would not result in an increase in the frequency or severity of

existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards.

b) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

As shown in **Tables 9** and **10**, the Proposed Project would be below the SCAQMD regional thresholds for construction and operations. Since the Project would result in less-than-significant regional emission impacts, it would not delay the timely attainment of air quality standards or AQMP emissions reductions.

Criterion 2

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining Project consistency focuses on whether or not the proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2016 AQMP?

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in Redlands. Specifically, SCAG's Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG) provides regional population forecasts for the region and SCAG's 2016 RTP/SCS provides socioeconomic forecast projections of regional population growth. The City's General Plan is referenced by SCAG in order to assist forecasting future growth in Redlands.

The proposed Project is consistent with the land use designation and development density presented in the General Plan. As previously stated, the Project site is designated by the General Plan as Very Low Density Residential. According to the City's General Plan, land use classifications contained in the General Plan are intentionally broad enough to avoid duplicating the City's zoning regulations. The City's Zoning Ordinance and the Zoning Map further delineate and prescribe specific uses of the land and associated development regulations. More than one zoning district may be consistent with a single General Plan land use category. For instance, the Very Low Density Residential designation allows for several different zoning districts including the A-2 – Estate Agricultural District, R-R – Rural Residential District, R-A – Residential Estate

District, R-E – Residential Estate District, R-S – Residential Suburban District, R-S – Suburban Residential District, and the R-1 – Single-Family Residential District. The Project site is zoned R-E– Residential Estate District. The Redlands Zoning Code (Title 18 of the City Municipal Code) states that residential developments are allowed in the R-E District, subject to a conditional use permit issued by the City. As such, the Project is proposing land uses consistent with the Zoning District applied to the site, and the Zoning District is in turn consistent with that allowed under the General Plan designation. Thus, the proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan and RCPG. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; and are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into their air quality planning efforts, it can be concluded that the proposed Project would be consistent with the projections.

b) Would the project implement all feasible air quality mitigation measures?

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge, from any source whatsoever, in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. As such, the proposed Project meets this consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed Project is consistent with the land use designation and development density presented in the City's General Plan and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. The proposed Project would not result in a long-term impact

on the region's ability to meet state and federal air quality standards. The proposed Project's long-term influence would also be consistent with the goals and policies of the SCAQMD's 2016 AQMP. Overall, Project impacts would be less than significant.

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?

Less Than Significant Impact.

Construction Emissions

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive particulate matter emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust-control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SCAQMD Rule 403, which requires taking reasonable precautions to prevent the emissions of fugitive dust. The following SCAQMD Rule 403 requirements were applied as mitigation measures in CalEEMod: apply soil stabilizers to unpaved roadways, replace groundcover on disturbed areas, water exposed soil surfaces three times per day, clean paved roadways, and reduce vehicle speeds on unpaved roads to 15 miles per hour (mph).

Construction-generated emissions associated with the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See **Appendix A** for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis. Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in **Table 9**. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

As shown in **Table 9**, *Construction-Related Emissions (Regional Significance Analysis),* emissions generated during Project construction would not exceed the SCAQMD's regional thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction would

not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Table 9: Construction-Related Emissions (Regional Significance Analysis)

Activity		Pollutant Emissions (pounds/day)					
		ROG	NOx	CO	SO_2	PM10	PM2.5
Grading	On-Site[1]	4.58	47.84	36.11	0.08	8.32	4.57
	Off-Site[2]	0.11	0.07	1.06	0.00	0.31	0.08
	Subtotal	4.69	47.91	37.16	0.09	8.64	4.66
Building Construction	On-Site[1]	2.68	24.16	26.29	0.05	1.15	1.09
	Off-Site[2]	3.52	13.60	35.04	0.14	11.15	3.09
	Subtotal	6.20	37.76	61.33	0.18	12.30	4.18
Paving	On-Site[1]	1.50	8.58	14.58	0.02	0.42	0.39
	Off-Site[2]	0.05	0.03	0.49	0.00	0.17	0.05
	Subtotal	1.55	8.61	15.07	0.02	0.59	0.43
Architectural Coating	On-Site[1]	17.15	1.15	1.81	0.00	0.05	0.05
	Off-Site[2]	0.54	0.32	5.25	0.02	1.81	0.48
	Subtotal	17.69	1.46	7.06	0.02	1.86	0.54
Total for overlapping phases[3]		25.43	47.83	83.46	0.22	14.75	5.14
SCAQMD Thresholds		75	100	550	150	150	55
Exceeds Thresholds?		No	No	No	No	No	No

Notes:
Source: CalEEMod Version 2020.4.0
(1) On-site emissions from equipment operated on-site that is not operated on public roads. On-site grading PM-10 and PM-2.5 emissions show mitigated values for fugitive dust for compliance with SCAQMD Rule 403.
(2) Off-site emissions from equipment operated on public roads.
(3) Construction, painting and paving phases may overlap.

Operational Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as ozone precursors such as ROG and NOx. Project-generated increases in emissions would be predominantly associated with motor vehicle use.

The following section provides an analysis of potential long-term air quality impacts due to regional air quality and local air quality impacts with the on- going operations of the proposed Project.

Long-term operational emissions attributable to the Project are identified in **Table 10**, *Operational-Related Emissions (Regional Significance Analysis).* As shown in **Table 10**, the

Project's emissions would not exceed any SCAQMD thresholds for any criteria air pollutants during operation.

Table 10: Operational-Related Emissions (Regional Significance Analysis)

Activity	Pollutant Emissions (pounds/day)					
	ROG	NOx	CO	SO2	PM10	PM2.5
Area Sources[1]	3.68	1.06	5.95	0.01	0.11	0.11
Energy Usage[2]	0.06	0.48	0.20	0.00	0.04	0.04
Mobile Sources[3]	2.00	2.68	19.45	0.04	4.60	1.25
Total Emissions	5.73	4.23	25.61	0.05	4.75	1.40
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:
Source: CalEEMod Version 2020.4.0; the higher of either summer or winter emissions.
(1) Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
(2) Energy usage consists of emissions from generation of electricity and on-site natural gas usage.
(3) Mobile sources consist of emissions from vehicles and road dust.

As identified in **Table 6**, the SoCAB is listed as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$. O_3 is a health threat to persons who already suffer from respiratory diseases and can cause severe ear, nose and throat irritation and increases susceptibility to respiratory infections. Particulate matter can adversely affect the human respiratory system. As shown in **Table 10**, the proposed Project would result in increased emissions of the O_3 precursor pollutants ROG and NOx, PM_{10}, and $PM_{2.5}$, however, the correlation between a project's emissions and increases in nonattainment days, or frequency or severity of related illnesses, cannot be accurately quantified. The overall strategy for reducing air pollution and related health effects in the SCAQMD is contained in the SCAQMD 2016 AQMP. The AQMP provides control measures that reduce emissions to attain federal ambient air quality standards by their applicable deadlines such as the application of available cleaner technologies, best management practices, incentive programs, as well as development and implementation of zero and near-zero technologies and control methods. The CEQA thresholds of significance established by the SCAQMD are designed to meet the objectives of the AQMP and in doing so achieve attainment status with state and federal standards. As noted above, the Project would increase the emission of these pollutants, but would not exceed the thresholds of significance established by the SCAQMD for purposes of reducing air pollution and its deleterious health effects.

Cumulative Impacts

The cumulative setting for air quality includes Redlands and the SoCAB. The SoCAB is designated as a nonattainment area for state standards of O_3, PM_{10}, and $PM_{2.5}$. The region is also designated as a nonattainment area for federal standards of O_3 and $PM_{2.5}$ (CARB 2020). Cumulative growth

in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the SoCAB and associated growth and development anticipated in the air basin.

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal CAA and CCAA. As discussed earlier, the proposed Project would be consistent with the 2016 AQMP, which is intended to bring the SoCAB into attainment for all criteria pollutants. In addition, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional thresholds for construction or operational-source emissions.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact with Mitigation.

Localized Construction Significance Analysis

The nearest sensitive receptors to the Project site are the single-family residential uses adjacent to the west and north of the Project site. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2008]) for guidance). The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects.

For this Project, the appropriate SRA for the localized significance thresholds is the East San Bernardino Valley source receptor area (SRA 35) as this source receptor area includes the Project site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The proposed Project would disturb five acres during construction. As previously described, the SCAQMD has produced look-up tables for projects that disturb ≤ five acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than five acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 11**, *Equipment-Specific Grading Rates*, is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

As shown in **Table 11**, Project implementation could potentially disturb up to five acres daily during the grading phase of construction. Thus, the LST threshold value for a five-acre construction site were sourced from the LST lookup tables for Project grading activities.

Table 11, *Equipment-Specific Grading Rates*, shows the maximum number of acres could be potentially disturbed per day.

Table 11: Equipment-Specific Grading Rates

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Grading	Rubber Tired Dozers	2	0.5	1
	Graders	2	0.5	1
	Scrapers	2	1	2
	Crawler Tractors[1]	2	0.5	1
Total for phase		-	-	5

Notes:
Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2011b.
Tractor/loader/backhoe is a suitable surrogate for a crawler tractor per SCAQMD staff.

LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Notwithstanding, the SCAQMD Methodology explicitly states: It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. The nearest sensitive receptors to the Project site are the single-family residential uses adjacent to the west and north of the project site. Therefore, LSTs for receptors located at 25 meters were utilized in this analysis.

The SCAQMD's methodology clearly states that "off-site mobile emissions from a project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "onsite" emissions outputs were considered. **Table 12**, *Construction-Related Emissions (Localized Significance Analysis),* presents the results of localized emissions during the grading phase of construction, which is construction activity that disturbs the most acreage daily. The LSTs reflect a maximum disturbance of five acres daily during grading for the proposed Project.

Table 12: Construction-Related Emissions (Localized Significance Analysis)

Activity	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Grading	47.84	36.11	8.32	4.57
Building Construction	24.16	26.29	1.15	1.09
Paving	8.58	14.58	0.42	0.39
Architectural Coating	1.15	1.81	0.05	0.05
SCAQMD Thresholds[1]	270	2,075	14	9

Activity	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Exceeds Threshold?	No	No	No	No

Notes:
Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 5 acres at a distance of 25 m in SRA 35 East San Bernardino Valley.
(1) The nearest sensitive receptors are the single-family detached residential dwelling located adjacent to the west and north of the project site; therefore, the 25 meter threshold was used.
Note: The project will disturb up to a maximum of 5 acres a day during grading (see Table 7).

Table 12 shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed Project does not include such uses. Therefore, in the case of the proposed Project, the operational phase LST protocol does not need to be applied.

Carbon Monoxide Hotspots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high-traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service (LOS) during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the SCAQMD 1992 Federal Attainment Plan for Carbon Monoxide in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot-spot analysis was conducted for four busy intersections in Los Angeles County during the peak

morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the LOS in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

According to the estimated traffic trip generation rates from Ganddini Group, Inc. (2021), the Project is anticipated to generate 632 daily trips on average. Because the proposed Project would not result in 100,000 vehicles per day at any intersection, there is no likelihood of the Project traffic exceeding CO values.

Construction-Related DPM

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; application of architectural coatings; and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Operational Health Risk Assessment

Cancer Risk

According to the health risk assessment conducted for the proposed Project, Tables 13, 14, 15, and 16 of the air quality assessment, provided as **Appendix A** to this Initial Study, Receptor 2 has the highest existing carcinogen hazards (cancer risk) to sensitive receptors. For Carcinogenic Hazards RISK (per million), the SCAQMD TAC threshold of 10 in one million is defined as the "maximum incremental cancer risk." However, as the cancer risk exceeds the SCAQMD MICR threshold of 10 in a million, mitigation is required.

Mitigation requiring minimum efficiency reporting value (MERV) 13 filters would remove a substantial amount of particulates, including DPM. MERV 13 filters have a particle size removal efficiency rating of greater than 90 percent for particulates 3.0 micron to 10.0 microns in size and a rating of 85 percent for particles 1.0 to 3.0 microns in size. A MERV 13 filter creates more resistance to airflow because the filter media becomes denser as efficiency increases. However,

the MERV filters do not remove gaseous pollutants. See Mitigation Measure 1 in Section 6 of the air quality report. Therefore, indoor (interior) exposure to DPM (of particles greater than 1.0 micron) and consequently cancer risk would be reduced by 85 percent, to 5.13 in one million; less than the 10 in one million SCAQMD threshold. Outdoor levels would still present a risk level exceeding the SCAQMD threshold of 10 in one million.

Non-cancer Risk

The non-carcinogenic hazards to adult, child and infant receptors are also detailed in Tables 13 through 16 column (j) of the air quality report, provided in **Appendix A** of this Initial Study. The RELDPM is 5 µg/m3. The Office of Environmental Health Hazard Assessment as protective for the respiratory system has established this concentration. Using the maximum DPM concentration from years 2025-2055, the resulting Hazard Index is:

HIDPM = 0.0494/5 = 0.0099

The criterion for significance is a Hazard Index increase of 1.0 or greater. Therefore, the on-going operations of the proposed Project would result in a less than significant impact due to the non-cancer risk from freeway-related diesel emissions to the proposed Project.

Therefore, the Project would have a less than significant impact regarding TACs with implementation of MM AQ-1 and there would be no impact as a result of the Project during operations.

Mitigation Measure

MM AQ-1: Residential dwelling units within 950 feet of the I-10 freeway shall be required to install high efficiency Minimum Efficiency Reporting Value (MERV) filters of MERV 13 or better as indicated by the American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE)) Standard 52.2, in the intake of ventilation systems. Heating, air conditioning and ventilation (HVAC) systems shall be installed with a fan unit power designed to force air through the MERV 13 filter. To ensure long-term maintenance and replacement of the MERV 13 filters, the following shall occur: i) The developer shall provide notification to all affected future residents of the Project site of the potential health risk from the I-10 freeway for all affected dwelling units, ii) the property owner shall inform residents of increased risk of exposure to diesel particulates from the freeway when windows are open and when outside.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Less than Significant Impact. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from

psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected to cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed Project. Diesel exhaust and VOCs would be emitted during construction of the Project, which are objectionable to some; however, emissions would disperse rapidly from the Project site and therefore should not reach an objectionable level at the nearest sensitive receptors.

Operational-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed Project would include odor emissions from the intermittent diesel delivery truck emissions and trash storage areas. Due to the distance of the nearest receptors from the Project site and through compliance with SCAQMD's Rule 402, no significant impact related to odors would occur during the on-going operations of the proposed Project. A less than significant impact would occur.

BIOLOGICAL RESOURCES

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

This section is based on the Biological Resources Assessment (BRA) and Jurisdictional Delineation (JD), prepared by Jericho Systems, dated February 25, 2020; refer to **Appendix B1**. Additionally, a Biological Resources Assessment Update (BRA-Update) was prepared by Jennings Environmental, dated February 7, 2022; refer to **Appendix B2**.

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 Game or U.S. Fish and Wildlife Service?

Less than Significant Impact. The Project site is vacant and undisturbed in portions of the site, but other areas are heavily disturbed from the dirt roads traversing the site as well as the electricity posts that were previously installed on the site.

Database searches were conducted within a 3-mile radius of the Project and identified 77 sensitive species (29 plant, 38 vertebrates, 2 invertebrate) and 8 sensitive habitats within Redlands and Yucaipa USGS 7.5-minute series quadrangles. A full summary of these results is provided as Attachment A to the Biological Resources Assessment, provided as **Appendix B** to this initial study.

The database searches indicated the presence of State- and/or federally listed threatened or endangered species within the vicinity of the Project site; however, not within the Project site. No U.S. Fish and Wildlife Service (USFWS)-designated Critical Habitats are on-site; the closest Critical Habitats are for southwestern willow flycatcher approximately 2.4 miles southwest of the Project site and San Bernardino kangaroo rat (SBKR) approximately 2.7 miles northeast of the Project site; refer to **Exhibit 8**, *USFWS Designated Critical Habitat.*

Plants

Habitat on-site consists almost entirely of invasive grassland with patches of highly disturbed sage scrub in the center of the western portion and scattered utility access roads near Wabash Avenue. Nonnative tree species can be found in tree lines and sporadically throughout the site. Nonnative vegetation present within the Project area consists of primarily wild oat (*Avena fatua*) and tocalote (*Erodium cicutarium*), summer mustard (*Hirschfeldia incana*). Trees on site are nonnative and species were limited to tree-of-heaven (*Ailanthus altissima*), Mexican fan palm (*Washintonia robusta*), and red gum (*Eucalyptus camaldulensis*)

Wildlife

Wildlife species observed or otherwise detected on-site during the surveys included: mourning dove (*Zenaida macroura*), California towhee (*Melozone fusca*), house finch (*Haemorhous mexicanus),* house sparrow (*Passer domesticus*), killdeer (*Charadrius vociferus*), red-tailed hawk (*Buteo jamaicensis*), and desert cottontail (*Sylvilagus audobonii*). Active small mammal burrows were found throughout the dense grassland on the parcels east of Wabash Avenue. Below is a discussion of sensitive species documented within a 3-mile radius of the Project site.

San Bernardino Kangaroo Rat (*Dipodomys simulants*) (SBKR)

The closest documented occurrence of SBKR to the Project site is approximately 2.7 miles north of the Project site. The required habitat type and elements such as alluvial fan processes do not occur on or adjacent to the Project site. The dense grass load renders the Project site unsuitable

for SBKR. The BRA-Update concurs with the previous findings and also concludes that further SBKR investigation is not recommended or warranted.

San Diego Pocket Mouse (SDPM)

The SDPM is listed as a Critical Species of Concern by the California Department of Fish and Wildlife (CDFW). Habitat on site is of marginal quality and the species has been documented approximately 0.25 mile east of the Project site. Potential for this species to occur is moderate. The BRA-Updated concluded that the site remains largely unchanged since the BRA survey. As such, the site is still marginally suitable for SDPM. Although the site is marginally suitable, and this species is considered a species survival plan (SSP) by California Department of Fish and Wildlife (CDFW), nothing further is required for this species.

California gnatcatcher (CAGN)

The Project site is not located within designated critical habitat for the CAGN. The closest documented occurrence of CAGN to the Project site is approximately 3.1 miles north/northeast of the Project site. The required habitat structure and elements do not occur on or adjacent to the Project site. All elevations on-site are above 1,500 ft and coastal scrub on site is of very low quality. The site does not provide suitable habitat for CAGN. The BRA-Update concurs with the previous findings and also concludes that further CAGN investigation is not recommended or warranted; Refer to **Exhibit 9**, *3-Mile CNDDB Occurrences*.

Burrowing Owl (BUOW)

The Project site does not contain potentially suitable habitat for this species for the following reasons:

- Vegetation is tall and dense where small mammal burrows occur.
- Open areas lack suitable burrows, and most soils are compacted and not friable

No evidence of BUOW was found in the survey area. No BUOW individuals, BUOW burrows or BUOW pellets, feathers or whitewash were observed during survey. Therefore, BUOW are currently absent from the site. The BRA-Update concurs with the previous findings and also concludes that further BUOW investigation is not recommended or warranted.

The site does not contain habitat designated as candidate, sensitive, and/or special status species. A less than significant impact would occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

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

No Impact. There are no drainages on site. No aspect of the site presents any evidence of riparian habitat or jurisdictional waters. None of the following indicators are present on-site: riparian vegetation, facultative, facultative wet or obligate wet vegetation, harrow marks, sand bars shaped by water, racking, rilling, destruction of vegetation, defined bed and bank, distinct line between vegetation types, clear natural scour line, meander bars, mud cracks, staining, silt deposits, or litter-organic debris. Additionally, the BRA-Update concurs with the previous findings and also concludes that no jurisdictional waters occur on-site and no impact would occur.

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?

Less than Significant with Mitigation. The Project site is suitable for use by raptors. The Project site and immediate surrounding areas contain habitat suitable for nesting birds in general, including the shrubs on site. Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) which provides protection for nesting birds that are both residents and migrants whether they are considered sensitive by resource agencies. The BRA-Update concurs with the previous findings and also concludes that the site offers suitable habitat to nesting and migratory birds, and as such Mitigation Measure BIO-1 is adequate and applicable. With implementation of Mitigation Measure BIO-1, a less than significant impact would occur.

Mitigation Measure

MM BIO-1: Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required.

If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. As discussed above, the Project site does not include any native trees or other protected biological resources. As such, the Project would not conflict with the City's Tree Protection Policy, Section 12.52.90. No impacts would occur.

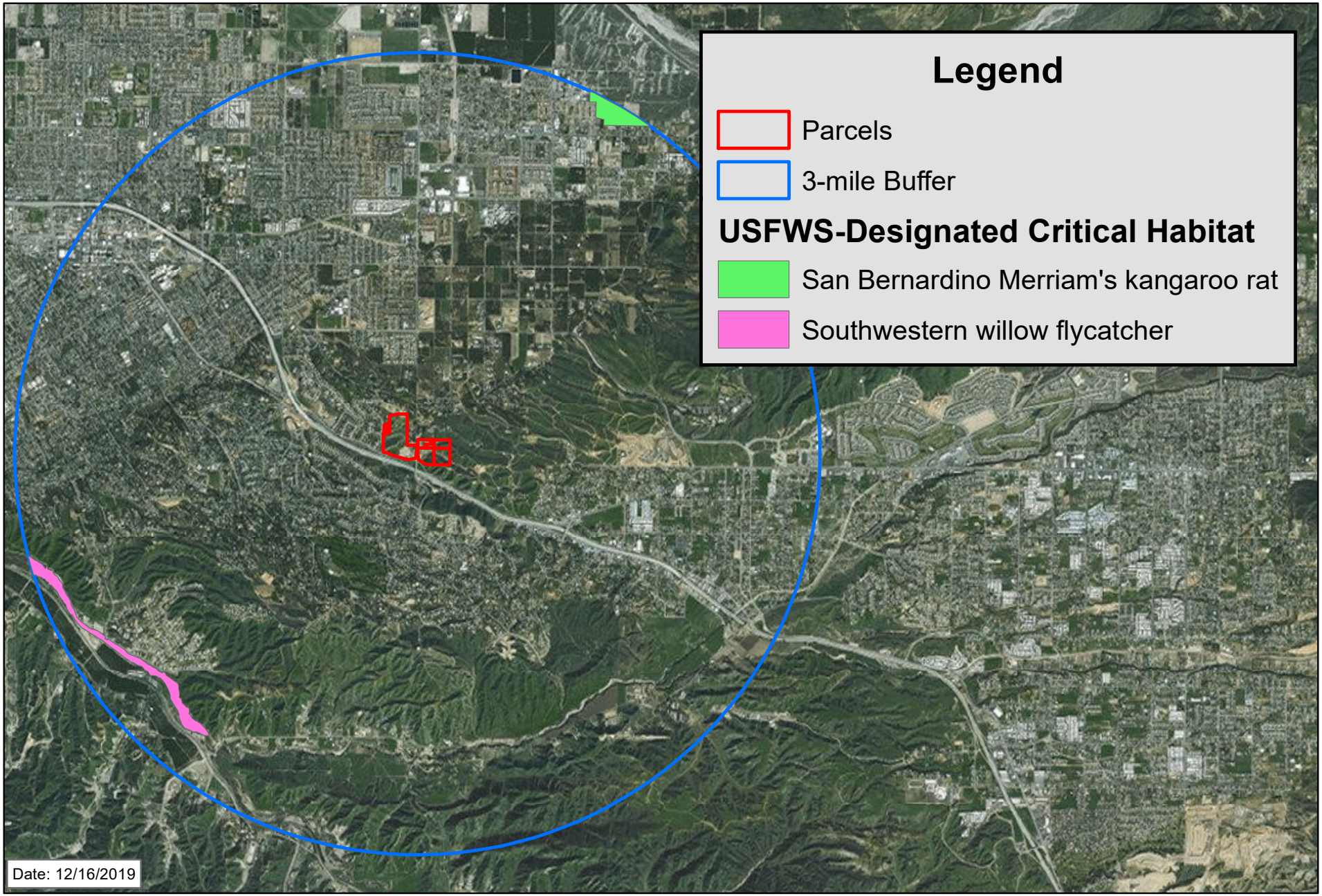
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The City of Redlands has adopted the hillside conservation plan which protects hillside areas. The Project site is not within or in the vicinity of a hillside. Additionally, the Project site does not contain a conservation overlay nor would the proposed Project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved local, regional, or state habitat conservation plan. No impact will occur.

Cumulative Impacts

The Project site was determined to not be a suitable site for wildfire habitat overall. The site is devoid of native habitat that would foster wildlife, as determined through site analysis and in the biological report. However, it was determined that in order to further minimize any potential impacts to migratory birds, Mitigation Measure BIO-1 would be applicable. Therefore, the potential incremental effects of the proposed Project would not be cumulatively considerable.

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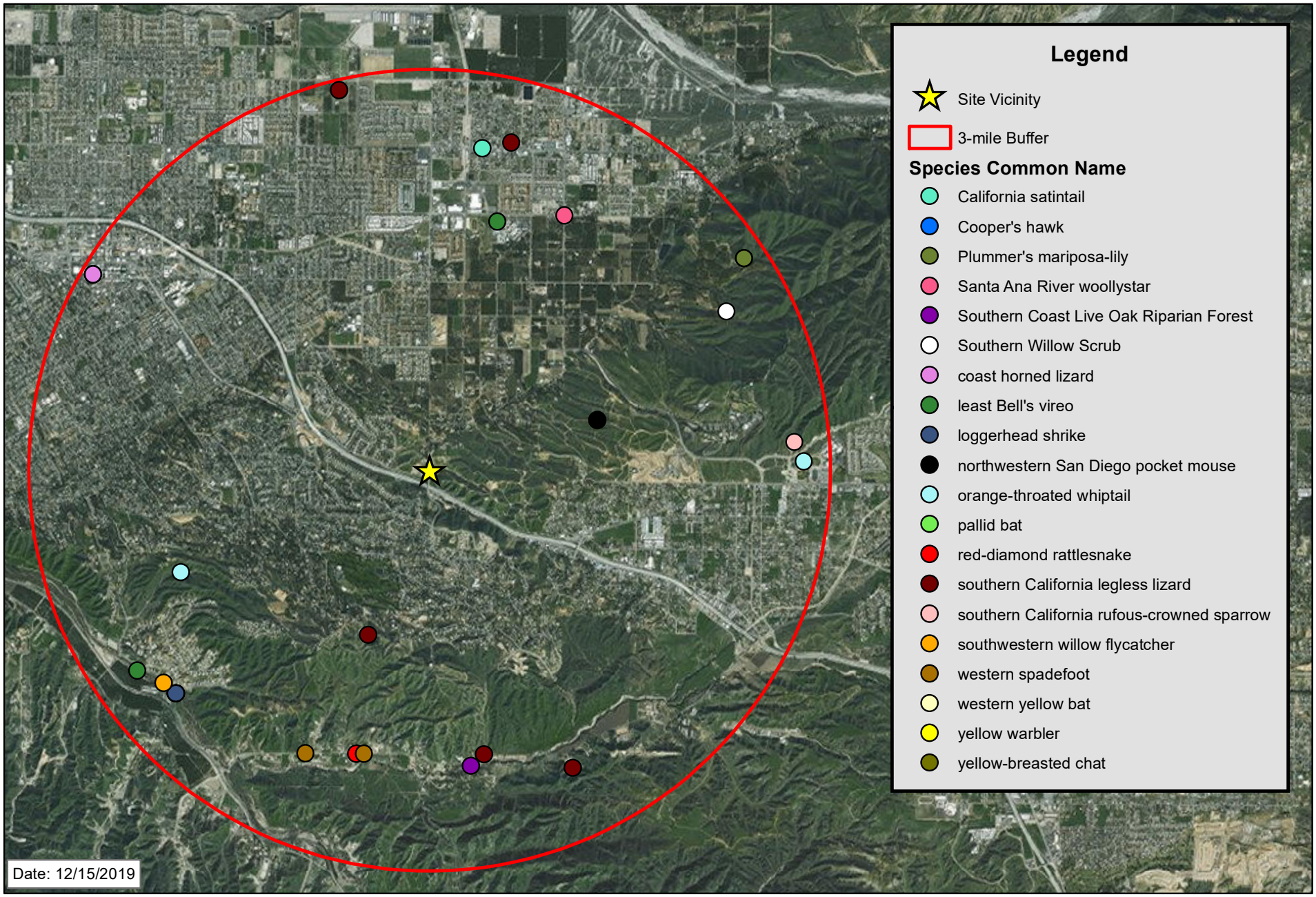
Source: Jericho Systems, Inc. (2020) Biological Resources Assessment

Exhibit 8: USFWS Designated Critical Habitat
City of Redlands
Crest Grove Project

Not to Scale

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Source: Jericho Systems, Inc. (2020) Biological Resources Assessment

Exhibit 9: 3-Mile CNDDB Occurrences
City of Redlands
Crest Grove Project

Not to Scale

Kimley»Horn

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CULTURAL RESOURCES

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

A Cultural Resources Assessment has been prepared by BCR Consulting, LLC. April 8, 2022. The report is available in **Appendix C** to this IS/MND. The report and research were completed pursuant to CEQA, the PRC Chapter 2.6, Section 21083.2, and CCR Title 14, Chapter 3, Article 5, §15064.5. The pedestrian cultural resources survey was intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic-period buildings, that exceed 45 years in age within defined Project boundaries.

Methodology

Records Search. This work was completed pursuant to CEQA, the Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and California Code of Regulations (CCR) Title 14, Chapter 3, Article 5, Section 15064.5. The pedestrian cultural resources survey was intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic-period buildings, that exceed 45 years in age within defined project boundaries. The Project site was examined using 15-meter transect intervals. This study intended to determine whether cultural resources are located within the Project boundaries, whether any cultural resources are significant pursuant to the above-referenced regulations and standards. Tasks include:

- Cultural resources records search summary to review studies and archaeological/historical resources recorded within a one half-mile radius of the Project boundaries
- Systematic pedestrian survey of the entire Project site
- California Register of Historical Resources (California Register) eligibility evaluation for any cultural resources identified
- Development of recommendations and mitigation measures for cultural resources documented within the Project boundaries, following CEQA

- Completion of the California Depart of Parks and Recreation (DPR) 523 forms for any discovered cultural resources.
- Vertebrate paleontology resources report through the Western Science Center.

Records search results revealed that eight previous cultural resources studies have resulted in five cultural resources identified within 0.5-mile from the Project site. The Project site has been subject to two previous cultural resources assessments and no cultural resources have been previously identified within its boundaries.

Field Survey. An archaeological pedestrian field survey of the Project site was conducted on March 16 and 17, 2022. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the Project site, where accessible. Portions of the Project site with undulating terrain and steep slopes were inventoried with more intuitive methods. In these areas, transects were less linear and followed elevation contour lines. Where necessary, vegetation was moved aside to enhance surface visibility. Soil exposures, including natural and artificial clearings were carefully inspected for evidence of cultural resources. The records search is summarized as follows in **Table 13,** *Cultural Resources and Studies Within Half Mile of the Project Site:*

Table 13: Cultural Resources and Studies Within Half Mile of the Project Site

Primary No.	Trinomial	Period	Description (Distance from Project Site)
P-36-2316	CA-SBR-2316	Multi-component	Crystal Springs Ranch and Prehistoric Habitation Site (0.2 mile S)
P-36-4910	CA-SBR-4910	Prehistoric	Lithic Scatter and Bedrock Milling Feature (0.5 miles SE)
P-36-10863	-	Historic	Building Complex with Structure Foundations, Refuse, Water Conveyance (0.35 miles N)
P-36-20458	-	Historic	Historic-Period Residence at 1744 Camelot Drive (Adjacent NW of Project Site; Demolished)
P-36-26761	CA-SBR-16909H	Historic	Road Segment (0.4 miles SE)
Source: BCR Consulting, LLC. April 8, 2022. Cultural Resources Assessment. **Appendix C**.			

Additional Research. The Project site lies within Sections 31 and 36. Section 31 was originally awarded to the descendants of Don Antonio Lugo and Diego Sepulveda under the authority of U.S. legislation to settle private land claims for property acquired through Spanish or Mexican land grants. Section 36 was originally held by the state in 1851 (Bureau of Land Management 2022a, 2022b). The Project site has been divided into six private parcels. Research has not yielded evidence for significant developments or historic period uses of the Project site, other than ancillary water conveyance features and electrical distribution alignments. The Project site is near many important early water conveyance features such as the South Fork Ditch, the Bear Valley Canal, and the Bear Valley and Alessandro Pipeline. However, no features associated with these developments passed through the Project site directly.

Field Survey. During the field survey, BCR Consulting staff carefully inspected the Project site and identified three historic-period resources within the Project site boundaries. These include the remnants of a water conveyance system temporarily designated KIM2201-H-1, and two historic-period electrical distribution alignments designated KIM2201-H-2 and KIM2201-H-6, respectively. These are described in detail below. No other resources were identified within the Project site boundaries. Sediments in the northwest portion of the Project site included light brown, dry, clayey silt with moderate gravel content. Sediment in the southwest portion of the Project site was similar, but with less clay content. Visibility was low throughout the Project site due to seasonal grasses.

KIM2201-H-1. This resource consists of four features remaining from a historic-period water conveyance system. They include the following: (1) a vertical cement standpipe, (2) a brick masonry weir box, (3) a buried horizontal water pipe, and (4) a steel and cement weir box. The features are situated on a ridge with a southwestern aspect. Although these resources are not currently physically connected, they are oriented to convey water in a southwesterly direction, toward Reservoir Canyon to a reservoir 1.2 miles to the west in Ford Park. Weir box orientations indicate that water could be redirected to the northwest at several points in the system. Most of the system has been demolished and can no longer function. While the features described here were undoubtedly used for water conveyance for a source that originated to the northeast and terminated to the southwest of the study area, there is not enough information to determine whether they comprised a single system, or whether their function was for domestic, agricultural, (and) or flood control purposes.

The features are not highly temporally diagnostic and most related components have probably been demolished. The features appear to have been built at different times. Aerial photos indicate that Feature 2 was built between 1938 and 1955; Feature 3 was built between 1985 and 1995; Feature 4 was built before 1938.

KIM2201-H-2. This resource consists of a historic-period electrical distribution alignment and associated dirt access road. Of the seven wooden towers in the segment, one pole has an inspection date nail that indicates a pre-1916 construction date. The remaining six poles appear to be modern, although an alignment was present in this location by 1938. The 1916 tower contains cross arms, a transformer, telecommunication antennas, and two small equipment boxes near its base. The west half of the dirt access road was created between 1959 and 1962 and the eastern half appeared between 1962 and 1966.

KIM2201-H-6. This resource consists of two historic-period wooden towers in an electrical distribution alignment. There are inspection date nails in both the southern and northern towers which read “4E7” and “40” respectively, indicating installation dates preceding 1947 and 1940. Historic aerial photographs corroborate these dates. Both towers feature a set of cross-arms slightly above the midpoint, and a single crossarm near the top. The southern tower also features two guywires and a transformer.

Significant Evaluations. During the field survey the remnants of historic-period elements of a former water conveyance system designated KIM2201-H-1 were identified in addition to two partial historic-period electrical distribution alignments designated KIM2201-H-2 and KIM2201-H-6. CEQA calls for the evaluation and recordation of historic and archaeological resources. The criteria for determining the significance of impacts to cultural resources are based on Section 15064.5 of the *CEQA Guidelines* and Guidelines for the Nomination of Properties to the California Register. Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register, or designation under a local ordinance.

Significance Criteria

California Register of Historical Resources. The CRHR criteria are based on NRHP criteria. For a property to be eligible for inclusion on the CRHR, one or more of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
2. It is associated with the lives of persons important to local, California, or U.S. history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of a master, possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, the CRHR requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). The CRHR also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

a, b) Cause a substantial adverse change in the significance of a historical and archaeological resource pursuant to § 15064.5?

Less than Significant Impact with Mitigation. As previously discussed, during the field survey, BCR Consulting archaeologists identified three historic-period resources within the Project site boundaries. These include the remnants of a water conveyance system temporarily designated KIM2201-H-1, and two historic-period electrical distribution alignments designated KIM2201-H-2, and KIM2201-H-6, respectively. These resources are recommended ***not eligible*** for the California Register because they do not meet the significance criteria, as outlined above. As such, none of these resources are recommended significant under CEQA. They do not warrant further consideration. No other cultural resources were identified. Based on these results the cultural

report recommends that no additional cultural resource work or monitoring is necessary for any earthmoving proposed within the Project site. These resources are also not locally eligible under Chapter 2.62, Article II of the Redlands Municipal Code.

However, although the current study has not indicated sensitivity for cultural resources (historical or archaeological) within the Project site boundaries, ground disturbing activities always have the potential to reveal buried deposits not observed on the surface during pedestrian field surveys. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic cultural deposits. Additionally, to prevent any inadvertent cultural findings, Mitigation Measures CUL-1 and CUL-2 are applicable.

Mitigation Measure:

MM CUL-1 In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease, the City shall be notified, and a qualified archaeologist meeting Secretary of Interior Standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period. Additionally, the Consulting Tribe(s) for this Project shall be contacted, as detailed within MM TCR-1, and be provided information after the archaeologist makes his/her initial assessment of the nature of the find.

MM CUL-2 If significant cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to the City for review and comment. The archaeologist shall monitor the remainder of the Project and implement the Plan accordingly.

With implementation of Mitigation Measures CUL-1 through CUL-2, impacts to historical and archaeological resources would be less than significant.

c) Disturb any human remains, including those interred outside of dedicated cemeteries

Less than Significant Impact with Mitigation. The closest cemetery to the Project sites is Hillside Memorial Park, located approximately 2.3 miles southwest of the Project site. According to input from the Western Science Center (WSC), there no localities within the Project area or within a one-mile radius.

The Project site is undeveloped and human remains, particularly those interred outside formal cemeteries, could be disturbed during grading, excavation, or other ground-disturbing activities associated with the development of the Project site. As part of the cultural resources assessment and investigation, consultation with the Native American Heritage Commission (NAHC) concluded that findings were positive. The NAHC did not indicate the nature or location of the

resources but recommended contacting the SMBMI for more information. The treatment of Native American human remains is regulated by Public Resources Code Section 5097.98, as amended by Assembly Bill 2641, which addresses the disposition of Native American burials, protects remains, and appoints the NAHC to resolve disputes. In addition, Health and Safety Code Section 7050.5 includes specific provisions for the protection of human remains in the event of discovery, as described below and in Mitigation Measure CUL-3:

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    - The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required; and
    - If the coroner determines the remains to be Native American:
        - The coroner shall contact the Native American Heritage Commission within 24 hours.
        - The Native American Heritage Commission (NAHC) shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        - The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code § 5097.98 (PRC § 5097.98), or
    - Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further and future subsurface disturbance pursuant to PRC § 5097.98(e).
        - The NAHC is unable to identify a most likely descendant.
        - The most likely descendant is identified by the NAHC, fails to make a recommendation within 48 hours of being granted access to the site; or
        - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

This regulation is applicable to any project where ground disturbance would occur. Therefore, the Project would comply with this existing State law and would be ready to implement mitigation measure CUL-3 if necessary.

Mitigation Measure:

MM CUL-3 If human remains or funerary objects are encountered during any activities associated with the Project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the Project.

With compliance with State law Public Resources Code Section 5097.98, as amended by Assembly Bill 2641 and MM CUL-3, a less than significant impact on human remains would occur.

Cumulative Impacts

The proposed Project would result in no impacts to historical, archaeological, or known human remains with implementation of the previously noted mitigation measures. The chance of cumulative impacts occurring as a result of the Project's implementation or of other projects in the area is less than likely since each project is to be under compliance of federal, state, and local laws and regulations in place to protect and/or preserve cultural, archaeological, and paleontological resources. Therefore, the potential incremental effects of the proposed Project would not be cumulatively considerable.

ENERGY

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
6. ENERGY. Would the Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Ganddini Group Inc. prepared an Air Quality, Global Climate Change, Health Risk Assessment, and Energy Impact Analysis for the Project; refer to **Appendix A**.

Building Energy Conservation Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the CCR). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the California Energy Commission (CEC) adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2019 Standards improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are expected to be about seven percent more energy-efficient and nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

a) 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.

Electricity

Southern California Edison (SCE) provides electricity to the Project area. Currently, the existing site does not use any electricity because the site is vacant. Therefore, Project implementation would result in a permanent increase in electricity over existing conditions. The increased demand is expected to be adequately served by the existing SCE electrical facilities. The increase

in electricity demand from the Project would represent an insignificant percent increase compared to overall demand in SCE's service area. Therefore, projected electrical demand would not significantly impact SCE's level of service.

It should also be noted that the Project design and materials would comply with the 2019 Building Energy Efficiency Standards. Prior to issuance of a building permit, the City of Redlands Building and Safety Department would review and verify that the Project plans demonstrate compliance with the current version of the Building and Energy Efficiency Standards. The Project would also be required to adhere to the provisions of CALGreen, which establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

Some design features include high-efficiency wall assemblies and windows to reduce heating and cooling loads; Energy Star appliances; high-efficiency heating and cooling systems; high efficiency domestic hot water systems; and high-efficiency light-emitting diode (LED) lighting in residential units, common areas, and landscape design. Project development would not interfere with achievement of the 60 percent Renewable Portfolio Standard set forth in Senate Bill (SB) 100 for 2030 or the 100 percent standard for 2045. These goals apply to SCE and other electricity retailers. As electricity retailers reach these goals, emissions from end-user electricity use would decrease from current emission estimates.

Natural Gas

Southern California Gas Company (SoCalGas) provides natural gas service to the Project area. The increased demand is expected to be adequately served by the existing SoCalGas facilities.

Fuel

During construction, transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. Most construction equipment during demolition and grading would be gas-powered or diesel-powered, and the later construction phases would require electricity-powered equipment. Impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure; impacts would not be significant.

During operations, energy consumption would be associated with residents and visitor vehicle trips; delivery and supply trucks; and trips by maintenance and repair crews. The Project includes development of 67 single-family detached residential dwelling units near the I-10 and SR-38, reducing the need to drive long distances to a major highway, and close to existing supermarkets and shopping centers. Consequently, the proposed Project would not result in a substantial

demand for energy that would require expanded supplies or the construction of other infrastructure or expansion of existing facilities. Additionally, fuel consumption associated with vehicle trips generated by the proposed Project would not be considered inefficient, wasteful, or unnecessary.

The proposed Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts are less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No impact. Project design and operation of the residential units would comply with State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards. Project development would not cause inefficient, wasteful, and unnecessary energy consumption, and no adverse impact would occur.

Cumulative Impacts

Construction and operations associated with the proposed Project would not result in the wasteful use of energy because the Project would adhere to all regulations relating to idling and fuel efficiency. The use of energy would not be substantial in comparison to statewide and countywide electricity, natural gas, gasoline, and diesel demands.

The Project and new development projects located within the Project area would also be required to comply with all the same applicable federal, State, and local measures aimed at reducing fossil fuel consumption and the conservation of energy. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. As noted above, the Project would not result in significant impacts to state or local plans for renewable energy or energy efficiency. Project and cumulative energy resources impacts are also addressed in the Initial Study Air Quality and Greenhouse Gas Sections, as it relates to energy conservation. Thus, the Project is not anticipated to result in a cumulatively considerable impact to energy resources.

GEOLOGY AND SOILS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
7. GEOLOGY AND SOILS. Would the Project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
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?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

GeoMat Testing Laboratories, Inc. prepared a Geotechnical Investigation for the Project; refer to **Appendix D**.

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?

Less Than Significant Impact. According to the City of Redland's General Plan 2035, Figure 7-5: Faults, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone.[4] The nearest Alquist-Priolo Fault Zones are located approximately 2.0 miles east of the Project site. Therefore, the possibility of significant fault rupture on the Project site is considered to be low.

The Project site is located in an area which is subject to strong ground motions due to earthquakes. Numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes.

The City of Redlands is bounded to the northeast by the San Andreas Fault Zone, and to the southwest by the San Jacinto Fault Zone. The closest fault zone to the Project site is the Reservoir Canyon Fault, traversing the Project site along the southwest to north-central portion of the site. The Reservoir Canyon Fault Zone is a system of normal dip-slip faults. The Reservoir Canyon Fault is considered a normal fault which is shown on the Figure 3-5 of the General Plan, in a northeast-southwest direction within the southwest to north-central portion of the site.

Reservoir Canyon Fault has been designated as potentially active by the City of Redlands; this fault, however, is not designated as a Fault Hazard Study Zone by the California Geologic Survey (CGS). Because the City of Redlands designated the fault as a potential geologic hazard, a fault investigation was performed as part of the geotechnical investigation and findings are summarize below.

A number of investigations have taken place analyzing this fault. Age assessment of the last fault displacement was attempted. It was estimated by visual observation that the soil lying unbroken over the fault splays were approximately 20 to 30 thousand years old. This indicates that the fault is *not considered active*. The older alluvium within the site have been estimated to be approximately 500 thousand years old. This age indicates that the last fault rupture occurred between 20 thousand and 500 thousand years ago. The geomorphology in the vicinity of the fault is not suggestive of recent faulting and appears to be much older than 20 to 30 thousand years

[4] Redlands. 2017. *City of Redlands General Plan 2035, Figure 7-5: Faults*. Available at https://gis.cityofredlands.org/generalplan/gp2035.pdf, accessed April 14, 2020.

old. Based on a review of aerial photographs of the Project site and surrounding area, no geomorphic evidence of active faulting was observed.

Construction of the Project structures and associated buildings would be required to conform to the seismic design parameters of the 2019 California Building Code (CBC). The CBC provides procedures for earthquake-resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The proposed development would be designed in accordance with the requirements of the current edition of the California Building Code. Lastly, because the Reservoir Canyon Fault was determined not to be active and the site is not in an Alquist-Priolo fault zone, a less than significant impact would occur.

iii) Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking.

According to the geotechnical study, groundwater is not present in the upper 50 feet and therefore the soils within the Project site are not considered susceptible to liquefaction; this is consistent to Figure 7-6: Liquefaction of the General Plan, which notes that the Project site and the greater vicinity have a low liquefaction susceptibility potential.[5] Since both seismic-related ground failure and generalized liquefaction would not be likely to occur, the implementation of the Project will result in no impact.

iv) And Landslides?

No Impact. Landslides can occur if areas of steep slopes consisting of unstable soils are disturbed by ground shaking and/or heavy rainfall. According to the geotechnical study, previous studies on the Project site concluded that based on the City of Redlands General Plan, the Project site is located in an area with potential land sliding. However, based on field mapping and previous work conducted on the site, no landslide debris was noted, and no ancient landslides are known to exist at the site. Site reconnaissance and additional subsurface exploration performed by GeoMat revealed no indications of landslides or other deep-seated slope stability issues at the site. Areas of potential surface erosion and rilling, etc. may be averted by implementation of proper, engineered surface drainage measures in the course of site development.

[5] Redlands. 2017. *General Plan 2035, Figure 7-6: Liquefaction*. Available at https://gis.cityofredlands.org/generalplan/gp2035.pdf, accessed February 7, 2022.

Consistent with the geotechnical study, Figure 5.16, Landslide Incidence in the Vicinity of the City of Redlands from the Local Hazard Mitigation Plan also shows that the City of Redlands is located in a low landslide incidence general area.[6] Thus, no impacts would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The geotechnical study notes that previous studies documented erosion gullies on the west-facing slope in the southwest corner of the site which appears to have been associated with a water line rupture in 1930. As noted above, areas of potential surface erosion may be averted by implementation of proper, engineered surface drainage measures in the course of site development.

Construction

Grading and earthwork activities during construction would expose soils to potential short-term erosion by wind and water. During construction, the proposed Project would be required to comply with the erosion and siltation control measures. This would include measures such as sand-bagging to reduce site runoff or hold topsoil in place prior to final grading and construction. Additionally, the proposed Project is required to comply with the National Pollutant Discharge Elimination System (NPDES) permitting process. Construction impacts would be minimized through compliance with the Construction General Permit. The NPDES permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and monitoring plan, which must include erosion-control and sediment-control Best Management Practices (BMPs) that would meet or exceed measures required by the Construction General Permit to control potential construction-related pollutants. Erosion-control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized.

Operational

To prevent operational erosion, proper slope protection and maintenance would help minimize erosion and improve the stability of the existing slopes. At a minimum, the slope maintenance guidelines presented in Appendix F of the geotechnical report, provided as **Appendix D** of this Initial Study (IS) should be followed. Additional precautions include the following:

- Any additional slope planting should be provided by a qualified landscape architect. GeoMat Testing Laboratories, Inc. strongly recommends that erosion and borrowing rodent control measures should be maintained.

[6] Redlands. 2015. *Hazard Mitigation Plan, Figure 20: Landslide Incidence and Susceptibility in the Vicinity of the City of Redlands.* Available at https://www.cityofredlands.org/sites/main/files/file-attachments/redlands_final_hmp_april_2015.pdf?1552928023, accessed on February 7, 2022.

- It is critical to provide periodic maintenance and repair of all slopes and drainage systems. Drainage system inlets, outlets, and spillways should be periodically inspected and cleaned of soil and debris.
- It is recommended that all Project landscaping be provided with automatic sprinkler shutoffs in order to help prevent over-saturation of slope faces and help mitigate surficial slope instability problems. Leaks in the irrigation system should be fixed without delay.
- The slopes should be periodically inspected for evidence of cracking, erosion, and burrowing animals. Any problems should be repaired immediately.

Implementation of these requirements would ensure that potential Project impacts are less than significant.

c, d) 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? And 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?

Less than Significant Impact. Refer to response a-iii and a-iv), above for a discussion of landslide and liquefaction potential. Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content.

Based on laboratory test results, the geotechnical study estimated that shrinkage of soils onsite would be approximately 7 (±2) percent. Shrinkage is defined as the decrease in volume of soil upon removal and re-compaction expressed as a percentage of the in-place volume.

This shrinkage is exclusive of any losses due to removal of roots or any underground structures and not from soil types or conditions. An increase in relative compaction obtained would increase the shrinkage factor. Furthermore, a subsidence of approximately 0.10 (± 0.05) feet may also be considered during site preparation. The geotechnical study recommends that an earthwork balance area should be designated to allow for variations in the indicated shrinkage and subsidence estimates. As such, a less than significant impact would occur.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. No septic tanks would be used as part of the proposed Project. The Project would connect to the existing sanitary sewer system for wastewater disposal. Thus, no impacts associated with the use of septic tanks would occur as part of the proposed Project's implementation and no mitigation is required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact with Mitigation. Archaeological and paleontological resources are protected under CEQA as cultural resources. Paleontological resources, including fossils, have also been found in the Redlands area, and there is potential for inadvertent discovery of archaeological and paleontological finds in remaining, unexcavated open space areas within and adjacent to the City. There are no known paleontological resources on the Project site. The qualified archaeologist retained to perform Mitigation Measures CUL-1 and CUL-2 would also address paleontological resources. As such, CUL-1 and CUL-2 are included in the event any unknown archaeological or paleontological finds occur during excavation or grading activities. Additionally, to further avoid inadvertent discovery of paleontological finds, Mitigation Measure GEO-1 would be applicable during construction and grading activities. Therefore, any impacts will be less than significant.

The cultural resources report was provided to the consulting tribes for their review on May 9, 2022. Consultation is ongoing with the tribes and will be concluded prior to adoption of any environmental document**.**

Mitigation Measure

MM GEO-1: In the event of an inadvertent discovery of paleontological and/or archaeological resources are made during construction and grading activities that occur at depths greater than five feet within native soil, the following measures shall apply:

1. Upon discovery of tan unearthed fossil, all earthwork within the vicinity of the discovery (within 50 feet) shall be immediately halted, notification made to the Development Services Department of the City of Redlands, and the paleontologist or archaeologist shall evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist.
2. The Project developer shall retain a qualified archaeologist or paleontologist to assess the nature and significance of the find and make recommendations prior to further disturbance.
3. The paleontologist shall develop a paleontological resources impact mitigation plan to mitigate the potential impacts to unknown buried paleontological resources that may exist onsite for the review and approval by the City. Actions may include recovering a sample of the fossiliferous material prior to construction, monitoring work and halting construction if an important fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. Recovery, salvage and treatment shall be done at the Applicant's expense.

4. All recovered and salvaged resources shall be prepared, identified, cataloged to the point of identification and permanent preservation by the paleontologist.
5. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource."

Cumulative Impacts

The potential cumulative impact related to geology and soils is typically site-specific. The previous analysis determined that a less than significant impact related to geological resources will occur due to Project implementation. Moreover, existing State and local laws and regulations are in place to protect people and property from substantial adverse geological and soil effects including fault rupture, strong seismic ground shaking, liquefaction, and landslides. Existing laws and regulations also protect people and property from adverse effects related to soil erosion. Implementation featuring the recently mentioned Project Analysis would render potentially adverse geological and soil effects less than signification without mitigation implemented.

GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
8. GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Ganddini Group Inc. prepared an Air Quality, Global Climate Change, Health Risk Assessment, and Energy Impact Analysis for the Project; refer to **Appendix A**.

Background

Certain gases in the earth's atmosphere, classified as Greenhouse Gases (GHG), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice it to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

In 2019, CARB released the 2019 edition of the California GHG inventory covering calendar year 2017 emissions. In 2017, California emitted 424.1 million gross metric tons of CO_2e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (24 percent) and the electric power sector including both in-state and out-of-state sources (15 percent). Emissions of CO_2 are by-products of fossil fuel combustion. CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N_2O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing carbon dioxide from the atmosphere.

Regulations and Significance Criteria

State

Executive Order S-3-05

Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this executive order remains relevant because a more recent California Appellate Court decision, Cleveland National Forest Foundation v. San Diego Association of Governments (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining "to adopt the 2050 goal as a measure of significance in light of the fact that the EO does not specify any plan or implementation measures to achieve its goal", the decision also recognized that the goal of a 40 percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions 80 percent below 1990 levels by the year 2050."

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed Assembly Bill (AB) 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25-percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible state implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the state implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40-percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of CH_4 emissions from agricultural and other wastes.

Executive Order B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below two degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewable sources by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewable sources by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewal Portfolio Standards.

Local

South Coast Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the Draft AQMD Staff CEQA GHG Significance Thresholds. These thresholds have not been finalized and continue to be developed through the working group.

On September 28, 2010, SCAQMD Working Group Meeting #15 provided further guidance, including an interim screening level numeric "bright-line" threshold of 3,000 metric tons of CO_2e annually and an efficiency-based threshold of 4.8 metric tons of CO_2e per service population (defined as the people that work, study, live, patronize and/or congregate on the Project site) per year in 2020 and 3.0 metric tons of CO_2e per service population per year in 2035. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the governing board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable only to boilers and process heaters, forestry, and manure management projects.

Southern California Association of Governments

On April 7, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS. The 2016 RTP/SCS charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

City of Redlands Climate Action Plan

The Redlands Climate Action Plan (CAP) is designed to reinforce the City's commitment to reducing GHG emissions and demonstrate how the City will comply with State of California's GHG

emission reduction standards. As a Qualified GHG Reduction Strategy, the CAP enables streamlined environmental review of future development projects, in accordance with CEQA. The CAP has been prepared concurrently with the updated Redlands General Plan, reflecting the City's most current land use and transportation strategy, and GHG implications of various General Plan's goals and policies. The General Plan includes strategies 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. It also includes goals and policies to promote energy efficiency, waste reduction, and resource conservation and recycling. These strategies, goals, and policies will result in GHG reduction compared to baseline trends. As a document adopted by the City of Redlands City Council, the CAP applies to the municipal limits of the City of Redlands.

Redlands Community Sustainability Plan

The Redlands Community Sustainability Plan was adopted in March 2011. This document is meant to guide the City of Redlands to become increasingly more sustainable. The plan identifies actions to increase sustainability through energy efficiency and conservation, water use, waste reduction, use of renewable energy, efficient transportation, and more. Goals and policies applicable to the Project include the following:

Policy LU3.2: In accordance with the General Plan, develop a city-wide comprehensive Non-Motorized Transportation Plan. Among its elements, the plan should consider bike lanes with "sharrows" for appropriate locations.

South Coast Air Quality Management District Thresholds

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
2) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

On September 28, 2010, the SCAQMD recommended an interim screening level numeric, bright-line threshold of 3,000 metric tons of CO_2e annually and an efficiency-based threshold of 4.8 metric tons of CO_2e per service population (Project employees + patrons + residents) per year in 2020 and 3.0 metric tons of CO_2e per service population per year in 2035. These thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research, CARB, the Attorney General's Office, a variety of city and county planning

departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations. The numeric bright-line and efficiency-based thresholds were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

For the purposes of this evaluation, the proposed Project will first be compared to the SCAQMD interim screening level numeric bright-line threshold of 3,000 metric tons of CO_2e annually. If it is determined that the proposed Project is estimated to exceed this screening threshold, it will then be compared to the SCAQMD-recommended efficiency-based threshold of 3.0 metric tons of CO_2e per service population per year in 2035, as the Project will be constructed after the year 2020.

The Project is also evaluated for compliance with the City CAP, which establishes an overall GHG target for the Project region consistent with long-term (beyond 2020) GHG reduction goals. Successful implementation of City CAP will enable the City to meet the standards outlined in California's 2017 Scoping Plan. As previously described, the CAP has been prepared concurrently with the updated Redlands General Plan, reflecting the City's most current land use and transportation strategy, and GHG implications of various General Plan's goals and policies. Thus, according to the CAP, implementation of projects consistent with the General Plan would not require additional GHG analysis in accordance with CEQA and would be considered less than significant.

Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by the SCAQMD and the City of Redlands. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for San Bernardino County. As previously described, the Project is anticipated to be built in two phases; however, in order to be conservative and consistent with the Traffic Impact Analysis, the Project was assumed to be completed in one phase with construction starting no sooner than the beginning of February 2023 and being completed by mid-July 2025. CalEEMod will generate results utilizing construction and operation equipment and vehicles meeting current standards rather than more efficient standards anticipated for the future year, 2025. As such, the result is more conservative and gives adequate representation to earlier construction and operational years.

Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates from Ganddini Group, Inc. (2021).

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact.

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). **Table 14**, *Construction-Related Greenhouse Gas Emissions*, illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

Table 14: Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/year)
Total Construction	4,486.2
Notes: Source: CalEEMod Version 2020.4.0 for Opening Year 2025. CalEEMod results identified by Gandini Group, Inc., 2021	

As shown in **Table 14**, Project construction would result in the generation of approximately 4,486 metric tons of CO_2e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions.

Operations

Operation of the Project would result in GHG emissions predominantly associated with motor vehicle use. Long-term operational GHG emissions attributable to the Project as a whole (Project site buildout) are identified in **Table 15**, *Operational-Related Greenhouse Gas Emissions*, and compared to SCAQMD's interim screening level numeric bright-line threshold of 3,000 metric tons of CO_2e annually.

Table 15: Operational-Related Greenhouse Gas Emissions

Emissions Source	$MTCO_2e$ per Year
Area Sources[1]	15.72
Energy Usage[2]	196.86
Mobile Sources[3]	724.61
Waste[4]	9.90
Water[5]	18.31
Construction[6]	149.54

Emissions Source	$MTCO_2e$ per Year
Total Emissions	1,114.94
SCAQMD Threshold	*3,000*
Exceeds Threshold?	**No**

Notes:
Source: CalEEMod Version 2020.4.0 for Opening Year 2025.
(1) Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
(2) Energy usage consist of GHG emissions from electricity and natural gas usage.
(3) Mobile sources consist of GHG emissions from vehicles.
(4) Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
(5) Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
(6) Construction GHG emissions CO2e based on a 30-year amortization rate.
CalEEMod results identified by Gandini Group, Inc., 2021

As shown in **Table 15**, operational-generated emissions would not exceed the SCAQMD's interim screening level numeric bright-line threshold of 3,000 metric tons of CO_2e annually. As such, a less than significant impact would occur.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact.

Redlands Climate Action Plan

The Redlands CAP is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic programs, policies, and projects to reduce emissions from the energy, transportation, land use, water use, and waste sectors. The GHG-reduction strategies in the CAP build on inventory results and key opportunities prioritized by City staff and members of the public. The CAP strategies consist of strategies that identify the steps the City will take to support reductions in GHG emissions. The City will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. All standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The City CAP identifies the fact that successful implementation of City CAP will enable the City to meet the standards outlined in California's 2017 Scoping Plan. The CAP has been prepared concurrently with the updated Redlands General Plan, reflecting the City's most current land use and transportation strategy, and GHG implications of various General Plan's goals and policies. Thus, according to the CAP, implementation of projects consistent with the General Plan would not require additional GHG analysis in accordance with CEQA and would be considered less than significant.

The proposed Project is consistent with the land use designation and development density presented in the General Plan. As previously stated, the Project site is designated by the General

Plan as Very Low Density Residential. According to the City of Redlands General Plan, land use classifications contained in the General Plan are intentionally broad enough to avoid duplicating the City's zoning regulations. The City of Redlands Zoning Ordinance and the Zoning Map further delineate and prescribe specific uses of the land and associated development regulations. More than one zoning district may be consistent with a single General Plan land use category. For instance, the Very Low Density Residential designation allows for several different zoning districts including the A-2 – Estate Agricultural District, R-R – Rural Residential District, R-A – Residential Estate District, R-E – Residential Estate District, R-S – Residential Suburban District, R-S – Suburban Residential District, and the R-1 – Single-Family Residential District. The Project site is zoned R-E – Residential Estate District. The Redlands Zoning Code (Title 18 of the City Municipal Code) states that residential developments are allowed in the R-E District, subject to a conditional use permit issued by the City. Further, schools are also allowed in the R-E District, subject to review and approval by the City Planning Commission. As such, the Project is proposing land uses consistent with the Zoning District applied to the site, and the Zoning District is in turn consistent with that allowed under the General Plan designation. Thus, the proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan. Since the Project is consistent with the City General Plan, it is consistent with the City CAP.

Cumulative Impacts

Climate change is a global problem. And GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the proposed Project as well as other cumulative-related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As previously discussed, the proposed Project would not conflict with the City CAP. As a result, the Project would not conflict with any GHG reduction plans. Therefore, the Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable.

HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
9. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

Meredith & Associates, Inc. prepared a Phase I Environmental Site Assessment (ESA) for the Project (January 22, 2003); refer to **Appendix E**.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Hazardous materials are used in manufacturing, agriculture, service industries (e.g., gas stations, dry cleaners), health care, and even in households. Many of these chemicals can be harmful to the health of those exposed, and to the environment. There are several types of hazardous materials releases:

- Fixed-Site Releases - releases involving the production and manufacturing, handling, and storage of a hazardous product at a single facility as well as any releases that may occur at a designated hazardous waste disposal site.
- Transportation-Related Releases - Includes releases that occur while the hazardous material is in transit from one facility to another or en route to be disposed of at a designated hazardous waste disposal site (e.g., on highways, railways, airports, or in pipelines).
- Intentional Releases - includes criminal acts and acts of terrorism in which a hazardous material is used to intentionally cause injuries and/or fatalities, damage the environment and/or property, or advance a political or social agenda. According to the U.S. Department of Transportation (USDOT), most hazardous materials release events between 1982 and 1991 occurred during transport; 81.4% of hazardous materials releases occur on highways, 14.7% on railways, with other events accounting for 3.9% of releases.

As part of the Phase I ESA, various records for the Project site and surrounding area were researched, solicited, and/or reviewed, including environmental databases (i.e., site lists), street directories, and regulatory agency files. The following are the results of these efforts.

A search of available Federal, State, and local environmental database records for the Project site and nearby sites were quested from Environmental Data Resources (EDR). In general, the databases include site that generate, store, treat, or dispose of hazardous substances, as well as sites where hazardous substances releases have contaminated soil and/or groundwater. Sites of particular interest include those with historical or active underground storage tanks (USTs), especially in instances where the USTs have leaked. The Project site was not identified in any of the databases searched by EDR. No sites of potential environmental interest were located within 1.0 mile of the Project site. The complete EDR report is included as Appendix A of the Phase I ESA, provided as **Appendix E** to this Initial Study.

Considering that no Recognized Environmental Conditions (RECs) were identified as part of the Phase I ESA, and additionally considering that the Project site is practically undeveloped, it is anticipated that the proposed Project would not release any hazardous materials.

However, the Project would involve construction activities that could result in the transport, use, and disposal of hazardous materials such as gasoline fuels, asphalt, lubricants, toxic solvents,

pesticides, and herbicides. The transport, use, storage, and disposal of these materials would comply with existing regulations established by several agencies, including the Department of Toxic Substances Control, the USEPA, the United Stated Department of Transportation (USDOT), and the Occupational Safety and Health Administration. The proposed Project would operate as a new residential community where typical residential maintenance activities may require the use of cleaners, solvents, paints, and other household products that are potentially hazardous. With exercise of normal safety practices, the Project would not create substantial hazards to the public or the environment.

The proposed Project is required to comply with all applicable local, state, and Federal regulations during Project construction and operation. The City of Redlands Fire Department Hazardous Materials Response Team (RFDHMRT) consists of five active members, with three members trained to the "Specialist" Level, and three members trained to the "Technician" Level. All trained personnel are also members of the San Bernardino County Inter-Agency Hazardous Materials Response Team, and respond countywide, through a countywide mutual aid agreement.

Personnel maintain their skills by attending monthly training sessions. Redlands is covered by the Local Emergency Planning Committee (LEPC) for California Region VI (CA105), located in Hemet. The City is a member of a Countywide Hazardous Materials Response Team. As a part of this, all City of RFD field employees are trained in Hazardous Materials First Responder Certifications. The Countywide team would provide a response if the level of hazard were above the certified level of City Staff. From there, the County Hazardous Materials Response Team would provide for the evacuation, mitigation, and facilitation of cleanup efforts in the event of an accidental release of hazardous materials. Compliance with federal, state, and local laws and regulations would result in a less than significant impact.

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?

Less than Significant Impact. Refer to response 9(a) above. The Project is not anticipated to result in the upset or accidental release of hazardous materials. Additionally, as a requirement of the SWPPP and NPDES, construction projects maintain supplies onsite for containing and cleaning small spills of hazardous materials and have a defined process for addressing spills.

Construction would also use equipment that would bring hazardous materials to the Project site, including diesel, gasoline, paints, solvents, cement, and asphalt. However, construction activities would be conducted in accordance with the SWPPP as part of the NPDES permit. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMP) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. BMPs for hazardous materials include, but are

not limited to, off-site refueling, placement of generators on impervious surfaces, establishing clean out areas for cement, etc. While the risk of exposure to hazardous materials cannot be eliminated, adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials and with the safety procedures mandated by applicable federal, state, and local laws and regulations.

Compliance with these regulations would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with the proposed Project and the potential for accident or upset less than significant.

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

No Impact. The nearest school to the Project site Redlands High School located at 840 E. Citrus Ave, approximately 2.0 miles northwest. This school is located well beyond the one-quarter miles radius. Therefore, no impact will occur due to the implementation of the Project.

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?

No Impact. The Project site is not included on the list of hazardous waste sites (Cortese List) compiled by the Department of Toxic Substance Control (DTSC) pursuant to Government Code Section 65962.5.[7] Nor is the Project site listed on any other regulatory databases. There are no properties within 100 feet of the Project site where a release is considered likely, or a known release has occurred. Therefore, the Project would have no impact.

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

No Impact. The Redlands Municipal Airport (RMA) is located approximately 3.0 miles north of the Project site. According to the Redlands Airport Land Use Compatibility Plan (RALCP) Figure 2A – Compatibility Map,[8] the Project site is not located within the RMA planning areas or Areas of Special Compatibility Concern. As such, no impact would occur with the implementation of the proposed Project.

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[7] DTSC. 2020. *Hazardous Waste and Substances Site List*. Available at https://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=6&CMD=search&ocieerp=&business_name=&main_street_number=&main_street_name=&city=&zip=&county=&branch=&status=ACT%2CBKLG%2CCOM&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&cleanup_type=&npl=&funding=&reporttype=CORTESE&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&operating=&post_closure=&non_operating=&corrective_action=&tiered_permit=&evaluation=&spec_prog=&national_priority_list=&senate=&congress=&assembly=&critical_pol=&business_type=&case_type=&display_results=&school_district=&pub=&hwmp=False&permitted=&pc_permitted=&inspections=&complaints=&censustract=&cesdecile=&ORDERBY=county&next=Next+50, accessed February 9, 2022.

[8] Redlands. 2003. *Redlands Municipal Airport, Land Use Compatibility Plan, Figure 2A: Compatibility Map.* Available at https://raacp.org/wp-content/uploads/2016/07/Redlands-Airport-Land-Use-Compatibility-Plan.pdf, accessed on February 9, 2022.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed Project would not impair or physically interfere with an adopted emergency response or evacuation plan. The proposed Project is subject to City Fire and Police Department review and approval prior to the issuance of building permits. The proposed Project is required to be designed, constructed, and maintained in accordance with applicable standards associated with vehicular access, which would provide for adequate emergency access and evacuation, if necessary.

Construction activities may have the potential to temporarily restrict vehicular traffic. Adherence to emergency access measures required by the City would ensure a less than significant impact would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact. According to the General Plan Figure 7-4: Fire Hazards, the Project site is located in a high threat fire level area. No portion of the site is within a Very High or Extreme threat area. CalFire does not designate the Project site as a Fire Hazard Severity Zone (FHSZ), however, land contiguous to the north and south are designated as Very High FHSZ, and land to the east as Moderate FHSZ.[9]

Although area to the north is designated as Very High FHSZ, this area is fully developed with existing residential homes. Redlands has Local Responsibility Areas (LRAs) consisting mostly of the developed areas in the south part of the City, which encompass roughly 35 percent of the Redlands Fire Department's (RFD) coverage area. Portions of the City are also designated as State Responsibility Areas (SRAs), areas where the State of California is financially responsible for the prevention and suppression of wildfires, or Federal Responsibility Area (FRA). As shown in Figure 7-4 of the General Plan, these areas are limited to the Crafton Hills outside of Redlands city limits. Some small areas of the Santa Ana River Wash are designated as Federal Responsibility Areas (FRAs). As shown in Figure 7-4, the Project site is not located in a SRA or a FRA.

The Project is anticipated to support the City's on-going Vegetation Management and Weed Abatement Program to manage weeds and brush and provided the defensible space (100-foot clearance) for areas prone to wildfire due to high vegetation area. Additionally, the Project would be consistent with Section 15.20.560: Fire Protection Plan of the City's Municipal Code.[10] Thus, less than significant impacts are anticipated, and no mitigation is required.

[9] CalFire. 2022. Fire Hazard Severity Zone Viewer. Available at https://egis.fire.ca.gov/FHSZ/, accessed February 9, 2022.
[10] Municipal Code. 2022. *Section 15.20.560: Fire Protection Plan*. Available at https://codelibrary.amlegal.com/codes/redlandsca/latest/redlands_ca/0-0-0-12312, accessed February 9, 2022.

Cumulative Impacts

The incremental effects of the proposed Project and the adjacent uses are anticipated to be less than significant with the adherence of Federal, state, and local laws and regulations. Hazardous materials use will be minimal and consistent with typical solvents used for cleaning and other upkeeping activities. Therefore, the proposed Project would not result in incremental effects to hazards or hazardous materials that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future projects.

HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
10. HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?			X	
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:			X	
i) Result in substantial erosion or siltation on- or off-site?			X	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
iv) Impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Aguilar Consulting, Inc. prepared a Water Quality Management Plan for the Project (July 30, 2020) and a Preliminary Drainage Study (June 22, 2020); refer to **Appendix F** and **Appendix G**, respectively.

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

Construction

As part of Section 402 of the Clean Water Act, the USEPA has established regulations under the NPDES program to control direct stormwater discharges. The NPDES program regulates industrial pollutant discharges, which include construction activities. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements.

Redlands Municipal Code Section 13.54.180, Best Management Practices (BMPs), requires that any new construction activity shall use BMPs to prevent the discharge of pollutants to the maximum extent practicable. Any new industrial or commercial or other development activity, or development, must use BMPs or other steps to prevent discharge of pollutants to the Municipal Separate Storm Sewer System (MS4). For other premises exposed to stormwater, the responsible person must use BMPs, if they exist, or other steps to reduce the discharge of pollutants to the maximum extent practicable, including the removal and lawful disposal of any solid waste or any other substance which, if it were to be discharged to the MS4, would be a pollutant, including fuels, waste fuels, chemicals, chemical wastes and animal wastes, from all parts of the premises exposed to stormwater. Examples of suitable BMPs may be found in the California Stormwater Quality Association (CASQA) "Stormwater Best Management Practice Handbook" and the City of Redlands' "Storm Water Guidance Handbook." Other BMPs may be utilized with the prior written approval of the City engineer.

Requirements for waste discharges potentially affecting stormwater from construction sites of one acre or more are set forth in the SWRCB's Construction General Permit, Order No. 2012-0006-DWQ, issued in 2012. The site is larger than one acre and would be subject to requirements of the Construction General Permit. Projects obtain coverage under the Construction General Permit by filing a Notice of Intent with the SWRCB prior to grading activities and preparing and implementing a SWPPP during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the project site, and to contain hazardous materials. BMPs categories include, but are not limited to, erosion control and wind erosion control, sediment control, and tracking control. Implementation and monitoring required under the SWPPP would control and reduce short-term intermittent impacts from soil erosion, siltation, and sedimentation related to water quality from construction activities to less than significant levels.

Operation

As noted in the preliminary water quality management plan (PWQMP), the Project is not anticipated to pose significant risk or groundwater quality related concerns because the Project site does not have constraints that would limit the recommended BMPs to be implemented in the various drainage areas (DAs) A-G of the site. Several improvements would be implemented that would minimize water quality impacts such as street drainage improvements, above-ground stormwater quality/detention and debris basins, underground stormwater quality/retention storage chambers, and water/sewer systems that would serve the proposed community.

The underground storm drains, open channels, and debris basins proposed to intercept and convey the storm flows generated by the Project site and the off-site areas emanating from the east. The proposed drainage system also includes above-ground infiltration basins and underground stormwater chambers to address stormwater quality volumes generated by the Project site.

Non-structural source control BMPs are required to be incorporated into all new development and significant redevelopment Projects. Non-structural BMPs are provided in Form 4.1-4 of the PWQMP. Additionally, structural source control BMPs are also applicable to the Project as shown in Form 4.1-2 of the PWQMP. These structural BMPs would further minimize impacts on surface and groundwater quality; see **Table 16**, *Structural Source Control BMPs*.

Table 16: Structural Source Control BMPs

ID	Name	Describe BMP Implementation
S1	Provide storm drain system stenciling and signage (CASQA New Development BMP Handbook SD-13).	The stencil shall be blue on a white background with lettering 2-1/2" in height or a catch basin curb marker, circular, or rectangular at least 4" in height or diameter may be used. Wording will read, "No Dumping – Drains to River."
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32).	The project is a residential development; each house will have their own trash and waste receptacles.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12).	Efficient SMART irrigation will be utilized to conserve water throughout the development and common landscape areas. Irrigations systems will meet City of Redlands Landscape and Water Conservation Ordinances and Resolutions: Ordinance 13.06 Water Conservation Plan Ordinance 13.28 Irrigation Found: http://www.sterlingcodifiers.com/codebook/index.php?book_id=550
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement.	All landscape will be finish graded at a minimum of 1-2 inches below top of curb or sidewalk for increased retention/infiltration of stormwater and irrigation water.

ID	Name	Describe BMP Implementation
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10).	All slopes to be landscaped to prevent erosion. At various intervals along the slopes, v-ditches and terrace drains will be installed to safely convey runoff from tops of slopes and to provide protection from erosion.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10).	Hillside areas that are disturbed by project development shall be landscaped with deep-rooted, drought tolerant plant species selected for erosion control, satisfactory to the local permitting authority.
Source: ACI. July 3, 2020. *Preliminary Quality Management Plan, Form 4.1-2: Structural Source Control BMPs.*		

The PWQMP complies with the requirements of the City of Redlands and the NPDES Areawide Stormwater Program requiring the preparation of a PWQMP. The PWQMP is a post-construction management program that ensures the on-going protection of the watershed basin by requiring structural and programmatic controls. The PWQMP identifies structural controls (including a contained, onsite wastewater treatment plant) and programmatic controls to minimize, prevent, and/or otherwise appropriately treat storm water runoff flows before they are discharged from the site. Mandatory compliance with the PWQMP would ensure that the Project does not violate any water quality standards or waste discharge requirements during long-term operation. Because the proposed Project has designed a WQMP chamber and stormwater basin to catch and treat runoff water, the water quality impacts associated with long-term operation of the Project would be less than significant and no mitigation measures would be required.

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

Less Than Significant Impact. The Redlands Planning Area domestic water sources consist of both surface (about 50 percent of total supply) and groundwater (about 50 percent of total supply). The City is entitled to surface water from both Mill Creek and the Santa Ana River. Mill Creek water is treated at the Henry Tate Water Treatment Plant, located northeast of the City. Water then flows by gravity from the Tate Treatment Plant to the City's distribution system. Santa Ana River water is treated at the Horace Hinckley Surface Water Treatment Plant, located northeast of the City.[11]

The City of Redlands uses 18 wells that pump directly into the system or into reservoirs. All of these wells are adequately separated from sewerage facilities and are free from serious flooding hazard. Although the City's domestic water wells constitute about 50 percent of the water supply, some of the wells require treatment. Because of contamination, the City has wells that are not used for domestic purposes and are instead used for irrigation. It is anticipated that the contaminant levels will not decrease for many years due to the slow movement of water through the basin. However, non-treated nitrate-contaminated water not suitable for human

[11] Redlands. 2017. *General Plan 2035, Section 4.7, Public Facilities*.

consumption can be used for irrigation (non-potable system). The source of this contamination is typically due to agricultural nitrates and would require costly treatment if the wells were to be used for domestic purposes.

The proposed Project would be served with potable water by the City of Redlands Municipal Utilities Department. The Department is party to the Upper Santa Ana River Watershed integrated Regional Water Management Plan, which indicates the Integrated Regional Water Management 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.[12] According to the plan, the City has sufficient water supplies to meet current and future development consistent with the General Plan through the year 2035.

The Project's demand for domestic water service would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Additionally, although the Project would result in additional impervious surfaces, as noted in Form 4.1-3: Preventive LID Site Design Practices Checklist of the PWQMP, the above-ground water quality basins and underground storm water chambers were designed for the different drainage areas to allow for infiltration of storm water quality flows back into the ground, as such, groundwater recharge would not be decreased compared to existing conditions. Accordingly, the proposed Project would not significantly impact local groundwater recharge. Impacts would be 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?

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. The Project site does not contain any streams or rivers. As such, the Project would have no impact on the alteration of an existing river or stream drainage pattern. The Project site has more than one drainage area (DA); see **Table 17**, *Site Location and Hydrologic Features for Drainage Areas.*

[12] SBVWCD. 2015. *Upper Santa Ana River Watershed Integrated Regional Water Management Plan, page ES-2.* Available at https://www.sbvwcd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file.html, February 12, 2022.

Table 17: Site Location and Hydrologic Features for Drainage Areas

DA and Flows	Description
DA-A flows to Outlet A	DA-A covers 7.47 acres of the proposed development. Storm runoff from DA-A is conveyed via the proposed streets and/or storm drain facilities and discharged into proposed above-ground Infiltration Basin A, where the water quality flow is retained. From the basin, storm flows are then discharged through an underground storm drain at Outlet A, the existing storm drain line at Reservoir Road. DA-A storm water runoff will be conveyed to above-ground Infiltration Basin A via the proposed streets and storm drain facilities.
DA-B.1 flows to Outlet B.1	DA-B.1 covers 13.74 acres of the proposed development. Storm runoff from DA-B.1 is conveyed via the proposed streets and/or storm drain facilities and discharged into proposed above-ground Infiltration Basin B.1, where the water quality flow is retained. From the basin, storm flows are then discharged through an underground storm drain line and ultimately discharged sheet flowed at Outlet B.1, onto Sophia Court. DA-B.1 storm water runoff will be conveyed to above ground Infiltration Basin B-1 via the proposed streets and/or storm drain facilities.
DA-B.2 flows to Outlet B.2	DA-B.2 covers 12.45 acres of the proposed development. Storm runoff from DA-B.2 is conveyed via the proposed streets and/or storm drain facilities and discharged into proposed above-ground Infiltration Basin B.2, where the water quality flow is retained. From the basin, storm flows are then discharged through an underground storm drain line and ultimately discharged sheet flowed at Outlet B.2, onto Sophia Court. DA-B.2 storm water runoff will be conveyed to above ground Infiltration Basin B-2 via the proposed streets and/or storm drain facilities.
DA-C flows to Outlet C	DA-C covers 13.87 acres of the proposed development. Storm runoff from DA-C is conveyed via the proposed streets and/or storm drain facilities and discharged into proposed above-ground Infiltration Basin C, where the water quality flow is retained. From the basin, storm flows are then discharged through an underground storm drain at Outlet C, the existing 48" storm drain line at Reservoir Road and Wabash Avenue. DA-C storm water runoff will be conveyed to above ground Infiltration Basin C via the proposed streets and/or storm drain facilities.
DA-D flows to Outlet D	DA-D covers 4.42 acres of the proposed development. Storm runoff from DA-D is conveyed via the proposed streets and/or storm drain facilities and discharged into proposed underground Stormwater Chamber D, where the water quality flow is retained. From the chamber, storm flows are then discharged through at Outlet D, the existing 48-inch storm drain line at Reservoir Road and Wabash Avenue. DA-D storm water runoff will be conveyed to underground Stormwater Chamber D via the proposed streets and/or storm drain facilities.
DA-E flows to Outlet E	DA-D covers 1.20 acres of the proposed development. Storm runoff from DA-E is conveyed via the proposed street section at Reservoir Road and/or storm drain facilities and discharged into proposed underground Stormwater Chamber E,

DA and Flows	Description
	where the water quality flow is retained. From the chamber, storm flows are then discharged through at Outlet E, the existing storm drain line at Reservoir Road. DA-E storm water runoff will be conveyed to underground Stormwater Chamber D via the proposed streets and/or storm drain facilities.
DA-F flows to Outlet F	DA-F covers 3.38 acres of the proposed development. Storm runoff from DA-F is conveyed via the proposed street section at Reservoir Road and/or storm drain facilities and discharged into proposed underground Stormwater Chamber F, where the water quality flow is retained. From the chamber, storm flows are then discharged through at Outlet F, the existing storm drain line at Reservoir Road. DA-F storm water runoff will be conveyed to underground Stormwater Chamber F via the proposed streets and/or storm drain facilities.
DA-G flows to Outlet G	DA-G covers 1.36 acres of the proposed development. Storm runoff from DA-G is conveyed via the proposed street section at Reservoir Road and/or storm drain facilities and discharged into proposed underground Stormwater Chamber G, where the water quality flow is retained. From the chamber, storm flows are then discharged through at Outlet G, the existing storm drain line at Reservoir Road. DA-G storm water runoff will be conveyed to underground Stormwater Chamber G via the proposed streets and/or storm drain facilities.
Source: ACI. July 2020. *Preliminary Quality Water Management Plan*.	

The Project is anticipated to change the site's existing drainage patterns. Drainage patterns and time of concentration based on pre-Project condition would change due to lot layout and grading design. However, all storm flows for the most part under the proposed condition will be discharged into the same drainage facilities as in the existing condition.

Please refer to **Section 7**, *Geology and Soils*, Response (b) for further discussion of erosion. Surface water drainage would be controlled by building regulations, with the water directed toward existing streets, storm drains, and catch basins. The proposed drainage for the site would not channel runoff on exposed soils, would not direct flows over unvegetated soils, and would not otherwise increase the erosion or siltation potential of the site or any downstream areas. As discussed above, the proposed Project is subject to NPDES requirements. Additionally, the Project Applicant is required to submit a SWPPP to reduce erosion and sedimentation of downstream watercourses during Project construction. Furthermore, the Project Applicant is required to prepare and submit a detailed erosion control plan for City approval prior to obtaining a grading permit. Implementation of this plan would address any erosion issues associated with proposed grading and site preparation. Therefore, this impact is less than significant.

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

Less Than Significant Impact. On-site stormwater runoff associated with the Project would be engineered to be conveyed through the proposed drainage system which also includes above-ground infiltration basins and underground stormwater chambers. The preliminary drainage study concluded that it is expected that flow attenuation occurring within the basins should show that the proposed condition flows would be less than the *existing condition flows,* which would help achieve the Project goal of reducing the post-development flow to approximately 90 percent (or less) of the existing or pre-development flow, as recommended by San Bernardino County Flood Control District.

The results of the preliminary drainage study also indicated that the 100-year storm flows under the proposed condition would not adversely impact the existing or pre-Project drainage condition adjacent to and downstream of the Project site. Additionally, implementation of the proposed drainage facilities as recommended in this drainage plan perpetuates the existing drainage flow pattern and provides the Project site with drainage protection from the once in a hundred-year flood event. Additionally, with required adherence to an SWPPP and WQMP as discussed above under Response a), the proposed Project would not be a substantial source of polluted runoff. Therefore, less than significant impacts would occur, and mitigation is not required.

iv) Impede or redirect flood flows?

Less Than Significant Impact. The Project site is designated by the Federal Emergency Management Agency (FEMA) as being within Zone X, indicating minimal risk of flooding (Per Flood Insurance Rate Map No. 06071C8716H[13]. Although the proposed Project would increase impervious surfaces, the Project site is not located within an area of flood risk, and the proposed basins would reduce impacts from on- or off-site flooding. Therefore, impacts are less than significant.

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

Less than Significant Impact. The site does not include any streams or rivers, which could be altered by the proposed Project. In addition, the proposed on-site detention/infiltration basins would limit the release of storm water from the site; therefore, minimizing the potential for flooding to occur on-site or off-site. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. The proposed Project would comply with water quality requirements set forth in the Statewide General Construction Permit, the NPDES, and the City of Redlands Municipal Code Sections 13.54.120 (Prevention of Accidental Discharges), 13.54.170 (Non-Storm Discharges), 13.54.180 (Best Management Practices), and 13.54.300 (NPDES

[13] ACI. June 22, 2020. *Preliminary Drainage Study, page 3.*

Program Regulatory Fees). Additionally, active groundwater management and conjunctive use programs have been implemented by the Integrated Regional Water Management Plan (IRWM) to ensure the Region's water suppliers meet water demands. By 2035, demand in the Region is projected to increase by over 100,000 acre-feet per year (AFY) and will require the continued development of a diverse water supply portfolio to overcome various challenges and uncertainties. Therefore, the project would not impede sustainable groundwater management of the basin, and impacts are less than significant.

Cumulative Impacts

The potential impacts related to hydrology and storm water runoff are typically site-specific. Furthermore, the analysis determined that the implementation of the proposed Project would not result in significant impacts. As a result, no cumulative impacts are anticipated. No mitigation is required.

LAND USE AND PLANNING

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
11. LAND USE AND PLANNING. Would the Project:				
a) Physically divide an established community?			X	
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?			X	

a) Physically divide an established community?

Less than Significant Impact. An example of a Project that has the potential to divide an established community includes the construction of a new freeway or highway through an established neighborhood. The proposed Project would be located within an area zoned Residential Estate (R-E) and has a Very Low Density Residential (VLDR) General Plan designation; refer to ***Exhibit 3****, Existing Land Use and Zoning Designation*. Following the approval of the CUP, the proposed Project would be consistent with the land use and zoning designations. The Project site is currently undeveloped and is characterized by invasive grassland vegetation and highly disturbed sage scrub. The site is bounded single-family residential to the north, northeast, and west. Electrical transmission lines border the southern portion of the site, along Reservoir Road. Because the proposed Project would be a new residential development, it is compatible with the existing surrounding uses. Furthermore, the improved street connections, open space, and recreational amenities proposed by the Project would serve to bring the community together by providing a safe space to gather, rather than further divide the community. Additionally, the Project would complete the construction of Wabash Avenue which would provide north-south connectivity to I-10 and adjacent residential communities. Therefore, a less than significant impact would occur.

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?

Less than Significant Impact. The proposed Project would require a CUP to establish a subdivided residential community on the Project site, which is currently zoned residential estate (R-E). The CUP would ensure the proposed Project is compatible with the neighborhood, and consistent with the allowable land uses for the Project site. Additionally, the Project is consistent with surrounding land uses. Therefore, the Project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental

effect. Moreover, the Project would pay the appropriate development fees to cover any public infrastructure fees. As such, a less than significant impact would occur.

Standard Conditions

Standard Condition (SC-1)

Development Fee Policy - In accordance with the provisions of California Government Code Sections 66000 et. seq., all development projects as defined therein shall be required to pay development fees to cover 100% of their pro rata share of the cost of any public infrastructure, facilities or services, including without limitation police and fire services, necessitated as a result of such development. The City Council shall set and determine development fees sufficient to cover 100% of the estimated cost of such public infrastructure, facilities and services based on appropriate cost-benefit analyses as required by the provisions of California law.

Cumulative Impacts

The analysis of potential impacts indicated that less than significant impacts would result from the proposed Project's implementation. As a result, less than significant cumulative impacts related to land use and planning would occur.

MINERAL RESOURCES

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
12.	**MINERAL RESOURCES. Would the Project:**				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
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?				X

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?

No Impact. The Surface Mining and Reclamation Act of 1975 (SMARA) requires classification of land into mineral resource zones (MRZs) according to the known or inferred mineral potential of the area. Under SMARA, areas are categorized into MRZs as follows:

MRZ-1 Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.

MRZ-2 Areas where geologic data indicate that significant PCC-Grade aggregate resources are present.

MRZ-3 Areas containing known or inferred mineral occurrences of undetermined mineral resource significance.

The proposed Project is within MRZ-3, meaning the significance of mineral deposits contained within the area cannot be evaluated from available data.[14] Implementation of the proposed Project would not utilize mineral deposits or involve mining activities. Furthermore, the Project site is not located in an area identified as a locally important mineral resource recovery site, nor is it currently being utilized for mining. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource. No impact would occur.

Cumulative Impacts

The analysis of potential impacts indicated that no significant impacts would result from the proposed Project. As a result, no cumulative impacts related to mineral resources would occur.

[14] Redlands. 2017. *General Plan 2035, Figure 6-4: Mineral Resources*. Available at https://gis.cityofredlands.org/generalplan/gp2035.pdf, accessed February 12, 2022.

NOISE

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

Ganddini Group, Inc. prepared a Noise Impact Analysis for the Project (August 31, 2021); refer to **Appendix H**.

Noise-Sensitive Receptors

The Project site is bordered by single-family residential uses, Sophia Court, and Buckingham Drive to the west; single-family residential uses to the north; Reservoir Road and vacant land to the south; and vacant land to the east.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas.

Sensitive land uses that may be affected by Project noise include the single-family detached residential dwelling surrounding the Project site.

Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 2013 Class 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the Project area, five 15-minute daytime noise measurements were taken between 12:10 PM and 3:09 PM on November 22, 2019. Field worksheets and noise

measurement output data are included in Appendix C of the Noise Assessment included as **Appendix H** of this Initial Study.

As shown on **Exhibit 10**, *Noise Measurement Locations*, the noise measurements were taken near the residential uses located along Sophia Court (NM1), to the west of the Project site near the residential uses located along Buckingham Drive (NM2), to the northwest of the Project site near the residential uses located along Daisy Avenue (NM3), to the northeast of the Project site near the residential uses located along Panorama Drive (NM4), and west of Wabash Road near residential uses (NM5).

Table 18, *Short-Term Noise Measurement Summary (dBA),* provides a summary of the short-term ambient noise data. Short-term ambient noise levels were measured between 45.2 and 65.7 dBA Leq. The dominant noise sources were from vehicles traveling along I-10, Reservoir Road, and Buckingham Drive, barking dog, residential activities (i.e., gardeners, leaf blowers, and lawn mowers), and bird song.

Table 18: Short-Term Noise Measurements Summary

Daytime Measurements[1,2]								
Site Location	**Time Started (PM)**	**Leq**	**Lmax**	**Lmin**	**L(2)**	**L(8)**	**L(25)**	**L(50)**
NM1	12:10	60.3	66.8	54.8	63.3	62.4	61.0	60.0
NM2	2:54	60.2	83.7	39.0	66.2	55.5	48.6	43.1
NM3	12:56	45.2	56.7	42.2	50.2	47.4	45.1	44.2
NM4	1:40	49.0	63.7	42.2	59.5	51.3	46.0	44.7
NM5	2:20	65.7	77.7	60.9	67.7	67.1	66.2	54.4

Notes:
(1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.
(2) Noise measurements performed on November 22, 2019.

Regulatory Setting

State

State of California General Plan Guidelines 2017

Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally unacceptable" ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed project. The City of Redlands has adopted their own version of the State Land Use Compatibility Guidelines for land use planning and to assess potential transportation noise impacts to proposed land uses, see **Table 19**, *City of Redlands Noise/Land Use Compatibility Matrix*[1].

Table 19: City of Redlands Noise/Land Use Compatibility Matrix[1]

Land Use Categories		Community Noise Equivalent Level (CNEL)						
Categories	**Uses**	**<60**	**65**	**70**	**75**	**80**	**85>**	
Residential	Single Family, Duplex, Multi-Fam	A	C	C	C	D	D	D
Residential	Mobile Homes	A	C	C	C	D	D	D
Commercial – Regional, District	Hotels, Motels, Transient Lodging	A	A	B	B	C	C	D
Commercial – Regional, Village Dist., Special	Commercial Retail, Bank, Restaurant, Movie Theater	A	A	A	A	B	B	C
Commercial, Industrial, Institutional	Office Buildings, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial – Recreation Instructional – Civic Center	Amphitheater, Concert Hall, Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial - Recreation	Children's 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, School 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

Land Use Categories		Community Noise Equivalent Level (CNEL)						
Categories	**Uses**	**<60**	**65**	**70**	**75**	**80**	**85>**	
Residential	Single Family, Duplex, Multi-Fam	A	C	C	C	D	D	D
Residential	Mobile Homes	A	C	C	C	D	D	D
Agriculture	Agriculture	A	A	A	A	A	A	A
Zone A: Clearly Compatible - Specified land use is satisfactory, based up 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 a 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 reduction feature								
Zone D: Clearly Incompatible - New construction or development should generally not be undertaken.								
Notes: (1) Source: City of Redlands General Plan Noise Element (GP Table 9.1), 2010.								

California Environmental Quality Act

The California Environmental Quality Act Guidelines (Appendix G) establishes thresholds for noise impact analysis. The noise study includes analysis of noise and vibration impacts necessary to assess the project in light of the following Appendix G Checklist Thresholds.

State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

Local

City of Redlands General Plan 2035

The City of Redlands has adopted a modified version of the State of California Noise Land Use Compatibility Matrix (see **Table 19**). This Matrix establishes standards for outdoor noise levels that are clearly compatible, normally compatible, and normally incompatible for a variety of land uses. For example, for single-family residential uses, noise levels of up to 60 dBA CNEL are "clearly compatible." Additional City of Redlands General Plan goals and policies which apply to the proposed project are presented below.

Principles

Principle 7-P.41: Ensure that new development is compatible with the noise environment by continuing to use potential noise exposure as a criterion in land use planning.

Actions

7-A.135 Use the noise and land use compatibility matrix (see **Table 19**) and Future Noise Contours map (General Plan Figure 7-9) as criteria to determine the acceptability of a given land use, including the improvement/construction of streets, railroads, freeways, and highways. Do not permit new noise-sensitive uses—including schools, hospitals, places of worship, and homes— where noise levels are "normally unacceptable" or higher, if alternative locations are available for the uses in the City.

7-A.136 Require a noise analysis be conducted for all development proposals located where projected noise exposure would be other than "clearly" or "normally compatible" as specified in **Table 19**.

7-A.137 For all projects that have noise exposure levels that exceed the standards in Table 2, require site planning and architecture to incorporate noise-attenuating features. With mitigation, development should meet the allowable outdoor and indoor noise exposure standards in **Table 20**, *City of Redlands Interior and Exterior Noise Standards*. When a building's openings to the exterior are required to be closed to meet the interior noise standard, mechanical ventilation shall be provided.

Table 20: City of Redlands Interior and Exterior Noise Standards

Land Use Categories	Community Noise Equivalent Level (CNEL)	
	Interior[1]	Exterior[2]
Residential		
Single Family, Duplex, Multiple Family	45 [3]	60
Mobile Home	-	60 [4]
Commercial. Industrial, Institutional		
Hotel, Motel, Transient Lodging	45	65 [5]
Commercial Retail, Bank, Restaurant	55	-
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

Notes:
*CNEL (Community Noise Equivalent Level) - The average equivalent A-Weighted sound level during a 24 hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 PM to 10:00 PM and ten decibels to sound

Land Use Categories	Community Noise Equivalent Level (CNEL)	
	Interior[1]	Exterior[2]

levels at night after 10:00 PM and before 7:00 AM.

(1) Indoor environment excluding bathrooms, toilets, closest, corridors.

(2) Outdoor environment limited to private yard of single-family as measured at the property line; multi-family private patio or balcony which is served by a means of exit from inside; mobile home park; hospital patio; park picnic area; school playground; hotel and recreational area

(3) Noise level requirement with open windows, if they are used to meet natural ventilation requirement.

(4) Exterior noise level should be such that interior level will not exceed 45 CNEL.

(5) Except those areas affected by aircraft noise.

Thresholds

Criteria for determining the significance of noise impacts were developed based on information contained in the California Environmental Quality Act Guidelines Appendix G. According to the guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

1) 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.

2) Generation of excessive groundborne vibration or groundborne noise levels.

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

For purposes of this analysis and where applicable, the City and County noise standards were used for evaluation of Project-related noise impacts.

Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Model (2008). Transportation-source noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). For Project operations trip generation was updated to reflect that generated by the Project, as supplied by Ganddini Group, Inc. (2021).

Onsite stationary source noise levels have been calculated with the SoundPLAN 3D noise model (SoundPLAN of the Noise Impact Assessment), which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings, and barriers.

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment.

Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

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

Less Than Significant Impact with Mitigation.

Substantial increases in ambient noise levels are usually associated with Project construction noise (temporary) and Project operational noise (permanent).

Project Construction Noise

Construction noise sources are regulated within the City of Redlands Municipal Code Section 8.06.120 (G) and 8.06.090 which limit the hours of construction to between the hours of 7:00 AM and 6:00 PM, including Saturdays, with no activities taking place at any time on Sundays or federal holidays. Per the General Plan EIR prepared for the City of Redlands General Plan (2019), a substantial temporary increase in ambient noise levels from construction noise would be considered less than significant if construction activities comply with the City's Noise Control Ordinance in the Municipal Code, Section 8.06.090.

In addition to adherence to the City of Redlands Municipal Code, which limits construction hours and requires all motorized equipment to be equipped with functioning mufflers, Mitigation Measures NOI-1 through NOI-5 would be implemented to further reduce construction noise and vibrations, emanating from the proposed Project.

Project Operational Noise

On-site operational noise is usually only evaluated for commercial and industrial projects. Quantitative analysis of on-site operational noise is typically not conducted for residential projects as they usually do not include stationary noise sources that could result in substantial increases in ambient noise levels resulting in violation of established standards. Therefore, the evaluation of Project operational noise in this study is limited to the potential impacts associated with Project-generated vehicle traffic (off-site noise). Depending upon how many units are proposed and the existing noise environment, Project generated vehicle trips could result in substantial increases in noise levels.

Per the City's General Plan 2035 and for purposes of this analysis, increases in noise levels associated with Project generated vehicle traffic will be considered substantial if they either cause an increase of four or more dB if the resulting noise level would exceed the clearly compatible standards, as identified in **Tables 19** and **20**, or any increase of six dB.

Offsite Traffic Noise

The City's General Plan 2035 identifies a potentially substantial increase as either an increase of four or more dB, if the resulting noise level would exceed the clearly compatible standards, or any increase of six dB. To determine if Project traffic would result in a substantial increase in ambient noise levels, noise associated with Project generated vehicle trips were modeled for the existing and existing plus Project conditions utilizing FHWA Traffic Noise Prediction Model FHWA-RD-77-108 methodology. Project generated vehicle trips are anticipated to increase roadway noise between approximately 0.05 to 3.52 dBA CNEL. Therefore, a change in noise level would not be audible and would be considered less than significant.

Predicted increase in traffic noise levels associated with the Project would be less than City and County noise standards. A less than significant impact with mitigation implemented would occur.

Mitigation Measures

MM NOI-1: During all Project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

MM NOI-2: The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

MM NOI-3: Equipment shall be shut off and not left to idle when not in use.

MM NOI-4: The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

MM NOI-5: Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact with Mitigation.

As shown in **Table 21**, *Guideline Vibration Damage Potential Threshold Criteria,* the threshold at which there is a risk to "architectural" damage to historic and some older buildings is a peak particle velocity (PPV) of 0.25, at older residential structures a PPV of 0.3, and at new residential structures a PPV of 0.5. **Table 22**, *Guideline Vibration Annoyance Potential Criteria***,** shows that a PPV of 0.04 is the threshold at which groundborne vibration becomes distinctly perceptible in regard to annoyance. Impacts would be significant if construction activities result in groundborne vibration of 0.25 PPV or higher at a sensitive receptor.

Table 21: Guideline Vibration Damage Potential Threshold Criteria

Structure Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes:
Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 19, April 2020.
(1) Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 22: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Notes:
Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 20, April 2020.
(1) Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

In summary, if a vibratory roller is used within 20 feet of an existing structure or if a large bulldozer is used within 12 feet of an existing structure there will be some potential for this equipment to result in architectural damage and significant impacts. Therefore, a mitigation measure (MM) NOI-6 prohibiting the use of a vibratory roller within 20 feet or a large bulldozer within 12 feet of existing structures at 1760 Camelot Drive (to the north of the project site) and 731 Buckingham Drive (located to the west of the project site) would be applied. Vibration worksheets are provided in Appendix G of the Noise Report, provided as **Appendix H** of this Initial Study.

With incorporation of MM NOI-6, potential impacts related to architectural damage would be reduced to less than significant.

Annoyance to Persons

The primary effect of perceptible vibration is often a concern. However, secondary effects, such as the rattling of a china cabinet, can also occur, even when vibration levels are well below perception. Any effect (primary perceptible vibration, secondary effects, or a combination of the two) can lead to annoyance. The degree to which a person is annoyed depends on the activity in which they are participating at the time of the disturbance. For example, someone sleeping or

reading will be more sensitive than someone who is running on a treadmill. Reoccurring primary and secondary vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels are well below minimum thresholds for damage potential (California Department of Transportation, 2020).

As shown in **Table 22**, vibration becomes distinctly perceptible to people in buildings at a PPV of 0.04. The City of Redlands has prohibited 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 one hundred fifty feet (150 feet) from the source if on a public space or public right-of-way. The City of Redlands Municipal Code, Section 8.06.020, defines the vibration perception threshold as 0.01 inches per second (in/sec) RMS.

To assess the impact in terms of the City's vibration perception, the threshold of 0.01 inches per second (in/sec) RMS was converted to a PPV (0.014 in/sec) using the conversion factor of 0.71 which is provided in the Caltrans Transportation and Construction Vibration Guidance Manual (April 2020). Therefore, if a vibratory roller is used within 150 feet of an existing structure or if a large bulldozer is used within 85 feet of an existing structure, there will be some potential for vibration related annoyance.

Perceptibility of construction vibration would be temporary and would only occur while vibratory equipment is utilized within 150 feet of the existing structures. Furthermore, implementation of MM NOI-6 intended to avoid structural damage would reduce impacts related to annoyance at the residential uses located at 1760 Camelot Drive and 731 Buckingham Drive. Additionally, construction of noise barriers as identified in **Exhibit 11**, Future Traffic Noise Levels with Mitigation (65 dBA CNEL) and part of MM NOI-7, would help reduce impacts to less than significant.

Mitigation Measures

MM NOI-6: The use of vibratory rollers, or other similar vibratory equipment, within 20 feet or a large bulldozer within 12 feet of existing structures at 1760 Camelot Drive (to the north of the project site) and 731 Buckingham Drive (located to the west of the Project site) is prohibited.

MM NOI-7: Barriers ranging between six and fifteen feet high along southern lot lines and lot lines adjacent to Wabash Avenue shall be constructed as shown on **Exhibit 11**, Future Traffic Noise Levels with Mitigation (65 dBA CNEL). The barriers shall reach the ground surface and be solid with no holes or cracks. The wall material shall provide at least 20 dB in sound transmission loss. Concrete block walls typically provide this amount of transmission loss.

MM NOI-8: At the time final grading is completed, prepare a final noise study to verify barrier mitigation and determine needed sound transmission class (STC) rating.

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

Less than Significant Impact. The Project site is located approximately 3.0 miles south of the Redlands Municipal Airport. The Project site is located outside of the 60 dBA CNEL noise contour per the Airport Hazards Map in the City's General Plan Healthy Community Element. As such, the Project would not expose people to excessive noise levels. Implementation of the Proposed Project would not affect airport operations nor result in increased exposure of noise-sensitive receptors to aircraft noise. As such, a less than significant impact would occur.

Cumulative Impacts

Cumulative Construction Noise

Construction activities associated with the proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the proposed Project was determined to be less than significant, following compliance with the City Municipal Code. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable City Municipal Code limitations on construction. Therefore, the Project would not contribute to cumulative impacts during construction.



Legend

NM 1 Noise Measurement Location

Source: Ganddini Group, Inc. (2021) Noise Impact Analysis

Exhibit 10: Noise Measurement Locations

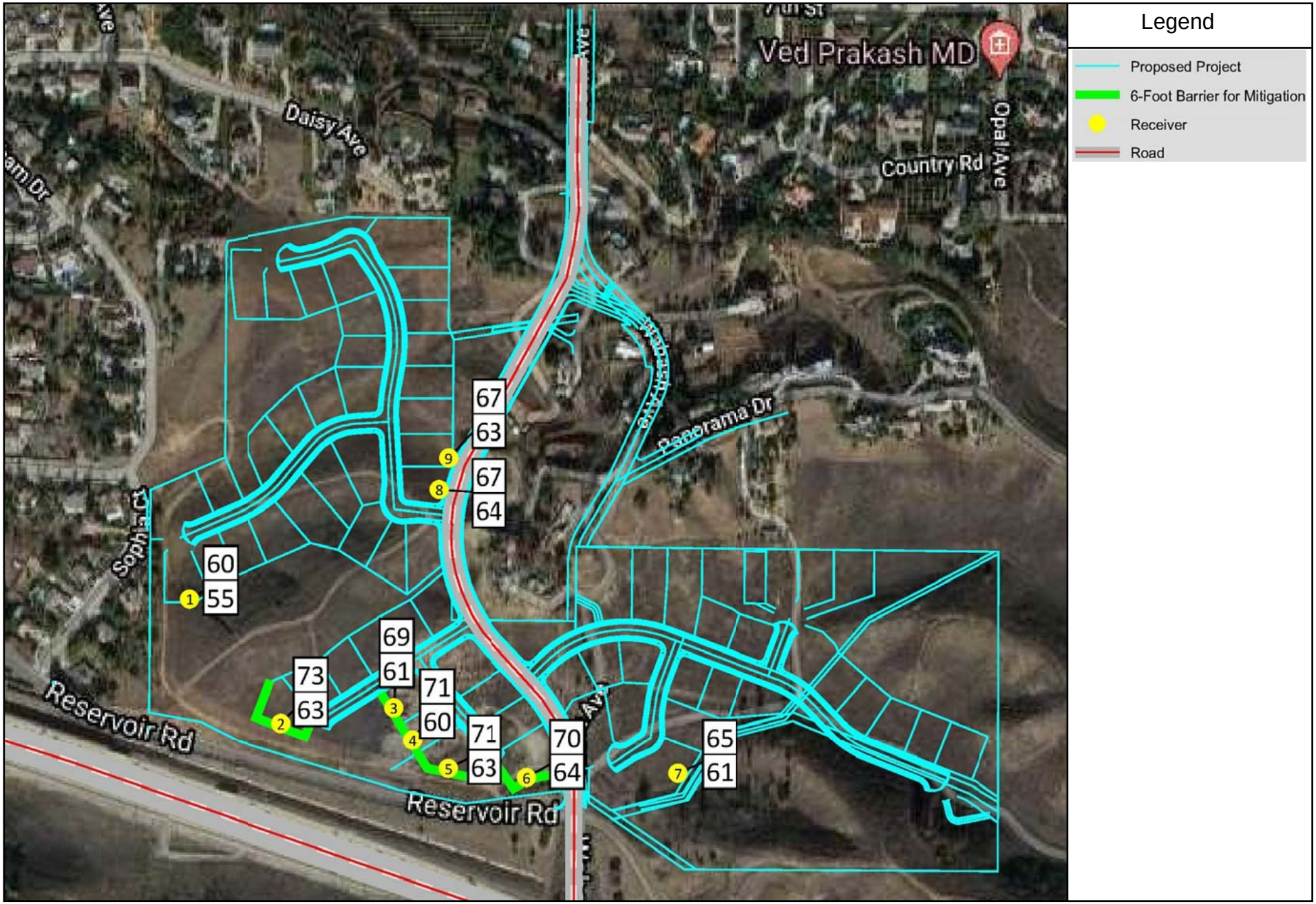
City of Redlands

Crest Grove Project

Not to Scale

Kimley»Horn

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Source: Ganddini Group, Inc. (2021) Noise Impact Analysis

Exhibit 11: Future Traffic Noise Levels with Mitigation (65dBA CNEL)
City of Redlands
Crest Grove Project

Not to Scale

Kimley»Horn

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POPULATION AND HOUSING

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
14. POPULATION AND HOUSING. Would the Project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

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

Less than Significant Impact. As of 2019, the population in the City of Redlands was 71,839 residents, with 27,045 housing units.[15] Population and housing projections anticipate that population will grow to approximately 85,500 residents and housing unit to 32,400 units by 2040. The City of Redlands has vacancy rate of 6.6 percent with approximately 2.71 persons per household.[16]

The proposed Project involves the development of a new residential community consisting of 67 single-family homes. The Project would also include the construction or the extension of roads. The Project would generate operational construction employment and could bring population that would come from within and outside the City of Redlands. The Project itself would not create long-term employment; however, many of those new residents have the potential to be new employees in and around the City.

Projected employment densities for various land uses vary widely, depending on the location and actual business activities. The unemployment rate in San Bernardino County from 2015 to 2040 will see an approximately 1.3 percent change, or approximately 299,000 new jobs, which is the second-highest in the region behind Riverside County (SCAG 2016). Thus, it is expected that the Project construction activities would utilize workers from the regional labor force and would not attract new workers into the region specifically for the construction of the site. As previously

[15] DOF. 2020. Table 2: E-5 City/County Population and Housing Estimates, 1/1/2019. Available at http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/, accessed February 12, 2020.
[16] SCAG. 2016. *2016-2040 RTP/SCS, Demographic and Growth Forecast Appendix*.

noted, both the City of Redlands and the County of San Bernardino anticipate population and employment growth by 2040.

Based on California Department of Finance (DOF) rates for the City of Redlands, the Project is anticipated to generate approximately 182 residents within this new community. The Project would represent approximately 0.002 percent of the City's housing stock and population in 2040 considering the projected growths, as noted above.

Therefore, the Project is consistent with City and County population and housing growth projections. The Project would not induce substantial *unplanned* population and housing and a less than significant impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project is vacant, and no housing exists on-site; therefore, no impacts would occur, and mitigation would not be necessary.

Cumulative Impacts

The proposed Project would help the City meets its 2021-2029 6th Cycle Regional Housing Needs Allocation (RHNA) requirement for additional housing of 3,526 housing units. With the additional 67 single family dwelling units proposed the Project, the City would be closer to meeting the 6th Cycle RHNA requirement. No other impacts aside from those assessed in this document would occur.

PUBLIC SERVICES

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
15. PUBLIC SERVICES. Would the Project:				
a) 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:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	

a) 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:

i) Fire protection?

Less Than Significant Impact. The City of Redlands is served by the RFD, and unincorporated portions of the Project area are served by the San Bernardino County Fire Department and CAL FIRE. Adjacent National Forest lands are served by the U.S. Forest Service. The City of Redlands has four stations, and most of Redlands can be reached by RFD within a four-minute response time. The majority of Redlands is well-served by the four RFD fire stations, while the outer edges of the Project area may receive faster response times from surrounding jurisdictions. The proposed Project site would be served by Fire Station 262, located at 1690 Garden Street, which is approximately 1.0 mile southwest of the Project site.

Redlands' fire service responsibilities extend beyond fire suppression to include a range of paramedic, technical rescue, hazardous materials, and lifeline services. Approximately 75 percent

of RFD calls (more than 8,000 calls annually) are for medical services. The RFD also responds to about 650 traffic collisions each year. While the plurality of emergencies is medical emergency related, staff hours spent on non-medical emergency responses make up the majority of hours spent on all emergencies. The RFD has automatic mutual aid agreements with all surrounding fire agencies. The City's agreements with Loma Linda Stations 251 and 252 (to the west) and San Bernardino County Fire (Mentone Station 9 to the east, City of San Bernardino Station 228 and 231 to the northwest) are facilitated by a consolidated dispatch center operated by CONFIRE. CONFIRE is a multi-agency organization that functions as the result of a 25-year Joint Powers Agreement for the collective provision of fire, rescue, and emergency medical dispatch services.[17]

According to the General Plan (GP) 2035, additional public facilities identified on the GP, including fire stations are anticipated to adequately serve the additional population Projected at the anticipated GP buildout year 2035. Development impact fees paid by the Project would be partially allocated for fire services and new fire stations and equipment. Therefore, impacts would be less than significant.

ii) Police protection?

Less Than Significant Impact. Public safety services in Redlands are provided by the Redlands Police Department. The main police station is located at 1270 West Park Avenue, with four other divisions located Citywide. In 2015, the Department had an average response time of 6.5 minutes for police services and a service ratio of 1.1 officers per 1,000 residents. The nearest police station is located at 406 Orange Street, which is approximately 3.0 miles northwest of the Project site. This station staffs patrol officers, custody services, dispatch services, and records services. Development impact fees paid by the Project would be partially allocated for police services and new police stations and equipment. As noted above, according to the GP 2035, additional public facilities identified on the GP, including police stations are anticipated to adequately serve the additional population Projected at the anticipated GP buildout year 2035. Therefore, impacts would be less than significant.

iii) Schools?

Less than Significant Impact. The Project site is located within the boundaries of Redlands Unified School District. The closest schools to the Project site are Mission Elementary School, located at 10568 California Street, and Redlands Academy located at 820 W. Stuart Avenue, both located approximately 3.0 miles northwest of the Project site. As previously discussed, the Project would include the development of 67 single-family residential dwelling units. This new residential community could bring 182 residents[18] that could be made up of new City residents, but also existing residents relocating from within the City of Redlands.

[17] General Plan 2035. *Fire Hazards, page 7-21*.
[18] DOF. 2020. Table 2: E-5 City/County Population and Housing Estimates, 1/1/2019. Available at http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/, accessed February 18, 2020.

This population increase was estimated throughout the Department of Finance's E-5 Table referenced previously. The Project Applicant would be required to pay development impact fees that would be dispersed to the school district to offset any potential impacts. Therefore, impacts would be less than significant, and no mitigation is required.

iv) Parks?

Less Than Significant Impact. The closest park to the Project site is Ford Park located at 955 Parkford Drive, located approximately 1.0 mile west of site. Although the Project would add population growth that could require some use of parks, the Project would include approximately 28.16 acres of active common and private open space to be utilized by the residents for recreational purposes. As such, the Project is not anticipated to substantially alter existing parks or require the construction of new parks. Therefore, less than significant impacts would occur.

v) Other public facilities?

Less Than Significant Impact. Other public facilities in the area such as health care, production, commercial, retail, etc., would not be adversely impacted because the proposed Project is consistent with the City of Redlands GP. As discussed above, the site is currently designated as Residential Estates (R-E). The proposed Project would amend the current R-E zoning district to add a Planned Residential Development (PRD) to have a R-E/PRD zoning district which would allow for a new residential development. Upon approval of the zoning district amendment, the proposed Project would be consistent with the local zoning requirements and would be consistent with City Zoning Maps. As noted in Threshold 14(a), the City's population is anticipated to grow to 85,500 residents by year 2040. As such, the population increase from the Project is consistent with the General Plan. Therefore, impacts would be less than significant, and no mitigation is required.

Standard Conditions and Requirements

The Project Applicant would comply with the City of Redlands development impact fee requirements for the applicable fire, police, and school district, if applicable.

Cumulative Impacts

The proposed Project is projected to have an increase in immediate population. This would increase the need for public services such as fire and police protection. Schools would see an increase in attendance due to the new development. Parks would have a minor increase in usage due to the implementation of onsite open space within the Project. This would result in less maintenance impacts of nearby parks, such as nearby Ford Park. Because the Project is consistent with current GP and upon approval of the zoning district amendment, the Project would not result in incremental effects to public services or facilities that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future Projects. The Project would not result in cumulatively considerable impacts to public services or facilities.

RECREATION

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
16. RECREATION. Would the Project:				
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?			X	
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

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. The City of Redlands Parks Division maintains 18 established parks, which comprise over 253 acres of land, and all median islands along City streets. They also maintain the grounds surrounding a number of City facilities such as the Civic Center. The nearest neighborhood park is Ford Park located 1.0 mile west of the Project site.

Ford Park is an approximately 27-acre park with a duck pond, picnic areas, lighted tennis courts and Redlands Dog Park. The rest of the City parks consists of active, passive, and natural open space. The proposed Project would include 67 residential units and would increase the population of the immediate area. However, the development would include approximately 28 acres of active common and private open space. With the addition of the provided common active private and open space, the Project would result in a less than significant impact.

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

No Impact. As noted above, the Project would include the recreational open and private space. The effects of the development of these facilities are discussed throughout this document. The impact of the recreational facilities as a standalone feature would not create impacts.

Cumulative Impacts

The Project would not result in an increased use of recreational facilities or require construction or expansion of existing recreational facilities. Therefore, no cumulative impacts on recreational facilities would result from Project implementation.

TRANSPORTATION

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

Ganddini Group, Inc. prepared a Traffic Impact Analysis for the Project (August 13, 2021), and a Vehicle Miles Traveled Screening Analysis (July 28, 2021); refer to **Appendix I** and **Appendix J**, respectively.

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The proposed Project was evaluated to determine if it would likely conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) or generate pedestrian, bicycle, or transit travel demand that would not be accommodated by transit, bicycle, or pedestrian facilities and plans. The City of Redlands adopted the City of Redlands Bicycle Master Plan in January 2015, which documents the trail circulation network. Additionally, the General Plan Bike Routes are shown on **Exhibit 12**, *City of Redlands General Plan Bike Routes*. As shown on **Exhibit 12**, there are no existing bike routes along the Project frontages. The General Plan indicates that both Wabash Avenue and Reservoir Street are planned bike routes. However, it is not known when this will take place. As such, the Project would not conflict with a bicycle plan. Currently, the Project site does not have fully built pedestrian facilities along its roadway frontage.

As part of the Project implementation, fully built pedestrian facilities would be provided along the Project frontages which would increase pedestrian connectivity within the Project and through the Project as Wabash Avenue will be realigned, and pedestrian facilities will also be provided. Although the City is served by Omnitrans with transit service, the Project area is not currently served by any transit routes. Project construction is not anticipated to conflict with

transit services. The impact on transit, pedestrian or bicycle facilities is determined to be less than significant.

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

Less Than Significant Impact. This section presents the Vehicle Miles Travelled (VMT) assessment for the Project for compliance with SB 743 and current CEQA requirements.

Background

California Department of Transportation

As stated in the Vehicle Miles Focused Transportation Impact Study Guidelines (State of California, May 20, 2020), "California Department of Transportation (Caltrans), will review the lead agency VMT thresholds for consistency with OPR's recommendations for the state reduction in Vehicle Miles Traveled (VMT) and greenhouse gas emissions (GHG). For consistency with local requirements, the VMT assessment will follow the local lead agency specified guidelines prepared in accordance to state standards. Additional information and a detailed Project assessment are provided in the VMT section presented below in this report and as **Appendix J** to this Initial Study.

Additionally, as stated in the Interim Local Development and Intergovernmental Review - Safety Review Practitioners Guidance, the purpose of the safety review to identify safety impacts based on locations which may be significantly affected by the proposed project and review for potential conflicts or safety mitigation measures.

California SB 743 directed the State OPR to amend the CEQA Guidelines for evaluating transportation impacts to provide alternatives that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of VMT as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Agencies may currently opt-in to apply the updated CEQA guidelines for VMT analysis and implementation was required State-wide by July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Technical Advisory on Evaluating Transportation Impacts in CEQA ["Technical Advisory"] provides technical

considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The VMT analysis has been prepared in accordance with City of Redlands CEQA Assessment VMT Analysis Guidelines. These guidelines establish the VMT methodology and thresholds of significance for assessing VMT impacts in the City of Redlands.

Project Screening

The City of Redlands VMT guidelines identify three types of screening criteria that lead agencies can apply to effectively screen projects from project-level assessment. They are as follows:

Transit Priority Area (TPA) Screening

A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Projects located within a TPA may be presumed to have a less than significant impact absent evidence to the contrary. The presumption may not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the Project is located within a TPA. The Project site is not located within a TPA based on the SBCTA VMT Screening Tool Assessment, and does not meet this criteria.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population (population plus employment) that is similar to the existing land uses in the low VMT area. A low VMT area is defined as an individual traffic analysis zone (TAZ) where the total daily Origin/Destination VMT per service population is 15 percent below the County of San Bernardino regional average total daily Origin/Destination VMT per service population.

The SBCTA VMT Screening Tool was used to assess low VMT area screening for the Project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual TAZs within the SBCTA region.

TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

The proposed Project is consistent with existing land uses in the TAZ since the proposed Project is residential, and there does not appear to be anything unique about the Project that would otherwise be misrepresented utilizing the data from the SBCTA VMT Screening Tool. In accordance with the City VMT Guidelines, a low VMT area is defined as a TAZ where the total daily Origin/Destination VMT per service population is 15 percent below the County of San Bernardino regional average total daily Origin/Destination VMT per service population; refer to **Exhibit 13**, *SBCTA VMT Screening Tool Results for the Project*, shows the SBCTA VMT Screening Tool results for the Project site.

Based on the City of Redlands guidelines, low VMT screening analysis was performed for the Project using the SBCTA Screening Tool for origin-destination VMT per service population, a 2021 baseline year, and a threshold of 15 percent below the San Bernardino County regional average VMT per service population. The Project is located in TAZs 53840401 and 53846202, which produce a VMT per service population of 28.5 that is above the San Bernardino County regional average of 27.3 VMT per service population. The Project VMT exceeds the screening threshold based on jurisdictional average 15 percent threshold of 27.3. Therefore, as shown on **Table 23,** *VMT Threshold*, Therefore, the proposed Project does not satisfy the low VMT area screening criteria.

Table 23: VMT Threshold

Metric	Project	Thresholds	
	(TAZ 53840401 / 53846202)	Jurisdictional VMT (SBCTA)	15% Below Jurisdictional Average
Total VMT / SP	28.5	32.1	27.3
Project VMT less than Threshold?	--	No	No

Notes:
Source: SBCTA VMT Screening Tool
VMT = Vehicle Miles Traveled; SP = Service Population

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects with stores less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel. In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools
- Local Parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g., non-destination hotels)
- Student housing projects on or adjacent to a college campus
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (public libraries, fires stations, local government)
- Local-serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)

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**
- Multi-family residential (1-2 stories) – 232 dwelling units or fewer
- Multi-family residential (3+ stories) – 299 dwelling units or fewer
- Office – 59,100 square feet or less
- Local-serving retail center – 112,400 square feet or less (no stores larger than 50,000 square feet)
- Warehousing – 463,400 square feet or less
- Light industrial – 74,600 square feet or less

Since the proposed 67 dwelling units are fewer than the screening threshold of 167 dwelling units for single family residential uses, the proposed project satisfies the project type screening criteria established by the City of Redlands and the Project can be presumed to result in a less than significant VMT impact.

VMT Assessment Conclusion

The proposed Project satisfies the City-established project type screening for single-family residential developments of 167 dwelling units or less and may be presumed to result in a less than significant VMT impact.

The following improvement is recommended to alleviate the Project-related deficiency at the substantially impacted intersection during the peak hours for Existing Plus Project conditions:

- Ford Street (north-south) at Reservoir Road (east-west) - #1
    - Install a traffic signal

The proposed Project is forecast to result in no substantial operational deficiencies at the study intersections during the peak hours for Existing Plus Project conditions with implementation of the recommended improvement.

Since the recommended improvement at the intersection of Ford Street and Reservoir Road is necessary to address the worsening of an existing deficiency, it is not equitable for the proposed Project to be financially responsible for the total cost of the improvement; rather, the Project should only be responsible for its share of the deficiency (e.g., Project trips divided by Existing Plus Project volume entering the intersection). If the recommended improvement is included the City of Redlands Development Impact Fee program, then payment of the Project's Development Impact Fees would address the Project's share of the impact at this intersection. Based on Measure U requirements, however, the recommended improvements must occur prior to Project opening. Therefore, if the recommended improvements are not scheduled for construction through the Development Impact Fee program prior to Project opening, the proposed Project may be required to sponsor the improvements and request a Development Impact Fee credit, reimbursement agreement, or wait until the improvements are constructed by the City or other developments.

As is the case for any roadway design, the City of Redlands would periodically review traffic operations in the vicinity of the Project once the Project is constructed to assure that the traffic operations are satisfactory. A less than significant impact is anticipated.

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

No Impact. The City of Redlands implements development standards designed to ensure standard engineering practices are used for all improvements. The proposed Project would be reviewed for compliance with these standards as part of the City's review process. Although the Project would introduce new roadways, no hazardous geometric design features would be proposed as part of the Project design or implementation. Finally, there will be no incompatible or hazardous uses associated with the Project. Therefore, no impact will occur, and no mitigation is necessary.

d) Result in inadequate emergency access?

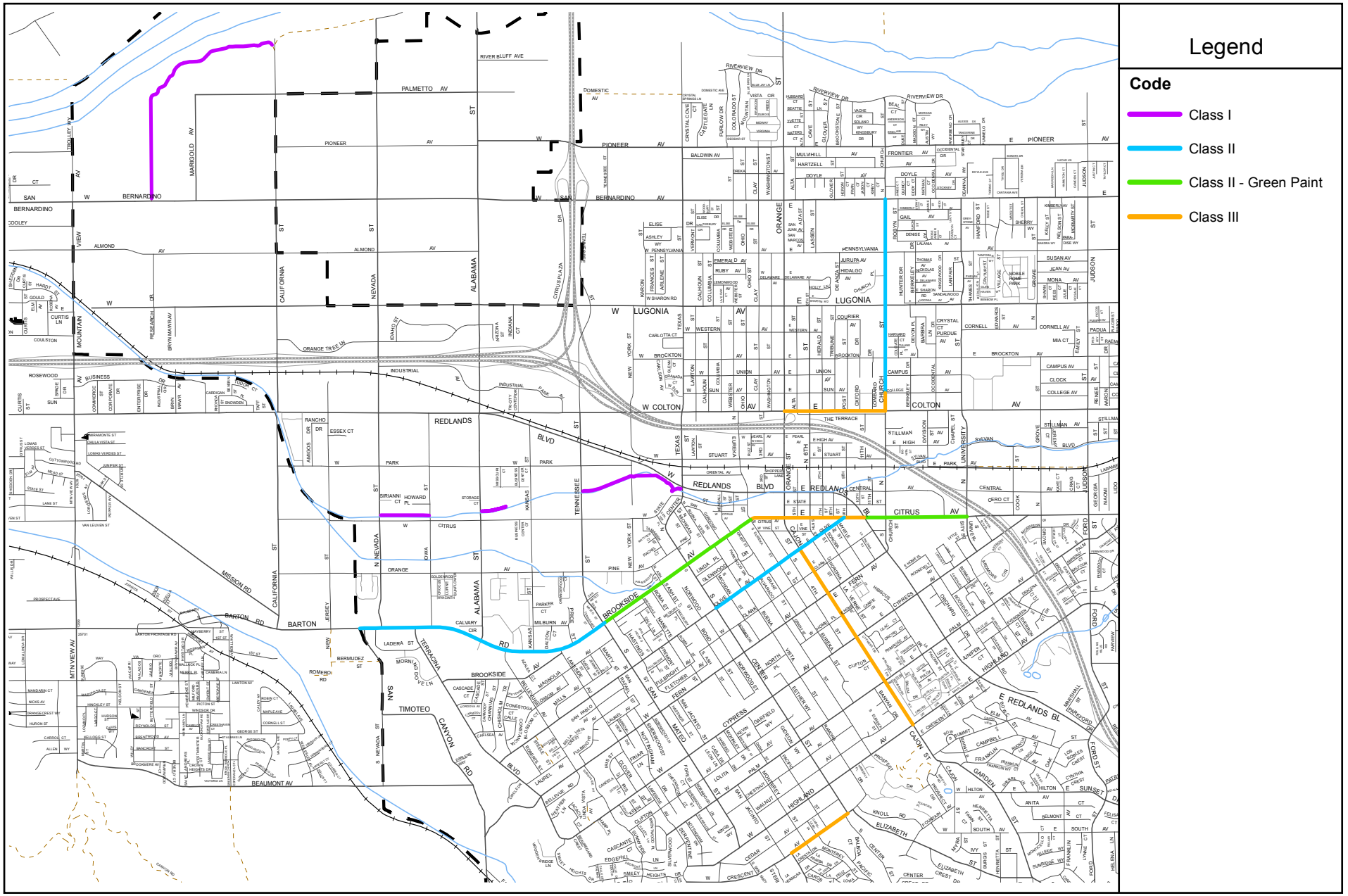
Less Than Significant Impact. Emergency ingress and egress is available via the realignment of Wabash Avenue, Reservoir Street, and the new local streets. The Project would provide ample ingress and egress opportunities that ensure that emergency vehicles have an unobstructed access and movement throughout the Project site. All streets will be publicly accessible and designed to standard.

As a standard City practice, if road closures (complete or partial) are necessary, the Police and Fire Departments would be notified of the construction schedule and any required detours would allow emergency vehicles to use alternate routes for emergency response. The RFD would review the proposed Project and would provide comments regarding fire and emergency access. The proposed Project would comply with the RFD requirements. The impact on emergency access from Project implementation would be less than significant.

Cumulative Impacts

As noted above, the Project is not subject to generate traffic impacts with compliance to the standard requirement which would install a traffic signal at intersection No. 1. Additionally, to minimize cumulative impacts to existing roadways, the Project proposes internal residential streets that will intersect Wabash Avenue to provide full access at three new intersections. Project will construct Wabash Avenue from Reservoir Road through the Project site at its ultimate alignment and full-section width (72 feet right-of-way), including parkway improvements and two travel lanes in each direction. Additionally, future projects in the City or vicinity of the Project site would be subject to conducting a traffic and vehicle miles traveled analysis that should dictate the level of mitigation each project should implement to minimize project specific impacts.

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Source: City of Redlands. (2015) Bicycle Master Plan

Exhibit 12: City of Redlands General Plan Bike Routes

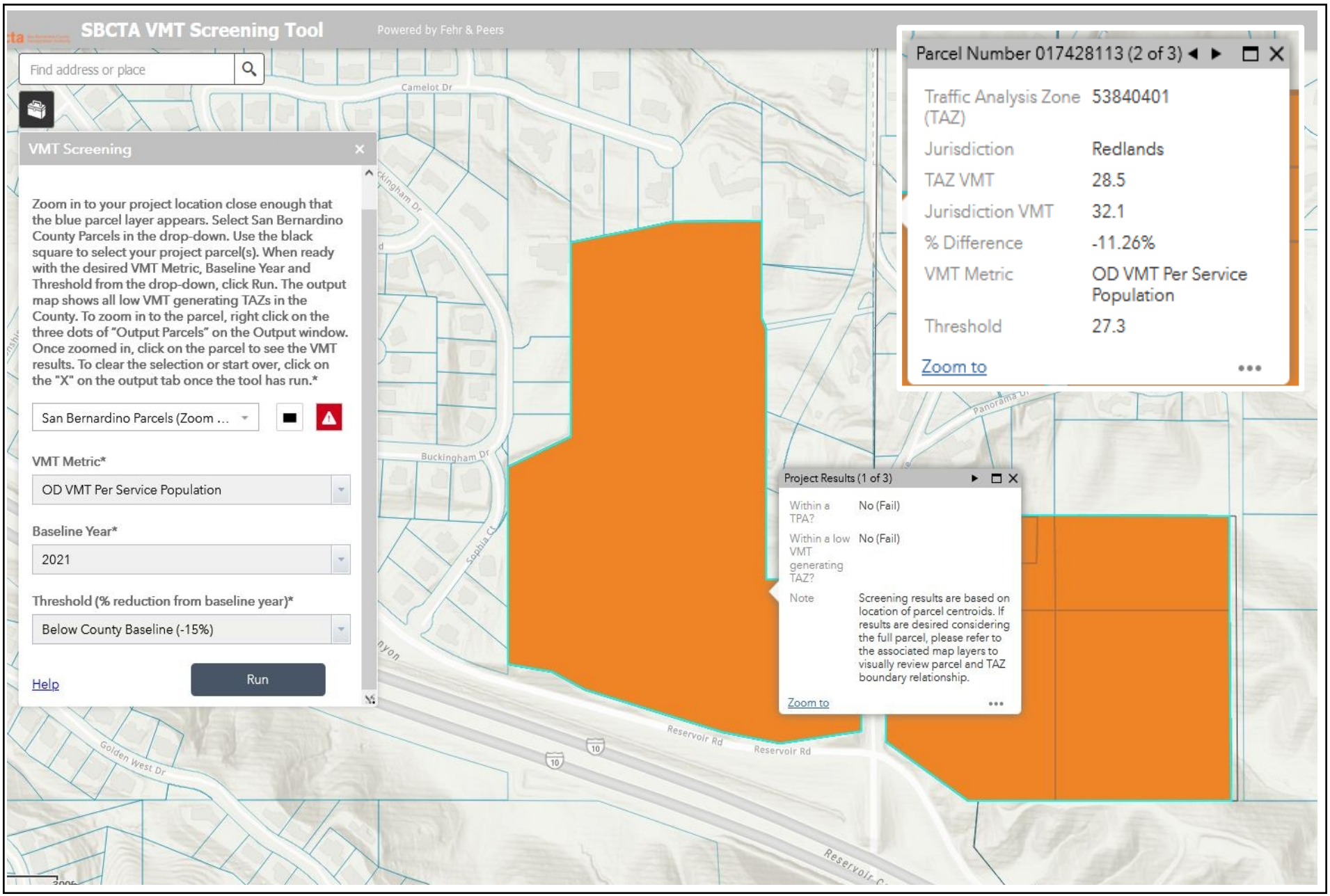
City of Redlands

Crest Grove Project

Not to Scale

Kimley»Horn

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Source: Ganddini Group, Inc. (2021) Vehicles Miles Traveled Screening Analysis

Exhibit 13: SBCTA VMT Screening Tool Results for the Project
City of Redlands
Crest Grove Project

Not to Scale

Kimley»Horn

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TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
18. TRIBAL CULTURAL RESOURCES. Would the Project:				
a) 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:				
i) 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)?		X		
ii) 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?		X		

i) 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)?

ii) 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 Impact with Mitigation.

As of July 2015, California AB 52 was enacted and expands CEQA by defining a new resource category, "Tribal Cultural Resources." AB 52 requires Lead Agencies to evaluate a project's potential to impact tribal cultural resources. Such resources include "sites, features, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe and is 1) listed or eligible for listing in the California Register of Historical Resources (CRHR) 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."

On October 14, 2021, the City provided written notices to interested California Native American tribes on the City's list consistent with AB 52. The following Native American tribes were notified: the Gabrieleño Band of Mission Indians – Kizh Nation, San Manuel Band of Mission Indians (San Manuel), Soboba Band of Luiseño Indians, Torres Martinez Desert Cahuilla Indians, and the Morongo Band of Mission Indians.

Written responses were received from San Manuel on October 27, 2021 and from Gabrieleno Band of Mission Indians - Kizh Nation – on November 29, 2021. Consequently, consultation began with San Manuel on October 27, 2021 and with Gabrieleno Band of Mission Indians - Kizh Nation, on December 1, 2021. While the Gabrieleño Band of Mission Indians – Kizh Nation indicated that the project is within the tribe's ancestral territory, the tribe deferred the project to other consulting tribes on July 27, 2022 and subsequently closed consultation on July 28, 2022. During consultation, the San Manuel Band of Mission Indians indicated that the project site is within the tribe's ancestral territory; however, on April 18, 2022, the tribe indicated that they did not have any concerns with the project's implementation and requested Mitigation Measures TCR-1 and TCR-2 be applied to the development in order to ensure that impacts would not occur. As previously noted, the Cultural Resources Assessment did not find cultural/historical resources that could be associated with tribal cultural resources. Additionally, the City has not been provided with any other specific information or evidence regarding the potential for any tribal cultural resources to occur on or near the Project site; therefore, no potentially significant impacts are anticipated. However, the City has agreed to implement those mitigation measures requested by the consulting tribe to ensure that any inadvertent discovery during construction activities (however unlikely) will remain at a level that is less than significant. As a result of the tribal consultations, Mitigation Measures TCR-1 and TCR-2 are proposed to be implemented which would help reduce or avoid impacts to less than significant level regarding tribal cultural resources.

Mitigation Measures:

MM TCR-1 The San Manuel Band of Mission Indians shall be contacted, as detailed in Mitigation Measure CR-1, of any pre-contact and/or historic-era 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. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resource Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with the San Manuel Band of Mission Indians, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents the San Manuel Band of Mission Indians for the remainder of the Project,

should the San Manuel Band of Mission Indians elect to place a monitor on-site.

MM TCR-2 Any and all archaeological/cultural 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 the San Manuel Band of Mission Indians. The Lead Agency and/or applicant shall, in good faith, consult with the San Manuel Band of Mission Indians throughout the life of the Project.

With implementation of MMs TCR-1 and TCR-2, a less than significant impact would occur on tribal cultural resources.

Cumulative Impacts

The proposed Project would result in no significant impacts to historical, known tribal cultural resources with implementation of mitigation measures TCR-1 and TCR-2. The chances of cumulative impacts occurring as a result of Project implementation plus implementation of other projects in the region is not likely since all proposed projects would be subject to individual project-level environmental review. Since there would be no project-specific impacts and due to existing laws and regulations in place to protect tribal cultural resources, the potential incremental effects of the proposed Project would not be cumulatively considerable.

UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
19. UTILITIES AND SERVICE SYSTEMS. Would the Project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
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?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Local Water Supply

The Redlands Planning Area domestic water sources consist of both surface (about 50 percent of total supply) and groundwater (about 50 percent of total supply). The City is entitled to surface water from both Mill Creek and the Santa Ana River. Mill Creek water is treated at the Henry Tate Water Treatment Plant, located northeast of the City. Water then flows by gravity from the Tate Treatment Plant to the City's distribution system. Santa Ana River water is treated at the Horace Hinckley Surface Water Treatment Plant, located northeast of the City.

Imported Water

Imported State Water Project (SWP) water is available to the Planning Area. The San Bernardino Valley Municipal Water District (SBVMWD) has an entitlement of about 102,600-acre feet a year of SWP water. The City of Redlands may purchase SWP water, which is conveyed eastward to the

Planning Area via the 17-mile Foothill Pipeline. SWP water is treated at the City's Hinckley Plant or infrequently at the Henry Tate Water Treatment Plant.

Groundwater

The City of Redlands uses 18 wells that pump directly into the system or into reservoirs. All of these wells are adequately separated from sewerage facilities and are free from serious flooding hazard. Although the City's domestic water wells constitute about 50 percent of the water supply, some of the wells require treatment. Because of contamination, the City has wells that are not used for domestic purposes and are instead used for irrigation. It is anticipated that the contaminant levels will not decrease for many years due to the slow movement of water through the basin. However, non-treated nitrate-contaminated water not suitable for human consumption can be used for irrigation (non-potable system). The source of this contamination is typically due to agricultural nitrates and would require costly treatment if the wells were to be used for domestic purposes.

Water Infrastructure

Redlands 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. Additionally, there are 30 miles of existing non-potable water pipeline and one non-potable reservoir planned for construction. Redlands owns other facilities that are currently not in use due to age, contamination, or other factors.

Recycled Water

Currently, the City produces recycled water capable of being used for irrigation and industrial uses. The City's wastewater treatment plant (WWTP) has the capability of treating to a tertiary level of 7.2 million gallons of wastewater each day, which is greater than the average flow of approximately 5.6 million gallons per day (mgd). Currently, the City supplies recycled water to the Southern California Edison Company (SCE) that is used for cooling water at its Mountain View Power Plant (MVP), to the City landfill for the purpose of dust control, and to businesses in the northwest portion of the City service area for irrigation purposes.

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

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?

Less Than Significant Impact.

Several improvements are planned in support of the proposed development including street and drainage improvements, above-ground stormwater quality/detention and debris basins, underground stormwater quality/retention storage chambers, and water/sewer systems to serve the proposed community.

Expanded and Wastewater Treatment

Most wastewater generated by sewered development within the City is treated at the City's WWTP on the south side of the Santa Ana River wash at Nevada Street. Average flow is about 5.6 million gallons per day (mgd). Secondary treatment capacity is about 9.5 mgd, which will allow for anticipated growth of the City over the next 20 years, as of 2017.[19] According to the General Plan, there would be available wastewater and sewer capacity to treat growth, including the proposed Project. Therefore, impacts are less than significant.

Stormwater

Stormwater runoff would be conveyed to above-ground infiltration basins and underground stormwater chambers via the proposed streets and storm drain facilities. After being retained in these chambers, storm flows would be discharged via existing storm drain line on Reservoir Road and Wabash Avenue. Additionally, the proposed Project would direct runoff from impervious areas to adjacent landscaping.

Proposed low impact development (LID) site design, LID BMP, and additional on-site or off-site retention BMP would result in an increase in the time of concentration and a reduction in peak runoff. Additionally, the BMP facilities implemented by the proposed Project would improve water quality. Impacts are less than significant. Stormwater drainage improvements would not exceed the capacity of storm drain systems, in accordance with the County MS4 Permit.

Electricity and Natural Gas

Utility improvements as part of Project implementation would include utility expansion within the site as well as improvements associated with the reconstruction of Wabash Avenue. Construction impacts of utility installation will be temporary and are not anticipated to result in significant environmental impacts as they will be within currently paved and/or developed areas and public rights-of-way. No long-term significant environmental impacts are anticipated due to this utility construction.

Overall, impacts were found to be less than significant.

[19] Redlands. 2017. *General Plan 2035, page. 4-43.*

b) 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. The City and the Project site are provided water services by the City's Municipal Utilities Department, which uses water from the Upper Santa Ana River Watershed (USARW). According to the Integrated Regional Water Management Plan (IRWMP) for the USARW, the USARW is highly dependent on local water supplies, specifically precipitation stored as groundwater. This provides approximately 67 percent of supplies during average years and over 70 percent of supplies during drought years. The IRWMP determined that the water supplies within the USARW are adequate to meet the demands of the region through 2035. However, it should be noted that the IRWMP analysis relied on the 20 percent by 2020 reduction in water demand as a result of Senate Bill X7-7 and the conservation efforts of agencies within the region.

Because the Project proposes the development of a vacant site, the Project is anticipated to utilize more water than existing conditions. The Project also necessitates the expansion of water and sewer utilities within the Project site to service the proposed residential homes. The City of Redlands 2020 Urban Water Management Plan (UWMP) shows the City's ability to meet water demand in the future during normal, dry, and multiple dry years and taking into account population growth that would include the proposed Project.[20] Therefore, the proposed Project would have sufficient water supplies through the buildout year of the General Plan in 2035. Impacts would be less than significant.

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?

Less Than Significant Impact. The City's California Street Landfill is currently being planned and permitted to provide capacity to approximately the year 2031. The remaining capacity of the landfill is estimated to be about five million cubic yards/tons. Current average daily tonnage is estimated by the City to be about 300 tons per day, or about 109,500 tons per year. The average single-family home generates approximately 12.23 pounds per day or approximately 2.23 tons of solid waste per year. This multiplied by the number of proposed single-family residences equates to approximately 149 tons/year for the Project. The 149 tons/year comprises only 0.13 percent of the annual tonnage of 109,500. The proposed Project would not create a significant increase in solid waste production. Impacts would be less than significant, and no mitigation is required.

[20] City of Redlands (2021). *2020 IRUWMP. Part 2, Chapter 4 Redlands 2020 UWMP,* pages 4-19 and -23. Available at https://www.cityofredlands.org/utilities-0. Accessed February 14, 2022.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. Implementation of the proposed Project would be expected to generate additional waste during the temporary, short-term construction phase, as well as the operational phase, but it would not be expected to result in inadequate landfill capacity. The proposed Project, as with all other development in the City, would be required to adhere to City City's Chapter 3.66, Solid Waste and with Chapter 3.70, Solid Waste Capital Improvement Fund, with respect to waste reduction and recycling. As a result, less than significant impacts related to State and local statutes governing solid waste are anticipated and no mitigation is required.

Cumulative Impacts

The proposed Project would have a less than significant impact with respect to utilities/service systems. The Project would require water and wastewater infrastructure, as well as solid waste disposal for building facility operation. Development of public utility infrastructure is part of an extensive planning process involving utility providers and jurisdictions with discretionary review authority. The coordination process associated with the preparation of development and infrastructure plans is intended to ensure that adequate resources are available to serve both individual Projects and cumulative demand for resources and infrastructure because of cumulative growth and development in the area. Each individual project is subject to review for utility capacity to avoid unanticipated interruptions in service or inadequate supplies. Coordination with the utility companies would allow for the provision of utility service to the proposed Project and other developments. The Project and other planned projects are subject to connection and service fees to assist in facility expansion and service improvements triggered by an increase in demand. Because of the utility planning and coordination activities described above, no significant cumulative utility impacts are anticipated.

WILDFIRE

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
20.	**WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:**				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
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?			X	
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
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?				X

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

Less Than Significant Impact. California Government Code Chapter 6.8 directs the CAL FIRE to identify areas of very high fire hazard severity within LRA. Mapping of the areas, referred to as VHFHSZ, is based on data and models of potential fuels over a 30- to 50-year time horizon and their associated expected fire behavior and expected burn probabilities, which quantifies the likelihood and nature of vegetation fire exposure to buildings. LRA VHFHSZ maps were initially developed in the mid-1990s and are now being updated based on improved science, mapping techniques, and data. In 2008, the California Building Standards Commission adopted California Building Code Chapter 7A requiring new buildings in VHFHSZs to use ignition-resistant construction methods and materials.

The City of Redlands has completed its Hazard Mitigation Plan (HMP) in accordance with 44 Code of Federal Regulations (44 CFR Parts 201 and 206). The intent of "hazard mitigation" is to reduce and/or eliminate loss of life and property. The purpose of the HMP is to demonstrate the plan for reducing and/or eliminating risk in the City. The HMP process encourages communities to engage community stakeholders to develop goals and projects that will reduce risk and build a

more disaster resilient community by analyzing potential hazards. Hazard mitigation is defined by the Department of Homeland Security-Federal Emergency Management Agency (FEMA) as "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." A "hazard" is defined by FEMA as "any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss."

According to the General Plan, the Project site is located in a high fire threat level area. The CAL FIRE does not designate the Project site as a FHSZ, however, land contiguous to the north, south, and west are designated as VHFHSZ. Although areas to the north and west are designated as VHFHSZ, this area is fully developed with existing residential homes. In addition, the Very High Fire Hazard Safety Zone to the south is occupied by Reservoir Road and I-10 that may serve as a fire break between the Project site and vacant hillsides south of I-10. As shown in Figure 7-4 of the City General Plan, the Project site is not located in a State Responsibility Area (SRA) or a FRA. However, the undeveloped hillsides to the west of the Project site are within a SRA and have a high fire threat level, according to Figure 7-4.

The Project would be subject to the Redlands Municipal Code Chapter 18.138.020: Objectives of Hillside Development District, which would guide the Project to minimize flood hazards, maximize retention of natural topographic features, provide safe vehicular circulation, and minimize exposure of human life and property to wildland fire. Consistent with Chapter 18.138.020, a Fuel Modification Plan and Landscape Plan have been prepared and submitted to the City for review; this will ensure appropriate fire-resistant landscape materials and structure spacing will be implemented in accordance with "defensible space" principles and must be approved prior to beginning construction.

In addition, the Project would be subject to the Redlands Municipal Code Chapter 15.30: International Wildland-Urban Interface Code (IWUIC). The IWUIC is a nationally recognized compilation of proposed rules, regulations, and standards relating to fire and life safety, fire prevention and fire investigation. The IWUIC regulate construction development standards for fire-resistant materials and methods of construction for unenclosed eaves, projections, appendages, decks, etc. As a standard requirement, this is mandatory for all new construction within the Wildland-Urban Interface (WUI) area and will avoid or reduce potential impacts. No further mitigation measures are required or recommended. Therefore, impacts would be less than significant, and no mitigation is necessary.

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?

Less Than Significant Impact. As discussed above, the Project site is located in a high threat fire level area. The Project site is in an urban area, surrounded by residential developments to the

north, northeast, and west. The site has varying elevations characteristic of its rolling topography. The eastern portion of the site is bordered by undeveloped land. These undeveloped hillsides can potentially provide fuel for a wildfire or mudslides in heavy rains. However, a geotechnical investigation and reconnaissance of the site found that no landslides or landslide debris were present within or near the site, nor did it identify any other deep-seated slope stability issues at the site.[21] Additionally, the Project would incorporate slope maintenance guidelines, such as periodic slope inspections and erosion control measures, as well as design features that would reduce the risk of slope failure, such as retaining walls and approved drainage devices.[22]

A fire protection plan (FPP), to be reviewed and approved by the fire code official, is required for all new development within the Wildland-Urban Interface (WUI) area. FPPs are required to include mitigation measures consistent with the unique problems resulting from the location, topography, geology, flammable vegetation, and climate of the proposed site. FPPs must address water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space, and vegetation management, and must be consistent with the requirements of California Building Code Chapter 7A, the International Wildland-Urban Interface Code, and the Redlands Municipal Code.

The Project would comply with applicable standards required by the City of Redlands and/or County of San Bernardino, as well as be subject to the standards and requirements set forth in the California Fire Code, California Building Code, and the Redlands Municipal Code Title 15 (Buildings and Construction). In addition, the Project would include 100-foot foot-wide (fuel modification zone) fire breaks around the Project site which would help provide a buffer from potential fires and homes. As shown in the landscape plan, the Project would incorporate a perimeter masonry firewall. Moreover, the grading plan will create slopes that are engineered and landscaped, most proposed homes are a minimum of 30 feet apart from one another, providing adequate separation. Consistent with the latest California Building Code (CBC), fire-resistant methods of construction would be utilized.

Therefore, the proposed Project is not anticipated to exacerbate wildfire risks or expose project occupants to increased risks, thereby exposing Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. As such, a less than significant impact would occur.

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

[21] Geomat Testing Laboratories, Inc. (2020). *Summary and Update of Previous Geotechnical Investigations and Review of Conceptual Grading Plan, Tentative Tract 20320, City of Redlands, California,* page 11.

[22] Geomat Testing Laboratories, Inc. (2020). *Summary and Update of Previous Geotechnical Investigations and Review of Conceptual Grading Plan, Tentative Tract 20320, City of Redlands, California,* page 23-24.

Less Than Significant Impact. Project components (including utilities and roadways) would be located within the boundaries of the Project site – with the exception of Wabash Avenue, which will be reconstructed adjacent to the Project site – and impacts associated with the development of the Project within this footprint are analyzed throughout this document. Additionally, the RFD, as part of the City's process, will review all plans for adequate fire suppression, fire access, and emergency evacuation. Therefore, adherence to standard City policies and the development standards contained in the Redlands Municipal Code would reduce potential impacts to a level of less than significant, and no mitigation is required.

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?

No Impact. As discussed above, the Project site is designated by FEMA as being within Zone X, indicating minimal risk of flooding or landslides. The Project site is located within a high fire threat level area, and is surrounded to the north, west, and south by CAL FIRE-designated VHFHSZ. The Project site lies within an area of gently sloping terrain, and drainage across the site flows towards the south-southwest into Reservoir Road under existing site conditions. The Project proposes above-ground infiltration basins and underground stormwater chambers that would discharge stormwater via existing storm drain lines on Reservoir Road and Wabash Avenue. Proposed LID site design, LID BMP, and additional on-site or off-site retention BMP would result in an increase in the time of concentration and a reduction in peak runoff. The grading plan will create slopes that are engineered and landscaped for their drainage, stability, and fire-resistant characteristics. Therefore, drainage changes would not introduce significant risks. In addition, a geotechnical investigation revealed that there are no landslides present within or near the site, nor were there any indications of other deep-seated slope stability issues at the site. Therefore, there is not a substantial risk of landslides that could pose a threat due to post-fire slope instability. Therefore, the proposed Project would not expose people to flooding or landslides due to runoff, post-fire slope instability, or drainage changes. There would not be any anticipate impacts and no mitigation is required.

Cumulative Impacts

The incremental effects of the proposed Project related to wildfire, if any, are anticipated to be minimal, and any effects would be site specific. Therefore, the proposed Project would not result in incremental effects to wildfire that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable future projects. The proposed Project would not result in cumulatively considerable impacts to or from wildfires.

MANDATORY FINIDNGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
21. MANDATORY FINDINGS OF SIGNIFICANCE. Does the Project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
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)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

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

Less Than Significant Impact with Mitigation. All impacts to the environment, including impacts to habitat for fish and wildlife species, fish and wildlife populations, plant and animal communities, rare and endangered plants and animals, and historical and pre-historical resources were evaluated as part of this IS/MND. Throughout this IS/MND, no impacts were determined to be potentially significant, and mitigation measures are required for Air Quality, Biological Resources, Noise, Cultural Resources, and Tribal Cultural Resources. The Project would not substantially degrade the quality of the environment and impacts would be less than significant.

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 with Mitigation. As discussed throughout this IS/MND, in all instances where the proposed Project has the potential to contribute to a cumulatively considerable impact to the environment, mitigation measures have been imposed to reduce potential impacts to less-than significant levels. As such, with incorporation of the mitigation measures imposed throughout this IS/MND, the Project would not contribute to environmental effects that are individually limited, but cumulatively considerable, and impacts would be less than significant.

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

Less Than Significant Impact with Mitigation. The Project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this IS/MND. In instances where the Project has potential to result in direct or indirect adverse effects to human beings, mitigation measures have been applied to reduce the impact to below a level of significance. With required implementation of mitigation measures identified in this IS/MND, construction and operation of the proposed Project would not involve any activities that would result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly.

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