PRIVIERE RANCHO MIRAGE

Initial Study
Mitigated Negative Declaration

Lead Agency:

City of Rancho Mirage

69-825 Highway 111

Rancho Mirage, California 92270

Prepared by:

MSA CONSULTING, INC.

October 2024

ENVIRONMENTAL INITIAL STUDY
PRIVIERE RANCHO MIRAGE

Project Title:	Priviere Rancho Mirage
City Project No:	Environmental Assessment Case No. EA24-0001 General Plan Zoning Map Amendment Case No. GPZMA24-0001 Tentative Tract Map Case No. TTM24-0001 (TTM38868) Preliminary Development Plan Case No. PDP24-0001
Lead Agency Name and Address:	City of Rancho Mirage 69-825 Highway 111 Rancho Mirage, California 92270
Applicant:	Adam Nester Palari Construction, Inc. 10573 West Pico Boulevard #121 Los Angeles, CA 90064
Contact Person:	Pilar Fløtterud, Senior Planner, City of Rancho Mirage
Phone Number:	(760) 328-2266
Project Location:	Southeast corner of Ginger Rogers Road and Via Josefina
Accessor Parcel Number:	685-100-007 & 685-110-017
General Plan Designation:	Existing: Very Low Density Residential (R-L-2) & Medium Density Residential (R-M) Proposed: Low Density Residential 3 du/ac max. (R-L-3)
Zoning Designation:	Existing: Very Low Density Residential (R-L-2) & Residential Medium (R-M) Proposed: Very Low Density Residential 2 du/ac max. (R-L-2)

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CHAPTER 1: PROJECT DESCRIPTION

Project Location

The project property occupies approximately 10.08 acres of vacant undeveloped land east of Via Josefina and south of Ginger Rogers in Rancho Mirage. The project site is surrounded by vacant, undeveloped land to the north, east, and south. Vacant land is located west of the project, separated by Via Josefina.

The project site previously operated as an equestrian center, with stables, riding areas, and storage areas. However, the equestrian center was demolished by April 2023, based on historical aerial imagery. The eastern portion of the site has remained vacant and undeveloped.

Proposed Project

The project proposes the construction of a residential community, consisting of 28 residential lots, accessory dwelling units, and associated improvements such as retention areas, paved drive aisles, and two points of access. The primary access point will occur on Via Josefina. Emergency access is proposed at the eastern side of the site and will connect to the future Via Florencia right-of-way, immediately south of the project. The residential lots will vary from 12,001 square feet to 14,542 square feet. Each residential lot will be developed with a single-family home and detached accessory dwelling unit (ADU). Each residential lot will have their own driveway that will provide access to both the single-family home and ADU. The project will also develop a 19-foot landscaped parkway along the southern boundary of the project, along Via Florencia.

In order to allow the 28-lot residential project, the applicant will submit the following entitlements for City approval:

- Environmental Assessment Case No. EA24-0001: The EA will analyze the project's impacts to the environment.
- General Plan Zoning Map Amendment Case No. GPZMA24-0001: The GPZMA will amend the project General Plan and Zoning designation from Very Low Density (R-L-2) and Medium Density Residential (R-M) designations to Low Density Residential 3 du/ac max. (R-L-3).
- Tentative Tract Map No. TPM24-0001 (TTM38868): The TTM will subdivide the two existing parcels into 28 lots for the residential project.
- Preliminary Development Plan Case No. PDP24-0001: The PDP shows the project concept by providing engineering, architectural, and landscaping plans for review.

Landscaping and Retention

Landscaping is proposed along the Via Josefina frontage, the Via Florencia frontage, and throughout the project. Drought-tolerant trees, shrubs and accents would be utilized to both enhance the property and complement the desert environment. Plant material could include acacia, willow, mesquite, palo verde, palm trees, aloe, ocotillo, and various forms of agave and cactus. Shrubs, accent plantings, and ground covers (i.e., copper canyon crushed rock) will also contribute to the project's landscaping.

Retention will occur at two lots adjacent to the Via Josefina frontage. One lot will be 9,863 square feet, and the second will be 6,446 square feet.

Access and Parking

As previously stated, primary access to the project will occur at a gated entry point on Via Josefina. The drive aisle will extend east of Via Josefina and end with a cul-de-sac. Emergency access to the site is proposed near the terminus of the cul-de-sac, between lots 16 and 17. See Exhibit 3 (Site Plan).

Utilities

The project will connect to existing water and sewer utility infrastructure along Via Josefina. Water and sewer services are provided to the City of Rancho Mirage, and the project site, by the Coachella Valley Water District (CVWD). The project will connect to the existing water main along the project's western boundary (Via Josefina). The project will connect to the future sewer main at the southwest corner of the project site (at Via Josefina Via Florencia intersection).

Electricity is provided to the project site by Imperial Irrigation District (IID). Currently, aboveground electric power lines are located west of the project along Via Josefina. The project will connect to the existing facilities.

Environmental Setting and Surrounding Land Uses

The project property previously operated as an equestrian center until April 2023, when the center was demolished. Structures previously associated with the equestrian center do not occur onsite. However, landscaping, including mature trees and shrubs exist onsite. The site is fenced.

The boundaries of the project are delineated by vacant land and the unpaved Gingers Roger Road alignment to the north, vacant land to the east, vacant land to the south, and vacant land to the west (separated by Via Josefina).

Table 1 Land Use Description

	Jurisdiction	General Plan/ Zoning	Existing Use
Project Site	Rancho Mirage	Very Low Density Residential (R-L-2) and Medium Density Residential (R-M)	Vacant Land and Equestrian Center
North	Rancho Mirage	R-L-2, High Density Residential (R-H)	Ginger Rogers alignment and Vacant Land
East	Rancho Mirage	R-M	Vacant Infill Land
West	Rancho Mirage	R-L-2	Via Josefina and Vacant Infill Land
South	Rancho Mirage	R-L-2, R-M	Vacant Infill Land

Other public agencies whose approval is required

South Coast Air Quality Management District

Imperial Irrigation District

Coachella Valley Water District



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 5,000 FT

VICINITY MAP
PALARI VILLAS RANCHO MIRAGE
EXHIBIT 1



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

0 NORTH 150 FT

AERIAL MAP
PALARI VILLAS RANCHO MIRAGE
EXHIBIT 2



MSA CONSULTING, INC.
> PLANNING > CIVIL ENGINEERING > LAND SURVEYING

NORTH

SITE PLAN
PALARI VILLAS RANCHO MIRAGE
EXHIBIT 3

CHAPTER 2: ENVIRONMENTAL ANALYSIS AND DETERMINATION

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	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ 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

Evaluation of Environmental Impacts:

1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).

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

a) Earlier Analysis Used. Identify and state where they are available for review.

b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

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

Determination: (To be completed by the Lead Agency) On the basis of this initial evaluation:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions 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.



10/24/2024

Pilar Fløtterud, Senior Planner

Date:

City of Rancho Mirage

Environmental Checklist and Discussion:

The following checklist evaluates the proposed Project's potential adverse impacts. For those environmental topics for which a potential adverse impact may exist, a discussion of the existing site environment related to the topic is presented followed by an analysis of the Project's potential adverse impacts. When the Project does not have any potential for adverse impacts for an environmental topic, the reasons why there are no potential adverse impacts are described.

–1 - Aesthetics

AESTHETICS -- Would the project**:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Sources: Rancho Mirage General Plan, 2017; Rancho Mirage Municipal Code; California Department of Transportation (Caltrans), State Scenic Highways, 2023.

1.1 Setting

The perception and uniqueness of scenic vistas and visual character can vary according to location and composition of its surrounding context. The subjective value of views is generally affected by the presence and intensity of neighboring man–made improvements, such as structures, overhead utilities, and landscaping, often in relation to the aesthetic quality offered by a natural background that may include open space, mountain ranges, or a natural landmark feature. The proximity and massing of structures, landscaping and other visual barriers interact with the visibility of surrounding environments to restrict or enhance the value of local scenic

views. The evaluation of scenic vistas takes into consideration the physical compatibility of proposed projects in relation to land uses, transportation corridors, or other vantage points, where the enjoyment of unique vistas may exist, such as residential areas or scenic roads.

The Rancho Mirage General Plan outlines the aesthetic qualities that define the City. The Rancho Mirage Municipal Code establishes development standards and guidelines attributed to the different zones within the City. The City's General Plan and Municipal Code were consulted to determine whether the proposed project would result in impacts to aesthetics, including scenic vistas, scenic quality, and light and glare.

1.2Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT.** The project property occupies approximately 10 acres of disturbed and vacant land in Rancho Mirage. The entire site has been disturbed by previous grading, and development. The western 6.5 acres of the project site was developed and operated as an equestrian center with stables, riding areas, and storage areas. The equestrian center was demolished by April 2023 (based on historical aerial imagery). Approximately 3.5 acres of the eastern side of the site has remained vacant and undeveloped. The entire site exhibits a predominantly flat condition. There are no salient topographic features or other natural visual landmarks on the project site, and the onsite characteristics and physical features do not contribute to a unique scenic vista.

The project is located in Rancho Mirage's Very Low Density Residential (R-L-2) and Medium Density Residential (R-M) General Plan Land Use/Zoning designations. The R-L-2 designation occupies the western 5 acres of the site, while the R-M designation occupies the eastern 5 acres of the site. The eastern half of the project is also located within the Monterey Specific Plan (MSP). The MSP was adopted in 1990 and is situated on approximately 320 acres south of Dinah Shore Drive, west of Monterey Avenue, north of Gerald Ford Drive, and east of Key Largo Drive.

The project site is located in an area of the City that is characterized by developed residential communities, developed residential estate lots, and vacant and undeveloped lots. The closest residential lot is located approximately 135 feet northwest of the project. The project's western boundary is delineated by the paved right-of-way, Via Josefina; the southern and eastern boundaries are immediately adjacent to vacant, undeveloped land; and the northern boundary is delineated by the Ginger Rogers Road alignment and vacant undeveloped land. Via Josefina does not include curb and gutter improvements, or pedestrian sidewalks along the project's frontage. The area west of Via Josefina includes a vacant, undeveloped lot, intended for R-L-2 land use. The future extension of the Ginger Rogers Road alignment is located along approximately 630 feet of the project's northern boundary. Lands north, south, and east of the project include vacant lots. The vacant areas north, west, south and east of the project are defined by natural desert landscape with scattered, low-lying vegetation. The areas east and partially north and south of the project are located within the MSP. Surrounding land use and zoning designations include R-L-2 to the north, west, and south, R-M to the east and south, and High Density Residential (R-H) to the north.

The hillsides and mountains surrounding the Coachella Valley are considered scenic resources. When viewed from the project site, the Santa Rosa Mountains are partially visible to south, and the San Jacinto Mountains are visible to the west. However, existing buildings landscaping and manmade features partially obstruct the baseline views of these natural features. To the north, views of the San Bernardino Mountains, Little San

Bernardino Mountains, and Indio Hills are distant and partially visible, however, views of these mountains are obstructed by existing structures and landscaping. Exiting buildings, perimeter walls, hedges, and planted trees of various sizes collectively obstruct the views of the surrounding mountain ranges. However, the peak and mid-range views of the mountains are visible, depending on viewpoint location. The San Gorgonio Mountains, to the northwest, are largely obstructed by existing landscaping, block walls and manmade structures.

As stated above, the project previously operated as an equestrian center and is largely surrounded by vacant land to the north, west, east, and south. Existing residential properties are located approximately 135 feet northwest, 370 feet south, and 400 feet east of the project. In its current vacant state, the project does not impair views of the surrounding scenic vistas to the existing residential structures or existing public right-of-way to a significant degree. Existing onsite landscaping briefly obstructs views of scenic vistas along the adjacent frontage of Via Josefina.

The project proposes the development of a 28-lot residential community, with associated improvements. When observed from the surrounding properties and local roadways, the views of the surrounding mountain ranges are visible and partially obstructed, depending on viewpoint location. The following discussion analyzes the project's potential impact on the surrounding scenic vistas from Via Josefina, as well as the properties to the northwest, east, and south.

Via Josefina

From the public right-of-way, Via Josefina, the Little San Bernardino Mountains and the Indio Hills are partially visible to the north, the Santa Rosa Mountains are visible to the south, and the San Jacinto Mountains are visible to the west. Due to the existing developments, landscaping of developed properties, manmade infrastructure (electric power lines), the distant mountains to the north are largely obstructed and panoramic views are not achieved from the right-of-way when viewed from the segment of Via Josefina adjacent to the project boundary. The project property was previously developed and operated as an equestrian center. The equestrian center was demolished by April 2023; however, perimeter landscaping was not demolished and occur onsite. Currently, the landscaping obstructs views to the north when viewed from the segment of Via Josefina adjacent to the project boundary. Development of the 28-lot residential project may contribute to additional obstructions to the scenic vistas to the north due to the proposed perimeter walls, landscaping and one-story residential structures. However, building and wall setbacks from the right-of-way will ensure that the obstruction will be less than significant.

Similar to the views to the north, the existing landscaping along the project's Via Josefina frontage partially obstructs views of the Santa Rosa Mountains. However, the Santa Rosa Mountains provides panoramic views to the south and southwest. As previously stated, development of the project would include landscaping, block wall, curb and gutter and sidewalk improvements along the Via Josefina frontage. Since landscaping exists along the project frontage and obstructs views of the scenic vistas, the project would not result in increased impacts to the scenic vista (Santa Rosa Mountains) observed along Via Josefina.

The project will not result in impacts to the views of the San Jacinto Mountains when viewed along via Josefina. This is due to the Mountain's location west of the project.

Surrounding Properties

The properties west, north, east, and south of the project are currently vacant and undeveloped. The properties are owned by private entities and are not considered public viewsheds where scenic vistas could be observed. Therefore, the project will not result in impacts to these properties.

As previously stated, the project proposes a 28-lot residential project with perimeter block walls, landscaping, curb and gutter and sidewalk improvements. The proposed residential community will be similar to existing residential communities in the area, which are also characterized by perimeter block walls, gated entries, and landscaped frontages. In addition to the foregoing, the project property is currently absent of any historic buildings, structures or other former permanent improvements that would hold any aesthetic value. Based on the existing conditions of the project property and the surrounding area, it is likely that historic buildings, structures, or other former permanent improvements were not present on the project site. Overall, impacts would be less than significant.

b) **LESS THAN SIGNIFICANT IMPACT.** The purpose of the State Scenic Highway Program is to preserve and protect scenic State highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. State highways can be officially designated as Scenic Highways or be determined to be eligible for designation. The status of a state scenic highway changes from eligible to “officially designated” when a local jurisdiction adopts a scenic corridor protection program, and the California Department of Transportation (Caltrans) approves the designation as a Scenic Highway. Based on the Caltrans status map of scenic highway designations, Highway 111 is considered an Eligible State Scenic Highway, but is not officially designated. The “eligible” segment of Highway 111 is located approximately 5 miles south of the proposed project. Based on the Circulation Element of the Riverside County General Plan, the project is not located within close proximity to any designated state or county scenic highway. Therefore, no impacts to those resources are anticipated.

According to the Rancho Mirage General Plan, the closest view corridor to the project site is Bob Hope Drive (RMGP Exhibit 32). Bob Hope Drive is located approximately 0.40 miles west of the project. Therefore, due to the distance from the project to Bob Hope Drive, the project would not result in visual obstructions of views witnessed by motorists and pedestrians traveling on Bob Hope Drive.

Additionally, the property does not contain any landmarks such as trees or historic buildings, and based on historical maps, the project property has maintained a developed condition, and as such, is absent of any historic buildings, structures or other former permanent improvements that would hold any aesthetic value. Furthermore, the project is not located within close proximity to any designated scenic highways as identified by Caltrans or the County of Riverside General Plan. Therefore, the proposed project would not result in adverse impacts to scenic resources adjacent to, or in close proximity to state scenic highways or other local transportation corridors. Less than significant impacts are expected.

c) **LESS THAN SIGNIFICANT IMPACT.** The proposed project is located in an urbanized area within the City of Rancho Mirage, with some infill and vacant parcels in the local vicinity. Areas surrounding the project site consist of residential communities, estate lots, and vacant, undeveloped land. Residential properties and communities are located west and south of the project, with the closest residential property being located approximately

135 feet northwest of the project (from property boundaries). The surrounding developed areas include well-maintained landscaping, building frontages, public and pedestrian areas, and roadways. The existing land uses contribute to the scenic quality of the area.

In its existing condition, the project property is disturbed and vacant. A majority of the site (approximately 6.5 acres) previously operated as an equestrian center; however, the center has been demolished. Landscaping from the previous equestrian development was not demolished and currently exists onsite. The site exhibits a predominantly flat topography with landscaping and scattered desert vegetation (on the undeveloped eastern portion of the site). Via Josefina delineates the project's western boundary and is paved, however, curb and gutter improvements do not occur along the project frontage.

The project is located within the Very Low Density Residential (R-L-2) and Medium Density Residential (R-M). The project proposes a General Plan Zoning Map Amendment to change the R-L-2 and R-M designations to Low Density Residential (RL-3). The project will comply with the development standards established for R-L-3 zones, per the Rancho Mirage Municipal Code (RMMC). Title 17, Zoning, of the RMMC was consulted in order to compare the development standards proposed for the project with the existing standards established for the City of Rancho Mirage.

Table I-1 Existing and Proposed Development Standards

Development Feature	Existing Zoning Standards		Proposed Zoning Standards
	R-L-2	R-M	R-L-3
Minimum Parcel Size	18,000 sf	10,000 sf	12,000 sf
Minimum Parcel Width	90 ft	70 ft	80 ft
Minimum Parcel Depth	100 ft	90 ft	90 ft
Maximum Density	2 du/ac	5 du/ac	3 du/ac
Private Outdoor Living Spaces	1,000 sf	500 sf	1,000 sf
Setbacks Required			
Front	25 ft	20 ft	25 ft
Side	10 ft	10 ft	10 ft
Street Side	15 ft	15 ft	15 ft
Rear	25 ft	20 ft	25 ft
Accessory Structures	17.30.190		
Maximum Lot Coverage	30%	30%	30%
Minimum Distance Between Structures	20 ft	20 ft	20 ft
Main Structure – Maximum Height	20 ft / 1 story	20 ft / 1 story	20 ft / 1 story

The proposed project will comply with the City's development standards established for R-L-3 zones in the RMMC. As indicated in the table above, the proposed project will not result in significant changes to the development standards established for R-L-2 and R-M zones. R-L-3 development standards are similar to R-L-2 and R-M zones, or in between R-L-2 and R-M zones. For example, as indicated above, the minimum parcel size for R-L-3 zones is 12,000 square feet, while R-L-2 allows 18,000 square feet, and R-M allows 10,000 square feet.

As demonstrated in the table above, the proposed project would not result in a significant change to the City's established Municipal Code development standards for R-L-2 and R-

M zones. The project proposes similar maximum lot coverage (30%), building distances, and building heights. As mentioned previously, building setbacks, spacing and orientation will be considered during plan review to accommodate views to the extent practicable.

The scenic/design quality in the project area is governed by the Rancho Mirage General Plan (Update 2017). Therefore, the following discussion will analyze the project's consistency with the goals and policies established in the Rancho Mirage General Plan (RMGP) governing scenic quality in the City. The Community Design Element of the RMGP defines the important design goals and guides new development to enhance Rancho Mirage's identity. Specifically, the Community Design Element outlines goals and policies designed to improve the image, character, and quality of life within the City. The table below outlines the various goals and policies established in the Community Design Element of the RMGP, and determines whether the project is consistent, not consistent, or not applicable with the RMGP.

Table I-2 Project Consistency with Rancho Mirage General Plan Goals

General Plan Goal/Policy	Project Consistency
Goal CD 1: *Preservation and promotion of the special identity of Rancho Mirage as an "Oasis in the Desert," combining quality development with scenic, natural, and open space amenities*	
Policy CD 1.1: Rancho Mirage's symbolic identity shall be enhanced through distinct signage, gateways, architecture, and resilient landscaping.	Consistent: As determined in discussion a), above, the project would not result in significant impacts to views of the Santa Rosa Mountains, San Bernardino Mountains, Little San Bernardino Mountains, and San Jacinto Mountains when viewed from the adjacent right-of-way. The project proposes setbacks from the Via Josefina right-of-way. The residential buildings will be limited to 20 feet (1-story) per RMMC. These height restrictions and setbacks will minimize impacts to the views of the mountains. Additionally, proposed landscaped features along Via Josefina will enhance the project's frontage along the roadway. The City of Rancho Mirage will review landscape plans prior to the development of the project. See discussion a) of this Aesthetics section for additional analysis.
Policy CD 1.2: Unique views of mountains and other natural open spaces from Rancho Mirage's streets shall be preserved and enhanced.	
Policy CD 1.4: The planning and design of residential neighborhoods shall provide distinctive and characteristic design elements along public rights-of-way and in the project, creating a recognizable sense of place.	Consistent: As stated in the analysis for Policy CD 1.3, and the table above, the project will comply with development standards established in the RMMC. Landscape areas will provide a sense of arrival and offer clear and safe pathways for interconnectivity.
Goal CD 3*: Scenic roadways that impart a sense of place and are attractively landscaped, provide visual continuity along adjacent uses, preserve views, and create focused intersection landscaping.*	
Policy CD 3.1: The City shall develop and maintain high-quality roadways that frame views, buffer surrounding residential development, and enhance commercial uses.	Consistent: The project is not located along a view corridor as designated in the Rancho Mirage General Plan. Via Josefina is the only paved roadway adjacent to the proposed project, delineating the project's western boundary. As

	stated in discussion a), the project would not result in significant obstructions to views witnessed from this right-of-way. Building setbacks and height restrictions will ensure impacts are less than significant.
Policy CD 3.2: The City shall ensure the development of well-designed, richly landscaped intersections that are attractive to drivers and pedestrians alike.	Consistent: Landscaping along the length of Via Josefina is intended to achieve a consistent, colorful and attractive presentation and soften the project when viewed from the public street. See discussion for Policy CD 3.1.
Policy CD 3.3: View corridors shall be preserved through streetscape improvements and specialized design standards.	Consistent: See discussions for Policy CD 3.1.
Goal CD 4: *A landscape program that promote aesthetics climate change resistance, and place making.*	
Policy CD 4.1: Landscape plans submitted to the City shall be consistent with this element.	Consistent: The landscaping proposed for the project will consist of drought-tolerant trees, ground covers, and shrubs. The landscaping and irrigation plans and system shall comply with all City ordinances relating to water efficiency and shall be an automatic system with an irrigation timer and two drip or bubbler heads per tree to produce deep root irrigation. Additionally, landscape lighting will include tree and shrub up lights, path lights, and step lights. All lighting will be low voltage and have low maintenance LED fixtures.
Goal CD 5: *Walls and fences that act as attractive elements of the streetscape, while providing privacy and views, creative design, and visual continuity*	
Policy CD 5.1: Wall and fence designs shall be considered important components of the design review process and overall streetscape improvement plans.	Consistent: Landscape buffers with screen plantings and wall treatments will be implemented in the design throughout the project.
Goal CD 6: *Signage of the highest level of design and construction quality.*	
Policy CD 6.1: The City shall encourage high-quality, low-scale signage that effectively communicates in an attractive manner.	Consistent: Exterior entrance signage will be subject to review according to the provisions of Section 17.28.040 of the Rancho Mirage Municipal Code.
Goal CD 7: *Protection of the star-studded desert night sky from excessive glare.*	
Policy CD 7.1: Lighting features that preserve the beauty of the desert night while still performing directional, safety, and informational functions shall be designed and incorporated into development projects.	Consistent: Lighting for landscaping, pathways and stairways, monuments and signs shall be installed as needed for security and safety purposes. All lighting will be low voltage and have low maintenance LED fixtures. The selective use of up lights will be limited to high-profile specimen tree and shrubs and will be shielded to reduce glare and hot spots. There shall be zero lumen foot candle for all exterior lighting at any property line of abutting

	properties and/or public right-of-way. See discussion d, below.
Goal CD 8: *Architecture that us sensitive to its context, blending quality materials, distinctive detailing, and a strong sense of living with nature.*	
Policy CD 8.1: The City shall encourage cohesive yet flexible architectural design for all structures in Rancho Mirage.	Consistent: See discussion for Policy CD 1.1, above.
Policy CD 8.2: The City shall encourage new development to incorporate "green building" practices to maximize resource conservation and be compatible with the surrounding environment.	Consistent: The project proposes 3D printing technology to manufacture premium, sustainable homes. The 3D printing method uses less material per square foot of home, and is composed of 60% recycled, sustainably sourced components and allows solar panels and storage enable homes to produce the same amount of energy consumed, without compromising design-forward modern and tech-enabled homes.

As indicated above, the project will comply with the development standards for R-L-3 zones as established in the RMMC. The project will also be consistent with applicable General Plan goals and policies governing scenic quality of the City. Project architecture, landscape design, and additional associated improvements will be subject to review and approval by the City of Rancho Mirage. Less than significant impacts are anticipated.

d) **LESS THAN SIGNIFICANT IMPACT.** The project site, located at the southeast corner of Via Josefina and Ginger Rogers Road. The project is currently vacant and undeveloped; however, the site previously operated as an equestrian center, with a stable, riding areas, and storage areas. The equestrian center was demolished by April 2023. Landscaping was not demolished. Apart from the possible up-lighting for existing landscaping, the project site does not contribute to light in the area.

In the project surroundings, existing sources of fixed nighttime lighting can be attributed to the existing residential uses located northwest and south of the project site. Lighting associated with residential areas typically consist of wall- and post-mounted, downward-oriented fixtures at residential building entrances and driveways, backyard/patio lighting, and landscape lighting. Via Josefina and Ginger Rogers Road are the closest rights-of-way to the project site, however, these roadways are not improved with street light posts. The closest traffic signal to the project site is located approximately 0.40 miles west at the Bob Hope Drive and Ginger Rogers Road intersection. Additionally, day-time glare and nighttime lighting can be attributed to existing vehicular traffic along the surrounding roads.

The proposed project would develop a 28-lot residential community with associated improvements, including retention areas, paved drive aisles, pedestrian sidewalks, and landscaping. The project will be consistent with the physical character intended for Low Density Residential land uses per page 10 of the City's General Plan. The project includes nighttime lighting to safely illuminate the site entrances, signage, parking, walkways, and other project features with the appropriate fixtures. All lighting will be low voltage and have low maintenance fixtures. Lighting for landscaping, pathways, and signs shall be installed as needed for security and safety purposes. Additionally, signage that is visible from outside the project will be subject to review according to the provisions of Section 17.28.040 of the Rancho Mirage Municipal Code (RMMC).

These requirements are established to ensure that proposed development includes a minimum uniformity of light coverage, while minimizing light trespass. Sources of low-intensity lighting will consist of wall-mounted fixtures for the dwelling unit exteriors and landscaping illumination throughout the interior walkways, consistent with Section 17.26.120 of the RMMC. The project's lighting plan and proposed fixtures will be subject to review and approval by the City of Rancho Mirage.

Pertaining to glare and reflectivity, the project encourages a variety of materials with a palette of neutrals and earth tones. The proposed project will include high quality materials that perform well in desert environments, and building color and material should be consistent and complimentary within the project and surrounding environment. The proposed project will not include colors or finishes that have highly reflective properties or other surface conditions that would cause substantial daytime or nighttime glare. With the proposed landscape plan that includes a strategic placement of trees, palms, shrubs, groundcover, and accent plantings, the potential visibility of nighttime light sources and building surfaces is expected to be partially screened. Less than significant impacts are expected.

1.3 Mitigation Measures: None required.

2 - Agriculture and Forestry Resources

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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of forest land,	☐	☐	☐	☒

timberland, or timberland zoned Timberland Production?				
d) Result in the loss of forest land or conversion of forest land to non forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Sources: Farmland Mapping and Monitoring Program, California Department of Conservation. Rancho Mirage General Plan 2017.

2.1 Setting

California Land Conservation Act of 1965

The California Land Conservation Act of 1965 (the "Williamson Act") encourages the preservation of agricultural lands through tax incentives due to the increasing trend toward the conversion of agricultural lands and urban uses. The act enables counties and cities to designate agricultural preserves (Williamson Act lands) and within these preserves, offer preferential taxation to agricultural landowners based on the agricultural income producing value of the property. There are no active or permitted quarries identified within the City of Rancho Mirage.

State Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 as a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Prime agricultural land is rated according to soil quality and irrigation status and identified by the following categories: Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Urban and Built-Up Land, and Other Land. Each category is described as follows:

- Prime Farmland: areas with both good physical and chemical attributes able to sustain long-term agricultural production.
- Farmland of Statewide Importance: areas that have a good combination of physical and biological characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses.
- Unique Farmland: areas that produce crops of statewide importance; however, contain lower quality soils than those within Prime Farmland.
- Farmland of Local Importance: lands generally without irrigation, and which produce dry crops that may be important locally but are not important for statewide agriculture production.
- Urban Built-Up Land: areas occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel.
- Other Land: areas of land not included in any other mapping category.

The project site and the City of Rancho Mirage area is characterized by the urban context, primarily consisting of residential and commercial developments.

2.2 Discussion of Impacts:

a-e) NO IMPACT: The proposed project will not disturb or convert any designated farmland or other form of agricultural resources. According to the 2018 California Farmland Mapping and Monitoring Program the proposed project is located in a portion of Rancho Mirage designated Other Land. Other Land is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Additionally, vacant, and nonagricultural land surrounded on all sides by urban development and greater than forty acres is mapped as Other Land. The properties to the west, north, and east are classified as Urban and Built-Up Land while the project site and the land directly south are classified as Other Land. The City of Rancho Mirage consists of Urban and Built-Up Land and land designated as Other.

The project site is not located in an existing zoning for agricultural use or classified as farmland.

According to the Williamson Act 2015-16 Status Report, no portion of the land within or near a one-mile radius is recognized as a Williamson Act Contract area. Furthermore, no forest land, timberland, or Timberland Production zone occurs on the project site or in the surrounding areas. The proposed project will not impact or remove land from the City or the County's agricultural reserve. No impacts are expected.

2.3 Mitigation Measures: None required.

3 - Air Quality

AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

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

Sources: *Final 2022 Air Quality Management Plan (AQMP),* by SCAQMD, December 2022; *Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP),* by SCAQMD, August 2003; *Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan,* by the California Air Resources Board, February 2010; *South Coast AQMD Rule Book*; *California Emissions Estimator Model* (CalEEMod) Version 2022.1.1.21 (Appendix A), California Air Pollution Officers Association (CAPCOA) and California Air Districts.

3.1 Setting

Summary of Existing Air Quality Regulatory Framework:

The project site and Coachella Valley are situated within the Riverside County portion of the Salton Sea Air Basin (SSAB), under jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the adopted 2022 Air Quality Management Plan (2022 AQMP). The 2022 AQMP builds upon and supersedes the prior 2016 AQMP with updated strategies toward air quality attainment, while recognizing the challenges from experiencing the worst levels of ground-level ozone (smog) and among the highest levels of fine particulate matter (PM2.5) in the nation, despite the progress in air pollution reduction. The 2022 AQMP also recognizes the Coachella Valley's necessity to meet federal ozone standards due to transport of pollution from the upwind South Coast Air Basin. As a result, the updated strategies focus on reducing emissions of nitrogen oxides (NOx) – the key pollutant that creates ozone – by 67 percent more than is required by adopted rules and regulations in 2037. This is to be achieved in part through the extensive use of zero emission technologies across all stationary and mobile sources, combined with additional controls over stationary sources that currently account for approximately 20 percent of NOx emissions. The 2022 AQMP recognize that the overwhelming majority of NOx emissions are from heavy-duty trucks, ships and other State and federally regulated mobile sources that are mostly beyond the South Coast AQMD's control, so federal regulatory action will help toward the AQMP goals. The current AQMP does not involve numeric revisions to the South Coast AQMD Air Quality Significance Thresholds, nor is it understood to implement land use and land development restrictions. The 2022 AQMP accounts for information and assumptions from the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to support the integration of land use and transportation toward meeting the federal Clean Air Act requirements.

Local air quality relevant to the standards for criteria air pollutants and attainment status is measured at three established Coachella Valley monitoring stations that are part of the SCAQMD 2022 Annual Air Quality Monitoring Network Plan: Palm Springs (AQS ID 060655001), Indio (AQS ID 060652002), and Mecca (Saul Martinez - AQS ID 060652005).

The 2022 AQMP provides guidance for the State Implementation Plans (SIP) for attainment of the applicable ambient air quality standards. The Coachella Valley region is in non-attainment for Particulate Matter (PM10) and Ozone (O3), which are described below.

<u>Particulate Matter (PM10):</u>

PM10 is a criteria air pollutant consisting of particulate matter (airborne particles) with an aerodynamic diameter of up to 10 microns. In terms of health effects, elevated levels of ambient particulate matter are linked to increases in respiratory infections, number and severity of asthma

attacks, the number of hospital admissions, and mortality rates. As indicated in the 2022 AQMP, the Coachella Valley is currently designated as a serious nonattainment area for PM10.

PM10 levels in the Coachella Valley are largely attributed to sources of fugitive dust (e.g., construction activities, re-entrained dust from paved and unpaved road travel, and natural wind-blown sources). The Coachella Valley is subject to frequent high winds that generate wind-blown sand and dust, leading to high episodic PM10 concentrations, especially from disturbed soil and natural desert blow sand areas.

The Final 2003 Coachella Valley PM10 State Implementation Plan (CVSIP) was approved by the U.S. Environmental Protection Agency (EPA) on December 14, 2005. It incorporated updated planning assumptions, fugitive dust source emissions estimates, mobile source emissions estimates, and attainment modeling with control strategies and measure commitments. Some of those measures are reflected in SCAQMD Rules 403 and 403.1, which are enacted to reduce or prevent man-made fugitive dust sources with their associated PM10 emissions.

Rule 403.1 recognizes blowsand as a form of larger particulate matter that can contribute to the production of the smaller PM10 (Particulate Matter with a diameter of 10 micrometers or smaller) particles in two ways: (1) by direct particle erosion and fragmentation as natural PM10, and (2) by secondary effects, as sand deposits on road surfaces. SCAQMD has defined a Coachella Valley Blowsand Zone as the corridor of land extending two miles on either side of the Interstate 10 (I-10) Freeway, beginning at the SR-111/I-10 junction and continuing southeast to the I-10/ Jefferson Street interchange in Indio. Being situated less than a mile south of the Interstate 10 Freeway, the project location is deemed to be located within the Coachella Valley Blowsand Zone that is exposed to relatively higher seasonal wind conditions and natural sand transport capable of producing fugitive dust from undeveloped and unstable ground conditions.

Under Rule 403.1, active operations within the Coachella Valley Blowsand Zone are required to stabilize new project-related bulk material within 24 hours of making the material deposit using water application, chemical stabilizer application, and/or installing wind breaks. Moreover, active operations within the Coachella Valley Blowsand Zone are required to stabilize new deposits of bulk material originating from off-site undisturbed desert areas within 72 hours. Such deposits typically consist of blowsand material landing on the site from upwind areas. The stabilization shall occur through water and/or soil binder application. The project will be subject to the additional requirements noted above.

Ozone and Ozone Precursors:

Ozone (O3) is a photochemical oxidant formed through chemical reactions of nitrogen oxides (NOx), volatile organic compounds (VOCs), and oxygen in the presence of sunlight. In terms of health effects, individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are the most susceptible sub-groups for the effects of ozone.

The Coachella Valley portion of the Salton Sea Air Basin (SSAB) is deemed to be in nonattainment for the 1997 8-hour ozone standard. The Coachella Valley is unique in its geography due to its location downwind from the South Coast Air Basin (SCAB). As such, when high levels of ozone are formed in the South Coast Air Basin upstream, they are transported to the Coachella Valley. Similarly, when ozone precursors such as NOx and VOCs are emitted from mobile and stationary sources located in the South Coast Air Basin, they are also transported to the Coachella Valley. The 2022 AQMP has found and established that the Coachella Valley does not have large sources of smog-forming emissions and therefore, local sources of air pollution have a limited impact on ozone levels compared to the transport of ozone precursors generated

upwind in SCAB. Based on the 2022 AQMP, the attainment date for the said ozone standard is August 2033. SCAQMD continues to reduce ozone and improve air quality in the Coachella Valley, in part by providing more than $50 million in grant funding towards paving dirt roads and parking lots, clean energy projects and cleaner vehicles. Future emission reductions anticipated to occur in the South Coast Air Basin associated with current and planned regulations on mobile and stationary sources are expected to contribute to improvements in ozone air quality in the Coachella Valley and lead to attainment of the standard.

Regional Significance Threshold Criteria:

The SCAQMD has determined that impacts to air quality are significant if there is a potential to contribute or cause regional and/or localized exceedances of the federal and/or state ambient air quality standards, such as the NAAQS and CAAQS. To assist lead agencies in determining the significance of air quality impacts, SCAQMD has established suggested short-term construction-related and long-term operational impact significance thresholds for direct and indirect impacts on air quality. Table III-1 displays the established SCAQMD Air Quality Significance Thresholds applicable to construction and operational activities to which the project-specific air emissions results will be compared. Table III-1 is based on the most current standards, published in March of 2023.

Table III-1
SCAQMD's Air Quality Significance Thresholds Pounds/Day)

Emission Source	CO	VoC	NOx	SOx	PM10	PM2.5
Construction	550	75	100	150	150	55
Operation	550	55	55	150	150	55

Source: Air Quality Analysis Guidance Handbook and SCAQMD Air Quality Significance Thresholds, March 2023

Localized Significance Threshold Criteria:

The South Coast Air Quality Management District (SCAQMD) has also developed and published the Final Localized Significance Threshold (LST) Methodology to help identify potential impacts that could contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). LST methodology was developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. The purpose of analyzing LSTs is to determine whether a project may generate significant adverse localized air quality impacts in relation to the nearest exposed sensitive receptors, such as schools, churches, residences, hospitals, day care facilities, and elderly care facilities. The separation distances between project sites and sensitive receptors, set forth by the LST methodology, range from 25 meters (82 feet) to 500 meters (1,640 feet). LST thresholds represent the maximum emissions from a project that will prevent an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project, size, and distance to the sensitive receptor. Therefore, meeting the lowest allowable emissions thresholds translates to meeting the most stringent air quality standards for a project locality.

As part of the LST methodology, SCAQMD has divided its jurisdiction into 37 source receptor areas (SRAs) which can be used to determine whether a project may generate significant adverse

localized air quality impacts. The proposed development is located in SRA 30, which covers the Coachella Valley and City of Rancho Mirage. LSTs only apply to certain criteria pollutants: carbon dioxide (CO2), oxides of nitrogen (NOx) particulate matter equal to or less than 10 microns in diameter (PM10), and particulate matter equal to or less than 2.5 microns in diameter (PM2.5).

Geographic Information Systems (GIS) mapping analysis was used to identify the project site in relation to the nearest potential sensitive receptors, such as residential dwelling units or schools. The undeveloped site is surrounded primarily by vacant with residential land use designations. The nearest developed residential property is located at the northwest corner of Via Josefina and Ginger Rogers Road, approximately 60 feet from the project site. Based on this residential property, the most conservative (closest) distance of 25 meters (82 feet) serves as the basis for the LST analysis. This will ensure that the lowest emissions threshold is used as a standard for determining significance.

Air Emissions Methodology:

This analysis relies on the quantitative findings from the latest version of the California Emissions Estimator Model™ (CalEEMod™) Version 2022.1.1.21, which serves as an adopted software platform, developed in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, to calculate both construction emissions and operational emissions of criteria air pollutants and greenhouse gases from land use projects. The parameters considered for CalEEMod and air quality analysis were obtained from the most current technical site plan for the project, as subsequently summarized. The most conservative interpretation of proposed land uses, equitable modelling criteria, and associated air quality impacts have been utilized to capture impacts associated with 100% of the proposed onsite structures and operations.

CalEEMod input included 28 single-family residential units with an average household size of 1.85 persons per household (PPH) based on the California Department of Finance 2022-2023 E-5 Population and Housing Estimates. The Weekday trip generation factor was 9.43 trips per home based on the default rates programmed into CalEEMod that are consistent with the Institute of Transportation Engineers (ITE) Trip Generation Rates, 11th Edition applicable to single-family homes. The area calculations for analysis purposes were as follows:

- Total Site: 10.08 Acres
- Residential Lot Area: 7.83 Acres
- Landscaped Open Space Area: 0.86 Acres
- Street Improvements: 1.12 Acres
- Off-Site Disturbance for Utility Improvements: 1 acre

Since the existing site condition includes remnants of the former equestrian facilities, this analysis assumed the removal of approximately 2,000 cubic yards of material resulting from a conservative area of approximately 26,000 square feet where concrete slab and associated materials may need to be collected and hauled. The total material volume in cubic yards, after rounding, results from the disturbance of approximately 26,000 square feet to a depth of two feet (52,000 cubic feet total) at the rate of 27 cubic feet per cubic yard. The analysis also assumed a conservative off-site disturbance of up to one acre associated with potential off-site utility improvements, occurring within public rights-of-way.

The proposed homes will be constructed with a 3-D printed modular design and a method involving the off-site manufacturing (printing) of building components from recycled composite material to be assembled on-site with other construction materials. This method is expected to represent a more sustainable approach to construction and emissions. However, since this method of construction has not been programmed into CalEEMod, the quantitative project emissions are instead based on a traditional construction process without factoring the potential sustainability and efficiency benefits of the proposed 3-D printing method.

Moreover, the model incorporated the fugitive dust control measures required during construction under the City's Dust Control Ordinance and SCAQMD Rules 403 and 403.1. The measures of temporary soil stabilization required under this local regulatory framework are designed to prevent sediment track-out onto public roads, prevent visible dust emissions from exceeding a 20-percent opacity, and prevent visible dust emissions from extending more than 100 feet (vertically or horizontally from the origin of a source) or crossing any property line. Being a requirement in the Coachella Valley, the dust control practices are not considered mitigation.

3.2 Discussion of Impacts:

a) LESS THAN SIGNIFICANT IMPACT:

The results summarized in Table III-3 display the potential criteria air pollutant emission levels associated with construction-related demolition, site preparation, grading, utilities/building construction, paving, and architectural coating phases. The emission levels from project construction are not shown to exceed the applicable SCAQMD Air Quality Significance Thresholds for criteria pollutants, including PM10 and Ozone precursors. As a standard requirement, dust control measures will be implemented during construction as part of a City-approved fugitive dust control plan in accordance with SCAQMD Rule 403/403.1 and Section 15.64.630 (Dust Control Requirements) of the Rancho Mirage Municipal Code. The project is also required to comply with the heightened measures applicable within the designated Coachella Valley Blowsand Zone. Thus, a less than significant impact would occur for the construction-related emissions in relation to the applicable South Coast AQMD Air Quality Significance Thresholds.

Table III-2
Short Term Air Pollutant Emissions
Associated With Construction of the Proposed Project (Unmitigated)
(Pounds/Day)

Construction Source	ROG/VoC	NOx	CO	SO2	PM10	PM2.5
Peak Emissions Resulting from Demolition, Site Preparation, Grading, Building Construction, Paving, and Architectural Coating	24.4 (Winter)	38.0 (Summer)	34.7 (Summer)	0.06 (Summer)	9.92 (Summer)	5.60 (Summer)
SCAQMD Air Quality Significance Threshold	75	100	550	150	150	55
Threshold Exceeded	**No**	**No**	**No**	**No**	**No**	**No**
Note: The PM10 and PM2.5 emissions account for required compliance with SCAQMD Rules 403/403.1 and Rancho Mirage Requirements.						

CalEEMod 2020.4.0 was also used to calculate the long-term operational air pollutant emissions that would occur during the life of the project. These operations include area, energy and mobile sources. As shown in Table III-4 below, the project-related operational emissions of criteria pollutants are also not expected to exceed any of the South Coast AQMD Air Quality Significance Thresholds. Therefore, a less than significant impact is expected for operational emissions from the project.

Table III-3
Long Term Operational Air Pollutant Emissions
Associated With Development of the Project (Unmitigated)
(Pounds/Day)

Emission Source	ROG/VoC	NOx	CO	SO2	PM10	PM2.5
Peak Area Sources, Energy Use, Mobile Sources	3.01 (Summer)	1.78 (Winter)	17.3 (Summer)	0.04 (Summer)	3.27 (Summer)	0.86 (Summer)
SCAQMD Air Quality Significance Threshold	55	55	550	150	150	55
Threshold Exceeded	**No**	**No**	**No**	**No**	**No**	**No**

In addition to the emission levels discussed above, another measure of determining consistency with the governing AQMP is outlined in Chapter 12, Section 12.2 and Section 12.3 of SCAQMD's CEQA Air Quality Handbook (1993), as provided and evaluated below:

Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The relevant emission standards are compiled in the South Coast AQMD Air Quality Significance Thresholds and also provided in Table III-1 pertaining to construction and operation. As demonstrated by the CalEEMod results in Tables III-3 and III-4, project construction and operation would not result in emission levels exceeding the AQMD Air Quality Significance Thresholds for any criteria air pollutant category, including PM10 and ozone precursors, and therefore would not conflict with the AQMP according to this criterion.

Consistency Criterion No. 2: The project will not exceed the assumptions in the AQMP based on the years of project build-out phase.

Project implementation will involve the construction and operation of the 28 residential lots, relying on the amendment of the General Plan and Zoning designation from Very Low Density (R-L-2) and Medium Density Residential (R-M) designations to Low Density Residential 3 du/ac max. (R-L-3). The amendment and scale of the project are not expected to exceed the locally adopted land development assumptions and other growth projections in a meaningful manner. Therefore, the project is not expected to result in emission levels, growth or land use changes that would interfere with the City or region's ability to comply with the most current air quality plans, including the 2022 AQMP and State Implementation Plan strategies for PM10 and ozone level attainment efforts. Moreover, the project's short-term construction and long-term operational emissions would not exceed the established regional thresholds for criteria air pollutant emissions.

In summary, by producing emission levels below the applicable SCAQMD Air Quality Significance Thresholds the project will prevent any interference with the City or region's ability to comply with the most current air quality plans, including the 2022 AQMP, CVSIP for PM10, and the ozone level attainment efforts. Pertaining to the obstruction of an applicable air quality plan, less than significant impacts are anticipated.

b) **LESS THAN SIGNIFICANT IMPACT:** As discussed previously, the Coachella Valley portion of the Salton Sea Air Basin (SSAB) is in nonattainment for the 1997 8-hour ozone standard. Under the 2022 AQMP, the target attainment date for this standard is August 2033. SCAQMD has established that the Coachella Valley does not have large sources of smog-forming emissions and therefore, local sources of air pollution have a limited impact on ozone levels compared to the transport of ozone precursors generated upwind in SCAB. As demonstrated in tables III-2 and III-3, project-related short-term construction and long-term operational emissions would not exceed the SCAQMD Air Quality Significance Thresholds for ozone precursors, such as NOx and ROG/VOC. Therefore, pertaining to the ozone nonattainment status, the proposed project would not result in an exceedance to the applicable threshold or result in a cumulatively considerable net increase in the precursors of this criteria pollutant.

Furthermore, the Coachella Valley is currently designated as a serious nonattainment area for PM10 and is under the EPA-approved Coachella Valley PM10 State Implementation Plan with an attainment strategy for meeting the PM10 standard. Some of the existing measures include the requirement of detailed dust control plans from builders that specify the use of more aggressive and frequent watering, soil stabilization, wind screens, and phased development to minimize fugitive dust.

Appropriate air quality measures to prevent fugitive dust are required by the City's Fugitive Dust Control ordinance and plan implementation requirements, which are consistent with SCAQMD Rules 403 and 403.1 that apply to the Coachella Valley strategy for reducing fugitive dust emissions. Under the City's dust control regulations, a Local Air Quality Management Plan (LAQMP) must be prepared and approved prior to any grading, earth-moving, demolition, or building operation with a disturbed surface area of more than five thousand (5,000) square feet. Consistent with SCAQMD Rules 403 and 403.1, implementation of the LAQMP is required to occur under the supervision of an individual with training on Dust Control in the Coachella Valley. The plan will include methods to prevent sediment track-out onto public roads, prevent visible dust emissions from exceeding a 20-percent opacity, and prevent visible dust emissions from extending more than 100 feet (vertically or horizontally from the origin of a source) or crossing any property line.

Moreover, being located within the Coachella Valley Blowsand Zone, project construction activities are also required to include measures for prompt stabilization of project-related bulk materials through watering or application of soil binders and the management of material, such as sand, that may be deposited on the site from off-site undeveloped areas. The stabilization shall occur through water and/or soil binder application.

The most widely used measures include proper construction phasing, proper maintenance/cleaning of construction equipment, soil stabilization, installation of track-out prevention devices, and perimeter wind fencing. As shown in tables III-2 and III-3, project-related short-term construction and long-term operational emissions that factor in the required soil stabilization measures are expected to not exceed the applicable SCAQMD Air Quality Significance Thresholds for PM10. Therefore, pertaining to the PM10 nonattainment status, the proposed project would not result in an exceedance to the applicable threshold or result in a cumulatively considerable net increase in the precursors of this criteria pollutant. Less than significant impacts are anticipated.

c) **LESS THAN SIGNIFICANT IMPACT:** A sensitive receptor is a person or group in the population particularly susceptible (i.e. more susceptible than the population at large) to health effects due to exposure to an air contaminant. Sensitive receptors and the facilities that house them are of particular concern if they are located in close proximity to localized sources of carbon monoxide, toxic air contaminants, or odors. Residences, long-term health care facilities, schools, rehabilitation centers, playgrounds, convalescent centers, childcare centers, retirement homes, and athletic facilities are generally considered sensitive receptors.

The SCAQMD has developed and published the Final Localized Significance Threshold (LST) Methodology to help identify potential impacts that could contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). LST methodology was developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. The purpose of analyzing LSTs is to determine whether a

project may generate significant adverse localized air quality impacts in relation to the nearest exposed sensitive receptors, such as those listed above. LSTs represent the maximum emission levels that comply with the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project, size, and distance to the sensitive receptor. Therefore, meeting the lowest allowable emissions thresholds translates to meeting the most stringent air quality standards for a project locality in consideration of sensitive receptors. As part of the LST methodology, SCAQMD has divided its jurisdiction into 37 source receptor areas (SRAs) which can be used to determine whether a project may generate significant adverse localized air quality impacts. The proposed development is located in SRA 30, which covers the Coachella Valley and City of Rancho Mirage. LSTs only apply to certain criteria pollutants: carbon dioxide (CO), oxides of nitrogen (NOx) particulate matter equal to or less than 10 microns in diameter (PM10), and particulate matter equal to or less than 2.5 microns in diameter (PM2.5).

The undeveloped site is surrounded primarily by vacant land with residential land use designations. The nearest developed residential property is located at the northwest corner of Via Josefina and Ginger Rogers Road, approximately 60 feet from the project site. Based on this residential property, the most conservative (closest) distance of 25 meters (82 feet) serves as the basis for the LST analysis. This will ensure that the lowest emissions threshold is used as a standard for determining significance.

Table III-4 Localized Significance Thresholds (LSTs) Associated with Construction of the Project with Receptors at 25 Meters (82 Feet), (In Pounds/Day)

Emission Source	NOx	CO	PM10	PM2.5
Maximum Unmitigated Emissions Resulting from Site Preparation, Grading, Building Construction, Paving and Architectural Coating	38.0	34.7	9.92	5.60
SCAQMD LST Threshold for SRA 30	304	2,292	14	8
LST Threshold Exceeded?	**No**	**No**	**No**	**No**

Sources: Appendix A and AQMD LST Look-Up Tables

Note: The PM10 and PM2.5 emissions factor dust control compliance with SCAQMD Rule 403 and 403.1 and Rancho Mirage Municipal Code requirements.

The results provided in Table III-4 resulting from the Localized Significance Thresholds methodology demonstrate that the construction-related emission levels would occur below the established thresholds, taking into account the source receptor area and nearest sensitive receptor location to the project. Therefore, the project would not result in emissions capable of exposing sensitive receptors to localized substantial pollutant concentrations. Moreover, the proposed project would not situate new housing in a location known to be exposed to existing or planned sources of substantial emissions. Less than significant impacts are anticipated.

d) **LESS THAN SIGNIFICANT IMPACT:** Objectionable odors can be associated with toxic or non-toxic emissions. While offensive odors seldom cause physical harm, they can

be unpleasant and lead to considerable annoyance and distress among the public. Examples of facilities commonly known to generate considerable odors include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging facilities, none of which are located in the project vicinity. The land uses and populations considered more likely to experience concern over odors include residences, retirement homes, schools, playgrounds, and athletic facilities, among others.

As demonstrated in the discussions above, construction-related and operational emissions resulting from the proposed residential development would occur below the applicable South Coast AQMD Air Quality Significance Thresholds. The project would also comply with the numeric Localized Significance Thresholds relevant to the localized project setting.

The project will result in potential short-term odor emissions associated with the temporary operation of construction equipment, handling of petroleum-based products, and application of certain materials, such as asphalt pavement. These temporary odors would be perceptible within close proximity to the active construction areas dissipate with distance, to the point of becoming undetectable.

During the life of the project, residential activities on the proposed dwelling units are not expected to represent a source of odor to the surrounding uses. Therefore, the project is not expected to result in odor or other emissions adversely affecting nearby neighbors or a substantial number of people. Less than significant impacts are anticipated.

3.3 Mitigation Measures: None required.

4 - Biological Resources

BIOLOGICAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish	☐	☐	☐	☒

and Wildlife or US Fish and Wildlife Service?				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

Sources: *General Biological Resources Assessment and CVMSHCP Consistency Analysis, JWC Ecological Consultants, April 2023 (Appendix B); Rancho Mirage General Plan 2017, Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan, CVAG, Staff Report on Burrowing Owl Mitigation, Department of Fish and Game (now the Department of Fish and Wildlife), 2012.*

4.1 Setting

The project site is located on approximately 10 acres of land east of Via Josefina, south of Ginger Rogers Road, and north of Via Florencia Road in the City of Rancho Mirage. The project proposes the construction of 28 single family homes with accessory dwelling units (ADU).

The project site has been previously graded and converted to a horse stable facility in the late 1980s. By 2021, the site had been abandoned though trees on the western two-thirds of the property have been receiving irrigation into 2023. During the biological survey, the western two-thirds of the site contained collapsed buildings, fences, and other structures in a state of disrepair. The eastern third of the site is being reclaimed by natural processes with blowsand covering an existing fence along the site's northeast boundary. The site is under demolition to prepare for redevelopment.

The project site is not within a Conservation Area nor does it share borders with a Conservation Area designated by the CVMSHCP. The discussion below evaluates the disturbed and developed property's potential impact on biological resources.

4.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION:** On April 6, 2023, James W. Cornett Ecological Consultants conducted a *project-specific General Biological Resources Assessment and CVMSHCP Consistency Analysis.* The assessment area covered the project site and 100 yards beyond all site boundaries. The biological survey and analyses were designed to ascertain the impacts of development to the potential biological resources of the project site and immediate vicinity as mandated by CEQA and required by the City of Rancho Mirage. The specific objectives of the biological survey are listed below:

- Determine the vascular plant and vertebrate animal species that occur on, and immediately adjacent to the project site.
- Ascertain the presence of plant or animal species given special status by government agencies. Emphasis is on non-covered species (under the CVMSHCP) that are (1) state or federally listed, (2) candidates for state or federal listing, and (3) state or federally protected species or communities.
- Ascertain the existence of other significant biotic elements, corridors, or communities.
- Consider the site's biological resources as they relate to the CVMSHCP and its Conservation Areas.
- If necessary and where applicable, recommend measures to mitigate significant adverse impacts of the project on sensitive species and habitats not covered in the Plan but determined to occur within, or adjacent to, the project boundaries.

Survey methodology included literature, records, collections websites and or staff of the University of California at Riverside Herbarium, the Boyd Deep Canyon Desert Research Center and the Coachella Valley Association of Governments were consulted for specific information as the occurrence of sensitive species. The California Department of Fish & Game Natural Diversity Database was also consulted. Field surveys were initiated in April of 2023. Specific dates of biological surveys were April 9, 15, 16, 17, 18, 19, and 20, 2023.

Night surveys were conducted on the evenings of April 15 and 16, 2023. Surveys were conducted by walking north/south transects at 10-yard intervals through the project site and 100 yards beyond the south and west boundaries. This survey pattern and intensity has been approved by the U.S. Fish and Wildlife Service for determining the presence or absence of the burrowing owl and desert tortoise and represents an intensive survey effort that resulted in no officially listed or federally protected species being overlooked. Animal surveys were conducted simultaneously with plant surveys. In addition, twenty live-animal traps (which captures animals unharmed) for large and small mammals were set within the project site for twenty-four-hour periods on April 15 and 16, 2023. Invertebrate sampling was conducted on the evenings of April 15 and 16, 2023. Two BioQuip light traps were used for attracting and live-capturing flying insects and some terrestrial arthropods. Black lights were the attracting mechanism with each trap powered by a 12-volt battery.

The elevation of the project site is approximately 320 feet above sea level. The only topographical relief consists of sand hummocks, within the eastern quarter of the site, that rise from one to five feet above their base. The hummocks have been formed by ornamental shrubs, trees, and a fence that interrupts the flow of sand carried wind coming from the northwest off the Whitewater River Floodplain. The shrubs reduce wind velocity

and result in sand deposits of *hummocks* on the leeward or easterly side of the obstacles. The western quarter of the project site is included within the sand field habitat of the valley floor as described in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

The project-specific biological report did not find any naturally occurring springs or permanent aquatic habitats in or near the project site. No blue-line stream corridors (streams or dry washes) are shown on the U.S. Geological Survey (USGS) maps for the project site nor are there botanical indicators of such corridors. Therefore, the report concludes that there appears to be no need to obtain streambed alteration permits from state or federal governments.

Soil characteristics are uniform over the entire site. Soil is composed of wind-blown alluvium created by historic and persistent air movements from the northwest. This process increased in intensity with the drying out of the Coachella Valley at the close of the Pleistocene epoch ending 10,000 years before present. At the current time, residential and commercial developments to the west and north have resulted in sand stabilization of the western three-quarters of the site.

Plant Surveys

Per the project-specific biological report, no native plant community was found within the site boundaries. The site was completely graded in the 1980s then planted with exotic ornamental landscape plants including lantana (*Lantana camara*), rubber tree (*Ficus elastica*), eucalyptus (*Eucalyptus* spp.), Desert Museum palo verde (*Parkinsonia x.* Desert Museum), and Bougainvillea (*Bougainvillea* spp.).

About a dozen native species have re-established on the project site due to the cessation of landscape management protocols. The native plants include wingscale (*Atriplex canescens*), and Emory's dalea (*Chylismia claviformis*), Spanish needle (*Palafoxia arida*), and bugseed (*Dicoria canescens*). Many exotic weed species have germinated within the site boundaries. These include Sahara mustard (*Brassica tournefortii*), common Mediterranean grass (*Schismus barbatus*), Russian thistle (*Salsola australis*), red brome grass (*Bromus rubens*), and Egyptian knapweed (*Volutaria tubuliflora*).

The Inventory of rare and Endangered Vascular Plants of California, published by the California Native Plant Society (2001), the California Natural Diversity Database (CNDDB) Special Plant List (2022) or the *Endangered, Threatened, and Rare Plants of California* (2022) lists a total of five plant species that could conceivably occur on the project site. They are the glandular ditaxis (*Ditaxis clariana*), ribbed cryptantha (*Cryptantha costata*), flat-seeded spurge (*Chamaesyce platysperma*), Coachella Valley milk-vetch (*Astragalus lentiginosus coachellae*), and the Salton milkvetch (*Astragalus crotalareiae*).

The glandular ditaxis is an uncommon perennial herb that blooms from December through March. It is restricted to sandy environments in the Sonoran Desert and has been found in the Coachella Valley at elevations like those found on the project site. Since the glandular ditaxis is a perennial, it likely would be detected during the plant surveys. It was not detected and therefore presumed to not occur onsite. This species is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. Though considered sensitive by the California Native Plant Society, the glandular ditaxis is not a covered species under the CVMSHCP.

The ribbed cryptantha is an uncommon ephemeral known to occur on sandy soils in the Coachella Valley. The project site edges can be considered suitable habitat for this species. It was not detected during the field surveys, although surveys were conducted in spring following above-average winter rainfall. Thus, if it was present, it would be detected. The ribbed cryptantha is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. The California Native Plant Society considers the ribbed cryptantha a sensitive species. It is not a covered species under the CVMSHCP.

The flat-seeded spurge is an extremely uncommon ephemeral herb known to occur on sandy soils in the Sonoran Desert. There has been at least one specimen found in the Coachella Valley. The species was not detected. The flat-seeded spurge is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. The California Native Plant Society considers it a sensitive species. It is not covered under the CVMSHCP.

The Coachella Valley milk vetch is an uncommon, spring blooming ephemeral herb that is known to occur on sandy soils in the Coachella Valley. It was expected due to the ample winter rains. However, no individual plants or seed pods were found. The milk vetch is listed as engendered by the U.S. Fish & Wildlife Service. It has no formal state status. Impacts to the milk vetch are fully mitigated by the CVMSHCP through the payment of mitigation fee. No further action is necessary regarding this species.

The Salton milkvetch is a perennial herb found in the Sonoran Desert of California and Arizona. No individuals, evidence or records of the Salton milkvetch were found on or near the project boundaries. The Salton Milkvetch is not state nor federally listed. It is a uncommon plant usually encountered in sandy or gravelly soils below 1,000 feet in elevation. Though considered sensitive by the California Native Plant Society is not a covered species under the CVMSHCP.

Per the biological report, no further surveys are needed for the five plant species identified, and no impacts are expected to occur to special plant species.

Animal Surveys

Encountered arthropods on the site included the harvester ant (*Pogonomyrmex californicus*), honeybee (*Apis mellifera*), California carpenter bee (*Xylocopa californica*), domestic house cricket (*Acheta domesticus*), and gray bird grasshopper (*Schistocerca nitens*). Arthropods found in undisturbed desert areas just beyond site boundaries include the ghost beetle (*Asbolus verrucosus*), fuzz beetle (*Edrotes ventricosus*), sand scorpion (*Paruroctonus mesaensis*), gray walking stick (*Pseudosermyle straminea*), and Eleodes beetle (Eleodes armata).

Three insect species known to occur within the Coachella Valley have been placed on the California Department of Fish & Games *Special Animals* list. They are the Coachella giant sand treader cricket (*Macrobaenetes valgum*), Coachella Valley Jerusalem cricket (Stenopelmatus cahuilaensis), and the Coachella Valley grasshopper (Spaniacris deserticola). None of these three species were found during the surveys and none have an official status with governmental agencies. The Coachella giant sand treader cricket and Jerusalem cricket are covered species under the CVMSHCP. No impact would occur on special status insects.

The biological field survey did not turn up any amphibian species and none are expected.

Detected reptiles included the side blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), desert iguana (*Dipoosaurus dorsalis*), western shovel-nosed snake (*Chionactis occipitalis*), and Coachella Valley fringe-toed lizard (*Uma inornata*).

One observation of the officially threatened Coachella Valley fringe-toed lizard was recorded in the extreme northeastern corner of the project site. Several consecutive drought years have likely reduced the population of this species in and near the project area. Impacts to the fringe-toed lizard are fully mitigated by the payment of a habitat acquisition fee as required under the Plan and reinforced under **Mitigation Measure BIO-1**. Therefore, less than significant impacts would occur.

A concerted effort was made to find signs of the officially listed desert tortoise (*Goperhus agassizi*). However, no evidence of any kind was found, and no direct observations were made. Additionally, the California Natural Diversity Database has no records of the tortoise on or within one mile of the project site. The project-specific biological report concludes that this species does not occur within the project site and immediate vicinity, and no additional surveys for this species are recommended. No impact is expected for the desert tortoise.

No observations of the flat tailed horned lizard (*Phrynosoma mcallii*) were found within the project boundaries. The habitat is suitable within and near the northeast corner of the site. Nonetheless, no observations or evidence of the species was found in or within three hundred feet of the project boundaries. Impacts to the horned lizard are fully mitigated under the Plan, and no impacts are expected.

Detected birds within the project area were the Say's phoebe (*Sayornis saya*), America kestrel (*Falco sparverius*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), and house finch (*Carpodacus mexicanus*). No nest of any avian species was found within the project boundaries.

No observations of LeConte's thrasher (*Toxostoma lecontei*) were recorded during the surveys. In the Coachella Valley, this species is associated with the golden cholla, an arborescent cactus that provides a nesting site for the thrasher. The field survey did not find this cactus species onsite and therefore concluded the thrasher does not occupy the project site. The thrasher is a covered species under the Plan; therefore, no impacts are expected on the species.

Two functionally non-covered and sensitive avian species were possible occupants of the project site and vicinity. The burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludovicianus*).

An intensive survey for the burrowing owl was undertaken following protocols established by state and federal governments. No observations of the owl were recorded, and no evidence of its presence was found. The habitat of the project site is suitable for the owl and active burrows of the species have been found on several occasions within three miles of the project site. Due to the suitable habitat of the site and the known occurrence in the immediate area, the burrowing owl can take up residence on the site at any time. The owl is not covered under the Plan. Therefore, **Mitigation Measure BIO-2** is required. **Mitigation Measure BIO-2** states that the project proponent shall ensure that burrowing owl clearance survey is performed no more than 14 days prior to project site disturbance

(clearing, grubbing, grading, construction). If any owls are identified, the most current protocol established by the California Department of Fish and Wildlife (Burrowing Owl Mitigation) must be followed. It is also recommended that a survey take place 24 hours prior to ground disturbance as burrowing owls may colonize or recolonize the site within the time between the original survey and project activities. **Mitigation Measure BIO-2** would ensure that impacts to burrowing owls would be less than significant.

The loggerhead shrike, a state Species of Special Concern, was not observed or detected on or near the project site. The project site and immediate area, however, are considered suitable habitat for the shrike and it could breed within project site boundaries. Additionally, there are numerous suitable nesting sites for other nesting bird species (large trees and covered structures). Therefore, **Mitigation Measure BIO-3** is required. **Mitigation Measure BIO-3** states that the project proponent shall ensure that a breeding survey for the loggerhead shrike and general breeding bird survey are performed no more than 14 days prior to site disturbance if ground disturbance (clearing, grubbing, grading, and construction) occurs between February 15th and June 15th. **Mitigation Measure BIO-3** would ensure that less than significant impacts would occur to the loggerhead shrike and nesting bird species.

Recorded mammals included the black-tailed jackrabbit (*Lepus californicus*), Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*) and coyote (*Canis latrans*). No individuals of the Palm Springs Pocket Mouse (*Perognathus longimembris bangsi*), a covered species, were found. The desert kit fox (*Vulpes macrotis arsipus*) was not seen or detected on or near the project site. Human activity in the area is likely the reason for its absence. The desert kit fox is fully protected in California and is not a covered species under the Plan.

The Palm Springs ground squirrel was the only covered CVMSHCP species discovered within the project boundaries. It was detected two times and is expected to occur throughout the project site due to the suitable habitat. It currently is not a listed species and has a much broader range than was previously thought. It is, therefore, unlikely that it will be listed in the near future. It is a covered species under the Plan and impacts to the squirrel are mitigated by the payment of the habitat acquisition fee. The project lies within the boundary of the CVMSHCP, which outlines policies for conservation of habitats and natural communities and is implemented by the City of Rancho Mirage. Prior to construction and issuance of any grading permit, the City of Rancho Mirage shall ensure compliance with the CVMSHCP and its associated Implementing Agreement and shall ensure that payment of the CVMSHCP Local Development Mitigation Fee for the proposed Project is sent to the Coachella Valley Conservation Commission.

The project site is not within a Conservation Area as shown in the CVMSHCP. Additionally, the site does not abut a Conservation Area. Therefore, the project is not subject to Plan requirements regarding lands adjoining Conservation Areas.

Therefore, less than significant impacts are expected to 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 the U.S. Fish and Wildlife Service, following **Mitigation Measure BIO-2** and **BIO-3**.

b) **NO IMPACT:** The property does not contain nor is it adjacent to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and

regulations or by the CDFW or the USFWS. No blue-line stream corridors or desert washes are found within the project boundaries. Therefore, no impacts are expected.

c) **NO IMPACT:** The project site does not contain federally protected wetlands, marshes, or other drainage features. As a result, implementation of the project would not result in the direct removal, filling, or other hydrological interruption to any of these resources. The project is designed with an on-site stormwater retention system that during the life of the project will comply with the City's drainage requirements by preventing the discharge and transport of untreated runoff associated with the project. A project Specific Water Quality Management Plan (WQMP) is expected to be prepared to ensure that the project does not contribute pollutants of concern in any project storm runoff. No impacts are expected.

d) **NO IMPACT:** Per the project-specific biological report, no migratory wildlife corridors or native wildlife nursery sites were found on the project or adjacent properties and no discernable and routinely used corridors were identified. Though many parcels of undeveloped land exist around the project site, in an area context, the site is surrounded by residential and commercial developments. As a result, the site is predicted to become an ecological island in the next few years as the remaining scattered, undisturbed parcels are developed. Specifically, a residential development lies to the immediate northwest of the project site. A residential development, under construction, lies to the immediate north. Parcels of undeveloped land exist to the east and west of the project site. Graded parcels lie to the immediate south, and proposes a residential community with 82 single family lots and retention basins. No impacts are expected.

e) **NO IMPACT:** The project site was completely graded and converted to a horse stable facility in the late 1980s. By 2021, the site had been abandoned though irrigation of trees on the western two-thirds of the property has continued into 2023. Th western two-thirds of the site are in the process of demolition in preparation for redevelopment. The eastern third of the site is being reclaimed by natural processes with blowsand covering and existing fence along the site's northeast boundary. Project implementation would not result in demolition or removal of native trees. The project will comply with the CVMSHCP and there are no other unique local policies or ordinances protecting biological resources that would cause a conflict nor does the site support high value biological resources that could be affected. Additionally, the proposed project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance and no impacts are anticipated.

f) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION:** As previously mentioned, the project lies within the boundary of the CVMSHCP, which outlines policies for conservation of habitats and natural communities and is implemented by the City of Rancho Mirage. The project site is not located within a Conservation Area under CVMSHCP. The CVMSHCP implements a habitat mitigation fee for new development to support the acquisition of conservation lands, to be paid to the City. Therefore, the proposed project will comply with all required plan provisions and pay the required Local Development Mitigation Fee in conformance with the CVMSHCP and City Ordinance and **Mitigation Measure BIO-1**. No impacts are anticipated.

4.3 Mitigation Measures:

BIO-1: Prior to construction and issuance of any grading permit, the City of Rancho Mirage shall ensure compliance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) and shall ensure the collection of payment of the CVMSHCP Local Development Mitigation Fee (LDMF) and transfer of revenues to the Coachella Valley Conservation Commission.

BIO-2: The project proponent shall ensure that burrowing owl clearance survey is performed not more than 14 days prior to project site disturbance (clearing, grubbing, grading, construction). If any owls are identified, the most current protocol established by the California Department of Fish and Wildlife (Staff Report on Burrowing Owl Mitigation, 2012) must be followed. A survey shall also take place 24 hours prior to ground disturbance as burrowing owls may colonize or recolonize the site within the time between the original survey and project activities.

BIO-3: The project proponent shall ensure that a breeding survey for the loggerhead Shrike and general breeding bird survey are performed no more than 14 days prior to site disturbance if ground disturbance (clearing, grubbing, grading, and construction) occurs between February 15th and June 15th.

5 - Cultural Resources

CULTURAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Sources: California Health and Safety Code Section 7050.5, Human Remains; Rancho Mirage General Plan, 2017.

5.1 Setting

The project area is within the upper part of the Coachella Valley, a low valley sandwiched between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. The valley is part of the Colorado Desert geomorphic province, an area that includes both sides of the lower Colorado River and the Coachella and Imperial Valleys of California. The Late Prehistoric period groups that occupied the Coachella Valley were the direct ancestors of

the ethnographic Cahuilla. This period entails a significant increase in human occupation of the valley, and several large archaeological sites from the period have been identified.

The aboriginal group that occupied the northern Coachella Valley during the historical period was the Desert Cahuilla, who, along with the Mountain Cahuilla and the Pass Cahuilla, constituted the ethnographic Cahuilla. The Cahuilla spoke a language of the Takic branch of Northern Uto-Aztecan and the Desert Cahuilla spoke a distinct dialect of Cahuilla. There have been few archaeological studies of the historical-period Cahuilla, but testing at the former Mission Creek Indian Reservation, approximately 20.5 miles northwest of the project area, identified occupations stretching from the Late Prehistoric period into the early twentieth century. Similarly, excavations at Tahquitz Canyon 19.9 miles southeast of the project area, found a large village complex dating to A.D. 1600–1870.

Villages were located in areas with access to a number of resources, either at springs or where wells could be easily dug. As a result, most villages relied on hand-excavated walk-in wells for water. These wells were dug to a depth of approximately 20 feet, to reach the water table. Villages were loose clusters of houses spread over an area up to 0.6 miles across. The Cahuilla were organized into moieties, tribelets (clans), and then lineages. The lineages were land holding groups, and each occupied its own village.

The Desert Cahuilla also grew a few agricultural crops (namely, corn, beans, and squash) that were probably obtained from native peoples along the Colorado River to the east. Crops were irrigated from springs; with the arrival of Europeans, wheat, melons, barley, and fruit trees were added. By the late eighteenth century, the Cahuilla had adopted ranching as an important industry and also worked as wage laborers on the railroads and at farms and ranches.

The discussion below evaluates the property's potential impact on cultural resources.

5.2 Discussion of Impacts:

a) **NO IMPACT:** The project is located on approximately 10 acres of land previously developed as an equestrian center. In the 1980's the land was graded and developed, and by 2021, the site had been abandoned. The site is currently under demolition to allow for redevelopment.

Cultural analyses were completed immediately south of the project site and approximately 0.1 miles west of the project site. For both sites, the City prepared an intensive level survey of historic resources in the City. The inventory included properties listed in the National Register of Historic Places, the California Register of Historical Resources, California Registered Historical Landmarks, California Points of Historical Interest, and properties review by OHP as part of a historic resources survey or an environmental review. It was concluded for both properties that no impacts to potentially historic structures listed in the database would occur. Due to the close proximity of the project site to these properties, it can be concluded that implementation of the proposed project would not result in the loss of potentially historic resources; therefore, less than significant impacts would be expected.

b) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION:** The entire City of Rancho Mirage and SOI are located within the tribal "Traditional Use Area" as identified by the Aqua Caliente Band of Cahuilla Indians. This is a land area of prehistoric and historic patterns of settlement and mobility throughout the region. Because the traditional areas of tribal use do not necessarily correspond to the checkerboard pattern of the reservation, the tribe is concerned about the protection of cultural resources sites off tribal land.

Although existing regulatory measures, including SB 18, address the protection of tribal, cultural resources, the Aqua Caliente Band of Cahuilla Indians does not believe the existing regulations and procedures are adequate to protect potential resources that could be impacted by project development outside of tribal lands. As previously discussed, cultural analyses were conducted immediately south and 0.1 miles west of the project property by the City. No known Tribal cultural resources were found or identified on the two nearby sites. Therefore, less than significant impacts are expected.

Pursuant to AB 52 and SB 18 consultation requirements, the City of Rancho Mirage initiated a SB18 and AB52 consultation process. The City conducted a 90-day tribal consultation period from April 9, 2024 to July 8, 2024. As a result of that consultation, the City received a letter from Augustine Band of Cahuilla Indians stating they were unaware of specific cultural resources that may be affected by the proposed project, however, in the event, should any cultural resources be discovered during the development of this project they should be contacted. Per a consultation call on May 30, 2024, the Agua Caliente Band of Cahuilla Indians (ACBCI), requested the addition of Mitigation Measures CUL-1 and CUL-2, which requires the Tribe to be notified 30 days before any earth-moving activities, and a qualified archaeologist and cultural monitor to be present during earth-moving activities. Following the implementation of the recommended mitigation measure, less than significant impacts are anticipated.

c) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:** The project site is not likely to uncover human remains during grading operations, since the site has been disturbed with the construction the equestrian center in the 1980's. However, the California Health and Safety Code Section 7050.5, and the CEQA Guidelines Section 15064.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the coroner determines the remains to be Native American or has reason to believe that they are those of Native American, the coroner shall contact by telephone within 24-hours of the Native American Heritage Commission. Assembly Bill 52 (AB 52) requires lead agencies to notify their local tribes about development projects. It also mandates lead agencies consult with Tribes if requested and sets the principles for conducting and concluding the required consultation process. Per the requirements of AB 52, the agreements shall provide protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction and provide for sensitive treatment and disposition of Native American burials, skeletal remains, and associated grave goods consistent with the planned use of, or the approved project on, the land. **Mitigation Measure CUL-3** requires that if buried human remains are found during earth-moving operations associated with the project, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the finds. If the human remains are determined to be of Native American Origin, the Native American Heritage Commission (NAHC) shall be contacted. The NAHC will make a determination of the Most Likely Descendants (MLD). The City and Developer will work with the designated MLD to determine the final disposition of the remains.

Mitigation Measure CUL-3 would ensure that less than significant impacts occur regarding possible human remains discovered on the project site.

5.3 Mitigation Measures:

CUL-1: The Agua Caliente Band of Cahuilla Indians must be notified a minimum of 30 days prior to any earth-moving activities including grading, grubbing, trenching, or excavations at the site. All earth-moving activities including grading, grubbing, trenching, or excavations at the site shall be monitored by a qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s).

CUL-2: A qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s) shall provide preconstruction training for all earthmoving construction personnel prior to the start of any ground-disturbing activities, regarding how to recognize the types of Tribal Cultural Resources and/or archaeological resources that may be encountered and to instruct personnel about actions to be taken in the event of a discovery.

Should cultural materials be discovered, they shall be recorded and evaluated in the field. The monitors shall be prepared to recover artifacts to avoid construction delays but must have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered. The Native American Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a Treatment Plan for submission to the State Historic Preservation Officer and Tribal Historic Preservation Office. If artifacts are discovered, these shall be processed, cataloged, analyzed, and prepared for permanent curation in a repository with permanent retrievable storage that would allow for additional research in the future. Only non-destructive methods shall be allowed in regards to Tribal Cultural Resources. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the California Historical Resources Information System.

CUL-3: In the event of remains being uncovered during construction activities, all construction activities will stop immediately as mandated by California Health and Safety Code Section 7050.5 and the CEQA Guidelines Section 15064.5. All construction work taking place within the vicinity of the discovered remains must cease and the necessary steps to ensure the integrity of the immediate area must be taken. The County Coroner must be notified within 24 hours of the discovery of human remains. If the remains discovered are determined by the Coroner to be of Native American descent, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would in turn contact the Most Likely Descendant (MLD) would determine further action to be taken. The MLD would have 48 hours to access the site and make a recommendation regarding the disposition of the remains.

6 - Energy

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

Sources: Appendix A (CalEEMod Version 2022.1.1.21); Rancho Mirage General Plan Update; Rancho Mirage Sustainability Plan, 2012; Rancho Mirage Greenhouse Gas Inventory, 2012; Rancho Mirage Municipal Code; Rancho Mirage General Plan EIR May, 2005.

6.1 Setting

Energy sources are made available to the Coachella Valley by private and public agencies. Major energy providers include Southern California Edison (SCE), Imperial Irrigation District (IID), and the Southern California Gas Company (The Gas Company or SoCalGas). Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage and are provided by SCE, IID and The Gas Company. The project property lies within IID's and The Gas Company's service areas. Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking.

Electricity and Natural Gas

Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage. The project property lies within IID's and The Gas Company's service areas. IID delivers electricity throughout the City at 92 or 161 kilovolts, decreased to 12 kilovolts for distribution to its customers. Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking.

Petroleum

There are more than 27 million registered vehicles in California, and those vehicles consumed an estimated 18.5 billion gallons of petroleum and diesel in 2014, according to the California Energy Commission (CEC). Gasoline and other vehicle fuels are commercially provided commodities and would be available to the project via commercial outlets. According to the CEC, transportation accounts for nearly 37 percent of California's total energy consumption. Petroleum-based fuels account for approximately 92 percent of California's transportation energy sources.

Technological advances, market trends, consumer behavior, and government policies could result in significant changes to fuel consumption by type and total. Various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and

reduce vehicle miles traveled (VMT), at the federal and State levels. Technological advances have made use of other energy resources or alternative transportation modes increasingly feasible, as market forces have driven the price of petroleum products steadily upward.

6.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project proposes a 28-lot residential community on approximately 10 acres at the southeast corner of Via Josefina and Ginger Rogers Road in the City of Rancho Mirage. Electricity and natural gas are the primary sources of energy in the City of Rancho Mirage. Electricity is provided primarily by Southern California Edison (SCE) and the Rancho Mirage Energy Authority (RMEA), with a limited portion of the northeast quadrant of Rancho Mirage in Imperial Irrigation District's (IID) service area. The project is located within IID's service area.

The Southern California Gas Company (SoCalGas or the Gas Company) provides natural gas to the City of Rancho Mirage, serving residential, commercial, and industrial markets. Natural gas is the primary source of energy used in the City for space and water heating, as well as cooking.

The project is expected to consume energy in the form of electricity, natural gas and petroleum during project construction and operation. The purpose of this analysis is to provide an assessment of the impacts resulting from the development and operation of the proposed project and to identify measures that may be necessary to reduce potentially significant impacts. Project-related energy consumption was calculated and analyzed using the latest version of CalEEMod V2022.1.1.21. CalEEMod was used to calculate project-related construction equipment demands, transportation energy demands, and facility energy demands (operational). Project-related construction and operational energy demands are discussed further below.

Construction Energy Demands

Electricity

Temporary electrical power for lighting and electronic equipment, such as computers inside interim construction trailers, would be provided by IID. Electricity consumed for onsite construction trailers, which are used by managerial staff during the hours of construction activities, as well as electrically powered hand tools are expected to use a minimal amount of electricity. However, the electricity used for such activities would be temporary and negligible. Most energy used during construction would be from petroleum consumption (discussed further in following subsection).

Natural Gas

Natural gas is not anticipated to be required during construction of the project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the following petroleum subsection. Any minor amounts of natural gas that may be consumed because of project construction would be temporary and negligible and would not have an adverse effect.

Petroleum

Petroleum would be consumed throughout construction of the project. Fuel consumed by construction equipment would be the primarily energy resource expended over the course of construction, while VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-

duty equipment used for project construction would rely on diesel fuel, as would haul trucks involved in off-hauling materials from excavation. Construction workers are expected to travel to and from the project site in gasoline-powered passenger vehicles. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive that is used for comparable activities or use of equipment that would not conform to current emission standards (and related fuel efficiencies).

Heavy-duty construction equipment of various types would be used during each phase of construction. CalEEMod was used to estimate construction equipment usage. In the analysis of the project the mitigated construction figures were used, based on the assumption that the project will implement applicable mitigation measures. Fuel consumption from construction equipment was estimated by converting the total CO2 emissions from each construction phase to gallons using the conversion factors shown in the tables included subsequently.

Table VI-1, Construction Worker Gasoline Demand, illustrates the demand of gasoline fuel for construction worker trips to and from the site during each construction phase, and phase of development. Construction worker gasoline demand during each phase of development equals a total of 2.177.7 gallons of gasoline fuel.

Table VI-1 Construction Worker Gasoline Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	15	12.8	3,840	1,320	8.89*	148.5
Site Prep.	10	17.5	12.8	2,240	770	8.89	86.6
Grading	30	20	12.8	7,680	2,650	8.89	298.1
Building Const.	300	10.1	12.8	38,784	13,160	8.89	1,480.3
Paving	20	15	12.8	3,840	1,290	8.89	145.1
Arch. Coating	20	2.02	12.8	517.12	170	8.89	19.1
Total Construction Worker Gasoline Demand							**2,177.7**

Sources: Appendix A (CalEEMod Version 2022.1.1.14); *https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

Table VI-2, Construction Vendor Diesel Demand, illustrates the demand of diesel fuel for construction vendor trips to and from the site during each construction phase, and phase of development. These trips are associated with the delivery of construction materials during the building construction phase. Construction vendor demand during each phase of development equals a total of 1,096.3 gallons of diesel fuel.

Table VI-2 Construction Vendor Diesel Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	0	0	0	0	10.18	0
Site Prep.	10	0	0	0	0	10.18	0
Grading	30	0	0	0	0	10.18	0
Building Const.	300	2.99	8.33	7,472	11,160	10.18	1,096.3
Paving	20	0	0	0	0	10.18	0
Arch. Coating	20	0	0	0	0	10.18	0
Total Construction Diesel Demand							**1,096.3**

Table VI-3, Construction Hauling Diesel Demand, illustrates the demand of diesel fuel for construction hauling during demolition and site preparation phases. These trips are associated with the hauling of material from the demolished maintenance building. Construction hauling demand during demolition and site preparation equals a total of 4,053.1 gallons of diesel fuel.

Table VI-3 Construction Hauling Diesel Demand

Const. Phase	Days	Trips	Miles	VMT	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	50	20	20,000	33,000	10.18	3,241.7
Site Prep.	10	25	20	5,000	8,260	10.18	811.4
Total Construction Diesel Demand							**4,053.1**

Table VI-4, Construction Equipment Diesel Fuel Demand, displays the demand of diesel fuel for construction vehicles on-site during the various construction phases. Construction equipment diesel demands for each phase of project development equals a total of 47,978.3 gallons of diesel fuel.

Table VI-4 Construction Equipment Diesel Demand

Const. Phase	Days	Equipment Units	KgCO2e	Kg/CO2/Gallon	Gallons
Demolition	20	6	31,200	10.18*	3,064.8
Site Prep.	10	7	24,100	10.18	2,367.4
Grading	30	8	90,100	10.18	8,850.7
Building Const.	300	9	328,000	10.18	32,220
Paving	20	6	13,800	10.18	1,355.6
Arch. Coating	20	1	1,220	10.18	119.8
Total Construction Equipment Diesel Demand					**47,978.3**

Overall, the project is estimated to consume approximately 2,177.7 gallons of gasoline and 53,127.7 gallons of diesel fuel during the project's construction phases, for a total of 55,305.4 gallons of petroleum consumed during construction of the project. The US EPA applied a Tier 3 program in order to reduce the impacts of motor vehicles on air quality and public health. The vehicle emissions standards will reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium duty passenger vehicles, and some heavy-duty vehicles. The construction equipment will utilize Tier 3 engines or higher, therefore will be newer off-road equipment units.

The energy used during the construction of the project would be limited to the development of the project and would not require long-term petroleum use. Additionally, there are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive that is used for comparable activities or use of equipment that would not conform to current emissions standards (and related fuel efficiencies). Thus, project construction would not consume petroleum in a wasteful or inefficient manner and impacts will be less than significant.

Operational Energy Demands

Energy consumption in support of or related to project operations would include facilities energy demands (energy consumed by building operations and site maintenance activities), and transportation energy demands (energy consumed by residence and patron vehicles accessing the project site).

Electricity

The project proposes to develop a residential community with 28 single family residential lots on approximately 10 acres. The single family residential project is typical of existing developments within the City. The project would not result in the use of excessive amounts of fuel or electricity and would not result in the need to develop additional sources of energy. Although energy use at the project would not be excessive, the project would incorporate several measures directed at minimizing energy use. These measures include applying energy efficient design features, including using high efficiency lighting, such as LEDs, to meet the most current Title 24 Standards in place at the time of construction, and therefore, reducing electricity consumption during project operation. According to the CalEEMod calculations, the project is expected to generate approximately 261,499 kWh of annual electricity. This is depicted in Table VI-5, Operational Electricity Demand.

Table VI-5 Operational Electricity Demand

Land Use	Electricity Demand (kWh/yr)
Single Family Housing	261,499
Other Asphalt Surfaces	0
Total	**261,499**

It is anticipated that the project will use electricity during operation of the proposed project. As indicated in the table above, it is estimated that the project would consume approximately 261,499 kWh of electricity annually. The IID planning area used approximately 1,822.6 gigawatt hours (GWh) of electricity in the residential sector in 2022. IID estimates that electricity consumption within IID's planning area will be approximately 4,641,267 MWh annually by 2031. Based on the project's estimated annual electrical consumption of 261,499 kWh (261.499 MWh), the project would account for approximately 0.006 percent of IID's total estimated demand in 2031.

The project proposes the installation of high efficiency lighting and appliances onsite and water efficient irrigation systems. The project will also comply with California Building Code and Energy Code standards to ensure energy efficient technologies and practices are used at the project site. Therefore, the project will not consume an unnecessary amount of electricity during operation.

Natural Gas

The consumption of natural gas typically is consumed during building heating, water heating and cooking, which will occur during project operation. The project's expected natural gas consumption was calculated using the CalEEMod default values. Based on the CalEEMod calculations, the project is expected to consume approximately 995,801 kBTU of natural gas annually during operation of the entire project. This is displayed in Table VI-6, Operational Natural Gas Demand.

Table VI-6 Operational Natural Gas Demand

Land Use	Natural Gas Demand (kBTU/yr)
Single Family Housing	995,801
Other Asphalt Surfaces	0
Total	**995,801**

Note: 995,801 kBTU/yr is approximately 2,630.9 cf/day per the 1 cf to 1.037 kBTU conversion and 365 days year.

With the aforementioned calculations, the project would result in a long-term increase in demand for natural gas. The project would consume approximately 995,801 kBTU of natural gas annually. This equates to 2,630.9 cf of natural gas per day. The project would be designed to comply with Title 24, Part 6, of the CCR, and the City's Sustainability Plan. Based on the 2018 California Gas Report, the California Energy and Electric Utilities estimates natural gas consumption within SoCalGas's planning area will be 2,310 million cf per day in 2030 (California Public Utilities Commission, 2018 California Gas Report, pg. 103). Therefore, the project would account for approximately 0.00011 percent of the 2030 forecasted consumption in SoCalGas's planning area (2,630.9 cf/day divided by 2,310 million cf/day) and would use the existing infrastructure. Natural gas consumption would be appropriate and not place a significant burden on SoCalGas services. Further, submittal, review, and approval of project plans through City and SoCalGas would ensure future natural gas demands to be manageable.

The project would be required to comply with the most recent California Building Code and Energy Code standards to ensure energy efficient technologies and practices are used at the project site. Therefore, the project will not result in the inefficient, wasteful, or unnecessary consumption of natural gas during project operation. Additionally, natural gas consumption would be appropriate and would not place a significant burden on SoCal Gas services.

Petroleum

According to the figures provided by the CalEEMod calculations, the project would result in 1,624,561 VMTs annually. Per the CalEEMod calculations, the average daily trip (ADT) rate will total 264 on the weekdays, 267 on Saturdays, and 239 on Sundays. Total mobile source CO2e is 608 MT per year, or 608,000 kg per year. CalEEMod assumes 92.5 percent of VMT burns gasoline, while the remaining 7.5 percent burn diesel. Thus, of the 608,000 kg of mobile emissions, 562,400 kg is generated by gasoline combustion, and 45,600 kg is generated by diesel combustion. Project operation would have an annual gasoline demand of 63,262.1 gallons and an annual diesel demand of 4,479.4 gallons, as displayed in Table VI-8.

Table VI-7, Operational Petroleum Demand

	Annual VMT
Land Use	**Project Buildout**
Single Family Housing	1,624,561
Other Asphalt Surfaces	--
Total Annual VMT	**1,624,561**

Table VI-8 Operational Annual Petroleum

	Annual VMT	KgCO2e	Kg/CO2/Gallon	Annual Gallons
Gasoline	1,502,719	562,400	8.89	63,262.1
Diesel	121,842	45,600	10.18	4,479.4
			Total Annual Petroleum	**67,741.5**

Over the lifetime of the project, the fuel efficiency of vehicles in use is expected to increase, as older vehicles are replaced with newer more efficient models. Therefore, it is expected that the amount of petroleum consumed due to the vehicle trips to and from the project site during operation would decrease over time. Additional advancement of technology includes the use of plug-in hybrid and zero emission vehicles in California, which will also decrease the amount of future petroleum consumed in the state. With the foregoing, operation of the project is expected to use decreasing amounts of petroleum over time, due to advances in fuel economy.

The project would provide for, and promote, energy efficiencies required under other applicable federal and State of California standards and regulations, and in doing so, would meet California Building Standards Code Title 24 standards. Moreover, energy consumed by the project's operation is modeled to be comparable to energy consumed by other residential uses of similar scale and intensity that are constructed and operating in California. On this basis, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the project would not cause or result in the need for additional energy producing facilities or energy delivery systems.

In conclusion, the project would result in an increase in energy use during construction and operation compared to the existing conditions. However, based on the findings described above, project construction and operation are not anticipated to result in potentially significant impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Additionally, the project would implement measures required under the City's General Plan, City Municipal Code, the California Building Code, and the California Energy Code. Given these considerations, energy consumption associated with the project operation would not be considered excessive.

b) **LESS THAN SIGNIFICANT IMPACT:** The project proposes to develop and operate a 28-lot single family residential community on approximately 10 acres in the City of Rancho Mirage. As stated in the previous discussion, project development and operation are not anticipated to use an unnecessary amount of energy resources. To ensure the conservation of energy, the State of California and the City of Rancho Mirage implement various regulations in order to be more energy efficient and reduce the amount of greenhouse gas (GHG) emissions. Some of the State-wide and local regulations are listed below.

Federal Regulations

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that

Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

State Regulations

Assembly Bill 32

Assembly Bill 32 (AB 32) was signed in 2006 to establish and reduce the amounts of greenhouse gases being emitted on a state-wide level. Specifically, AB 32 requires a reduction of emissions to 1990 levels by 2020. It plans to do this by establishing an annual reporting program for significant sources. Energy efficiency goals listed in AB 32 includes maximizing energy efficiency building and appliance standards, and pursuing additional efficiency efforts including new technologies, and new policy and implementation mechanisms.

CARB Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561(h)). The California Air Resources Board (CARB) developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. The initial Scoping Plan was approved in 2008, and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. Updates to the Scoping Plan occurred in 2014 and in 2017.

In 2022, CARB released an update to the Scoping Plan. The update addresses recent legislation and direction from Governor Newsom, extends and expands upon earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. The 2022 Plan also adds carbon neutrality as a science-based guide and touchstone for California's climate work.

Assembly Bill 1493/Pavley Regulations

California Assembly Bill 1493 (AB 1493), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the Environmental Protection Agency (EPA) from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007, the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

Executive Order (EO) S-3-05, passed in 2005, established reduction targets of an 80 percent of 1990 levels reduction by 2050, and created agencies to achieve these targets. The passage of this regulation requires the use of more energy efficient practices regarding building development and operation in order to reduce the amount of GHGs produced.

State of California Energy Plan

The California Energy Commission (CEC) is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

Title 20: Appliance Efficiency Standards

The California Code of Regulations (CCR), Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608 (Appliance Efficiency Regulations) regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

Title 24: Building Energy Efficiency Standards and CALGreen Building Standards Code

In addition to Title 20 (Sections 1601-1608) of the CCR, Title 24, parts 6 and 11, also outlines energy efficient building designs for new development. The CCR's Building Energy Efficiency Standards (Title 24, Part 6), and the CALGreen Building Standards Code (Title 24, Part 11), establish mandatory guidelines and standards requiring more energy efficient new and existing developments. The California Energy Commission adopted the Building Energy Efficient Standards for all new residential and nonresidential construction to reduce greenhouse gases, as a part of the California Building Code, Title 24. The code emphasizes heat pumps for space heating and water heating; and extends the benefits of photovoltaic and battery storage systems and other demand flexible technology. Title 24, Part 11, establishes design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties. The proposed project will be required to comply with the state implemented standards for energy efficient new developments.

Local and City Regulations

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction Mandates of AB 32. The project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has the authority to develop the sustainable communities strategy (SCS) or alternative planning strategy (APS). For the SCAG region, the targets set by the California Air Resources Board (CARB) are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions by 2035. These reduction targets became effective October 2018.

Desert Cities Energy Partnership and Green for Life Project

Rancho Mirage is an active member of the Desert Cities Energy Partnership (DCEP), a partnership of Southern California Edison (SCE), Southern California Gas Company (SoCalGas), Imperial Irrigation District (IID), the Agua Caliente Band of Cahuilla Indians, and the cities of Blythe, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, La Quinta, Rancho Mirage, Palm Desert, and Palm Springs, managed by the Coachella Valley Association of Governments (CVAG). Green for Life is an energy-saving program funded by the California Public Utilities Commission (CPUC) through SCE and administered by CVAG.

Rancho Mirage Sustainability Plan

The City of Rancho Mirage established their Sustainability Plan in 2012 as a framework for the development and implementation of policies and programs that will reduce the City's GHG emissions. State-wide regulations, including previously mentioned AB 32, act as policy guides for the City of Rancho Mirage to achieve GHG reduction goals. Through the Sustainability Plan, the City is determined to reduce energy use and waste, create local jobs, improve air quality, and preserve the local landscape and history in order to benefit the City in the future.

The Sustainability Plan addresses the major sources of emissions in seven spheres of daily life: Where We Live, Where We Work, How We Build, How We Get Around, How We Govern, Where We Visit and Play, and How We Teach and Learn. For each sphere, the Sustainability Plan suggests a number of programs or policies that can be implemented by Rancho Mirage to meet its goals by the year 2020.

Rancho Mirage Greenhouse Gas Inventory

The Rancho Mirage Greenhouse Gas Inventory (GHG Inventory) was published by the City in September 2012 to inform residents and businesses of its ecological footprint in significant detail. The GHG Inventory establishes a 2010 baseline of emissions from which reductions will be measured to be aligned with State of California law. The GHG Inventory, the City of Rancho Mirage can assess its GHG emissions and strategically implement policies that specifically target GHG emissions by sector or source. Thus, creating the most mitigating impact while introducing programs and initiatives.

Rancho Mirage General Plan 2017

The City of Rancho Mirage is committed to encouraging the conscious use of energy resources by encouraging the development and use of alternative and renewable reducing energy demand and consumption within their City. Energy efficiency is emphasized in the Conservation and Open Space (COS), Air Quality (AQ), and Community Design Elements (CD) of the Rancho Mirage General Plan. Some goals and policies encouraging energy efficiency are provided as follows:

- Goal COS 4 – The conservation, efficient use, and thoughtful management of energy sources and mineral deposits.
- Goal COS 5 – The long-term viability of limited and non-renewable resources.
- Policy COS 5.1 – The City shall promote energy efficiency and conservation in all areas of community development, including transportation, development planning, and public and private sector construction and operation, as well as in the full range of residential and non-residential projects.

- Policy CD 8.2 – The City shall encourage new development to incorporate "green building" practices to maximize resource conservation and be compatible with the surrounding desert environment.
- Program CD 8.2A – Encourage architects, developers and designers to implement all of the 2016 California Green Building Standards Code, as opposed to just the mandatory measures.

Rancho Mirage Municipal Code

Similar to the Sustainability Plan and the 2017 General Plan, the City's Municipal Code also includes provisions that encourage the use of alternative transportation means that reduce the use of non-renewable energy and the use of energy efficient appliances and building design standards. The following list includes some of these provisions:

- Chapter 10.80, Transportation Demand Management, which is intended to protect the public health, safety and welfare by reducing air pollution, traffic congestion and energy consumption attributable to vehicle trips and vehicle miles traveled.
- Chapter 15.02.010, Codes of the California Building Standards Code adopted without local amendments, which states that the most recent California Energy Code (Part 6 of Title 24 of the CCR), and the most recent California Green Building Standards Code (Part 11 of Title 24 of the CCR) are applicable within the City, without local amendments.

Regarding federal transportation regulations, the project site is located in a developed area. Access to and from the project site is proposed to occur on existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by Southern California Edison and the Southern California Gas Company.

Regarding Pavley (AB 1493) regulations, an individual project does not have the ability to comply or conflict with these regulations because they are intended for agencies and their adoption of procedures and protocols for reporting and certifying GHG emission reductions from mobile sources.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CALGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

Additionally, the project is consistent with the applicable strategies of the City of Rancho Mirage's Sustainability Plan and Energy Action Plan, as well as CARB's Scoping Plan. The project property will comply with all applicable federal, State, and local guidelines and regulations regarding energy-efficient building design and standards. Therefore, the proposed project is not anticipated to conflict or obstruct a State or local plan for renewable

energy or energy efficiency. The project proposes permanent lodging uses and will not have any long-term effects on an energy provider's future energy development or future energy conservation strategies. Less than significant impacts are expected.

6.3 Mitigation Measures: None required.

7 - Geology and Soils

GEOLOGY AND SOILS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal	☐	☒	☐	☐

systems where sewers are not available for the disposal of wastewater?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Sources: The Alquist-Priolo Earthquake Fault Zoning (AP) Act, California Department of Conservation; Geotechnical Investigation, NTS Geotechnical, Feb 2023 (Appendix C). 2017 Rancho Mirage General Plan Update; Rancho Mirage General Plan EIR May, 2005; Riverside County General Plan, Safety Element, 2016; Riverside County General Plan Geotechnical Report 2000.

7.1 Setting

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to prohibit the location of developments and structures for human occupancy across the trace of active faults. To assist with this, the State Geologist delineates appropriately wide earthquake fault zones (Alquist-Priolo Zones) to encompass potentially and recently active traces, which are submitted to city and county agencies to be incorporated into their land use planning and construction policies. A trace is a line on the earth's surface defining a fault, and an active fault is defined as one that has ruptured in the last 11,000 years. The minimum distance a structure for human occupancy can be placed from an active fault is generally fifty feet.

Seismic Hazard Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 directs the Department of Conservation, California Geological Survey to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards.

The SHMA requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires.

California Code of Regulations, Title 24 (California Building Standard Code)

The California Building Standards Commission operates within the Department of General Services and is charged with the responsibility to administer the process of approving and adopting building standards for publication in the California Building Standards Code (Cal. Code Regs., Title 24). These regulations include provisions for site work, demolition, and construction, which include excavation and grading, as well as provisions for foundations, retaining walls, and expansive and compressible soils. The California Building Code also provides guidelines for building design to protect occupants from seismic hazards.

South Coast Air Quality Management District

South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for Orange County and portions of Los Angeles, San Bernardino, and Riverside counties, including the Coachella Valley. SCAQMD is responsible for controlling emissions primarily from stationary sources of air pollution, including grading and construction sites. The main source of pollution from grading and construction activities is fugitive dust, which is particulate matter that is suspended in the air by direct or indirect human activities. Two South Coast AQMD rules were adopted with the purpose of reducing the amount of fugitive dust entrained as a result of human activities. Rule 403 applies to any activity capable of generating fugitive dust. Rule 403.1 is supplemental to Rule 403 and applies only to fugitive dust sources in Coachella Valley.

Rule 403 (Fugitive Dust) requires the implementation of best available dust control measures (BACM) during active operations capable of generating fugitive dust. This rule also requires activities defined as “large operations” to notify the South Coast AQMD by submitting specific forms. A large operation is defined as any active operation on property containing 50 or more acres of disturbed surface area; or any earth moving operation with a daily earth-moving or throughput volume of 5,000 cubic yards, three times during the most recent 365 day period.

Rule 403.1 (Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources) is a supplemental rule to Rule 403 and is applicable to man-made sources of fugitive dust in Coachella Valley. The purpose of this rule is to reduce fugitive dust and resulting PM10 emissions from man-made sources in the Coachella Valley. Rule 403.1 requires a Fugitive Dust Control Plan approved by South Coast AQMD or an authorized local government agency prior to initiating any construction/earth-moving activity. These requirements are only applicable to construction projects with 5,000 or more square feet of surface area disturbance.

Geotechnical Investigation

NTS Geotechnical composed a project-specific Geotechnical Investigation in February 2023. The purpose of the investigation was to evaluate the subsurface conditions at the site and provide geotechnical engineering recommendations for the proposed construction. The Geotechnical Investigation included a background review of geologic and topographic maps and aerial photographs relevant to the project area. The investigation also included field exploration of the site which included 6 hollow-stem-auger borings to a depth of 20 feet below the existing grade. Lab testing was performed on selected samples obtained from the borings in order to better classify soil and evaluate engineering properties of the foundation soils.

The 2023 Geotechnical Investigation was consulted throughout this Geology and Soils Section and discussed further below.

Paleontological Resources

Paleontological resources are the fossilized remains of ancient plants and animals. They occur in older soils which have been deposited in the Valley over millions of years. Figure 4.9.3, Paleontological Sensitivity, in the Riverside County General Plan, recognized the property as having low potential for Paleontological Sensitivity. Areas recognized for having a “low” potential have a reduced likelihood of containing significant non-renewable paleontological resources, including vertebrate or significant invertebrate fossils.

7.2 Discussion of Impacts:

a i) **LESS THAN SIGNIFICANT IMPACT:** The City of Rancho Mirage, similar to most of Southern California, is susceptible to earthquakes due to the active faults that traverse the

region. The Rancho Mirage General Plan Environmental Impact Report (EIR) states that classifying an active fault helps gauge the surface rupture potential of a fault and prevents development from being sited directly on an active fault. Additionally, the ability to identify and locate faults makes ground rupture the easiest seismic hazard to avoid.

According to Exhibit 21, *Faults in the Rancho Mirage General Plan Area*, in the City's General Plan Safety Element and the Rancho Mirage General Plan ArcGIS Public Web Application, multiple faults are located in and near Rancho Mirage. These faults include the Banning, Garnet Hill, San Andreas, Santa Ana Thrust, Deep Canyon, San Jacinto, and San Gorgonio Pass faults. The faults are capable of creating an earthquake in the Rancho Mirage area; however, no known active or inactive faults traverse through or near the project site.

In order to reduce the losses from surface fault rupture on a statewide basis, the Alquist-Priolo (AP) Earthquake Fault Zone Act was passed in 1972 after the San Fernando earthquake a year prior. The AP Earthquake Fault Zone Act is intended to ensure public safety by prohibiting the location of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. After consulting the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist, it can be determined that the closest AP Earthquake Fault Zone to the project site is at the San Andreas Fault, approximately 3.7 miles northeast. Therefore, due to the distance of the fault zone, it can be concluded that risks associated with primary surface ground rupture are low.

Per the AP Earthquake Fault Zone Map and the 2017 Rancho Mirage General Plan, rupture from an earthquake fault is not anticipated on the project property or at offsite improvements proposed along Via Josefina to connect to Coachella Valley Water District's (CVWD)'s sewer main. No known active faults traverse through or are found near the project site, although seismically induced ground shaking is expected in the City of Rancho Mirage. The project site nor offsite improvements are not located in an AP Earthquake Fault Zone; therefore, impacts would be less than significant.

ii) **LESS THAN SIGNIFICANT IMPACT:** Seismically induced ground shaking is anticipated in the entire Coachella Valley, due to the multiple northwest-southeast trending faults in the region. Although these faults produced the unique topography in the Coachella Valley (high mountain ranges and a low valley floor), the major faults, such as the San Andreas Fault, have the potential to produce strong shaking during a seismic event. The strength of ground shaking is accredited to the distance from the fault; where the intensity of the seismic shaking decreases the further it is from the causative fault. The 2017 Rancho Mirage General Plan Safety Element indicates that ground shaking during an earthquake is the most significant seismic hazard that will impact Rancho Mirage.

The approximately 10-acre project property proposes the development of 28 lots that are comprised of a single-family residence and ADUs. To ensure the safety of the project improvements against strong seismic ground shaking, construction shall be designed and implemented in accordance with the most current edition of the California Building Code (CBC) and all applicable provisions of the CBC.

Following the regulations provided by the City and the CBC, the proposed development will be constructed in a manner that reduces the risk of seismic hazards (Title 24, California

Code of Regulations). The project shall also comply with the Geotechnical Investigation. The Geotechnical Investigation provides direction for site preparation, remedial grading, materials for fill and compacted fill, temporary excavations, seismic design, and foundation design and construction. Findings and recommendations from the Geotechnical Investigation would work to reduce exposure of people or structures to adverse effects to the greatest extent possible against seismic hazards. The project shall comply with all recommendations set forth in the Geotechnical Investigation as required by **Mitigation Measure GEO-1**. Site work shall also be conducted in accordance with the Rancho Mirage Municipal Code, and all grading and construction plans will be reviewed and approved by the City. These requirements are designed to reduce impacts related to strong ground shaking; therefore, less than significant impacts are anticipated for onsite and offsite construction.

iii) **LESS THAN SIGNIFICANT IMPACT:** The Rancho Mirage General Plan states that liquefaction may occur when loose, unconsolidated, saturated, sandy soils are subject to ground vibrations during a seismic event. This occurs in areas where the ground water table is within 50 feet of the ground surface and when seismic events occur that generate a Modified Mercalli Intensity value of VII or greater. Significant ground shaking can suddenly increase water pressure in the pores between soil particles and cause soils to lose cohesion and “liquefy.” This loss of soil strength can cause a building to sink, tilt and suffer structural damage. Other effects of liquefied soils include a loss of bearing strength, ground oscillations, lateral spreading, and ground lurching and slumping.

Three conditions must be met in order for liquefaction to occur. There must be (1) a relatively long duration of strong ground shaking, (2) the presence of unconsolidated sediments consisting primarily of silty sand and sand, and (3) the presence of groundwater within 50 feet of the ground surface. Exhibit 22, *Areas Susceptible to Liquefaction Map*, in the 2017 Rancho Mirage General Plan, identifies the project location to be in an area of moderate liquefaction susceptibility, primarily due to the liquefaction susceptible soils present at the project site. Based on the United States Department of Agriculture (USDA) Web Soil Survey, the site consists of Myoma fine sand, a wind-blown sandy alluvium soil. However, the deep groundwater in Rancho Mirage does not allow the saturation of the sediments. Additionally, the Geotechnical Investigation did not encounter groundwater while drilling boreholes to a maximum depth of 20 feet below the existing grade; therefore, the potential for liquefaction to occur at the project site would be less than significant.

Although the project area and the offsite improvements for the project are not susceptible to liquefaction, the 2017 Rancho Mirage General Plan categorizes a majority of Rancho Mirage, including the project area, as having a high susceptibility to seismically induced settlement (Exhibit 23, *Seismically Induced Settlement Susceptibility*). This is due to the windblown sands and other recently deposited sediments that are typically loose and, therefore, potentially subject to seismically induced settlement. Strong seismic shaking, the 2017 General Plan states, can cause densification or compaction of soils resulting in local or regional settlement of the ground surface, which can cause damage to foundations and structures. The site consists of Myoma fine sand, a wind-blown sandy alluvium soil. The project site shall implement proper excavation, compaction, and foundation design during development of the site to avoid effects caused by seismically induced settlement.

To ensure the safety of the project against seismically induced hazards, the project site and offsite improvements shall adhere to the standard design requirements stated in the most recent California Building Code (CBC), the recommendations provided in the

Geotechnical Investigation as required in **Mitigation Measure GEO-1**, and the City's building standards. Overall, impacts from seismically induced ground failure such as liquefaction and settlement are anticipated to be less than significant.

iv) NO IMPACT: As discussed throughout this Geology and Soils Section, the City of Rancho Mirage, like most of Southern California, is susceptible to seismic ground shaking due to the multiple faults in the region. As a result of seismic ground shaking, slope failure, such as rockfalls and landslides, may occur, especially throughout elevated areas in the City.

According to the Safety Element in the 2017 Rancho Mirage General Plan, seismically induced landslides and rock falls can be expected primarily in the southern portion of the City including areas near the Santa Rosa Mountains (where the bedrock is intensely fractured or jointed), the Indio Hills area, and some sections of Highway 111. Exhibit 24 in the 2017 Rancho Mirage General Plan, *Seismically Induced Rock Falls and Landslide Susceptibility Map*, classifies the project location in an area of low susceptibility of being impacted by rock falls and seismically induced landsliding, due to the relatively flat topography found onsite and in the surrounding area. Therefore, no impacts to the project area or offsite improvements are expected to occur regarding landslides and rockfalls.

b) LESS THAN SIGNIFICANT IMPACT: The 2017 Rancho Mirage General Plan states that most of the City is highly susceptible to wind erosion. The geomorphology of the Coachella Valley, its extreme aridity, and the marine air masses funneled from the west through the San Gorgonio Pass create strong and persistent winds in the valley. These strong winds have been blowing and redistributing sand deposits in the area for thousands of years. Additionally, lands disturbed by flooding, grading or agricultural activities are subject to significant erosive forces that suspend fine dust and transport sand over great distances. This is a concern for the City of Rancho Mirage because the eroded particles have the ability to damage vehicles, structures, and other improvements due to windblown sand.

The project site is currently mostly vacant and included an equestrian center that has been mostly demolished near Via Josefina. The project site proposes the construction of 28 lots that are comprised of single-family residence and ADUs. Construction of the site will result in ground disturbing activities such as the clearing and grubbing of vegetation and grading, which may increase the potential of soil erosion. According to Exhibit 25 of the General Plan, *Wind Erosion Hazard*, the project site is characterized as being within an area exposed to "very severe" wind erosion. Very severe wind erosion hazard areas are properties exposed to erosive winds where soils show distinct evidence of wind removal and/or accumulation forming dunes more than 48 inches high.

Blowing sand and fugitive dust (discussed previously in the Air Quality section of this document) constitutes a significant local environmental and health hazard. Control of this hazard, as required by the City, includes a submittal of a Fugitive Dust Control Plan (Local Air Quality Management Plan) prior to development. Per South Coast Air Quality Management District (SCAQMD) Rule 403.1, the project would be required to submit a Local Air Quality Management Plan (LAQMP) to be reviewed as part of the grading permit process to minimize potential impacts caused by blowing dust and sand during construction. Procedures and best management practices (BMPs) set forth in the Plan would ensure that potential erosion is controlled during the construction process. These BMPs may include watering of the site during construction, the installation of retaining

walls and landscaping materials, or the application of chemical soil stabilizers. As a standard condition, any ground surface area adjacent to the proposed development that is temporarily disturbed by construction activities must be entirely covered by the LAQMP and must be properly re-stabilized to satisfy the City, SCAQMD, and NPDES requirements. The adjoining areas disturbed during construction due to temporary staging or soil movement must be treated with an effective long-term soil stabilizer or an equivalent cover method, subject to review and approval by the City of Rancho Mirage. These actions would be regulated by the plan review process prior to obtaining a grading permit and would be enforced as part of the agency site inspection protocols during construction. See the Air Quality Section of this document for further discussion.

Along with the implementation of the LAQMP, to further avoid erosion at the project site, the developer must comply with the State's most current Construction General Permit (CGP) (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). Compliance with the CGP involves the development and implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) designed to reduce potential adverse impacts to surface water quality during the period of construction. The required plan would identify the locations and types of construction activities requiring BMPs and other necessary compliance measures to prevent soil erosion and stormwater runoff pollution. The plan would also identify the limits of allowable construction-related disturbance to prevent any exceedances or violations. Waterborne erosion and the City's Standard Conditions associated with it are thoroughly discussed in the Hydrology and Water Quality Section of the document.

In addition to the LAQMP and the SWPPP, the project would include the development of both pervious and impervious surfaces. The pervious surfaces would include landscaped areas and the proposed open space and retention areas, while the impervious surfaces will include the building areas, parking lots, sidewalks, and drive aisles. Landscaping of the project would contain trees, shrubs, and ground covers, as well as crushed rocks. The permanent stabilization methods of paving and landscaping at the project site would decrease the amount of erosion created at the property during project operation.

With the implementation of the LAQMP, and SWPPP (outlined above and in the Air Quality and Hydrology Sections of this document), along with the paved and landscaped surfaces on the property, impacts regarding erosion from the project site are expected to be less than significant.

c) LESS THAN SIGNIFICANT IMPACT: The approximately 10-acre project will include the development of a single-family residential community, located at 35050 Via Josefina in Rancho Mirage. The project site was analyzed for the likelihood of potential hazards such as landslides, liquefaction, and subsidence. The findings are discussed as follows:

As identified in portion a) iii. of this Geology and Soils Section, liquefaction occurs when loose, unconsolidated, saturated, sandy soils are subjected to ground vibrations during a seismic event. This occurs in areas where the ground water table is within 50 feet of the ground surface and when seismic events occur the sudden increase in water pressure in the pores between soil particles and the loss of cohesion with the soils causes them to act like a liquid. Per the City General Plan, the depth to groundwater in most of Rancho Mirage, including the project property, is more than 50 feet below ground surface. Therefore, the potential for liquefaction at the project site and offsite improvements are considered negligible. Less than significant impacts are anticipated.

Lateral spreading is the lateral displacement of gently sloping ground as a result of pore pressure build-up or liquefaction in a shallow underlying deposit during an earthquake. As discussed in a) iii, the risk of liquefaction at the project site is considered moderate due to the underlying soil type, however because of the presumed lack of shallow groundwater below the site, the potential for liquefaction is considered negligible; therefore, the potential for lateral spreading is low. Impacts are anticipated to be less than significant at both the project site and offsite improvements.

As discussed in portion a) iv. of this Geology and Soils Section, the City of Rancho Mirage indicates that the project is located in an area of low susceptibility of being impacted by rock falls and landslides. The existing project site is characterized by relatively flat topography. Due to the absence of steep slopes around the project site, impacts of landslides are not expected.

The 2017 Rancho Mirage General Plan defines subsidence as gradual settling or sinking of the ground surface with little or no horizontal movement. Several regions of subsidence have been documented in Riverside County, all of them in deep, alluvium-filled valleys. Subsidence can be caused by both human activities and natural causes, such as earthquakes. In most cases, the cause of ground subsidence in the Coachella Valley is typically due to declining groundwater levels. The recognition that ground subsidence is an environmental restraint has forced agencies, such as the U.S Geological Survey and the Coachella Valley Water District, to devote resources to the study and mitigation of this potential hazard. Regional subsidence from groundwater withdrawal is a potential hazard that the City can proactively mitigate by supporting the proper management of the groundwater supplies, creating water conservation programs, encouraging water recycling, and educating the public. In addition, building and seismic code requirements assure that potential impacts associated with ground subsidence are reduced to less than significant levels.

According to the Rancho Mirage General Plan EIR, strong ground shaking can cause densification or compaction of soils resulting in local or regional settlement of the ground surface. During strong shaking, soil grains become more tightly packed due to the collapse of voids and pore spaces, resulting in a reduction of the thickness of the soil column. This type of ground failure typically occurs in loose granular, cohesionless soils, and can occur in either wet or dry conditions. This can result in local differential settlement and damage to foundations and structures, as well as damage to water and sewer lines. According to Exhibit 23 in the General Plan, the project site is displayed as having high susceptibility to seismically induced settlement. The project property is mostly vacant except for an equestrian center that is under demolition. To reduce the potential for seismic settlement in the project area, the City recommends proper excavation, compaction, and foundation design (page 86 of the General Plan). Grading plans and structural engineering plans will be reviewed and approved by the City.

Offsite improvements would not cause impacts since Via Josefina is a paved road that is disturbed by both vehicles and pedestrians. The project and offsite improvements would follow the recommendations in the Geotechnical Investigation as required by **Mitigation Measure GEO-1**. The project would also be conditioned to comply with the recommendations within the General Plan and EIR, the Rancho Mirage Municipal Code, and the most recent California Building Code (CBC). Overall, less than significant impacts are anticipated.

d) LESS THAN SIGNIFICANT IMPACT: Expansive soils, as defined in the Riverside County General Plan, have a significant amount of clay particles which can give up water (shrink) or take on water (swell). The change in volume exerts stress on buildings and other loads placed on these soils, which is why they are a potential hazard. These soils can also be widely dispersed, occurring in both hillside areas and low-lying alluvial basins.

Based on the Geotechnical Investigation which included laboratory testing and expert review of similar material types, the soils encountered near the ground surface at the project site exhibit a very low expansion potential. Impacts from expansive soils are expected to be less than significant at the project site and offsite improvements with the adherence to the recommendations set for in the Geotechnical Investigation (**Mitigation Measure GEO-1**) County and City standard conditions during grading and construction.

e) NO IMPACT: The project property is located is located at 35050 Via Josefina. The project is bound by Via Josefina to the west and vacant lots on the north, south, and east. The project area would be provided with sanitary sewer service by the Coachella Valley Water District (CVWD). The existing infrastructure located along Via Josefina would provide the project with access to wastewater treatment infrastructure (further discussed within the Utilities Section of this document). The proposed project will be required to connect to sanitary sewer lines and no septic systems will be permitted. No impacts are expected.

f) LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED: Paleontological resources provide evidence of past life forms and their biota, which is valued for the information they yield about the history of earth and its past ecological settings. Per Figure OS-8, *Paleontological Sensitivity*, in the Riverside County General Plan's Multipurpose Open Space Element, the property is recognized for having low potential for Paleontological Sensitivity. Areas recognized for having a "low" potential have a reduced likelihood of containing significant non-renewable paleontological resources, including vertebrate or significant invertebrate fossils. Moreover, the site is not recognized as a unique paleontological or a unique geologic feature. Additionally, the project property lies in an urbanized context within the City, surrounded by residential uses and vacant land. Therefore, it is unlikely that paleontological resources are onsite. If during the course of grading or construction, artifacts or other paleontological resources are discovered, all grading onsite shall be halted and the applicant shall immediately notify the City Planner. A qualified paleontologist shall be called to the site, at the cost of the applicant, to identify the resource and recommend mitigation if the resource is significant. This is stated in the **Mitigation Measure GEO-2,** and would reduce impacts on paleontological resources or geologic features to less than significant.

7.3 Mitigation Measures:

GEO-1 The applicant shall comply with all recommendations set forth in the Geotechnical Investigation prepared for the project (Appendix C) during the construction.

GEO-2 If paleontological materials are discovered during grading or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified paleontologist can assess the nature and significance of the find. Project personnel shall not collect or move any paleontological materials. To the extent feasible, project activities shall avoid these deposits.

8 – Greenhouse Gas Emissions

GREENHOUSE EMISSIONS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Sources: *Final 2022 Air Quality Management Plan* (AQMP), by SCAQMD, December 2022; *Final 2003 Coachella Valley PM10 State Implementation Plan* (CVSIP), by SCAQMD, August 2003; *Analysis of the Coachella Valley PM10 Redesignation Request and Maintenance Plan*, by the California Air Resources Board, February 2010; Appendix A (California Emissions Estimator Model (CalEEMod), Version 2022.1.1.21); California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators, 2021 Edition, California Air Resources Board; Release No. 18-37 & 19-35, California Air Resources Board Press Release, July 2018 and August 2019.

8.1 Setting

Summary of Local and Statewide Greenhouse Gas Regulations and Trends:

Greenhouse gases (GHG) are a group of gases that trap solar energy in the Earth's atmosphere, preventing it from becoming too cold and uninhabitable. Common greenhouse gases in the Earth's atmosphere include water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), ozone, and chlorofluorocarbons to a lesser extent. Carbon dioxide is the main GHG thought to contribute to climate change. Carbon dioxide reflects solar radiation back to Earth, thereby trapping solar energy and heat within the lower atmosphere. Human activities (such as burning carbon-based fossil fuels) create water vapor and CO2 as byproducts, thereby impacting the levels of GHG in the atmosphere. Carbon dioxide equivalent (CO2e) is a metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas.

To address the long-term adverse impacts associated with global climate change, California's Global Warming Solutions Act of 2006 (AB 32) requires California Air Resource Board (CARB) to reduce statewide emissions of greenhouse gases to 1990 levels by 2020. In 2016, Governor Jerry Brown signed Senate Bill 32 (SB32) that requires California to reduce GHG emissions to 40 percent below 1990 levels by 2030. With the passage of the California Global Warming Solutions Act of 2006 (Assembly Bill 32) in California, environmental documents for projects pursuant to CEQA are required to analyze greenhouse gases and assess the potential significance and impacts of GHG emissions.

California's annual statewide GHG emission inventory is a relevant tool for tracking California's progress in reducing GHGs and achieving the statewide GHG target. The GHG inventory relies on data collected through various California Global Warming Solutions Act (AB 32) programs. On July 11, 2018, CARB announced in a press release (No. 18-37) that greenhouse gas pollution in

California fell below 1990 levels for the first time since emissions peaked in 2004, an achievement roughly equal to taking 12 million cars off the road or saving 6 billion gallons of gasoline a year. Moreover, according to the CARB report on California Greenhouse Gas Emissions for 2000 to 2017 (published in 2019), which tracks the trends of GHG emissions, California's GHG emissions have followed a declining trend between 2007 and 2017. In 2017, emissions from GHG emitting activities statewide were 424 million metric tons of CO2 equivalent (MMTCO2e), 5 MMTCO2e lower than 2016 levels and 7 MMTCO2e below the 2020 GHG Limit of 431 MMTCO2e. The data also show that for the first time since California started to track GHG emissions, the state power grid used more energy from zero-GHG sources like solar and wind power than from electrical generation powered by fossil fuels. On July 28, 2021, CARB announced via Press Release No. 21-34 that state Greenhouse Gas Inventory shows emissions have continued to drop below 2020 target, which is a return to the 1990 GHG levels. The target was achieved four years ahead of schedule in 2016.

On October 26, 2022, CARB published the California Greenhouse Gas Emissions for 2000 to 2020, Trends of Emissions and Other Indicators. Based on this report, in 2020, emissions from GHG emitting activities statewide were 369.2 million MMTCO2e, 35.3 MMTCO2e lower than 2019 levels and 61.8 MMTCO2e below the 2020 GHG Limit of 431 MMTCO2e. The 2019 to 2020 decrease in emissions was deemed likely due in large part to the impacts of the COVID-19 pandemic. Economic recovery from the pandemic may result in emissions increases over the next few years. As such, the total 2020 reported emissions are likely an anomaly, and any near-term increases in annual emissions should be considered in the context of the pandemic.

South Coast Air Quality Management District: On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. A threshold for projects where SCAQMD is not the lead agency has not been adopted. The City of Rancho Mirage also has not adopted a GHG numeric threshold of significance. From the interim GHG guidance, a GHG emission level of 3,000 metric tons of carbon dioxide equivalent (MTCO2e) has served as measure to distinguish small projects that can be screened out while achieving the emission capture rate of 90 percent for all new or modified projects subject to environmental review. According to the SCAQMD guidance, the 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. Small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

Rancho Mirage Sustainability Plan: The City of Rancho Mirage completed the 2013 Sustainability Plan: Leadership in Energy Efficiency (Sustainability Plan) in May 2013. The Sustainability Plan is a framework for the development and implementation of policies and programs that will reduce the City's emissions, working towards the Statewide target of 1990 levels by 2020, set by AB 32. For the City to achieve the Statewide target of 1990 levels by 2020, it will have to reduce emissions by 54,272 metric tons of carbon dioxide equivalent ($MTCO_2e$), a 19.8 percent reduction. The set of measures presented in the Sustainability Plan will reduce the City's GHG emissions by 60,411 $MTCO_2e$, which exceeds the reduction target by 6,139 $MTCO_2e$ (compared with the target amount of 54,272 $MTCO_2e$).

As previously discussed, CalEEMod Version 2022.1.1.21 was used to quantify GHG emissions associated with construction and operation of the proposed project. The parameters considered

for CalEEMod and air quality analysis involved 28 single-family residential units with an average household size of 1.85 persons per household (PPH) based on the California Department of Finance 2022-2023 E-5 Population and Housing Estimates. The total site area of 10.08 acres was attributed to the 28 residential lots (7.83 acres), landscaped open space (0.86 acres), and street improvements (1.12 acres). In addition, a conservative off-site area of up to one acre was factored for the potential off-site utility improvements outside of the project tract and within the public rights-of-way. Although the project site is vacated and demolished, the model input also considered the disturbance and export of materials remaining from the former equestrian facilities, such as concrete slabs.

8.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project parameters were factored into CalEEMod to evaluate whether the GHG emissions would exceed the screening levels and therefore conflict with the plans and efforts of reducing the emissions of greenhouse gases. Construction-related GHG emissions were amortized over a 30-year period and added to the project's annual operational GHG emissions. The operational GHG emissions can be attributed to area sources, mobile sources, solid wastes and water supply, treatment and distribution of the proposed operations.

As previously discussed, the screening threshold of 3,000 metric tons of carbon dioxide equivalent MTCO2e) per year will serve as the numeric threshold of significance. The GHG emissions estimates resulting from CalEEMod are displayed below in Table VIII-1.

Table VIII-1 Total Project Greenhouse Gas Emissions

Unmitigated Emission Source	Emissions (metric tons per year)
	Total CO2E
Annual Construction Emissions Amortized Over 30 Years	9.93
Mobile, Area, Energy, Water, Waste, Refrigerant Sources	702.00
Total CO2E (All Sources)	711.93
SCAQMD Screening Threshold	3,000
Threshold Exceeded?	**NO**

Table VIII-1 demonstrates that the project involving 28 single-family residential lots is expected to generate approximately 711.93 MTCO2e per year from construction, mobile, area, energy, water, waste, and refrigerant sources. Therefore, the residential project would not result in GHG emissions at a scale or level capable of having a significant impact on the environment. Less than significant impacts are anticipated.

b) **LESS THAN SIGNIFICANT IMPACT:** The project is expected to result in GHG emissions totaling 711.93 MTCO2e per year, which is below the applicable screening level of 3,000 MTCO2e per year set forth under the SCAQMD regional jurisdiction that generally categorizes small-scale projects. As a result, the project is not expected to conflict with any applicable plan, policy or regulation for the purpose of reducing GHG emissions. This includes the Rancho Mirage Sustainability Plan, which works in accordance with the AB 32 framework and strategies. The construction of new residential units would imply

implementing the most current building energy efficiency and water efficiency standards, including those associated with 3-D construction methods. The applicability and implementation of statewide vehicle emission standards would not be impeded or burdened by the proposed scale and land use of the project that has been factored into the governing General Plan. Less than significant impacts are anticipated.

8.3 Mitigation Measures: None required.

9 - Hazards and Hazardous Materials

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

response plan or emergency evacuation plan?				
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Sources: Enforcement and Compliance Fault Zoning Act, California Department of Conservation; Enforcement and Compliance History Online, EPA, 2023; EnviroStor, Department of Toxic Substances Control, 2023; GeoTracker, State Water Resources Control Board, 2023; Rancho Mirage General Plan 2017.

9.1 Setting

Hazardous Materials

The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials based on ignitability, reactivity, corrosivity, and/or toxicity properties. The State of California defines hazardous materials as substances that are toxic, ignitable, or flammable, reactive and/or corrosive, which have the capacity of causing harm or a health hazard during normal exposure or an accidental release. As a result, the use and management of hazardous or potentially hazardous substances is regulated under existing federal, state, and local laws.

Hazardous Waste

The United States Environmental Protection Agency (EPA) simply defines hazardous waste as a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from sources ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids, gases, and sludges. These can include everyday commercial products, such as pesticides, cleaning fluids, and household sprays, as well as byproducts of manufacturing processes. The EPA has classified hazardous waste into four categories:

- Listed wastes – wastes from common manufacturing and industrial processes, waste from specific industries such as petroleum refining or pesticide manufacturing, and discarded commercial products;
- Characteristic wastes – non-listed wastes that exhibit ignitability, corrosively, reactivity, and toxicity;
- Universal wastes – batteries, mercury-containing equipment, and fluorescent lamps and bulbs; and
- Mixed wastes – radioactive and hazardous waste components.

A hazardous material may become hazardous waste upon its accidental release into the environment. All hazardous wastes must be discharged into a Class I landfill. No Class I landfill is currently operated within Riverside County. Hazardous Waste generated within Riverside County and disposed of in Kern County or Santa Barbra County, where active Class I landfills are located. Some waste is also transported out of the State.

Many types of businesses can be producers of hazardous waste. Small businesses such as dry cleaners, auto repair shops, medical facilities or hospitals, photo processing centers, and metal plating shops are usually generators of small quantities of hazardous wastes. Generators of large quantities of hazardous waste include chemical manufacturers, large electroplating facilities, and petroleum refineries. All significant spills, releases or threatened releases of hazardous materials must be immediately reported.

Local Schools

The project site is located within the boundary of the Palm Springs Unified School District. The closest school is Della S. Lindsley Elementary School, located 1.80 miles north of the project.

Public Airports/Private Airstrips

The Palm Springs International Airport is located approximately 5.75 miles to the northwest of the project, and the Bermuda Dunes Airport is located approximately 7.15 miles southeast of the project.

9.2 Discussion of Impacts:

a-b) LESS THAN SIGNIFICANT IMPACT: The Code of Federal Regulations (CFR Title 40, Part 261) defines hazardous materials based on ignitability, reactivity, corrosivity, and/or toxicity properties. The State of California defines hazardous materials as substances that are toxic, ignitable, or flammable, reactive and/or corrosive, which have the capacity of causing harm or a health hazard during normal exposure or an accidental release. As a result, the use and management of hazardous or potentially hazardous substances is regulated under existing federal, state and local laws. Hazardous wastes require special handling and disposal methods to reduce their potential to damage public health and the environment. Manufacturer's specifications dictate the proper use, handling, and disposal methods for the specific substances. In most cases, it is a violation of federal or state law to improperly store, apply, transport, or dispose of hazardous materials and waste.

Construction of the proposed project is expected to involve the temporary management and use of oils, fuels and other potentially flammable substances. The nature and quantities of these products would be limited to what is necessary to carry out construction of the project. Some of these materials would be transported to the site periodically by vehicle and would be stored in designated controlled areas on a short-term basis. When handled properly by trained individuals and consistent with the manufacturer's instructions and industry standards, the risk involved with handling these materials is considerably reduced. The contractor will be required to identify a controlled staging area within the project limits for storing materials and equipment and will be required to implement best management practices to assure that impacts are minimized and that any minor spills are immediately and properly remediated.

Furthermore, to prevent a threat to the environment during construction, the management of potentially hazardous materials and other potential pollutant sources will be regulated, in part, through the implementation of measures required in the Storm Water Pollution Prevention Plan (SWPPP) for the project. The SWPPP requires a list of potential pollutant sources and the identification of construction areas where additional control measures are necessary to prevent pollutants from being released on-site or into the surroundings. Best management practices (BMPs) are necessary for proper material delivery and storage; material use; and spill prevention and control. These temporary measures outline the required physical improvements and procedures to prevent impacts of pollutants and

hazardous materials to workers and the environment during construction. For example, all construction materials, including paints, solvents, and petroleum products, must be stored in controlled areas and according to the manufacturer's specifications. In addition, perimeter controls (fencing with wind screen), linear sediment barriers (gravel bags, fiber rolls, or silt fencing), and access restrictions (gates) would help prevent temporary impacts. With such standard measures in place, less than significant impacts are anticipated during construction.

The operation of the 28-lot residential project does not involve the routine transport, use, or disposal of hazardous materials in quantities or a manner that would pose a threat to the project and surroundings. Typical operational uses would involve the handling and application of cleaning agents, building maintenance products, paints and solvents, and similar items would be stored on-site. These potentially hazardous materials would not be present in significant quantities to pose a significant hazard to public health and safety or the environment.

Additionally, the handling, application, and storage of cleaning agents, building maintenance products, paints, solvents and other related substances is expected to occur within the project in order to carry out the necessary operations within each household. However, these materials would not be present in sufficient quantities to pose a significant hazard to public health and safety, or the environment.

By following the appropriate federal, State, and regional regulatory standards, less than significant impacts are expected pertaining to significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, and accident conditions involving the release of hazardous materials into the environment. Less than significant impacts are expected.

c) **NO IMPACT:** The project site is not located within ¼ mile of an existing or proposed school. The closest school to the project site is Della S. Lindsley Elementary School, located approximately 1.80 miles north of the project. Therefore, the project is not expected to emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) **LESS THAN SIGNIFICANT IMPACT:** The project proposes the construction of a 28-lot residential community on approximately 10 acres. In order to comply with Government Code 65962.5 and its subsections, record searches on the project property were performed within multiple database platforms. The resources consulted included GeoTracker, EnviroStor and the EPA Enforcement and Compliance History Online (ECHO).

GeoTracker is a database maintained by the State of California Water Resources Control Board that provides online access to environmental data. It serves as the management system for tracking regulatory data on sites that can potentially impact groundwater, particularly those requiring groundwater cleanup and permitted facilities, such as operating underground storage tanks and land disposal sites.

EnviroStor is a database maintained by the State of California Department of Toxic Substances Control (DTSC). The EnviroStor database identifies sites with known contamination or sites for which there may be reasons to investigate further. It includes the identification of formerly contaminated properties that have been released for reuse; properties where environmental deed restrictions have been recorded to prevent

inappropriate land uses; and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Moreover, the ECHO database focuses on inspection, violation, and enforcement data for the Clean Air Act (CAA), Clean Water Act (CWA) and Resource Conservation and Recovery Act (RCRA) and also includes Safe Drinking Water Act (SDWA) and Toxics Release Inventory (TRI) data.

In December 2023, a search was performed on all three database platforms. The GeoTracker, EnviroStor, and ECHO database results did not identify any Leaking Underground Storage Tank (LUST) Cleanup Sites, Land Disposal Sites, Military Sites, DTSC Hazardous Waste Permits, DTSC Cleanup Sites, or Permitted Underground Storage Tanks on or in connection with the project property. The following discussion summarizes the findings of the database search conducted within a half-mile radius from the project.

The GeoTracker and Envirostor database search did not identify sites within a half-mile radius of the project. However, ECHO identified five registered facilities within a half-mile radius of the project. The facilities are listed as follows:

- Best Buy Pacific Sales #1705, at 34295 Monterey Avenue (approximately 0.36 miles northeast of the project), is listed by the CAA and RCRA as an active facility. No violation.
- Home Depot 0667, at 34249 Monterey Avenue (approximately 0.40 miles northeast of the project), is listed by the CAA and RCRA as an active small quantity generator (SQG). No violation.
- TMH Head and Neck Pain Center, at 35900 Bob Hope Drive, Suite 110 (approximately 0.45 miles southwest of the project), is listed by the RCRA as an active facility. No violation.
- Desert Gastroenterology Consultants, at 35900 Bob Hope Drive Suite 275 (approximately 0.45 miles southwest of the project), is listed by the RCRA as an active facility. No violation.
- FCPP Primary Care, at 35800 Bob Hope Drive Suite 225 (approximately 0.45 miles southwest of the project), is listed by the RCRA as an active facility. No violation.

Each of the registered facilities listed within the ECHO database do not currently have any violations (as indicated on the ECHO database).

Per the records search pursuant of Government Code 65962.5, the project site was not registered as having any Leaking Underground Storage Tank (LUST) Cleanup Sites, Land Disposal Sites, Military Sites, DTSC Hazardous Waste Permits, DTSC Cleanup Sites, or Permitted Underground Storage Tanks onsite. No violations were recorded with the associated site. Less than significant impacts are anticipated.

e) **NO IMPACT:** The project is not located within an airport land use plan or private airstrip. The Palm Springs International Airport is located approximately 5.75 miles northwest of the project site. The Bermuda Dunes Airport is located approximately 7.15 miles southeast of the project. As a result, the project is located outside both of the airport facilities' influence and planning area. Flights approaching and departing the Palm Springs

International Airport and the Bermuda Dunes Airport may fly over the City and the project site with an intermittent frequency, however, no impacts are anticipated.

f) **LESS THAN SIGNIFICANT IMPACT:** The Emergency Preparedness Element of the City's General Plan provides information on the critical facilities necessary to effectively respond in the event of an emergency. The City has also adopted a Multi-Hazard Functional Plan, which is continually updated, addresses the planned response to extraordinary emergency situations associated with natural or human caused disasters, technical incidents and nuclear defense operations. Additionally, the City participates in the Riverside County Multi-Jurisdictional and Local Hazard Mitigation Plan (LHMP). Based on these resources, the two main evacuation routes in the City and region include I-10 and Highway 111, while the City's primary and minor arterial streets serve as secondary routes. At project build-out and operation, roadways and emergency evacuation routes will not be altered or reconfigured.

Development of the 10-acre project would result in a minimal increase in demand for fire services, however based on the project site's proximity to Fire Station 69, located at 71751 Gerald Ford Drive (approximately 1.5 driving miles northeast), the proposed project could be adequately served by fire protection services within the 5-minute response time and no new or expanded facilities would be required. The project will be reviewed by City and Fire officials to ensure adequate fire service and safety as a result of project implementation.

By implementing the appropriate federal, State, and local regulatory standards, the project is not expected to interfere with the critical facilities, emergency transportation and circulation, or emergency preparedness coordination. Less than significant impacts are anticipated.

g) **NO IMPACT:** The project property is located on approximately 10 acres west of Via Josefina and south of Ginger Rogers Road. The project site is surrounded by developed land to the northwest, and vacant, undeveloped land to the north, east, south, and west. The project site is currently vacant.

The proposed site intends to develop a 28-lot residential community. Based on the 2017 General Plan Fire Threat Map (Exhibit 27), the project property is identified as having no fuel (no hazard). Areas identified as having moderate, high or very high fire threats are areas in the northern part of the City, between Ramon Road and the Interstate 10 Freeway, and the south part of the City, south of Highway 111 at the hillside of the Santa Rosa Mountains. Consult the Wildfires Section of this environmental document for further discussion. Conclusively, the project site is located in an area with no fire threat to the City; therefore, impacts regarding wildland fires are not expected.

9.3 Mitigation Measures: None required.

–10 - Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☐	☒	☐
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?	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Sources: Flood Insurance Rate Map # 06065C1595G, Federal Emergency Management Agency (FEMA), Effective August 28, 2008; Water Quality Control Plan for the Colorado River Basin Region, January 2019; 2020 Coachella Valley Regional Urban Water Management Plan, June 2021.

10.1 Setting

Summary of Regulatory Framework Relevant to Hydrology and Water Quality:

Hydrology refers to the occurrence, distribution, and movement of surface water, including water found in rivers and stormwater drainage systems. Stormwater particularly refers to the surface runoff and drainage resulting from rain events. Stormwater runoff and surface drainage patterns are determined by the soil conditions, topography, and associated gradients of the land. Surface water quality refers to selected physical, chemical, or biological characteristics found in stormwater in relation to existing standards. Groundwater is the water found underground in the voids in soil, sand, and rock. It is stored in and moves slowly through aquifers. Groundwater supplies are naturally replenished, or recharged, by precipitation that seeps into the land's surface and by replenishment efforts made by local water agencies.

The Clean Water Act (CWA) of 1972 was enacted to restore and maintain the chemical, physical, and biological integrity of the nation's waters by regulating the discharge of pollutants to waters of the U.S. from point sources. The National Pollutant Discharge Elimination System (NPDES) was enacted as a program under the CWA to regulate non-point source discharges from urban land runoff and other diffused sources that were also found to contribute to runoff pollution. Under CWA, the Environmental Protection Agency (EPA) delegated the NPDES program responsibility to various state, tribal, and territorial governments, enabling them to perform many of the permitting, administrative, and enforcement aspects of the program. California is a delegated NPDES state and has authority to administer the NPDES program within its limits.

The Porter-Cologne Water Quality Control Act (California Water Code section 13000 et seq.) is the principal law governing water quality regulation for surface waters in California, thus effectuating the delegated provisions of the federal CWA and its NPDES program. It has set forth a comprehensive program to protect water quality and the beneficial uses applicable to surface waters, wetlands, and ground water and to point and nonpoint sources of pollution. The Porter-Cologne Act establishes that, as a matter of policy, all the waters of the State shall be protected; all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and that the state must be prepared to exercise its full power and jurisdiction to protect the quality of water in the state from degradation. The Porter-Cologne Act established the State Water Resources Control Board (SWRCB) and nine California Regional Water Quality Control Boards (RWQCBs), including Region 7, Colorado River Basin Regional Water Quality Control Board, which has jurisdiction in the City of Rancho Mirage and project site.

Under this framework, the Colorado River Basin Water Quality Control Plan (Basin Plan) serves as the guiding document prepared, adopted, and maintained to identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. It is worth noting that as defined in Section 13374 of the California Water Code (CWC), the term "Waste Discharge Requirements" (WDRs) is equivalent of the term "permits" and is therefore attained through a regulatory compliance process. Compliance with WDRs is achieved through the appropriate permit registration process under the applicable National Pollutant Discharge Elimination System (NPDES) programs described in this section.

At the regional level, the project is located within the Whitewater River Watershed, which is an arid desert region encompassing approximately 1,645 square miles. Within this watershed, an area of approximately 367 square miles (22 percent) encompassing most of the existing development in the Coachella Valley region, is regulated under the established Whitewater River Region Municipal Separate Storm Sewer System Permit (MS4 Permit). The Riverside County Flood Control and Water Conservation District (RCFC&WCD), Coachella Valley Water District,

and the incorporated Coachella Valley cities, including Rancho Mirage have joint permittee responsibility for coordinating the regional MS4 Permit compliance programs and other activities aimed at reducing potential pollutants in urban runoff from land development construction, municipal, commercial, and industrial areas to the maximum extent possible. These public entities are generally in charge of stormwater management within their jurisdiction.

At the City level, stormwater management and on-site stormwater retention are codified in Rancho Mirage Municipal Code Chapter 7.03 and Section 13.05.010 respectively. Chapter 7.03 encompasses a broad range of stormwater management and discharge control requirements, including regulatory consistency with the federal Clean Water Act and NPDES programs. Section 13.05.010 requires new development of one acre or greater in size to provide sufficient on-site retention stormwater runoff volume resulting from the controlling 100-year storm event, to the satisfaction of the city engineer.

The analysis and findings provided in this section relied on the regulatory compliance and site hydrology conditions that were factored into the Preliminary Hydrology Report, Preliminary Water Quality Management Plan (WQMP), and Preliminary Grading Plan that have been prepared as part of the entitlement process. A Stormwater Pollution Prevention Plan (SWPPP) will also be prepared in conjunction with the construction documents as a compliance plan and requirement for obtaining a grading permit.

10.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project site covers approximately 10.08 acres of land vacated from former equestrian facilities. The site's ground conditions are relatively level and visibly compacted with remnants of concrete slabs and landscaping hedges associated with the former uses.

Based on the current U.S. Geological Survey (USGS) Topographic Map, named Cathedral City Quadrangle, covering the project area in the City of Rancho Mirage, the project site and its surroundings are absent of any mapped drainage courses, washes, rivers, and water bodies. Moreover, based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 06065C1595G, the project site occurs within a Zone X designation, corresponding to an area of minimal flood hazard that by classification is not considered a Special Flood Hazard Area (SFHA) or a designated floodway. The project site and frontage portion of Via Josefina lack formal storm drainage infrastructure.

Project implementation will require compliance with the applicable CWA, NPDES, state, and local regulations designed to prevent violations or impacts to surface water quality standards and waste discharge requirements pertinent to surface or ground water quality. This form of compliance must be demonstrated to the City and other regulatory entities prior to site disturbance and grading.

During the period of construction, the project proponent must comply with the State's most current NPDES Construction General Permit (2022 CGP), which requires the preparation of a Notice of Intent (NOI) and a project-specific Storm Water Pollution Prevention Plan (SWPPP), designed to prevent potential adverse impacts to surface water quality, including erosion and siltation, during the period of construction. The NOI and SWPPP are submitted to the State Water Resources Control Board (SWRCB) for approval and permit coverage. The SWPPP is a site-specific compliance plan required to identify a strategy of storm water Best Management Practices (BMPs) in accordance with Section XIV (SWPPP Requirements) of the CGP. Storm water BMPs refer to a schedule of activities,

prohibitions, practices, maintenance procedures, and other management practices to avoid, eliminate, or reduce the pollution of the receiving waters, primarily focused on preventing erosion, siltation, illicit discharge, and contamination. The SWPPP will include such measures as erosion control, sediment control, storm drain inlet protection, proper waste management and pollution prevention. The SWPPP must be prepared concurrently with final engineering design and must meet all NPDES plan review elements for acceptance by the City of Rancho Mirage. Compliance and plan implementation during construction will be regulated and enforced as part of the local agency site inspection protocols.

In order to obtain a grading permit, the project proponent is required to submit and obtain approval for a Final Project-Specific Water Quality Management Plan (WQMP) in accordance with the current standards of the Whitewater River Region Water Quality Management Plan for Urban Runoff, the Whitewater River Watershed MS4 Permit, and the City's on-site stormwater retention requirements (Municipal Code Section 13.05.010). The WQMP is a compliance plan required to account for the stormwater facilities and management conditions during the life of the project. Based on preliminary engineering plans, the project involves a private storm drainage system designed to convey site runoff into an on-site retention system sized according to the controlling 100-year storm event volume. A standard requirement for Final WQMP approval will involve an agreement between the developer and the City to ensure that the responsible parties are properly informed of the stormwater measures and facilities and to allow City access and enforcement on this matter during the life of the project.

The retention capacity demonstrated in the preliminary engineering plans for the project is deemed to abide by the volumetric requirements set forth in Municipal Code Section 13.05.010 (required on-site retention) and Chapter 7.03 (stormwater management and discharge control). Stormwater runoff produced by the project will be properly intercepted, conveyed and retained on-site up to the required 100-year storm event levels and therefore will not result in an urban runoff discharge condition.

In summary, during construction and operation, project implementation will require plan- and permit-based compliance with CWA, NPDES, and local regulations to prevent impacts to water quality standards and the beneficial uses assigned to local receiving waters. Following City engineering review and approval, the stormwater capture and management strategy for on- and off-site runoff will avoid waste discharge violations through the implementation of properly sized retention facilities. Less than significant impacts are expected.

b) **LESS THAN SIGNIFICANT IMPACT:** The project site and a majority of the City of Rancho Mirage are located within the domestic water service area of Coachella Valley Water District (CVWD), which covers approximately 1,000 square miles and serves approximately 110,000 homes and businesses. The Coachella Valley Groundwater Basin is the primary groundwater source for the project region's domestic water purveyors, including CVWD. Based on the California Department of Water Resources (DWR), the Coachella Valley Groundwater Basin has an approximate storage capacity of 39.2 million acre-feet (AF) of water within the upper 1,000 feet and is divided into four subbasins: Indio, Mission Creek, Desert Hot Springs, and San Gorgonio. The project site is specifically underlain by the Indio Subbasin, which is also known as the Whitewater River Subbasin. DWR has estimated that the Indio Subbasin contains approximately 29.8 million AF of water in the first 1,000 feet below the ground surface, representing approximately 76

percent of the total groundwater in the Coachella Valley Groundwater Basin. Local groundwater management is currently taking place under the framework of the 2020 Coachella Valley Regional Urban Water Management Plan (2020 RUWMP), the preparation of which involved the collaboration of the six urban water suppliers in the Coachella Valley, including CVWD. The 2020 RUWMP describes the region's water supplies and anticipated demands through 2045, along with each agency's programs to encourage efficient water use.

CVWD, Coachella Water Authority (CWA), Desert Water Agency (DWA), and Indio Water Authority (IWA) collectively represent the Indio Subbasin Groundwater Sustainability Agencies (GSAs). In January 2017, the GSAs submitted to DWR the 2010 Coachella Valley Water Management Plan (2010 CVWMP), accompanied by an Indio Subbasin Bridge Document, as a SGMA-compliant Alternative Plan. On July 17, 2019, DWR approved the Alternative Plan with a requirement to submit an Alternative Plan Update by January 1, 2022 and every five years thereafter. Based on the Indio Subbasin SGMA documentation, the combined strategies have resulted in significant groundwater storage increases across the subbasin, thus allowing the region to comply with the framework for sustainable management.

CVWD collaborates with the operation and maintenance of three replenishment facilities serving the Indio Subbasin: Whitewater River Groundwater Replenishment Facility, the Thomas E. Levy Groundwater Replenishment Facility, and the Palm Desert Groundwater Replenishment Facility. Artificial replenishment, or recharge, is recognized by the water districts as one of the most effective methods available for preserving local groundwater supplies, reversing aquifer overdraft and meeting demand by domestic consumers. According to the CVWD web site on Groundwater Replenishment and Imported Water, local agencies have percolated over 650 billion gallons of water back into the aquifer. In the central part of the Coachella Valley, groundwater recharge is provided by the recently constructed first phase of the Palm Desert Groundwater Replenishment Facility, operated by CVWD. According to the CVWD web site, this facility is expected to add up to 25,000 acre-feet of Colorado River water annually into the aquifer. Combined with water conservation and efficiency requirements, individual development projects can contribute to groundwater sustainability by implementing the required stormwater runoff retention and infiltration facilities. The established groundwater replenishment facilities described above for the Indio Subbasin are not located on or near the project. Therefore, from the aspect of land use and location, project implementation is not deemed to be in conflict with any existing or planned groundwater recharge facility or associated infrastructure.

The proposed residential development involving an area of approximately 10 acres will include 28 numbered lots within an existing residential land use designation. The residential land use and associated improvements are expected to incorporate water conservation measures, including the use of low-flow plumbing fixtures, drought-tolerant (native) outdoor landscaping, and water-efficient irrigation systems. Moreover, lot front yard, community entry and parkway landscape design call for inert material (crushed rock) instead of irrigated turf as the primary groundcover to support the drought tolerant accent, shrub, and tree plantings. 28 lots may accommodate respective recreational swimming pools of approximately 300 square feet.

As such, the proposed scale and intensity, scale of this residential project is not expected to incur an increase in water demand capable of affecting groundwater resources or otherwise interfere with the groundwater management or related conservation efforts.

As a standard condition for service connections, the project operators will be expected to furnish the appropriate rate payment to CVWD based on the meter size, ongoing flow charges, agency fees, and groundwater recharge fees.

Furthermore, the project will incorporate on-site retention facilities to ensure that stormwater runoff is adequately intercepted, conveyed, and retained on-site instead of being discharged off-site as urban runoff. As a function of the WQMP, operation of the development will include the required operational source control measures that work toward prohibiting pollution discharge and other conditions capable of affecting stormwater.

Source control measures include activity restrictions, site maintenance, and other operational controls aimed at preventing potential sources of pollution from coming into contact with the storm drain system and impacting groundwater. Structural source control measures consist of physical facility design standards to prevent direct contact between potential pollutants and stormwater runoff. The storm drain and basin system will be maintained during the life of the project per a required WQMP agreement to be entered between the project proponent and the City. The proposed facilities are therefore not expected to violate or interfere with the groundwater quality. Regarding ground water quality, less than significant impacts are anticipated.

c i) **LESS THAN SIGNIFICANT IMPACT:** The undeveloped project site involves a relatively level terrain, in part attributed to the former equestrian facility uses, which have been vacated. According to the USGS topographic map, Cathedral City Quadrangle, that covers a portion of Rancho Mirage, the project site is absent of any mapped naturally occurring drainage or flood-prone patterns. Therefore, development of the site would not result in any alteration or obstruction of any river, stream, or other naturally occurring drainage pattern. Based on the USGS Web Soil Survey, the site soils consist of Myoma fine sand corresponding to Hydrologic Soil Group A, which is characterized for having low runoff potential and high infiltration rates. Therefore, the site soils are not deemed to be prone to existing erosion or siltation.

As a standard practice, erosion and siltation conditions will be prevented during construction and operation through the required compliance plans. The required Stormwater Pollution Prevention Plan (SWPPP) will include best management practices for proper soil stabilization and perimeter controls to prevent erosion and siltation from being generated by site clearing, grading, and construction activities. Upon completion, all construction related soil disturbance will be properly restored to a stabilized condition consisting of permanent project improvements (residential structures, hardscape, street pavement, and landscaping) with the properly designed storm drainage system and retention system.

During the life of the project, the ongoing maintenance and operation of facilities will ensure that all permanently improved ground surfaces are adequately maintained. As required by the City's engineering standards and practices, all project-related runoff must be adequately handled along engineered conveyances (sheet flow, swales, gutters, or pipes) to the designated retention facilities. Such storm drain system will be a function of the site plan and final engineering plans subject to City review and approval. Less than significant impacts are anticipated regarding substantial erosion or siltation, on- or off-site.

ii) **LESS THAN SIGNIFICANT IMPACT:** Based on FEMA FIRM Panel Number 06065C1595G, effective August 28, 2008, the project site occurs within a Zone X

designation, corresponding to an “area of minimal flood hazard”, which by definition is not considered a Special Flood Hazard Area (SFHA) or a designated floodway. As a standard condition, the project is required to include adequate improvements and site design features to handle the relevant hydrologic conditions in a way that prevents inundation to the proposed structures and facilities. The project will introduce impervious surfaces (buildings, hardscape, asphalt, etc.) to a vacant property, but will also include the required private storm drain system (catch basins, lines, outlets, and retention facilities) to intercept, convey and retain the controlling storm event stormwater volume from the site. Project site runoff and a tributary frontage portion of Via Josefina will be conveyed to a retention system that has been sized to accept and infiltrate the controlling 100-year storm event volume. Based on preliminary engineering plans, the provided capacity is approximately 44,800 cubic feet. In adhering to the City’s engineering and retention requirements, the proposed development is not expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Less than significant impacts are anticipated.

iii) **LESS THAN SIGNIFICANT IMPACT:** The City of Rancho Mirage is a Permittee of the Whitewater River Watershed Municipal Separate Storm Sewer System (MS4) permit area. Within the City limits, MS4 facilities include a system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) designed for collecting and conveying stormwater. Storm drain facilities can be public or private. Examples of public facilities include pipes, gutters, channels, and basins occurring on the public right-of-way and/or maintained by a public agency. Private facilities are distinguished by being maintained separately by a private entity.

Although the project site was formerly utilized as an equestrian center, it did not include any formal private or public storm drain facilities. The frontage of Via Josefina to the west lacks public storm drain infrastructure, such as underground lines or curb and gutter improvements.

The traditional land development process generally results in the conversion of pervious ground surface (pre-development condition) into a setting with a higher impervious cover, occurring through the introduction of buildings, streets, and hardscape (post-development condition). This conversion generally leads to an increase in post-construction runoff volumes and rates compared to the pre-development or pervious condition.

As a standard requirement under Section 13.05.010 of the Rancho Mirage Municipal Code (Required on-site retention), the project must include retention facilities sized to contain stormwater volume resulting from the controlling 100-year, 24-hour duration storm event.

Based on preliminary engineering plans, the residential project will include an on-site retention system sized to accept and infiltrate the entirety of the controlling 100-year stormwater volume. Runoff from the lots, interior road, and associated hardscape will be conveyed onto and along the interior street toward private catch basins connected to the retention system. The project will also include a street catch basin on Via Josefina to accept the off-site tributary street frontage runoff into the on-site retention system. The approximate retention volume provided by the proposed on-site retention system is approximately 44,800 cubic feet. The project’s final engineering plans and retention levels will be subject to standard City review and approval. Therefore, by complying with the local retention requirements that take into account the existing facilities, the project will prevent

a runoff discharge condition capable of contributing to or exceeding the MS4 capacity. Less than significant impacts are anticipated.

iv) **LESS THAN SIGNIFICANT IMPACT:** The project site is located outside of any designated SFHA, floodway, or drainage flow line as determined by FEMA and USGS maps. Therefore, the project will not impede or redirect any discernable drainage course, floodplain, or flood prone area. As a standard condition, the proposed development will include a storm drain system and associated on-site retention capacity to meet the City's engineering requirements and to provide adequate protection to the new facilities. The associated grading and hydrology plans will be subject to standard City review and approval. In doing so, the project will not be capable or permitted to impede or redirect flood flows, resulting in less than significant impacts.

d) **NO IMPACT:** The project is not located near any coastal areas or any large body of water and therefore is not prone to tsunami hazards or seiche risks. The project site is not located in a floodplain or special flood hazard area. As a standard requirement, the project incorporates on-site retention facilities to handle project-related runoff volume up to the controlling 100-year storm event. The nature of the residential project will not involve the storage or handling of any significant quantities of hazardous substances or petroleum products that would in turn be vulnerable to release due to flooding. With these required improvements subject to City review and approval, less than significant impacts are anticipated pertaining to flood hazard.

e) **LESS THAN SIGNIFICANT IMPACT:** The project proponent is required to implement a project-specific Water Quality Management Plan (WQMP) to comply with the most current standards of the Whitewater River Region MS4 Permit and with the City's on-site retention standards. The final form of the WQMP will be consistent with final engineering documents to incorporate the grading, hydrology, and other improvement plans to demonstrate how the site design, source controls, and operation and maintenance program will achieve compliance. The combined retention capacity for the project will meet the stormwater volume resulting from the controlling 100-year storm event. Moreover, the project's storm water retention facilities will ensure that only stormwater runoff is recharged into the ground via infiltration. Therefore, project implementation is not expected to conflict with the regional groundwater management strategies or with the Indio Subbasin Sustainable Groundwater Management Plan. Less than significant impacts are expected.

10.3 Mitigation Measures: None required.

11 - Land Use and Planning

LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Sources: Rancho Mirage 2017 General Plan Update; Rancho Mirage Municipal Code.

11.1 Setting

The approximately 10-acre project is located at the southeast corner of Ginger Rogers Road and Via Josefina in Rancho Mirage. The land use and zoning designation for the project site is currently Very Low Density Residential (R-L-2) on the western portion, and Medium Density Residential (R-M) on the eastern portion. The eastern portion of the project site is also located within the MSP. R-L-2 designations in Rancho Mirage provides for single family residential development typically on individual lots of about 0.5-acre. R-M designations are intended for single family and planned residential developments (PRD).

The MSP was adopted in 1990, and encompasses a 320-acre area, generally bounded by Dinah Shore Drive to the north, Monterey Avenue to the east, Gerald Ford Drive to the south, and Key Largo Drive to the west. The MSP area is partially developed with commercial, residential, and recreational uses; however, vacant, undeveloped lots also contribute to the MSP area.

The project proposes the construction of a 28-lot residential community with associated improvements, including retention areas, paved drive aisle, perimeter walls, curb and gutter improvements, landscaped frontage, and pedestrian sidewalks. To allow for these uses, the project applicant is submitting a General Plan Zoning Map Amendment (GPZMA) which will amend the project General Plan and Zoning designation from R-L-2 and R-M zones to Low Density Residential (R-L-3). The proposed project, associated entitlements, and their impacts to land use and planning are discussed below.

11.2 Discussion of Impacts:

a) **NO IMPACT:** The proposed project site occupies approximately 10 acres of developed and vacant land located on the southeast corner of Ginger Rogers Road and Via Josefina in Rancho Mirage. The project is surrounded by vacant and undeveloped land on all sides. Via Josefina delineates the project's western boundary, and Ginger Rogers Road partially delineates the project's northern boundary. The Monterey Specific Plan (MSP) area encompasses the project's eastern portion as well as the area east of the project. Currently, the project previously operated as an equestrian center (until 2023). The site does not operate in connection to the properties north, south, east, and west of the project. residential properties are located approximately 135 feet northwest of the project (separated by Via Josefina), 370 feet south of the project (separated by vacant land), and 400 feet east of the project (also separated by vacant land). Therefore, with the vacant uses surrounding the project and separated, residential uses northwest, south, and east of the project, the proposed project site will not divide an established community, and no impacts are expected.

b) **LESS THAN SIGNIFICANT IMPACT:** As stated throughout this document, the project site occupies approximately 10 acres of land on the southeast corner of Ginger Rogers Road

and Via Josefina in Rancho Mirage. The project site's eastern 5 acres and areas to the east of the project are located within the existing Monterey Specific Plan (MSP) area which was adopted in the early 1990s. The MSP proposes commercial, retail, and residential uses on approximately 320 acres. The land use and zoning designation for the 10-acre project site is currently Very Low Density Residential (R-L-2) and Medium Density Residential (R-M). R-L-2 designations in Rancho Mirage provides for single family residential developments typically on lots of about 0.5-acre. R-M designations intended for single family homes and planned residential developments (PRD). The project site is surrounded by vacant and developed properties, located in the City's land use and zoning designations R-L-2, R-M, and R-H. The surrounding properties and their land use and zoning designations are presented in the table below.

Table 11-I Surrounding Land Use and Zoning Designations

	Jurisdiction	General Plan/ Zoning	Existing Use
North	Rancho Mirage	R-L-2, R-H	Ginger Rogers alignment and Vacant Land
East	Rancho Mirage	R-M	Vacant Infill Land
West	Rancho Mirage	R-L-2	Via Josefina and Vacant Infill Land
South	Rancho Mirage	R-L-2, R-M	Vacant Infill Land

The project proposes a 28-lot residential community with retention areas, landscaped frontages, sidewalks, and a paved drive aisle. The proposed project is consistent with the land use and zoning designations for the project area. In order to allow the 28-lot residential community, the project applicant will submit a General Plan Zoning Map Amendment (GPZMA) to amend the General Plan land use designation and zoning from R-L-2 and R-M to Low Density Residential (R-L-3). R-L-3 zones allow for moderately low-density development and PRD. It serves to transition between lower and more moderate (medium) residential densities. R-L-3 zoning designation is the residential zone in-between R-L-2 and R-M zones, meaning R-L-3 zones allows higher density than R-L-2 zones, and lower density than R-M zones.

Along with the GPZMA, the project is requesting approval of a Preliminary Development Plan (PDP) and Tentative Tract Map (TTM). The PDP would demonstrate the design guidelines and ensure quality architecture, landscape, and site design future development project within the project area shall follow the Development Plan Permit process as outlined in Chapter 17.42 of the Rancho Mirage Municipal Code. The TTM would illustrate the proposed residential lots, open space lots, internal drive aisle, entry, sidewalk and curb and gutter improvements. The PDP and TTM will require approval by the City of Rancho Mirage.

Proposed Project Consistency with General Plan

As previously stated, the existing General Plan land use designation at the project site includes R-L-2 and R-M designations. The project proposes a GPZMA to amend the project General Plan and Zoning designation from R-L-2 and R-M to Low Density Residential (R-L-3). The R-L-3 land use proposed for the project does not represent a substantial change to the character of the area as envisioned in the General Plan. An analysis of applicable goals, policies and programs contained in the General Plan was conducted. The findings of that analysis are summarized below.

Land Use

Goal LU 1: A resort residential community of desirable neighborhoods, a variety of community facilities, and high-quality development.

Goal LU 2: A balanced mix of functionally integrated land uses, meeting the general social and economic needs of the community through simplified, compatible, and consistent land use and zoning designations.

- *Policy LU 2.4:* Infill development shall be encouraged by prioritizing capital improvements in the developed areas of Rancho Mirage.
- *Policy LU 2.6:* The City shall ensure privacy and safety for residential neighborhoods by providing adequate buffering and screening, particularly where neighborhoods adjoin or are integrated with commercial developments.

Goal LU 3: The preservation and enhancement of the predominately low-density, high-quality residential character of Rancho Mirage.

- *Policy LU 3.1:* Areas of existing residential development and surrounding vacant lands shall be planned in a manner that preserves neighborhood character and assures a consistent and compatible residential land use pattern.

Consistency: The project proposes an amendment to the existing General Plan and Zoning Map to change the land use and zoning from Very Low Density Residential (R-L-2) and Medium Density Residential (R-M) to Low Density Residential (R-L-3), in order to facilitate the development of a 28-lot residential community. The project is located in a partially developed area of Rancho Mirage. Currently, the vacant project site is surrounded by vacant properties residential communities, and estate residential properties. See Table 11-I, above, for a description of the surrounding land uses. The proposed low density residential project would preserve the low density residential character of Rancho Mirage.

The project would result in the development of 28 residential lots. The project would provide residential uses near existing and future residential uses.

Housing

- *Goal H 1:* A variety of housing types that meet the needs of residents in Rancho Mirage.

Consistency: The project proposes the development of 28 single family residential lots on approximately 10 acres. The residential properties will include both single family homes and an accessory dwelling unit (adu). The residential dwellings will contribute to the Regional Housing Needs Allocation (RHNA) for the 2022-2029 planning period, which assigns 1,746 new housing units within the City.

Noise

- *Goal N 1:* A noise environment providing peace and quiet that complements and is consistent with Rancho Mirage's resort residential character.

Consistency: The project proposes 28 residential lots on approximately 10 acres. Typically, residential uses do not result in substantially increased noise levels. The 28 residential lots would be consistent with the existing resort residential character in the City.

Although the project proposes a GPZMA to allow a 28-lot Low Density Residential project on the 10-acre site, the project will be consistent with the applicable goals and policies within the Rancho Mirage General Plan. The project will also provide housing to contribute to RHNA requirements; and surrounded by land designated for residential uses.

Proposed Project Consistency with Zoning Code

The existing zoning designation for the project site is Very Low Density Residential (R-L-2) and Medium Density Residential (R-M). The project is proposing a GPZMA to change the zone from R-L-2 and R-M to Low Density Residential (R-L-3). According to Chapter 17.10, Residential Districts, of the Rancho Mirage Municipal Code (RMMC) R-L-2 districts identifies areas appropriate for large lot single-family uses. The allowable maximum density is two units per gross acre. The R-L-2 zoning district is intended to provide for single family parcels ranging from fifteen thousand to twenty thousand square feet or larger, or similar density country club type development. The R-L-2 district is consistent with the low density residential land use designation of the General Plan. R-M zones identify areas appropriate for a variety of housing types. The allowable maximum density is four units per gross acre. The R-M zoning district is intended to encourage the development of a variety of residential development, including garden apartments and affordable housing. The R-M zoning district is consistent with the medium density residential land use designation of the General Plan.

Per Chapter 17.08, R-L-3 zones identify areas appropriate for single family uses. The allowable maximum density is three units per gross acre. The R-L-3 zoning district is intended to provide for moderately low density development in a single family setting. The R-L-3 zoning district is consistent with the low density residential land use designation in the General Plan.

The project proposes a 28-lot residential community on 10 acres. Development of the project would result in approximately 2.8 du/ac, which is consistent with the zoning. Additionally, the proposed project will comply with Section 17.08.020 of the RMMC, which establishes development standards for the residential zones in the City, including minimum parcel size (12,000 square feet), setbacks (25 feet front, 10 feet site, 15 feet street side, 25 feet rear), and maximum building heights (20 feet or 1 story). Additionally, Section 17.30.200 of the RMMC establishes development standards for accessory dwelling units (adu).

The project site shall adhere to the standards and requirements set forth in the municipal code for the R-L-3 zoning district. Therefore, impacts would be less than significant.

Proposed Project Consistency with Surrounding Areas

The project occupies approximately 10 acres of land at the southeast corner of Ginger Rogers Road and Via Josefina. As previously stated, the project is surrounded by vacant properties to the immediate north, south, and east. Residential properties and communities are located west and south of the project, with the closest residential property being located approximately 140 feet northwest of the project (from property boundaries). The surrounding developed areas include well-maintained landscaping, building frontages, public and pedestrian areas, and roadways.

The project proposes 28 single family residential lots with accessory dwelling units, and associated improvements (i.e., paved vehicular access, landscaping). The areas north,

south, east, and west of the project are designated for residential uses. Therefore, although the project proposes a GPZMA, the project would be consistent with the surrounding land uses. Additionally, the project would continue to provide residential properties to the City of Rancho Mirage, per the RHNA allocation.

Therefore, the project would not introduce inconsistent land uses in the area.

Based on the consistency analysis presented in this discussion, the project will be consistent with the land use goals and policies of the Rancho Mirage General Plan and the City Municipal Code. Impacts will be less than significant.

11.3 Mitigation Measures: None required.

12 - Mineral Resources

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

Sources: Mineral Land Classification Map, Riverside County, 2007; Rancho Mirage General Plan 2017; Rancho Mirage General Plan EIR, May 2005.

12.1 Setting

The State of California has recognized the importance of mineral resources for construction materials and other economic purposes. Mining and extraction of mineral resources continues to be threatened by urbanization and development in areas where important mineral resources exist. The California Surface Mining and Reclamation Act of 1975 (SMARA) addresses the loss of regionally significant mineral deposits to urban development.

The Act requires the Department of Conservation to create Production-Consumption Regions which are areas where significant mineral resources of statewide importance and regional significance are produced and consumed, and a classification system that identifies lands where significant mineral resource deposits are located. Rancho Mirage is located in the Palm Springs Production-Consumption Region. The Palm Springs Production-Consumption Region covers approximately 631 square miles of the Coachella Valley, from near Cabazon to Thermal. Lands within the Production-Consumption Region are classified according to the presence of valuable mineral resources. Rancho Mirage has two Mineral Resource Zones, MRZ-1 and MRZ-3. MRZ-1 are areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-3 are areas containing known or inferred mineral deposits, the significance of which cannot be evaluated from available data.

12.2 Discussion of Impacts:

a-b) **NO IMPACT:** The mineral resources that are attributed to the Coachella Valley desert floor primarily consists of sand, gravel (aggregate) and other important mineral deposits that have eroded from the surrounding mountains and hills. To ensure the protection of important mineral resources, the Surface Mining and Reclamation Act of 1975 (SMARA) developed Mineral Land Classification Maps and reports to identify the presence or absence of suitable sources of aggregate (sand, gravel or stone deposits) into Mineral Resource Zones. According to this Classification Map, the project site is located within Mineral Resource Zone 1 (MRZ-1). This specific zone identifies areas where adequate information indicates that no significant mineral deposits are present or likely to be present. No impacts to mineral resources are anticipated.

12.3 Mitigation Measures: None required.

13 - Noise

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

Sources: Rancho Mirage General Plan 2017; Rancho Mirage Municipal Code; Rancho Mirage General Plan Environmental Impact Report, 2005; Noise Impact Study, MD Acoustics, July 2023.

13.1 Setting

Noise

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. Noise is defined as sound that is loud, unpleasant, unexpected, or unwanted.

A continuous sound is described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude.

The amplitude of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude is measured in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal (uPa). One uPa is approximately one hundred billionths of normal atmospheric

pressure. Sound pressure level (SPL or Lp) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated “dB”.

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound. The A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Table XIII-1 Changes in Noise

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

Noise in the daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 pm and after addition of ten (10) decibels to sound levels in the night before 7:00 am and after 10:00 pm.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level.

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

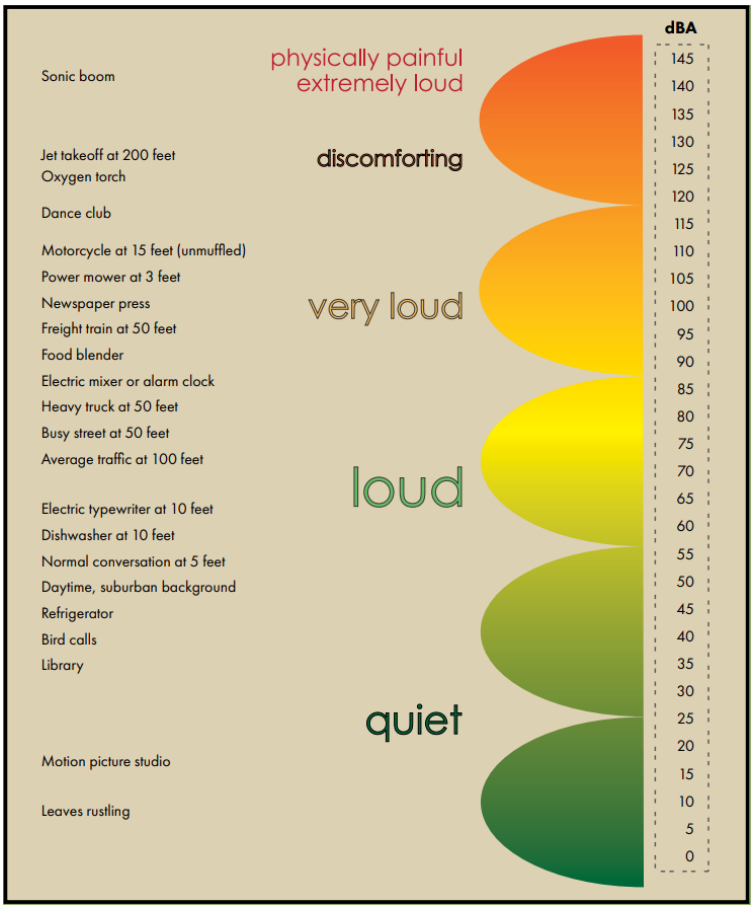
L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90, and L99, etc.

Noise: Any unwanted sound or sound which is undesired because it interferes with speech and hearing or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "…excessive undesirable sound…".

City of Rancho Mirage

According to the Rancho Mirage General Plan, the most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at three feet away is roughly at 60 dBA, and loud engine noise can be as loud as 110 dBA. The higher level can cause serious physical or psychological discomfort. The exhibit below illustrates various examples of noise sources and their associated decibel levels.

Exhibit XIII-1 Noise Levels of Familiar Noise Sources



Source: Exhibit 17, Noise Levels of Familiar Noise Sources, Rancho Mirage General Plan, 2017.

To assist the City of in the planning of compatible uses, a range of exterior noise thresholds for various land uses have been developed and are provided in the exhibit below. Particularly sensitive land uses include residences, schools, libraries, churches, hospitals and nursing homes, and destination resort areas.

Exhibit XIII-2 Noise Level and Land Use Compatibility



Source: Exhibit 20, Noise Level and Land Use Compatibility, Rancho Mirage General Plan, 2017.

The City's Municipal Code establishes the exterior noise limits as it relates to stationary noise sources in Chapter 8.45 – Noise.

8.45.030 – Exterior noise level limits: No person shall operate or cause to be operated any source of sound or allow the creation of sound or noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, as measured on any other property, to exceed:

- The noise level for the applicable zone specified in the table below for a cumulative period of more than thirty minutes in any hour of the applicable time period.

Table XIII-2 Noise Level Limits

Land Use/Zone	Noise Level (dBA)		
	Daytime (7 am to 6 pm)	Evening (6 pm to 10 pm)	Nighttime (10 pm to 7 am)
Residential, Low Density	55	50	45
Residential, Medium and High Density, Hospital, Open Space	60	55	50
Commercial Office, Resort Commercial, Mixed Use, Institutional	65	60	55
Commercial Neighborhood, General Commercial, Commercial Recreation, Light Industrial	70	65	60

- For cumulative periods of time less than thirty minutes in an hour, all the noise standards in the table above are increased according to table below.

Table XIII-3 Noise Level Limit Adjustment

Duration of Sound	dBA Adjustment
15-30 minutes per hour	+3
10-15 minutes per hour	+5
5-10 minutes per hour	+10
1-5 minutes per hour	+15
Any period of time less than 1 minute per hour	+20

Special provisions and exemptions include school activities, City special events, public playgrounds, and emergency vehicles/work that generate noise. Construction work is also exempt from provisions in the noise code and shall occur within allowable hours of 7 am to 7 pm, and is prohibited to occur on Sundays and holidays.

Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

Vibration

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibrations levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the

motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude.

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source.

The discussion below analyzes the project's impact relative to noise and vibration.

13.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project site is located at the southeast corner of Via Josefina and Ginger Rogers Road. The existing noise environment is defined by the residential properties and neighborhoods in the surrounding area. Noise generated in residential areas is generally quiet, and consist of people talking, automobile door closing, automobile traffic, and periodic maintenance activities such as landscaping (lawn mowers, etc.) and trash collection. Automobile traffic along Via Josefina and Ginger Rogers Road also contributes to the existing noise environment in the area.

The project is proposing the development of a 28-lot residential community with associated infrastructure (i.e., paved drive aisle, curb and gutter improvements, sidewalk and landscaped frontage, 19-foot landscaped parkway along the southern boundary, and perimeter block wall). The onsite project-related noise sources are expected to include outdoor seating activity, vehicular activity, trash collection activity, outdoor air conditioning units, and pool activity. The project site is currently vacant and does not contribute to the existing noise environment.

The City of Rancho Mirage has the authority to establish land use noise standards and corresponding restrictions under the City's Noise Ordinance. A range of noise standards apply to different receiving land uses based on sensitivity and compatibility. According to Exhibit 20, Noise Level and Land Use Compatibility, in the Rancho Mirage General Plan Noise Element, low density residential land uses have a normally acceptable noise level between 50 to 57 dBA CNEL, and a conditionally acceptable noise level between 55 to

70. The project falls under the low density residential land use category defined by the exhibit.

Construction Noise

Construction of the project site is expected to generate short-term noise increases compared to the existing levels. A temporary incremental increase in noise levels along local roadways is expected to occur during the transport of workers and equipment to and from the site. Noise increases will also be generated by the actual on-site construction activities. Equipment used during the construction phases would generate both steady state and episodic noise that would be heard both on and off the project site. The residential homes in the surrounding area may be affected by construction noise generated by the project.

Noise levels generated during various phases are presented in Table XIII-4, Typical Maximum Noise Levels for Construction Phases. Equipment estimates used for the analysis for grading and building construction noise levels were provided by the U.S. Department of Transportation and are representative of worst-case conditions, since it is unlikely that all the equipment contained on-site would operate simultaneously.

Table XIII-4 Typical Maximum Noise Levels for Construction Phases

	Appropriate Leq dBA without Noise Attenuation			
Construction Phase	25 Feet	50 Feet	100 Feet	200 Feet
Clearing	90	84	78	72
Excavation	94	88	82	78
Foundation/Conditioning	94	88	82	78
Laying Subbase/Paving	85	79	73	67

Source: U.S. Department of Transportation, Construction Noise Handbook, Chapter 9.0, August 2006.

Areas immediately north, south, and east will not be impacted by construction noise because they are currently undeveloped and vacant. The closest residential property is located approximately 135 feet northwest of the project. Per the table above, at 100 feet, typical maximum noise observed is 82 Leq dBA, without factoring attenuation (i.e., block walls, landscaping, etc.). The existing residential property is surrounded by concrete block walls, which would reduce construction noise levels observed.

During construction, the project shall follow common industry standards that will help limit noise level increases. For example, all construction equipment, fixed or mobile, should be equipped with properly operating and maintained mufflers and the engines should be equipped with shrouds. Approved haul routes shall be used to minimize exposure of sensitive receptors to potential adverse levels from hauling operations. All construction equipment shall be in proper working order and maintained to reduce backfires. Grading activities would involve the use of standard earth moving equipment, which would be stored on the site during construction to minimize disruption of the surrounding land uses. Above-grade construction activities would involve the use of standard construction equipment, such as hoist, mixer trucks, concrete pumps, laser screeds and other related equipment.

Construction traffic and equipment is also anticipated to generate noise along access routes to the proposed development. The larger pieces of heavy equipment would be moved onto the development only one time for each construction activity (i.e., site prep,

grading, etc.). Daily transportation of construction workers and the hauling of materials both on and off the project site are expected to cause increases in noise levels along surrounding roadways.

As a standard requirement, the project is expected to abide by the Municipal Code regulations on construction hours, which limit activities to the less sensitive times of the day. The RMMC Section 15.04.030 [A][11] indicates that construction shall be limited to the hours of 7:00 a.m. and 7:00 p.m. with no activity on Sundays and holidays. Impacts are less than significant.

Operational Noise

As previously stated, the existing noise environment is defined by the residential properties and neighborhoods and vehicle traffic in the surrounding area. Noise generated in residential areas is generally quiet, and consist of people talking, automobile door closing, automobile traffic, and periodic maintenance activities such as landscaping (lawn mowers, etc.) and trash collection. Automobile traffic along Via Josefina and Ginger Rogers Road also contributes to the existing noise environment in the area. Currently, the vacant project site does not contribute to the existing noise environment.

According to the City of Rancho Mirage Municipal Code, the following exterior noise levels are appliable to the associated zone, as illustrated in the table below.

Table XIII-5 Exterior Noise Level Limits

Land Use/Zone	Time of Day	Noise Level (dBA)
Residential, Low Density (R-E, H-R, R-L-2, R-L-3)	7:00 am to 6:00 pm	55
	6:00 pm to 10:00 pm	50
	10:00 pm to 7:00 am	45
Residential, Medium and High Density, Hospital, Open Space (OS, R-M, R-H, MHP)	7:00 am to 6:00 pm	60
	6:00 pm to 10:00 pm	55
	10:00 pm to 7:00 am	50

Noise sources associated with the proposed residential development are expected to include opening and closing of vehicle doors in driveways, people talking, car alarms, trash pick-ups, and operating HVAC equipment. According to Exhibit 17 of the Rancho Mirage General Plan, daytime suburban background has a noise level of 50 dBA, while a normal conversation at five feet has a noise level of 55 dBA. These noise levels will be typical of the proposed residential neighborhood. A power mower at 3 feet has a typical noise level of 105 dBA. However, these activities typically occur for short periods of time and during the daytime hours. To minimize noise conflicts between properties, the existing and proposed solid barriers (such as walls) are expected to reduce noise levels. The project is not anticipated to exceed noise levels typical of residential neighborhoods during operation.

Overall, the project will result in less than significant impacts regarding short-term construction and long-term operational noise.

b) **LESS THAN SIGNIFICANT IMPACT:** Groundborne vibration also referred to as earthborne vibration, can be described as perceptible rumbling, movement, shaking or

rattling of structures and items within a structure. Groundborne vibration can generate a heightened disturbance in residential areas. These vibrations can disturb residential structures and household items while creating difficulty for residential activities such as reading or other tasks. Although groundborne vibration is sometimes perceptible in an outdoor environment, it does not result in the degree of disturbance that is experienced inside a building. Groundborne vibration can be measured in terms of amplitude and frequency or vibration decibels (VdB). Trains, buses, large trucks and construction activities that include pile driving, blasting, earth moving, and heavy vehicle operation commonly cause these vibrations. Other factors that influence the disturbance of groundborne vibration include distance to source, foundation materials, soil and surface types. The table below indicates groundborne vibration and noise from typical construction equipment, from CalTrans.

Table XIII-6 Groundborne Vibration and Noise from Typical Construction Equipment

Equipment	Peak Particle Velocity (in/sec) (A)			Velocity Decibels (VdB) (B)		
	25 feet	50 feet	100 feet	25 feet	50 feet	100 feet
Small bulldozer	0.003	0.001	0.001	58	49	40
Jackhammer	0.035	0.016	0.008	79	70	61
Rock Breaker	0.059	0.028	0.013	83	74	65
Loaded truck	0.076	0.035	0.017	86	77	68
Auger Drill Rig	0.089	0.042	0.019	87	78	69
Large bulldozer	0.089	0.042	0.019	87	78	69
Vibratory Roller	0.210	0.098	0.046	94	85	76
Impact Pile Driver (upper range)	1.518	0.708	0.330	112	103	94
Impact Pile Driver (typical)	0.644	0.300	0.140	104	95	86
Sonic Pile Driver (upper range)	0.734	0.42	0.160	105	96	87
Sonic Pile Driver (typical)	0.170	0.079	0.037	93	84	75

Sources: Caltrans 2013b and FTA 2018

(A) Estimated PPV calculated as: PPV(D)=PPV(ref)*(25/D)^1.1 where PPV(D)= Estimated PPV at distance; PPVref= Reference PPV at 25 ft; D= Distance from equipment to receiver; and n= ground attenuation rate (1.1 for dense compacted hard soils).

(B) Estimated Lv calculated as: Lv(D)=Lv(25 feet)-30Log(D/25) where Lv(D)= estimated velocity level in decibels at distance, Lv(25 feet)= RMS velocity amplitude at 25 ft; and D= distance from equipment to receiver.

Note: No pile drivers, bulldozers, rock breakers, or auger drill rigs would be utilized during construction of the project.

As shown in Table XIII-2, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. Vibration levels dissipate rapidly with distance, such that even maximum impact pile driving activities would result in vibration levels below Caltrans' recommended 0.5 PPV threshold for transient vibration-induced damage in historic, older buildings at a distance of 100 feet. All other activities would be below Caltrans' threshold for transient vibration-induced damage in historic, older buildings at a distance of 25 feet. Historic, older buildings are not located adjacent or in the vicinity of the project property. Standard construction equipment (e.g., bulldozers, trucks, jackhammers) generally does not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receptors. However, the use of bulldozers, rock breakers, auger drill rigs, or pile drivers will not occur onsite. Vibratory rollers are typically utilized at construction sites to compact and densify soil, asphalt or other

materials. It is likely that a vibratory roller will be used during construction to compact the soils and asphalt materials used for the project's proposed internal street. Additionally, the use of the vibratory roller will not occur in the same location for prolonged periods of time. Therefore, impacts of a vibratory roller to the existing residential community will be less than significant.

The project is surrounded by a combination of vacant and developed land. Lands immediately adjacent to the project are vacant and undeveloped (apart from the paved right-of-way, Via Josefina). However, residential homes are located approximately 135 feet northwest, 400 feet east, and 370 feet south of the project boundary. The existing source of groundborne vibration is attributed to the circulation of vehicles along Via Josefina and Ginger Rogers Road, to the west. The closest sensitive land use is the residential property 130 feet northeast of the project site. Therefore, the residential property would not likely be impacted by project-related construction activities. Additionally, construction activities would only be for a temporary amount of time and would only occur during permitted construction hours (Section 15.04.030 [A][11] of RMMC).

Construction of the project will involve the temporary operation of vehicles and equipment that could result in localized, short-term vibration increases during the permitted hours of construction established by the City. All construction equipment staging will be located within the temporary construction limits, while vehicular and equipment access to the construction site would be restricted to only the approved entry point that minimize disturbance to local traffic. Short-term increases in vibration and sound during construction are not expected to result in significant impact.

After construction, the nature of the proposed residential property would not typically involve activities expected to generate excessive vibration or groundborne noise. All activities within the project will be required to adhere to the City's Noise Ordinance. Less than significant impacts are anticipated.

c) **NO IMPACT:** The project is not located within an airport land use plan or private airstrip. The project is located approximately 5.75 miles from the closest airport, the Palm Springs International Airport. The project is also located outside of the 70, 65 and 60 CNEL noise contours associated with this facility. Furthermore, the Palm Springs Airport Land Use Plan does not identify the project as being located within its planning area. No impacts are expected.

13.3 Mitigation Measures: None Required

14 - Population and Housing

POPULATION AND HOUSING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Sources: Department of Finance E-5 City/County Population and Housing Estimates, 2023.

14.1 Setting

According to the Department of Finance (DOF), the City of Rancho Mirage had a population of 17,012 people in 2023. The City of Rancho Mirage's population accounts for approximately 0.70 percent of the County of Riverside's total population. The median age in the City was 45.6 in 2010 (US Census data). The most recent Census data (2021) shows the median age in the City to be 65, compared to the median age in Riverside County (35) and the Nation (38). Additionally, the number of jobs in 2017 in Rancho Mirage was 16,901 an approximately 76 percent increase in jobs since 2010 (SCAG).

14.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The approximately 10-acre project is located at the southeast corner of Ginger Rogers Road and Via Josefina in the City of Rancho Mirage. The project site and the surrounding areas are characterized as developed and undeveloped land, with residential communities located northwest and south of the project, and vacant undeveloped land north, south, east and west of the project. The easter portion of the project site is located within the Monterey Specific Plan (MSP) which was adopted in the early 1990s. The MSP proposes commercial, retail, and residential uses on approximately 320 acres. The land use and zoning designation for the 10-acre project site is currently Very Low Density Residential (R-L-2) and Medium Density Residential (R-M). R-L-2 designations provides for single-family residential development typically on individual lots of about 0.5-acre. Planned residential developments (PRD) are also an appropriate form under this designation. R-M designations are intended for single-family and PRD communities.

The development of the residential project site (28 lots) could result in approximately 52 residents in the project area, based on the City's 1.85 persons per household, as provided by the Department of Finance's (DOF) 2023 population and housing elements. Although the project area did not propose residential uses onsite in the MSP, the City of Rancho

Mirage accounts for this growth in their General Plan and General Plan Environmental Impact Report (EIR), which analyzes City buildout conditions. Per the City's General Plan EIR, buildout of the City and Sphere of Influence (SOI) area, would result in a population of 44,268 people by the year 2025. Meanwhile, the Southern California Association of Governments (SCAG) predicts that the City of Rancho Mirage will have a population of 25,200 people by the year 2045. However, it shall be noted that the SCAG population forecast does not include the City's Sphere of Influence area, thus, resulting in a reduced number. Currently, the City of Rancho Mirage has 16,804 residents (DOF), which is 27,464 less people than the General Plan EIR predicted for the buildout of the City and SOI, and 8,396 less people than the SCAG population growth forecast for the City by 2045. The development of the proposed project may increase the population by approximately 0.32 percent to 16,856 people. However, this is a conservative figure because it assumes that none of the future residents would come from the City of Rancho Mirage. It is likely that some new residents of the project will be existing residents of the City. Based on the General Plan EIR, the maximum addition of approximately 52 residents as a result of the proposed project would not result in unplanned population growth within the City. Population growth within the City of Rancho Mirage is accounted for in the General Plan EIR, and less than significant impacts are anticipated.

The project would result in the planned growth of infrastructure in the area. Currently, the project site is located on partially developed land. Areas surrounding the project site are currently vacant. The closest development to the project includes a residential property approximately 135 feet northwest of the project (separated by Via Josefina). Two additional residential properties are located east and south of the project (separated by vacant land). The project previously operated as an equestrian center and is served by utilities. Development of the proposed project would result in the property's connection to infrastructure to serve the project site. The project's connection to the sewer line will not result in unplanned growth, because the areas south of the project are designated for residential communities (compliant with the General Plan), which would also connect to the sewer line. Additionally, the project will connect to existing water lines approximately 670 feet west of the project within Ginger Rogers Road. Similar to sewer, the project's connection to existing water infrastructure will not result in unplanned growth because the vacant properties along Ginger Rogers Road are anticipated for residential communities, per the General Plan. Sewer and water will be provided to the site by CVWD, which plans and accounts for growth within its service area. See Utilities for further discussion. Therefore, the project would not result in unplanned indirect growth. Less than significant impacts.

b) **NO IMPACT:** The proposed site currently operates as an equestrian center and does not provide existing housing. Therefore, the project would not require the construction of replacement housing elsewhere. The proposed project will not displace substantial numbers of exiting people or housing. No impacts are anticipated.

14.3 Mitigation Measures: None required.

15 - Public Services

PUBLIC SERVICES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Sources: Department of Finance E-5 City/County Population and Housing Estimates, 2022; City of Rancho Mirage Fire and Police Department Website, City of Rancho Mirage 2017 General Plan Update, 2017 Rancho Mirage General Plan EIR Addendum, PSUSD Fee Justification Study, 2022; Police Officer Kyle Albenesius, 2022.

15.1 Setting

Fire Protection Services

The Riverside County Fire Department (RCFD), under contract with the City of Rancho Mirage, provides a full range of 24-hour fire protection and emergency medical services to the City. The City's Fire Department serves approximately 25 square miles with an estimated population of 17,012. RCFD maintains two fire stations within the City of Rancho Mirage, Fire Station 50, and Fire Station 69.

Police Protection Services

Law enforcement services are provided to the City of Rancho Mirage through a contractual agreement with Riverside County Sheriff's Department. The Sheriff's department provides 24-hour municipal police services associated with a City police department. The Rancho Mirage police department has a small police substation at the Rancho Mirage Public Library; deputies assigned to work in Rancho Mirage primarily operate out of the Palm Desert station located at 73-705 Gerald Ford Drive. This station is approximately 1.7 miles from the project site. The City's

police department patrols 7 days a week, 365 days a year and 24-hours a day. The police department serves over 17,000 residents, patrolling 25 square miles of City streets.

Schools

The project site is within the boundary of the Palm Springs Unified School District (PSUSD). The School District provides education to students in grades transitional kindergarten through 12 residing within portion of the cities of Cathedral City, Desert Hot Springs, Palm Desert, Palm Springs, Rancho Mirage, and a portion of the unincorporated County of Riverside.

Parks

The City of Rancho Mirage provides both public and private parks, open space and multi-city recreational facilities with various amenities. See **Section 16**, **Recreation**, below for further background.

Other Facilities

Other facilities within the City of Rancho Mirage include City Hall, hospitals, and the public library and observatory. These facilities provide services and amenities for the residents of the City.

15.2 Discussion of Impacts:

a) FIRE

LESS THAN SIGNIFICANT IMPACT: Currently there are two fire stations within the City of Rancho Mirage. Fire Station 50 is located at 70-801 Highway 111 and is approximately 5.0 driving miles from the proposed project site. This station covers the southern portion of the City. According to the City's General Plan, Fire Station 50 is equipped with a Medic Engine and Paramedic Ambulance. Five firefighters are staffed at this station daily and three of the five firefighters are paramedics.

Fire Station 69 is located at 71-751 Gerald Ford Drive and is approximately 1.5 driving miles northeast from the project site. This station covers the northern portion of Rancho Mirage and is also staffed with five firefighters daily, with three of the five fire fighters being paramedics (General Plan 2017). The Riverside County Fire Department operates under a Regional Fire Protection Program, which allows all of its fire stations to provide support as needed regardless of jurisdictional boundaries.

The project proposes the construction of 28 single family homes with ADUs. Project utility and roadway improvements would require the implementation of Construction Control Plans (see Section 17, Transportation, for further discussions). Traffic Control Plans are required by the City for all projects encroaching and impacting public roadways. With the implementation of the Construction Traffic Control Plans, construction of the offsite improvements would have less than significant impact on fire protection services and would cease once construction of the offsite improvements are complete.

The development of the project would result in an increase in demand for fire services. According to the 2023 Department of Finance Population and Housing Estimates, the City of Rancho Mirage has an average of 1.85 persons per household (PPH). Based off this number, the project would be expected to house 51.8 persons. Service calls made by the residents could place an additional demand on fire personnel, fire apparatus and equipment. However, the project site is located in a developed urban area of the City, and approximately 1.5 driving miles from Fire Station No. 69. Therefore, the project would not necessitate the construction or alternation of a fire station in order to continue to serve the

site at its current level, nor would it impact the current response times. Additionally, the project would comply with the 2017 General Plan *Public Service and Facilities Policy PS&F 6.1* in that all new developments are reviewed for their impacts on safety and the provision of police and fire protection services. The project would be required to implement all applicable fire safety requirements, including the installation of fire extinguishers, fire hydrants, and sprinkler systems.

Additionally, the City enacts a development fee on all new development within the City to finance public facilities which goes towards the funding of fire services. The project would be required to comply with Development Impact Fees in place at the time of construction. The project will be required to annex into the City's Community Facilities District No.1, which is a special tax used to pay for public services. Payment of these fees helps offset impacts by providing sufficient revenue for necessary improvements to ensure acceptable fire facilities, response times, equipment and personnel are maintained. Less than significant impacts to fire services are anticipated with project implementation.

POLICE

LESS THAN SIGNIFICANT IMPACT: The basic law enforcement protection is provided to the City of Rancho Mirage by contractual agreement with the Riverside County Sheriff's Department. The Riverside County Sheriff's Department provides over sixteen (16) uniformed deputy sheriffs for patrol and traffic enforcement.

The department has a staff of 29 full-time officers (24 sworn and 5 non-sworn). The officers have a daily staffing of 7 officers that work in two, 12-hour shifts. Four deputy patrol officers work the day shift, and 3 deputy patrol officers work that night shift. The City currently provides 1.7 officers per 1,000 residents, which is well above the commonly used and accepted ratio of one officer per 1,000 residents. Police response times vary and are dependent on the location of patrol cars. The average response times for priority 1 calls in the City of Rancho Mirage was 5 to 6 minutes.

The project site is approximately 10 acres of land located within the City of Rancho Mirage. The project proposes to develop 28 residential units with ADUs with private roads and retention landscapes. Construction activities of the off-site sewer line improvements may briefly impact response times of police response times on Via Josefina. Therefore, construction of the proposed offsite improvements would require the implementation of Construction Traffic Control Plans, which the City requires of all projects that encroach into the public right-of-way during construction (see Section 17, Transportation, for further discussion). With the implementation of the Construction Traffic Control Plans, construction of the off-site improvements would not significantly impact police protection services and would cease once construction of the offsite improvements is complete.

The development of the project is expected to have an incremental increase to the number of calls for police services. The project site is in an existing urban area and is currently serviced by the Sheriff's Department. Therefore, the proposed project would not substantially increase the need for new or expanded police facilities and response times are not expected to be impacted. Additionally, all new construction in the City will be required to pay Development Impact Fees to assist in offsetting impacts to police services. These development fees on new development allow the City to continue to finance public facilities which goes towards the funding of various public services to include police. The project will be required to annex into the City's Community Facilities District No.1, which is a special tax used to pay for public services. Payment of these fees helps offset impacts

by providing sufficient revenue for necessary improvements to ensure acceptable response times, equipment and personnel are maintained. Development of the proposed project will result in less than significant impacts to police services. Impacts to police services are less than significant.

SCHOOLS

LESS THAN SIGNIFICANT IMPACT: As previously stated, the project site is within the boundary of the Palm Springs Unified School District (PSUSD). Development of the project would not create a substantial demand on school services. The development of the proposed project could generate school age children requiring public education. The project has the potential to generate 9 new students based on the District's Student Generation Rate (See Table XVI-1).

Table XVI-1 PSUSD District Wide Student Generation Rate

School Type	Multi-Family Dwelling Units*	Generation Rate**	Students Generated***
Elementary School	28	0.1369	4
Middle School	28	0.0695	2
High School	28	0.0980	3
Total New Students			**9**

*28 multi-family dwelling units proposed for the project.
**Source: 2022 PSUSD Fee Justification Study for New Residential and Commercial/Industrial Development, March 2022
***Numbers were rounded.

Per the PSUSD 2022 Fee Justification Report, the District has an excess capacity at the elementary school level by 2,786. Middle schools in the district are over capacity by 12 students and high schools has an excess capacity of 1,706 students. An additional 9 students would not necessitate the construction of new school facilities. Education funding comes from a combination of federal, state, and local sources. Assembly Bill 2926 and Senate Bill 50 (SB 50) allow school districts to collect "development fees" for all new construction for residential/commercial and industrial use. At the time of writing, is $4.79/sq.ft. for residential and $0.78/ sq.ft for commercial. Monies collected are used for construction and reconstruction of school facilities. Moreover, school age children may also attend several private schools located in the Coachella Valley. The project will comply with PSUSD development fees and less than significant impacts to local schools are expected.

PARKS

NO IMPACT: The City of Rancho Mirage provides both public and private parks, open space and multi-city recreational facilities with various amenities. As discussed below in the Recreation Section of this document, the proposed project would not create additional demand for public park facilities, nor result in the need to modify existing or construct new park facilities. Therefore, no impacts are expected.

OTHER FACILITIES

NO IMPACT: No increase in demand for government services or other public facilities is expected beyond those discussed in this section.

15.3 Mitigation Measures: **None required.**

16 - Recreation

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

Source: 2017 Rancho Mirage General Plan

16.1 Setting

The City oversees parks that are a mix of mini and local parks. The 2017 Rancho Mirage General Plan EIR indicates that the existing and planned parks are sufficient to meet the forecast demand in the City's 2017 General Plan. Mini parks are generally less than one acre in size and are intended to complement adjacent uses, while local parks are intended to provide for the active and passive recreation needs of nearby residents in the vicinity of the park. The City of Rancho Mirage also provides a variety of hiking trails and equestrian trails within the City. The closest park to the project site is the Rancho Mirage Dog Park located approximately 0.5 miles northeast. The Butler-Abrams Trail and Wolfson Park is located approximately 4 miles southwest of the project site.

16.2 Discussion of Impacts:

a-b) **LESS THAN SIGNIFICANT IMPACT:** The project site is 10 acres and consists of 28 residential units. According to the Department of Finance, Population and Housing Estimates, the City of Rancho Mirage has an estimated 1.85 persons per household (PPH). Based on the PPH, the proposed project can be expected to house 51.8 people. Some residents of the project may attend events and participate in activities at local parks in the City; however, such visits are expected to be minimal. The project will comply with the City's parkland in-lieu fee (Quimby) and other development impact fees. The future residents generated by project implementation may lead to an incremental increase in physical deterioration of City public recreational facilities. The operation of the proposed project will not substantially increase the use of existing parks as to accelerate their physical deterioration since the project consists of 28 residential units. Additionally, the

project will be required to comply with the City's development impact fees. Impacts will be less than significant.

16.3 Mitigation Measures: None required.

17 - Transportation

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

Source: Rancho Mirage General Plan, 2017.City of Rancho Mirage Active Transportation Guidelines and Best Practices, July 15, 2019, City of Rancho Mirage Vehicle Miles Traveled Transportation Analysis Policy, February 18, 2021; Transportation Analysis and Guidelines for Level of Service Vehicle Miles Traveled, December 2020.

17.1 Setting

According to the City of Rancho Mirage General Plan, the City's character is described as a premier residential resort community. The Circulation Element of the City General Plan aims to preserve the City's character while providing the safest and most efficient roadway system possible, by documenting the road system's status, identifying problems, and proposing solutions.

17.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The proposed project includes the construction of a low-density single family residential subdivision. The project is located at the southeast corner of Ginger Rogers Drive and Via Josefina in the City of Rancho Mirage. Approximately 10.08 acres of existing, currently vacant, property will be developed to include 28 single family residential units with a private gated street. Primary access to the proposed residential community will be provided by an access point on Via Josefina and a secondary emergency access point at the southeast portion of the project's southern boundary.

Level of Service Standard (LOS)

With the implementation of SB 743, intersection Level of Service (LOS) is not calculated to determine transportation impacts, however it provides information regarding intersection capacity and General Plan consistency for the City. The transportation assessment of LOS was conducted for consistency with the City of Rancho Mirage General Plan and to evaluate the proposed project's effect on the surrounding transportation network.

Average Daily Trips (ADT) refers to the total number of vehicles that travel a defined segment of roadway over a twenty-four-hour period. The standard most often used to evaluate the operating conditions of the transportation system is called level of service (LOS). LOS is a qualitative assessment of the quantitative effect of factors such as: speed and travel time, traffic volume, geometric features, traffic interruptions, delays, and freedom to maneuver, driver comfort and convenience, and vehicle operating costs. LOS allows operating conditions to be categorized as LOS "A" through LOS "F", where LOS "A" represents the most favorable free flow condition and LOS "F" the least favorable forced flow driving condition. The LOS categories are based on relative levels of driver acceptability of various delays. A given lane or roadway may provide a wide range of service levels, depending upon traffic volumes and speeds.

Roadway capacity has been defined as the maximum number of vehicles that can pass over a given roadway during a given time under prevailing roadway and traffic conditions. The capacity of a roadway used for design purposes (generally defined as LOS D) is the level at which the facility is handling the maximum traffic volume that it can accommodate while maintaining an acceptable level of driver satisfaction. The City of Rancho Mirage has defined Level of Service "D" as the minimum adequate intersection service level during peak hours for planning and design purposes.

The volume-to-capacity ratio (V/C) indicates the overall performance of the roadway segment or intersection and corresponds to a rating of A through F identifying its level of capacity utilization and relative level of congestion. For roadway segment travel LOS is a measure of the flow of traffic, while for intersections, the LOS is based on the number of seconds the vehicle is delayed in passing through the intersection. Although accepting a lower level of service (LOS E or even F) at certain intersections and segments during peak season may result in periodic congestion, once familiar with network constraints, travelers will seek alternative paths and traffic will be distributed to those parts of the network with surplus capacity.

Table XVII-1
Level of Service - Roadway Segment
Description Mid-Link and Uninterrupted Flow

Level of Service	Volume/Capacity Ratio
A	0.00 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Not Meaningful

Source: Highway Capacity Manual, Transportation Research Board – Special Report 209, National Academy of Science, Washington, D.C. 2000.

Existing Roadway System

Regional access to the site vicinity is provided by the Interstate 10 Highway. Local access is provided by a multitude of roadways including Bob Hope Drive and Gerald Ford Drive.

Via Josefina is a two (2) lane undivided roadway trending in an north-south direction. Via Josefina is classified as a Local roadway (60 feet of right-of-way) in this location. The curb-to-curb measurement is 40-feet. Local roadways include one lane of travel in each direction. On-street parking is allowed. It is currently paved with no curb or gutter on either side.

Project Impacts:

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021) trip generation rates were utilized to determine trip generation for the proposed project. Based on the proposed project description the following ITE land use Code was utilized: 210 – Single Family Detached Residential; These rates were determined to represent the proposed project most closely. The analysis calculates that, upon buildout, the project will generate approximately 264 new daily vehicle trips or average daily trips (ADT), with 20 ADT expected to be generated in the morning peak hour and 26 ADT in the evening peak hour.

Table XVII-2
Project Trip Generation Summary

Trip Generation Rates						
Land Use (ITE Code)	**Unit**	**AM Peak Hour**		**PM Peak Hour**		**Daily Trip Rate**
		In:Out Split	**Trip Rate**	**In:Out Split**	**Trip Rate**	
Single Family Units (210)	DU	0.18:0.52	0.70	0.59:0.35	0.94	9.43

Trips Generation Results								
Land Use (ITE Code)	**Quantity**	**AM Peak Hour**			**PM Peak Hour**			**Daily**
		In	**Out**	**Total**	**In**	**Out**	**Total**	
Single Family Units (210)	28 DU	5	15	20	16	10	26	264

1. Source ITE = Institute of Transportation Engineers, Trip Generation Manual, 11th, 2021
2. DU = Dwelling Unit

According to Appendix B of the *Riverside County Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled*, Traffic Analysis Exemptions, certain types of development proposals are generally exempt from Traffic Analysis requirements per Board of Supervisor's action November 5, 1996 (Item no. 3.27). **Exemption #10** indicates that an exemption is appropriate for any use which can demonstrate, based on the most recent edition of the Trip Generation Report published by the Institute of Transportation Engineers (ITE) or other approved trip generation data, trip generation of less than 100 trips during the peak hours. As noted above the project is anticipated to generate

approximately 264 ADT for the project and 20 ADT during the AM peak hour and 26 ADT during the PM peak hour and is therefore not required to prepare a formal Traffic Study.

Proposed Private Street: is not a General Plan designated roadway. It is a private roadway with a proposed right of way of 57 feet, with 37 feet of pavement curb to curb, two lanes undivided and on-street parking.

Via Josefina is a two (2) lane undivided roadway trending in an north-south direction. Via Josefina is classified as a Local roadway (60 feet of right-of-way) in this location. The curb-to-curb measurement is 40-feet. Local roadways include one lane of travel in each direction. On-street parking is allowed. It is currently paved with no curb or gutter on either side.

General Plan buildout street improvements have been designed to accommodate increasing traffic conditions associated with planned land uses.

LOS Conclusion

The proposed project is not expected to have a significant adverse impact on the area transportation network over those analyzed in the City of Rancho Mirage General Plan EIR.

This analysis also assumes the project shall comply with the following conditions as part of the City of Rancho Mirage standard development review process to ensure adequate geometric design and emergency access:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction-related trips shall be restricted to off-peak hours to the extent possible.
- All on-site and off-site roadway design traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Rancho Mirage.
- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Rancho Mirage.
- Adequate off-street parking shall be provided to the satisfaction of the City of Rancho Mirage based on supporting parking and density analysis prepared for the project.
- Prior to project entitlement, the grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with the applicable City of Rancho Mirage/California Department of Transportation sight distance standards.

Alternative Transportation

SunLine Transit Agency (SunLine) provides bus services to the City of Rancho Mirage and other various jurisdictions throughout the Coachella Valley. Route 4 provides service

along Bob Hope Drive within the study area. One bus stop is located near the Project, at the intersection Bob Hope Drive and Gerald Ford Drive. The bus stop is approximately 0.5 miles walking distance to the southwest.

SunLine buses are wheelchair accessible and include bicycle racks accommodating two or three bicycles. The potential use of local bus services by future Project residents is not expected to conflict with or substantially increase the demand for this transit service. Project implementation is not anticipated to interfere with the existing service or performance at bus stop facilities. Less than significant impacts are anticipated.

If future demand warrants, expansion of available services may be appropriate. Transit services are monitored by both the City and SunLine. Additional services are periodically considered in response to the anticipated increase in use.

The project will contribute to alternative transportation improvements through the payment of DIF. Less than significant impacts are anticipated.

Congestion Management Plan

The County Congestion Management Plan (CMP) requires a LOS E or better for regional roadways. As noted previously the generation, distribution, and management of project traffic is not expected to conflict with the CMP; no CMP roadways were identified in the vicinity of the project. The project and background traffic will not exceed City level of service standards or travel demand measures, or other standards established by the City or Riverside County Transportation Commission (RCTC) for designated roads or highways.

The Transportation Uniform Mitigation Fees (TUMF) program identifies network backbone and local roadways that are needed to accommodate growth. The regional program was put into place to ensure that developments pay their fair share and that funding is in place for the construction of facilities needed to maintain an acceptable level of service for the transportation system. The TUMF is a regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

According to the Coachella Valley Association of Governments TUMF Handbook, effective July 1, 2012, the following are provisions from the TUMF Ordinance and provided as background information:

- The provisions of this Ordinance shall apply only to new development yet to receive final discretionary approval and or issuance of a building permit or other development right and to any reconstruction or new use of existing buildings that results in a change of use and generates additional vehicular trips.
- No tract map, parcel map, conditional use permit, land use permit or other entitlement shall be approved unless payment of the mitigation fee is a condition of approval for any such entitlement. The mitigation fee shall be paid to the applicable jurisdiction.
- No building or similar permit, certificate of occupancy or business license reflecting a change of use shall be issued unless the applicant has paid the mitigation fee. Mitigation fees shall be imposed and collected by the applicable jurisdiction and shall be transmitted to CVAG to be placed in the Coachella Valley Transportation Mitigation Trust Fund. All interest or other earnings of the Fund shall be credited to the Fund.

Following the payment of required fees such as TUMF and DIF, less than significand impacts are anticipated relative to the CMP.

The following Standard Conditions are anticipated to be implemented by the proposed project.

Standard Conditions

1. Clear unobstructed sight distances shall be provided at site access and internal routes. Sight distances shall be reviewed at the time of preparation of final grading, landscape and street improvement plans.
2. The project shall accommodate the largest service and delivery vehicles expected to negotiate the site access and internal circulation system. Landscaping, monuments, and other objects shall be avoided in the off-tracking area at the site access connections.
3. Off-street parking shall be provided to meet the anticipated parking demand as required by the parking standards in Section 17.26 of the Rancho Mirage Municipal Code and the Uniform Federal Accessibility Standards.
4. Project layout and site access design shall be subject to the review and approval of the City Traffic Engineer prior to project entitlement.
5. Emergency police, fire and paramedic vehicle access shall be provided for all new developments to the satisfaction of the City of Rancho Mirage.
6. A traffic signing and striping plan shall be developed in conjunction with detailed construction plans for the project site and submitted to the City of Rancho Mirage for review and approval.
7. The applicant shall coordinate with the SunLine Transit Agency regarding the need for public transit facilities.
8. The project proponent shall contribute development impact fees, as required by the City of Rancho Mirage.
9. The project proponent shall contribute traffic impact mitigation fees, by participating in the Traffic Uniform Mitigation Fee (TUMF) program.
10. A Construction Traffic Control Plan shall be prepared for use during construction activities. Construction includes onsite and offsite improvements.
11. A Knox-Box Rapid Entry System or similar device shall be installed at the gated entry to facilitate emergency access by fire fighters and other emergency first responders.

Following implementation of Standard Conditions, Project Design Features and the Mitigation Measure listed below, the project is expected to result in less than significant impacts.

b) LESS THAN SIGNIFICANT IMPACT:

Vehicle Miles Travelled (VMT)

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020.

City of Rancho Mirage Resolution 2021-06 aligns the City's VMT analysis policy (City Guidelines) with SB 743 and the City's goals as set forth in the General Plan Update

(2017). The purpose of the policy is to comply with State laws while maintaining the resort residential character of the community. The City's VMT policy establishes VMT as the metric to measure transportation impacts in conformance with. This VMT analysis/screening has been developed based on the adopted City Guidelines.

Exhibit A of Resolution 2021-06 sets forth screening criteria under which Projects are not required to submit detailed VMT analysis. This guidance for determination of non-significant VMT impact is primarily intended to avoid unnecessary analysis and findings that would be inconsistent with the intent of SB 743. VMT screening criteria for development projects include the following:

- **Small Local Serving Projects (Project Type Screening)** with low trip generation per existing CEQA exemptions or resulting in a 3,000 metric tons of Carbon Dioxide Equivalent per year screening level threshold. Specific examples include Single Family Housing projects less than or equal to 110 Dwelling Units, Multi-Family (low-rise) Housing projects less than or equal to 147 Dwelling Units or Multi-Family (mid-rise) Housing projects less than or equal to 194 Dwelling Units. **The small project screening threshold is met.**

Additional description of the VMT concept is provided in the Greenhouse Gas and Energy sections of this Initial Study. Following implementation of the project design features, TUMF, DIF and standard conditions, the project is expected to result in less than significant impacts.

c) **LESS THAN SIGNIFICANT IMPACT:** The project will be developed in accordance with City of Rancho Mirage design guidelines and will not create a substantial increase in hazards due to a design feature. The project's access point will be located with adequate sight distances, and project-generated traffic will be consistent with existing traffic in the area. The internal circulation system would be designated in accordance with the City of Rancho Mirage guidelines and would provide adequate fire department access and widths as required. Sharp curves are avoided by design guidelines.

A Traffic Control Plan may be required as a condition of approval to be implemented throughout all construction activities. This plan will work to reduce potential impacts that may arise due to conflicts with construction traffic. Impacts will be less than significant. The project's access points will be located with adequate sight distances, and project-generated traffic will be consistent with existing traffic in the area.

The project is not anticipated to increase hazards due to geometric design features or incompatible uses. Following implementation of the Standard Conditions within this CEQA document as well as the review and approval process at the City of Rancho Mirage, impacts are less than significant without mitigation.

d) **LESS THAN SIGNIFICANT IMPACT:** The proposed Project will provide adequate access to emergency response vehicles, as required by the City of Rancho Mirage and in accordance with the Fire Department review and requirements. Site plan review would include in-depth analysis of emergency access to the site to ensure proper access to facilities. As mentioned previously, the proposed site plan provides one primary proposed vehicular access point and one secondary access point. The design details of the vehicular driveways will be reviewed and approved by the Fire Department and the City.

The Project is anticipated to provide proper premises identification with legible site name, address numbers, and clear signage indicating the site access points. Operational fire hydrants and extinguishers are also required in accordance with the Rancho Mirage Municipal Code.

Prior to construction, both the Fire Department and Police Department will review the project site plan to ensure safety measures are addressed, including emergency access. The project is not anticipated to result in inadequate emergency access. Therefore, impacts are less than significant relative to inadequate emergency access.

17.3 Mitigation Measures: None required.

18 - Tribal Cultural Resources

TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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 section5020.1(k), or	☐	☐	☐	☒
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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Source: Public Resource Code §21074; Rancho Mirage 2017 General Plan. Cultural Resources Assessment, Statistical Research, Inc., August 2023

18.1 Setting

The Coachella Valley is a historical center of Native American settlement, where U.S. surveyors noted large numbers of Indian villages and *rancherías* occupied by the Cahuilla people in the mid-

19th century. The origin of the name "Cahuilla" is unclear, but it may have originated from their own word *káwiya*, meaning master or boss (Bean 1978). The Takic-speaking Cahuilla are generally divided by anthropologists into three groups, according to their geographic setting: the Pass Cahuilla of the San Gorgonio Pass-Palm Springs area, the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountains and the Cahuilla Valley, and the Desert Cahuilla of the eastern Coachella Valley.

Today, Native Americans of Pass or Desert Cahuilla heritage are mostly affiliated with one or more of the Indian reservations in and near the Coachella Valley, including Torres Martinez, Augustine, Cabazon, Agua Caliente, and Morongo. There has been a resurgence of traditional ceremonies, and the language, songs, and stories are now being taught to the younger generations.

18.2 Discussion of Impacts:

a i) **NO IMPACT:** As previously discussed in the Cultural Resources Section, cultural analyses were completed immediately south of the project site and approximately 0.1 miles west of the project site. For both sites, the City prepared an intensive level survey of historic resources in the City. The inventory included properties listed in the National Register of Historic Places, the California Register of Historical Resources, California Registered Historical Landmarks, California Points of Historical Interest, and properties review by OHP as part of a historic resources survey or an environmental review. No cultural resources were identified within the project areas during the study, none of them meets CEQA's definition of a "historical resource." Due to the close proximity of the project site to these properties, it can be concluded that implementation of the proposed project would not result in the loss of potentially historic or cultural resources; therefore, less than significant impacts would be expected.

ii) **LESS THAN SIGNIFICANT IMPACT:** Assembly Bill 52 (AB 52) requires lead agencies to notify their local tribes about development projects. It also mandates lead agencies consult with Tribes if requested and sets the principles for conducting and concluding the required consultation process. Pursuant to AB 52 and SB 18 consultation requirements, the City of Rancho Mirage initiated the AB52 consultation process. During the consultation period, two tribes responded: the Augustine Band of Cahuilla Indians and the Agua Caliente Band of Cahuilla Indians. The Augustine Band of Cahuilla Indians in their letter dated April 18, 2024, stated that they are unaware of specific cultural resources that may be affected by the project. However, the Tribe requested that in the event that if any cultural resources are discovered during the development of the proposed project, that the Tribe be contacted to evaluate further. The Agua Caliente Band of Cahuilla Indians, in their letter dated April 19, 2024, stated that the project is not located within the boundaries of the ACBCI Reservation, however, it is within the Tribe's Traditional Use Area. Therefore, the ACBCI requested the following:

- Formal government to government consultation under California Assembly Bill No. 52 (AB 52) and Senate Bill 18 (SB 18);
- A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area;
- A copy of the records search with associated survey reports and site records from the information center;
- Copies of any cultural resource documentation (report and site records) generated in connection with this project;

- The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys); and
- The Tribe's participation in the survey.

The City will provide the Tribe with the applicable and relevant documentation. Additionally, the project proponent shall ensure the presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office. This shall be required by **Mitigation Measure TCR-1.**

Moreover, as stated in the Cultural Section of this document, **Mitigation Measure CUL-1** and **CUL-2** requires that the Tribe be notified 30 days prior to any earth-moving activities and a qualified archaeologist and cultural monitor to be present during earth-moving activities. Should buried cultural deposits be encountered, a qualified archeologist may request that destructive construction halt and prepare a mitigation plan for submission to the State Historic Preservation Office and the Agua Caliente Tribal Historic Preservation Office. Additionally, **Mitigation Measure CUL-3** requires that if buried human remains are found during earth-moving operations associated with the project, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the finds. If the human remains are determined to be of Native American Origin, the Native American Heritage Commission (NAHC) shall be contacted. The NAHC will make a determination of the Most Likely Descendants (MLD). The City and Developer will work with the designated MLD to determine the final disposition of the remains.

With the implementation of **Mitigation Measure TCR-1,** and **CUL-1** through **CUL-3**, impacts would be less than significant.

18.3 Mitigation Measures: **See Mitigation Measure CUL-1, CUL-2 and CUL-3**

TCR-1 The project proponent shall ensure the presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

19 - Utilities and Service Systems

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

Sources: Rancho Mirage 2017 General Plan Update; CVWD; 2020 Regional Urban Water Management Plan.

19.1 Setting

Domestic Water & Waste Water

CVWD provides domestic and wastewater service to the project vicinity and is the largest provider of potable water in the Coachella Valley. It operates more than 100 wells and serves a population of 283,000 in its service areas. CVWD's adopted 2020 Coachella Valley Regional Urban Water Management Plan has been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. Additionally, CVWD treats nearly 6.3 billion gallons of wastewater a year. CVWD operates six water reclamation plants and maintains more than 1,000 miles of sewer pipeline and more than 30 lift stations that transport wastewater to the nearest

treatment facility. No new water or wastewater treatment facilities are required as a result of the project's development.

Groundwater is the primary source of domestic water supply in the Coachella Valley. CVWD is the largest provider of potable water in the Coachella Valley and currently provides potable water to the City of Rancho Mirage. CVWD's 2020 Regional Urban Water Management Plan and 2022 Indio Subbasin Water Management Plan have been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. The comprehensive Water Management Plan guides efforts to eliminate overdraft, prevent groundwater level decline, protect water quality, and prevent land subsidence. The 2020 UWMP serves as a planning tool that documents actions in support of long-term water resources planning and ensures adequate water supplies are available to meet the existing and future urban water demands.

CVWD has developed a Sewer System Management Plan (SSMP) pursuant to the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. The primary goal of the SSMP is to minimize frequency and severity of Sanitary Sewer Overflows (SSOs). The SSMP will cover the management, planning, design, and operation and maintenance of the District's sanitary sewer system. The wastewater system serves approximately 265,000 customers. The system collects municipal waste from residential and commercial users, delivering the collected wastewater to one of six Wastewater Reclamation Plants. The system includes approximately 1,100 miles of sewer, 34 lift stations and approximately 17,000 manholes.

Solid Waste

Solid waste disposal and recycling services for the City of Rancho Mirage is provided by Burrtec. Solid waste and recycling collected from the proposed project will be hauled to the Edom Hill Transfer Station. Waste from this transfer station is then sent to a permitted landfill or recycling facility outside of the Coachella Valley. These include Badlands Disposal Site, El Sobrante Sanitary Landfill and Lamb Canyon Disposal Site. Cal-Recycle data indicates the Badlands Disposal site has 15,748.799 cubic yards of remaining capacity, the El Sobrante Landfill has a remaining capacity of 145,530,000 tons of solid waste, and Lamb Canyon Disposal has a remaining solid waste capacity of 19,242,950 cubic yards. As part of its long-range planning and management activities, the Riverside County Department of Waste Resources (RCDWR) ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal. The 15-year projection of disposal capacity is prepared each year as part of the annual reporting requirements for the Countywide Integrated Waste Management Plan. The most recent 15-year projection by the RCDWR indicates that no additional capacity is needed to dispose of countywide waste through 2024, with a remaining disposal capacity of 28,561,626 tons in the year 2024.

Other Utilities

The site is under the jurisdiction for power from Imperial Irrigation District (IID), natural gas from Southern California Gas Company, and Frontier for telecommunications. IID has a primary overhead (OH) conductor running directly north and west of the project site and has one secondary underground conductor on the west end of the project site. Frontier has copper facilities on the project site on the north and west side.

19.2 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT:** The project will connect to existing water and sewer utility infrastructure along Via Josefina. Water and sewer services are provided to

the City of Rancho Mirage, and the project site, by CVWD. The project will connect to the existing water main along the project's western boundary (Via Josefina). The project will connect to the future sewer main at the southwest corner of the project, at Via Josefina and Via Florencia.

Electricity is provided to the project site by IID. Currently, OH electric power lines are located west of the project along Via Josefina. The project will connect to the existing facilities. SoCal Gas would continue to provide natural gas services and telecommunication connections would continue to be provided by Frontier.

The project will include stormwater drainage and retention facilities sized to adequately handle the runoff conditions resulting from the controlling 100-year storm event pertinent to the site. The category of stormwater retention facilities may consist of surface basins and/or underground structures, both of which have a precedent of City approval. The proposed storm drain system includes facilities which have been preliminarily sized to provide enough storage for the 100-year controlling storm event.

CVWD sewer is the only utility that would require construction outside of the project site boundaries. As mentioned above, sewer services for the project would connect to a future sewer main at Via Josefina and Via Florencia intersection. Utility improvements are expected to have less than significant impacts since Via Josefina is an existing paved road disturbed by vehicle and pedestrian use.

The extension of all other onsite utilities will occur within the project's existing footprint and no new construction of public water, electric power, natural gas, or telecommunications facilities will need to be constructed or relocated. Therefore, less than significant impacts are expected.

b) **LESS THAN SIGNIFICANT IMPACT:** Groundwater is the primary source of domestic water supply in the Coachella Valley. CVWD is the largest provider of potable water in the Coachella Valley and currently provides potable water to the City of Rancho Mirage. CVWD's domestic water system has 64 pressure zones and consists of approximately 97 groundwater production wells, 2,000 miles of pipe, and 133 million gallons of storage in 65 enclosed reservoirs. CVWD's 2020 Urban Regional Water Management Plan has been developed to assist the agency in reliably meeting current and future water demands in a cost-effective manner. The comprehensive Water Management Plan guides efforts to eliminate overdraft, prevent groundwater level decline, protect water quality, and prevent land subsidence.

Per CVWD's 2020 Regional Urban Water Management Plan (RUWMP), the district had a 2020 target water use demand of 473 gpcd. The District's 2015 actual per capita daily water use of 383 gpcd is currently 19 percent below the 2020 target of 473 gpcd. CVWD has currently achieved its 2020 water use target but continues to implement demand management measures to reduce per capita water use. Per the 2020 RUWMP, CVWD anticipates that future residential development would be expected to use less water than existing properties due to the mandated use of high efficiency plumbing fixtures under the CalGreen building standards and reduced landscape water use mandated by CVWD's Landscape Ordinance.

The project will connect to the existing water main along the project's western boundary (Via Josefina) to adequately serve the project in addition to an internal network of private lines to serve on-site development. Water mains run along the north of the property along

Ginger Rogers Road and to the west on Via Josefina. Current water meter and backflow feeds the property at the northwest corner of the site. The proposed residential project would result in an increased use of water supplies. It is estimated that a project of this size could use 10.2 AFY.

CVWD's 2020 RUWMP projected demands are shown in the table below. The demand projections are for future municipal demands within CVWD's jurisdictional boundary. Some of these areas are currently served by private domestic wells and are not yet connected to the CVWD system. CVWD plans to consolidate and provide service to these areas, but the timing will depend on the availability of grant funding. For planning purposes, all municipal demands within the jurisdictional boundary are included beginning in 2025. The estimated water use of 10.2 AFY for the proposed project is approximately 0.02 percent of the total projected water use of 60,142 AFY for single family uses in 2025. Additionally, new development is accounted for in CVWD's projected water use.

CVWD Projected Retail Demands for Water (AFY)

Projected Water Use					
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	60,142	63,824	67,331	69,816	71,695
Multi-Family	6,873	7,245	7,742	8,267	9,045
CII	7,060	7,244	7,438	7,709	7,985
Landscape	34,193	36,205	38,226	39,865	41,516
Other	1,457	1,563	1,670	1,755	1,840
Losses	13,736	14,501	15,222	15,670	16,085
Total	**123,461**	**130,582**	**137,629**	**143,082**	**148,166**

Source: 2020 Coachella Valley Regional Urban Water Management Plan

The infrastructure and design components for the project will be consistent with CVWD requirements and water management plan. The proposed development will be expected to follow water conservation guidelines to mitigate impacts to public water supplies. Examples of these water conservation methods include water conserving plumbing fixtures, drought tolerant landscaping, and drip irrigation systems as well as on-site stormwater infiltration. Additional domestic water improvements necessary to serve this development will be identified by CVWD and included as conditions of approval by the City of Rancho Mirage during the City's standard review process. Therefore, less than significant impacts relative to water supply are expected.

c) **LESS THAN SIGNIFICANT IMPACT:** CVWD's wastewater reclamation system collects and treats approximately 17 million gallons per day (MGD) from approximately 103,616 active accounts. The system consists of approximately 1,160 miles of collection piping and five wastewater reclamation plants (WRPs). Some areas within the CVWD service area remain on septic systems. Additionally, CVWD treats nearly 6.2 billion gallons of wastewater a year. The District operates six (6) water reclamation plants and maintains more than 1,000 miles of sewer pipeline and twenty-seven (27) lift stations that transport wastewater to the nearest treatment facility. CVWD maintains 5 sewer lift stations within

the City's boundaries. Wastewater from the City is conveyed to CVWD's Cook Street Water Reclamation Plant No.10 (WRP-10), which treats an average of 10 mgd and has a capacity of 18 mgd.

An existing CVWD sewer main exists off Via Josefina. The proposed project would connect into future sewer infrastructure at the southwest corner of the project site and provide wastewater services to the site. The estimated sewer demand proposed for the project is 5,600 gpd or 0.01 mgd (million gallons per day). This increase would be treated by WRP-10 and is within the treatment capacity of this plant.

The project will undergo review by CVWD and City staff to ensure wastewater capacity and compliance with the current wastewater treatment requirements. Additionally, sewer and water installation and connection fees in place at the time of development will be collected by CVWD. No new or expanded treatment facilities are expected as a result of project implementation, nor is the project expected to exceed wastewater capacity. Less than significant impacts are expected.

d) **LESS THAN SIGNIFICANT IMPACT:** Solid waste disposal and recycling services for the City of Rancho Mirage is provided by Burrtec. Solid waste and recycling collected from the proposed project will be hauled to the Edom Hill Transfer Station. Waste from this transfer station is then sent to a permitted landfill or recycling facility outside of the Coachella Valley. These include Badlands Disposal Site, El Sobrante Sanitary Landfill and Lamb Canyon Disposal Site. Cal-Recycle data indicates the Badlands Disposal site has 7,800,000 cubic yards of remaining capacity, the El Sobrante Landfill has a remaining capacity of 143,977,170 tons of solid waste, and Lamb Canyon Disposal has a remaining solid waste capacity of 19,242,950 cubic yards.

As part of its long-range planning and management activities, the Riverside County Department of Waste Resources (RCDWR) ensures that Riverside County has a minimum of 15 years of capacity, at any time, for future landfill disposal. Pursuant to AB939, the County prepared the 1996 Countywide Integrated Waste Management Plan (CIWMP) in collaboration with its cities to ensure a coordinated effort at solid waste reduction and landfilling. The 15-year projection of disposal capacity is prepared each year as part of the annual reporting requirements for the CIWMP. The most recent 2019 Annual Summary has a 19-years of disposal capacity, and no additional capacity is needed to dispose of countywide waste through 2038. Less than significant impacts are anticipated.

e) **LESS THAN SIGNIFICANT IMPACT:** The project will comply with all applicable solid waste statutes and guidelines. All development is required to comply with the mandatory commercial and multi-family recycling requirements of Assembly Bill 341. The project will also comply with the recycling requirements of Cal Green and develop a waste management plan that will include diverting at least 50% of construction and demolition material fill from landfills. No impacts are expected relative to applicable solid waste statues and regulations.

19.3 Mitigation Measures: None required.

20 - Wildfire

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

Sources: Rancho Mirage General Plan, 2017; Rancho Mirage General Plan EIR May, 2005; CAL FIRE High Fire Severity Zone Maps.

20.1 Setting

A wildfire is an unplanned fire that burns in a natural area such as a forest, grassland, or prairie. Wildfires are often caused by humans or lighting and are exacerbated by steep slopes, dense vegetation (fuel), and dry and windy weather conditions. When these conditions are present, a wildfire can burn quickly and over a vast area, damaging hillsides, essential infrastructure, and homes and buildings.

The City of Rancho Mirage is primarily comprised of urban and developed uses. The western and southern boundaries of the City are defined by the Santa Rosa Mountains. The undeveloped Santa Rosa Mountains are characterized by steep topographic gradients that are typically conducive to spreading wildfires. Furthermore, the region's hot, dry summer and autumn weather

is considered ideal for generating the dry vegetation that fuel most wildfires. However, wildfires in the undeveloped local mountains adjacent to the Coachella Valley cities are not common due to the mountain's natural terrain, which is steep, rocky, and dry soil. Furthermore, the Santa Rosa Mountains are made up primarily of Granitic rock and sparse desert vegetation. The topographic character of the Santa Rosa Mountains is not conducive for the growth of dense vegetation; and as a result, the amount of fuel available for wildland fires is limited. Additionally, the distance between the existing vegetation does not allow wildfires to spread easily.

A Wildland Urban Interface (WUI) is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels. People and man-made structures in WUI areas are more susceptible to the impacts of wildfires due to their adjacency to areas that provide fuel to wildfires, such as forests with dense vegetation.

The City of Rancho Mirage is situated at the base of the Santa Rosa Mountains, introducing an urban-wildland interface to the western and southern portions of the City. The project site is located on relatively flat land. As stated previously, the Santa Rosa Mountains are made up primarily of Granitic rock and sparse desert vegetation. The limited vegetative conditions on the Santa Rosa Mountains and throughout the City portion, are unlikely to cause a major wildfire. Additionally, the flat urban areas of the City are considered low wildfire areas, as indicated in the Rancho Mirage General Plan.

20.2 Discussion of Impacts:

a-d) LESS THAN SIGNIFICANT IMPACT: The project site currently resides in a primarily urban and developed area within the City of Rancho Mirage. Areas north, west, south, and east of the project are currently characterized by vacant and undeveloped land with scattered, low-lying desert vegetation. Residential developments are located northwest, east, and south of the project, separated from the project by paved roads and vacant land. The paved roadway, Via Josefina, delineates the project's western boundary. The approximately 10-acre project is located within the City of Rancho Mirage's Very Low Density and Medium Density Residential land use and zoning designations.

According to CAL FIRE's Fire Hazard Severity Zones (FHSZ) in State Responsibility Areas (SRA) Map, the project site is not located in an SRA or located in an area classified as very high fire hazard severity zone. Per CAL FIRE's map, the project property is located in a (incorporated) Local Responsibility Area (LRA). The project is not located in or near state responsibility areas or lands classified as very high, high or moderate fire hazard severity zones, therefore, no impacts are anticipated.

Wildfire risk is related to a number of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazards by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. According to the Riverside County General Plan, wildfire susceptibility is moderate to low in the valley and desert regions on the western and eastern sides of the Salton Sea. Methods in which developments address wildland fires hazards includes establishing setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, use of low fuel landscaping, and use of fire-resistant building techniques.

As previously stated, the project property is located in an urban and developed area of the City. Thick vegetation, which acts as wildfire fuel, does not occur in areas adjacent to the project. Additionally, the project is not located adjacent to steep slopes. The closest slope to the project is occurs approximately 3.15 miles southwest of the project, at the Santa Rosa Mountains. However, the Santa Rosa Mountains do not provide an environment conducive to wildfires because of the sparce vegetation that occurs on the slopes. Therefore, a wildfire is not expected to occur in the City and at the project site. The project site will be developed to the most current California building standards and fire code. As a result, the project site is not expected to expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

The project will connect to existing water and sewer infrastructure located along Ginger Rogers Road and Via Josefina. The proposed infrastructure would allow for a decrease of fire risk during operation of the project. The development of this infrastructure will not exacerbate fire risk or result in short- or long-term impacts to the environment. The project site will be connecting to an existing network of streets. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project is not expected to require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building. The site is located on flat ground and, as previously stated, the closest slope to the project is located approximately 3.15 miles southwest; therefore, risks associated with slope instability are not significant. As a result, the project is not expected to expose people or structures to significant risks including downslope or downstream flooding or landslides, due to runoff, post-fire slope instability, or drainage changes. Overall, less than significant impacts are anticipated.

20.3 Mitigation Measures: None required.

21 - Mandatory Findings of Significance

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

20.1 Discussion of Impacts:

a) **LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:** As concluded in the Biological and Cultural Resources sections of this document, the proposed project would result in no impacts, less than significant impacts, or less than significant impacts to these resources with the implementation of mitigation. The project is compatible with the City of Rancho Mirage General Plan and Zoning and its surroundings. The project will not significantly degrade the overall quality of the region's environment, or substantially reduce the habitat of a wildlife species, case a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare of endangered plant or

animal species with the implementation of mitigation measures BIO-1 through BIO-3. The project would not eliminate important examples of the major periods or California history or prehistory with the implementation of mitigation measures CUL-1 through CUL-3. Based upon the information provided within this Initial Study, approval and implementation of the project is not expected to substantially alter or degrade the quality of the environment, including biological, cultural or historical resources.

b) **LESS THAN SIGNIFICANT IMPACT:** The proposed project and its location is found to be adequate and consistent with existing federal, state, and local policies and is consistent with the City of Rancho Mirage General Plan and surrounding land use. As stated throughout, the proposed project is located in an area of Rancho Mirage that is developed. Future development in the vicinity of the project is anticipated to occur, however, developments would be consistent with the surrounding land uses, which includes residential communities. The cumulative impact of project development, future development and the existing uses are anticipated to be less than significant. Approval and implementation of the proposed project would result in less than significant impacts related to cumulatively considerable impacts.

c) **LESS THAN SIGNIFICANT IMPACT:** The proposed project will not result in impacts related to environmental effects that will cause substantial adverse effects on human beings. The project has been designed to comply with established design guidelines and current building standards. The City's review process will ensure that applicable guidelines are being followed. Based upon the findings provided in this document, and mitigation measures and standard conditions incorporated into the project, less than significant impacts are expected.

21.3 Mitigation Measures: See BIO-1 through BIO-3 and CUL-1 through CUL-3 in Biological Resources and Cultural Resources discussions.

Table XXI-1: Mitigation Monitoring and Reporting Program			
Mitigation Measure	**Responsible Agency**	**Timing**	**Verification (Date and Initials)**
AESTHETICS			
AGRICULTURAL RESOURCES			
AIR QUALITY			
BIOLOGICAL RESOURCES			
BIO-1: Prior to construction and issuance of any grading permit, the City of Coachella shall ensure compliance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) and shall ensure the collection of payment of the CVMSHCP Local Development Mitigation Fee (LDMF) and transfer of revenues to the Coachella Valley Conservation Commission.	City Planning Department Project Applicant/ Developer CVCC	Prior to construction and issuance of any grading permit	
BIO-2: The project proponent shall ensure that burrowing owl clearance survey is performed not more than 14 days prior to project site disturbance (clearing, grubbing, grading, construction). If any owls are identified, the most current protocol established by the California Department of Fish and Wildlife (Staff Report on Burrowing Owl Mitigation, 2012) must be followed. A survey shall also take place 24 hours prior to ground disturbance as burrowing owls may colonize or recolonize the site within the time between the original survey and project activities.	City Planning Department Qualified Biologist Project Applicant	14 days prior to any ground disturbance activities	
BIO-3: The project proponent shall ensure that a breeding survey for the loggerhead Shrike and general breeding bird survey are performed no more than 14 days prior to site disturbance if ground disturbance (clearing, grubbing, grading, and construction) occurs between February 15th and June 15th.	City Planning Department Qualified Biologist Project Applicant	14 days prior to any ground disturbance activities	
CULTURAL RESOURCES			
CUL-1: The Agua Caliente Band of Cahuilla Indians must be notified a minimum of 30 days prior to any earth-moving activities including grading, grubbing, trenching, or excavations at the site. All earth-moving activities including grading, grubbing, trenching, or excavations at the site shall be monitored by a qualified	City Planning Department NAHC	During any ground disturbing activities	

archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s). **CUL-2:** A qualified archaeologist and/or approved Agua Caliente Native American Cultural Resource Monitor(s) shall provide preconstruction training for all earthmoving construction personnel prior to the start of any ground-disturbing activities, regarding how to recognize the types of Tribal Cultural Resources and/or archaeological resources that may be encountered and to instruct personnel about actions to be taken in the event of a discovery. Should cultural materials be discovered, they shall be recorded and evaluated in the field. The monitors shall be prepared to recover artifacts to avoid construction delays but must have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered. The Native American Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a Treatment Plan for submission to the State Historic Preservation Officer and Tribal Historic Preservation Office. If artifacts are discovered, these shall be processed, cataloged, analyzed, and prepared for permanent curation in a repository with permanent retrievable storage that would allow for additional research in the future. Only non-destructive methods shall be allowed in regards to Tribal Cultural Resources. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the California Historical Resources Information System. **CUL-3:** In the event of remains being uncovered during construction activities, all construction activities will stop immediately as mandated by California Health and Safety Code Section 7050.5 and the CEQA Guidelines Section 15064.5. All construction work taking place within the vicinity of the discovered remains must cease and the necessary steps to ensure the integrity of the immediate area must be taken. The County Coroner must be notified within 24 hours of the discovery of human remains. If the remains discovered are determined by the Coroner to be of Native American descent, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would in turn contact the Most Likely Descendant (MLD) would determine further action to be taken. The MLD would have 48 hours to access the site and make a recommendation regarding the disposition of the remains.	Project Applicant/ Developer		

GEOLOGY AND SOILS			
GEO-1 The applicant shall comply with all recommendations set forth in the Geotechnical Investigation prepared for the project (Appendix C) during the construction	City Planning Department Project Applicant/ Developer	Prior to and during any ground disturbing activities	
GEO-2 If paleontological materials are discovered during grading or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified paleontologist can assess the nature and significance of the find. Project personnel shall not collect or move any paleontological materials. To the extent feasible, project activities shall avoid these deposits.	City Planning Department Qualified Paleontologist Project Applicant/ Developer	During any ground disturbing activities	
GREENHOUSE GAS EMISSIONS			
HAZARDS AND HAZARDOUS MATERIALS			
HYDROLOGY AND WATER QUALITY			
LAND USE AND PLANNING			
MINERAL RESOURCES			
NOISE			
POPULATION AND HOUSING			
PUBLIC SERVICES			
RECREATION			
TRANSPORTATION/TRAFFIC			
TRIBAL CULTURAL RESOURCES			
TCR-1 The project proponent shall ensure the presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the	City Planning Department	During any ground disturbing activities	

Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.	Native American Cultural Resource Monitor Project Applicant/ Developer		
UTILITIES AND SERVICE SYSTEMS			

CHAPTER 3: REFERENCES

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CHAPTER 4: APPENDICES

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5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Palari Villas Rancho Mirage
Construction Start Date	6/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	0.80
Location	33.7940673582971, -116.39820573255764
County	Riverside-Salton Sea
City	Rancho Mirage
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5671
EDFZ	11
Electric Utility	Imperial Irrigation District
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	28.0	Dwelling Unit	8.69	72,800	268,274	37,462	52.0	Lots and Open Space
Other Asphalt Surfaces	1.39	Acre	1.39	0.00	0.00	—	—	Street Improvements
Other Asphalt Surfaces	1.00	Acre	1.00	0.00	0.00	—	—	Off-Site Utilities

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.49	3.77	38.0	34.7	0.06	1.63	8.28	9.92	1.50	4.09	5.60	—	7,216	7,216	0.28	0.58	7.99	7,323
Mit.	4.49	3.77	38.0	34.7	0.06	1.63	8.28	9.92	1.50	4.09	5.60	—	7,216	7,216	0.28	0.58	7.99	7,323
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	24.4	11.4	13.6	0.02	0.50	0.14	0.61	0.46	0.03	0.49	—	2,567	2,567	0.10	0.03	0.02	2,580
Mit.	1.49	24.4	11.4	13.6	0.02	0.50	0.14	0.61	0.46	0.03	0.49	—	2,567	2,567	0.10	0.03	0.02	2,580

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03	2.07	8.28	8.47	0.02	0.35	0.78	1.13	0.32	0.28	0.60	—	1,781	1,781	0.06	0.05	0.33	1,799
Mit.	1.03	2.07	8.28	8.47	0.02	0.35	0.78	1.13	0.32	0.28	0.60	—	1,781	1,781	0.06	0.05	0.33	1,799
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.38	1.51	1.55	< 0.005	0.06	0.14	0.21	0.06	0.05	0.11	—	295	295	0.01	0.01	0.06	298
Mit.	0.19	0.38	1.51	1.55	< 0.005	0.06	0.14	0.21	0.06	0.05	0.11	—	295	295	0.01	0.01	0.06	298
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.49	3.77	38.0	34.7	0.06	1.63	8.28	9.92	1.50	4.09	5.60	—	7,216	7,216	0.28	0.58	7.99	7,323
2025	1.40	1.18	10.6	13.8	0.02	0.43	0.11	0.54	0.40	0.03	0.43	—	2,580	2,580	0.10	0.03	0.57	2,593
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.49	1.24	11.4	13.6	0.02	0.50	0.11	0.61	0.46	0.03	0.49	—	2,567	2,567	0.10	0.03	0.02	2,580
2025	1.39	24.4	10.6	13.5	0.02	0.43	0.14	0.54	0.40	0.03	0.43	—	2,564	2,564	0.10	0.03	0.01	2,577
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	1.03	0.86	8.28	8.20	0.02	0.35	0.78	1.13	0.32	0.28	0.60	—	1,781	1,781	0.06	0.05	0.33	1,799
2025	0.87	2.07	6.54	8.47	0.01	0.27	0.07	0.34	0.25	0.02	0.27	—	1,578	1,578	0.06	0.02	0.16	1,585
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	0.16	1.51	1.50	< 0.005	0.06	0.14	0.21	0.06	0.05	0.11	—	295	295	0.01	0.01	0.06	298
2025	0.16	0.38	1.19	1.55	< 0.005	0.05	0.01	0.06	0.05	< 0.005	0.05	—	261	261	0.01	< 0.005	0.03	262

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.49	3.77	38.0	34.7	0.06	1.63	8.28	9.92	1.50	4.09	5.60	—	7,216	7,216	0.28	0.58	7.99	7,323
2025	1.40	1.18	10.6	13.8	0.02	0.43	0.11	0.54	0.40	0.03	0.43	—	2,580	2,580	0.10	0.03	0.57	2,593
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.49	1.24	11.4	13.6	0.02	0.50	0.11	0.61	0.46	0.03	0.49	—	2,567	2,567	0.10	0.03	0.02	2,580
2025	1.39	24.4	10.6	13.5	0.02	0.43	0.14	0.54	0.40	0.03	0.43	—	2,564	2,564	0.10	0.03	0.01	2,577
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.03	0.86	8.28	8.20	0.02	0.35	0.78	1.13	0.32	0.28	0.60	—	1,781	1,781	0.06	0.05	0.33	1,799
2025	0.87	2.07	6.54	8.47	0.01	0.27	0.07	0.34	0.25	0.02	0.27	—	1,578	1,578	0.06	0.02	0.16	1,585
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.19	0.16	1.51	1.50	< 0.005	0.06	0.14	0.21	0.06	0.05	0.11	—	295	295	0.01	0.01	0.06	298
2025	0.16	0.38	1.19	1.55	< 0.005	0.05	0.01	0.06	0.05	< 0.005	0.05	—	261	261	0.01	< 0.005	0.03	262

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.47	3.01	1.75	17.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,498	4,509	1.19	0.17	12.8	4,603
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.11	2.66	1.87	10.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,048	4,058	1.20	0.18	0.84	4,142
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.21	2.76	1.78	12.5	0.04	0.05	3.15	3.19	0.05	0.80	0.84	10.1	4,144	4,154	1.19	0.17	5.70	4,240
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.50	0.32	2.28	0.01	0.01	0.57	0.58	0.01	0.15	0.15	1.68	686	688	0.20	0.03	0.94	702

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Area	0.15	1.84	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.47	3.01	1.75	17.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,498	4,509	1.19	0.17	12.8	4,603

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Area	—	1.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.11	2.66	1.87	10.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,048	4,058	1.20	0.18	0.84	4,142
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.11	0.98	1.52	11.6	0.04	0.03	3.15	3.17	0.02	0.80	0.82	—	3,615	3,615	0.12	0.16	5.18	3,671
Area	0.07	1.77	0.01	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.09	2.09	< 0.005	< 0.005	—	2.10
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.21	2.76	1.78	12.5	0.04	0.05	3.15	3.19	0.05	0.80	0.84	10.1	4,144	4,154	1.19	0.17	5.70	4,240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608
Area	0.01	0.32	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35
Energy	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	84.0	84.0	0.01	< 0.005	—	84.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84
Waste	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.22	0.50	0.32	2.28	0.01	0.01	0.57	0.58	0.01	0.15	0.15	1.68	686	688	0.20	0.03	0.94	702

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Area	0.15	1.84	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.47	3.01	1.75	17.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,498	4,509	1.19	0.17	12.8	4,603
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Area	—	1.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.11	2.66	1.87	10.3	0.04	0.05	3.22	3.27	0.05	0.82	0.86	10.1	4,048	4,058	1.20	0.18	0.84	4,142
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.11	0.98	1.52	11.6	0.04	0.03	3.15	3.17	0.02	0.80	0.82	—	3,615	3,615	0.12	0.16	5.18	3,671
Area	0.07	1.77	0.01	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.09	2.09	< 0.005	< 0.005	—	2.10
Energy	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	507	507	0.05	< 0.005	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3

Waste	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	1.21	2.76	1.78	12.5	0.04	0.05	3.15	3.19	0.05	0.80	0.84	10.1	4,144	4,154	1.19	0.17	5.70	4,240
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608
Area	0.01	0.32	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35
Energy	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	84.0	84.0	0.01	< 0.005	—	84.3
Water	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84
Waste	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	0.22	0.50	0.32	2.28	0.01	0.01	0.57	0.58	0.01	0.15	0.15	1.68	686	688	0.20	0.03	0.94	702

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.84	2.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.36	1.19	< 0.005	0.06	—	0.06	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.06	1.11	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	158	158	0.01	0.01	0.59	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.07	3.91	0.88	0.02	0.07	0.90	0.97	0.07	0.23	0.30	—	3,473	3,473	0.03	0.55	7.41	3,644
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.88	7.88	< 0.005	< 0.005	0.01	7.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.23	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	190	190	< 0.005	0.03	0.17	200
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.32

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.5	31.5	< 0.005	< 0.005	0.03	33.0

3.2. Demolition (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.12	2.62	24.9	21.7	0.03	1.06	—	1.06	0.98	—	0.98	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.84	2.84	—	0.43	0.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.36	1.19	< 0.005	0.06	—	0.06	0.05	—	0.05	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.06	1.11	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	158	158	0.01	0.01	0.59	160
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	0.07	3.91	0.88	0.02	0.07	0.90	0.97	0.07	0.23	0.30	—	3,473	3,473	0.03	0.55	7.41	3,644
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.88	7.88	< 0.005	< 0.005	0.01	7.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.23	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	190	190	< 0.005	0.03	0.17	200
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.5	31.5	< 0.005	< 0.005	0.03	33.0

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	1.30	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	184	184	0.01	0.01	0.68	187

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.04	1.96	0.44	0.01	0.03	0.45	0.49	0.03	0.12	0.15	—	1,736	1,736	0.02	0.27	3.70	1,822
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.59	4.59	< 0.005	< 0.005	0.01	4.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.6	47.6	< 0.005	0.01	0.04	49.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.88	7.88	< 0.005	< 0.005	0.01	8.26

3.4. Site Preparation (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.99	0.90	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	1.30	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	184	184	0.01	0.01	0.68	187
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.04	1.96	0.44	0.01	0.03	0.45	0.49	0.03	0.12	0.15	—	1,736	1,736	0.02	0.27	3.70	1,822
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.59	4.59	< 0.005	< 0.005	0.01	4.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.6	47.6	< 0.005	0.01	0.04	49.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.88	7.88	< 0.005	< 0.005	0.01	8.26

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movemen	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544

Dust From Material Movemen	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movemen	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.48	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	211	211	0.01	0.01	0.78	214
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.8	15.8	< 0.005	< 0.005	0.03	16.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.61	2.61	< 0.005	< 0.005	< 0.005	2.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.59	3.59	—	1.42	1.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.82	2.48	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.51	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1

Dust From Material Movemen	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	1.48	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	211	211	0.01	0.01	0.78	214
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.8	15.8	< 0.005	< 0.005	0.03	16.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.61	2.61	< 0.005	< 0.005	< 0.005	2.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.79	3.26	0.01	0.12	—	0.12	0.11	—	0.11	—	596	596	0.02	< 0.005	—	598
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.51	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.7	98.7	< 0.005	< 0.005	—	99.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.75	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	108
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.4	79.4	< 0.005	0.01	0.21	82.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.44	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	90.4	90.4	0.01	< 0.005	0.01	91.6
Vendor	< 0.005	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.5	79.5	< 0.005	0.01	0.01	82.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	24.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	0.01	4.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.27	3.27	< 0.005	< 0.005	< 0.005	3.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.79	3.26	0.01	0.12	—	0.12	0.11	—	0.11	—	596	596	0.02	< 0.005	—	598
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.51	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.7	98.7	< 0.005	< 0.005	—	99.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.75	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	108
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.4	79.4	< 0.005	0.01	0.21	82.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.44	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	90.4	90.4	0.01	< 0.005	0.01	91.6
Vendor	< 0.005	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	79.5	79.5	< 0.005	0.01	0.01	82.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	24.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.7	19.7	< 0.005	< 0.005	0.02	20.6

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.97	3.97	< 0.005	< 0.005	0.01	4.03
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.27	3.27	< 0.005	< 0.005	< 0.005	3.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.01	7.50	0.01	0.25	—	0.25	0.23	—	0.23	—	1,379	1,379	0.06	0.01	—	1,384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.14	0.12	1.10	1.37	< 0.005	0.05	—	0.05	0.04	—	0.04	—	228	228	0.01	< 0.005	—	229
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.69	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	104	104	< 0.005	< 0.005	0.36	105
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.1	78.1	< 0.005	0.01	0.21	81.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	88.5	88.5	< 0.005	< 0.005	0.01	89.7
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.1	78.1	< 0.005	0.01	0.01	81.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.09	55.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.9	44.9	< 0.005	0.01	0.05	46.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.00	9.00	< 0.005	< 0.005	0.01	9.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.44	7.44	< 0.005	< 0.005	0.01	7.75
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.65	6.01	7.50	0.01	0.25	—	0.25	0.23	—	0.23	—	1,379	1,379	0.06	0.01	—	1,384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.10	1.37	< 0.005	0.05	—	0.05	0.04	—	0.04	—	228	228	0.01	< 0.005	—	229
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.69	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	104	104	< 0.005	< 0.005	0.36	105
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.1	78.1	< 0.005	0.01	0.21	81.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	88.5	88.5	< 0.005	< 0.005	0.01	89.7
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.1	78.1	< 0.005	0.01	0.01	81.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.09	55.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.9	44.9	< 0.005	0.01	0.05	46.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.00	9.00	< 0.005	< 0.005	0.01	9.13
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.44	7.44	< 0.005	< 0.005	0.01	7.75
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	0.01	0.01	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	7.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.61	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	132	132	0.01	0.01	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	7.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	24.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	< 0.005	17.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	24.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34

Architect Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	< 0.005	17.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.29	1.15	1.48	15.6	0.04	0.03	3.22	3.25	0.03	0.82	0.84	—	3,967	3,967	0.12	0.16	12.3	4,031
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.08	0.94	1.62	10.1	0.03	0.03	3.22	3.25	0.03	0.82	0.84	—	3,521	3,521	0.13	0.17	0.32	3,575
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.20	0.18	0.28	2.12	0.01	< 0.005	0.57	0.58	< 0.005	0.15	0.15	—	598	598	0.02	0.03	0.86	608

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	31.1	31.1	< 0.005	< 0.005	—	31.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	31.1	31.1	< 0.005	< 0.005	—	31.4

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	188	188	0.02	< 0.005	—	189
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	31.1	31.1	< 0.005	< 0.005	—	31.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	31.1	31.1	< 0.005	< 0.005	—	31.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.25	0.11	< 0.005	0.02	—	0.02	0.02	—	0.02	—	319	319	0.03	< 0.005	—	320
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.15	0.14	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26
Total	0.15	1.84	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35
Total	0.01	0.32	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.15	0.14	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26
Total	0.15	1.84	0.02	1.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.25	4.25	< 0.005	< 0.005	—	4.26

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35
Total	0.01	0.32	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.35

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.18	19.7	21.9	0.23	0.01	—	29.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.36	3.27	3.63	0.04	< 0.005	—	4.84

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	7.94	0.00	7.94	0.79	0.00	—	27.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.32	0.00	1.32	0.13	0.00	—	4.60

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.52	0.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2024	6/29/2024	5.00	20.0	—
Site Preparation	Site Preparation	6/30/2024	7/14/2024	5.00	10.0	—
Grading	Grading	7/15/2024	8/26/2024	5.00	30.0	—
Building Construction	Building Construction	8/27/2024	10/21/2025	5.00	300	—
Paving	Paving	10/22/2025	11/19/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	11/20/2025	12/18/2025	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	50.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	25.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—

Grading	Worker	20.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	10.1	12.8	LDA,LDT1,LDT2
Building Construction	Vendor	2.99	8.33	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.8	LDA,LDT1,LDT2
Paving	Vendor	—	8.33	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.02	12.8	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.33	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	12.8	LDA,LDT1,LDT2
Demolition	Vendor	—	8.33	HHDT,MHDT
Demolition	Hauling	50.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT

Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	12.8	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.33	HHDT,MHDT
Site Preparation	Hauling	25.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	12.8	LDA,LDT1,LDT2
Grading	Vendor	—	8.33	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	10.1	12.8	LDA,LDT1,LDT2
Building Construction	Vendor	2.99	8.33	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.8	LDA,LDT1,LDT2
Paving	Vendor	—	8.33	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	2.02	12.8	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.33	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	147,420	49,140	0.00	0.00	6,247

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	4,000	—
Site Preparation	—	2,000	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.70

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Single Family Housing	0.31	0%
Other Asphalt Surfaces	1.39	100%
Other Asphalt Surfaces	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	221	0.03	< 0.005
2025	0.00	223	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	264	267	239	95,323	4,505	4,552	4,080	1,624,561
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	264	267	239	95,323	4,505	4,552	4,080	1,624,561
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
147420	49,140	0.00	0.00	6,247

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)

Single Family Housing	261,499	262	0.0330	0.0040	995,801
Other Asphalt Surfaces	0.00	262	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	262	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	261,499	262	0.0330	0.0040	995,801
Other Asphalt Surfaces	0.00	262	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	262	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,138,866	6,856,063
Other Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,138,866	6,856,063
Other Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	14.7	—
Other Asphalt Surfaces	0.00	—
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	14.7	—
Other Asphalt Surfaces	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.4	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	7.34
AQ-DPM	43.4
Drinking Water	45.4
Lead Risk Housing	1.31

Pesticides	0.00
Toxic Releases	3.08
Traffic	64.6
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	43.3
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	20.9
Cardio-vascular	16.5
Low Birth Weights	20.3
Socioeconomic Factor Indicators	—
Education	25.9
Housing	86.8
Linguistic	7.38
Poverty	21.5
Unemployment	4.23

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	47.56833055
Employed	15.56525087
Median HI	74.56691903

Education	—
Bachelor's or higher	65.96945977
High school enrollment	100
Preschool enrollment	48.45374054
Transportation	—
Auto Access	37.4566919
Active commuting	25.81804183
Social	—
2-parent households	97.56191454
Voting	86.88566662
Neighborhood	—
Alcohol availability	82.80508148
Park access	2.194276915
Retail density	35.17259079
Supermarket access	45.92583087
Tree canopy	17.8108559
Housing	—
Homeownership	83.62633132
Housing habitability	22.35339407
Low-inc homeowner severe housing cost burden	25.38175286
Low-inc renter severe housing cost burden	6.274862056
Uncrowded housing	70.21686129
Health Outcomes	—
Insured adults	97.45925831
Arthritis	0.0
Asthma ER Admissions	80.6
High Blood Pressure	0.0

Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	94.6
Cognitively Disabled	39.7
Physically Disabled	49.3
Heart Attack ER Admissions	64.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	79.8
Elderly	0.9
English Speaking	70.5
Foreign-born	10.7
Outdoor Workers	98.2

Climate Change Adaptive Capacity	—
Impervious Surface Cover	47.2
Traffic Density	47.5
Traffic Access	23.0
Other Indices	—
Hardship	34.9
Other Decision Support	—
2016 Voting	92.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	7.00
Healthy Places Index Score for Project Location (b)	56.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	The project is located within IID's territory, as confirmed by the official agency maps.
Land Use	Total site area of 10.08 ac. is made up of 1.39 acres of street improvements, including Street A (1.12 ac.) and portion of Via Josefina (0.27 ac.). The residential land use of 8.69 acres includes the total lot area of 7.83 acres and 0.86 acres of common open space (special landscape area). Household size is 1.85 PPH based on the California Department of Finance 2023 data. A conservative area of 1 acre of disturbance is attributed to potential asphalt disturbance for the installation of off-site utility improvements.
Operations: Hearths	The project does not factor the use of wood stoves or fire places per SCAQMD Rule 445 (Wood Burning Devices).

GENERAL BIOLOGICAL
RESOURCES ASSESSMENT
and
CVMSHCP CONSISTENCY ANALYSIS

Palari 10-Acre
Rancho Mirage Project

Located Within
SECTION 30, TOWNSHIP 4 SOUTH, RANGE 6 EAST
(APNs 685-100-007-1, 685-110-017-1)
Rancho Mirage, Riverside County, California

Prepared For:
Mr. Adam Nestor
Palari Construction, Inc.
10573 West Pico Blvd. #121
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Field Study and Report Completed By:
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April 26, 2023

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EXECUTIVE SUMMARY

A proposed 10-acre residential development necessitated a biological survey and impact analysis as required by the city of Rancho Mirage and California Environmental Quality Act. Most sensitive species known to occupy the *sand fields* habitat that once characterized the project site are covered under the Coachella Valley Multiple Species Habitat Conservation Plan. Impacts to these species are mitigated by payment of a habitat acquisition fee. The current fee amount is determined by the Coachella Valley Association of Governments. This report focuses on species and habitats not functionally covered under the Plan.

Desert washes are not a covered habitat under the CVMSHCP. However, no blue-line stream corridors or desert washes were found within the project boundaries. Therefore, no state or federal streambed alteration permits are required.

Casey's June beetle, a non-covered species classified as Endangered by the federal government, was not detected. The site is not within the recommended beetle survey area established by the U.S. Fish & Wildlife Service and no further actions regarding this species are required.

The burrowing owl and other migratory bird species are protected under the Migratory Bird Treaty Act and not functionally covered under the Plan. The owl was not detected within or adjacent to the project boundaries. The habitat, however, is suitable and this species could take up residence at any time. The California Department of Fish & Wildlife recommends **a burrowing owl clearance survey be conducted not more than 14-days prior to grading, grubbing or other site disturbance.** The site is not considered a significant resource for other migratory bird species.

The loggerhead shrike, a California Species of Special Concern, is not covered under the Plan. Though the shrike was not observed or detected during biological surveys, it could breed and nest in the future. Therefore, it is recommended a shrike breeding survey be undertaken if ground disturbance is to occur between February 15 and June 15. The burrowing owl clearance survey and shrike breeding survey may be conducted simultaneously.

Though the desert tortoise is a covered species under the CVMSHCP, clearance surveys to relocate tortoises to alternate locations are necessary prior to site disturbance. Focused, protocol-level surveys, however, revealed no evidence of the desert tortoise within the project site and, therefore, no clearance surveys are necessary.

The project site is not within, or immediately adjacent to, a Conservation Area as shown in the CVMSHCP.

Following the implementation of the required and recommended mitigation described in this report, development of the project site is not expected to have significant adverse impacts upon sensitive species or other biological resources on or adjacent to the project site.

I. INTRODUCTION

On April 6, 2023, JWC Ecological Consultants was retained by Mr. Adam Nestor of Palari Construction, Inc., to conduct a biological survey and impact analysis on a 10-acre site located along Via Josefina in the city of Rancho Mirage, Riverside County, California. The project site lies within Section 30, Township 4 South, Range 6 East, San Bernardino Baseline and Meridian. Assessor parcel numbers within the project boundaries are 685-100-007-1 and 685-110-017-1. The regional location is shown in Figure 1, area location in Figure 2 and specific location with project boundaries in Figure 3. Site photographs are shown in Figures 4-7.

This study was included as part of an environmental assessment mandated by the California Environmental Quality Act (CEQA) and the city of Rancho Mirage. The biological survey and impact analysis were designed to ascertain the impacts of a residential development on the biological resources of the project site and immediate vicinity.

Specific purposes of the biological surveys and impact analysis are listed below.

1. Determine the vascular plant and vertebrate animal species that occur on, and immediately adjacent to, the project site.

2. Ascertain the presence of plant or animal species given special status by government agencies. Emphasis is on non-covered species, under the CVMSHCP, that are (1) state or federally listed, (2) candidates for state or federal listing, and (3) state or federally protected species or communities.

3. Ascertain the existence of other significant biotic elements, corridors, or communities.

4. Consider the site's biological resources as they relate to the CVMSHCP and its Conservation Areas.

5. If necessary and where applicable, recommend measures to mitigate significant adverse impacts of the project on sensitive species and habitats not covered in the Plan but determined to occur within, or adjacent to, the project boundaries.

Figure 1. Regional Location of Project Site

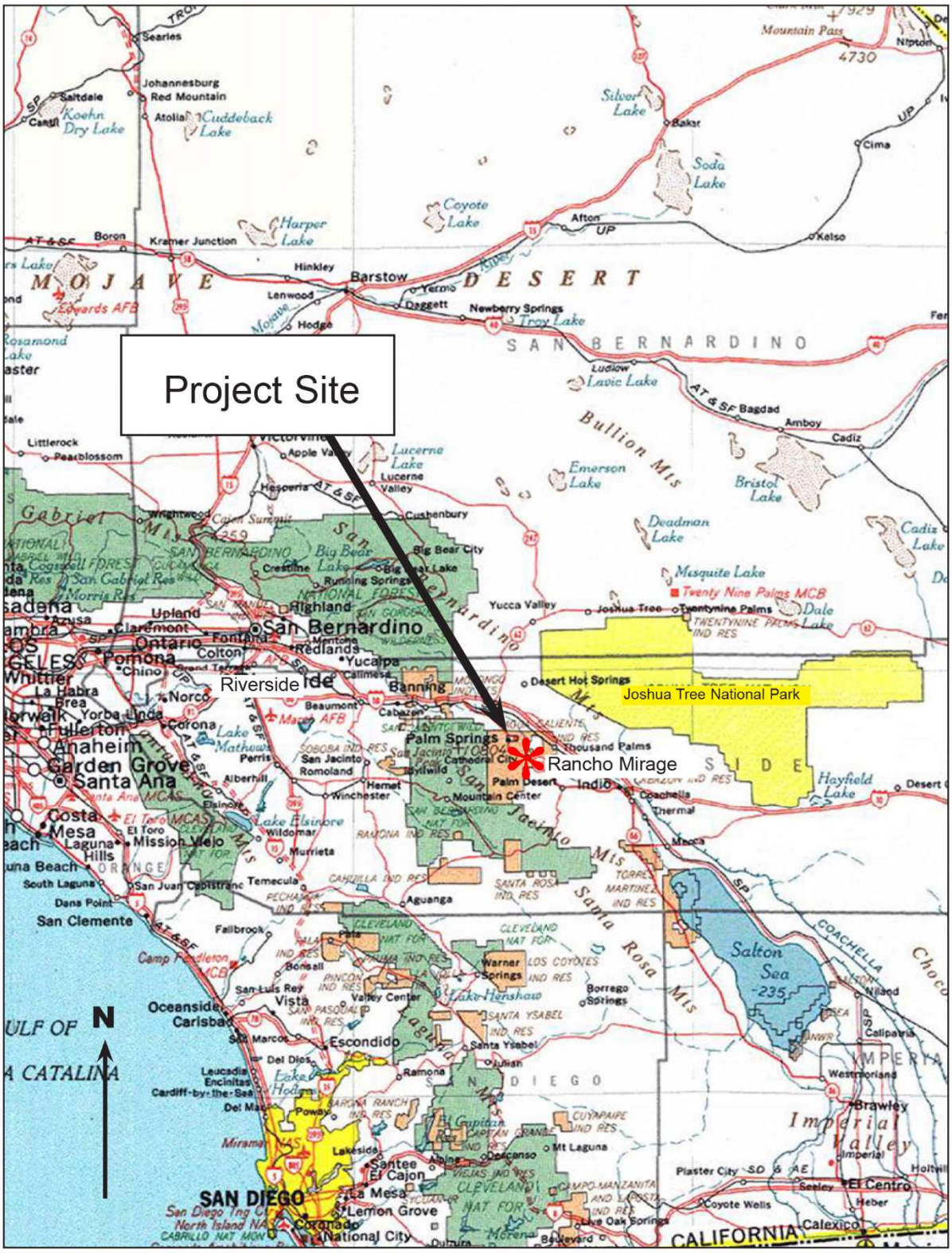

Project Site
Rancho Mirage
Joshua Tree National Park
Riverside
San Bernardino
Palm Springs
Indio
Desert Hot Springs
Banning
Yucca Valley
Twenty Nine Palms MCB
Twentynine Palms
Joshua Tree
Big Bear City
Big Bear Lake
Lake Arrowhead
Crestline
Running Springs
Redlands
Yucaipa
Beaumont
Hemet
San Jacinto
Perris
Corona
Riverside
Norco
Ontario
Pomona
Claremont
Upland
Fontana
Colton
Rialto
Highland
Chino
Whittier
La Habra
Brea
Yorba Linda
Fullerton
Anaheim
Garden Grove
Santa Ana
Costa Mesa
Laguna Hills
Mission Viejo
El Toro
Lake Elsinore
Murrieta
Temecula
Aguanga
San Clemente
Dana Point
South Laguna
San Juan Capistrano
Camp Pendleton MCB
Oceanside
Carlsbad
Vista
San Marcos
Escondido
Del Dios
Ramona
Valley Center
Pauma Valley
Pala
Fallbrook
Bonsall
San Luis Rey
Warner Springs
Lake Henshaw
Borrego Springs
Julian
Santa Ysabel
Cuyapaipe
Del Mar
Poway
Rancho Santa Fe
Encinitas
Leucadia
Cardiff-by-the-Sea
Lakeside
Santee
El Cajon
La Mesa
Lemon Grove
National City
Coronado
SAN DIEGO
Alpine
Descanso
Mt Laguna
Jacumba
Plaster City
Ocotillo Wells
Coyote Wells
Seeley
El Centro
Imperial
Brawley
Westmorland
Calipatria
Niland
Salton Sea
Thermal
Coachella
Indio
Mecca
Desert Hot Springs
Thousand Palms
Cathedral City
Palm Desert
Mountain Center
Idyllwild
Hayfield Lake
Twenty Nine Palms
Amboy
Cadiz
Bagdad
Ludlow
Lavic Lake
Bullion Mts
Emerson Lake
Bristol Lake
Deadman Lake
Mesquite Lake
Cushenbury
Lucerne Valley
Lucerne Lake
Apple Valley
Victorville
Hesperia
Wrightwood
Cajon Summit
Barstow
Hinkley
Lenwood
Daggett
Yermo
Newberry Springs
Troy Lake
Hodge
Edwards AFB
Rosamond Lake
Harper Lake
Koehn Dry Lake
Cuddeback Lake
Johannesburg
Red Mountain
Searles
Saltdale
Boron
Kramer Junction
Coyote Lake
Afton
Kelso
Silver Lake
Baker
Soda Lake
Cima
Nipton
Mountain Pass
4730
MOJAVE DESERT
SAN BERNARDINO
IMPERIAL
Imperial Valley
CALIFORNIA
Gulf of California
Santa Rosa Mts
Santa Ana Mts
Laguna Mts
Bullion Mts
Chocolate Mts
Orocopia Mts
Gabriel Mts
San Jacinto Mts
Hayfield Lake
Lake Mathews
Lake Elsinore
Lake Henshaw
Salton Sea
Mecca
Desert Center
Blythe
Needles
Barstow
Victorville
San Bernardino
Riverside
Palm Springs
Indio
Coachella
Thermal

Figure 2. Area Location of Project Site



Figure 3. Survey Area
(outlined in red)



Figures 4-7. Project Site Images

Figure 4. View across site to northeast.



Figure 5. View across site to southwest.





Figure 6. View across site to southeast.



Figure 7. View across site to northwest.

II. SITE AND PROJECT DESCRIPTIONS

Climate

The project area lies within the confines of a geographical region known as the Colorado Desert (Jaeger, 1957). As is typical of this subdivision of the Sonoran Desert, annual rainfall averages approximately five inches (National Climatic Center, 2021). Most precipitation falls during the winter and late spring with occasional summer storms accounting for approximately one-fifth the annual total. Winter days are mild, averaging 71 degrees Fahrenheit. Winter nights occasionally drop to near freezing. July brings the hottest temperatures with daytime highs averaging 109 degrees F.

Physical Features

The elevation of the project site is approximately 320 feet above sea level. The only topographical relief consists of sand hummocks, within the eastern quarter of the site, that rise from one to five feet above their base. The hummocks have been formed by ornamental shrubs, trees, and a fence that interrupt the flow of sand carrying wind coming from the northwest off the Whitewater River Floodplain. The shrubs reduce wind velocity and result in sand deposits or *hummocks* on the leeward or easterly side of the obstacles. The western quarter of the project site is included within the sand field habitat of the valley floor as described in the Coachella Valley Multiple Species Habitat Conservation Plan.

No naturally occurring springs or permanent aquatic habitats occur in or near the project site. No blue-line stream corridors (streams or dry washes) are shown on U.S. Geological Survey maps of the project site nor are there botanical indicators of such corridors. Thus, there appears to be no need to obtain streambed alteration permits from state or federal governments.

Soil characteristics are uniform over the entire site. Soil is composed of wind-blown alluvium created by historic and persistent air movements from the northwest. This process increased in intensity with the drying out of the Coachella Valley at the close of the Pleistocene epoch ending 10,000 years before present. At the current time, residential and commercial developments to the west and north have resulted in sand stabilization of the western three-quarters of the site.

Surrounding Lands

The project area consists of residential and commercial developments that nearly surround the site. The site is predicted to become an ecological island in the next few years as the remaining

scattered, undisturbed parcels are developed (see Figure 2). Specifically, a residential development lies to the immediate northwest of the project site. A residential development, under construction, lies to the immediate north. Parcels of undeveloped land exist to the east and west of the project site. Graded parcels lie to the immediate south.

Existing Impacts

The site was completely graded and converted to a horse stable facility in the late 1980s (Google Earth, historical imagery accessed in 2023). By 2021, the site had been abandoned though irrigation of trees on the western two-thirds of the property has continued into 2023. The eastern third of the site is being reclaimed by natural processes with blowsand covering and existing fence along the site's northeast boundary. Collapsed buildings, fences, and other structures in a state of disrepair cover the western two-thirds of the site.

Project Description

The project proponent intends to remove existing debris and erect a residential development on the site.

III. STUDY METHODS

Prior to the initiation of field work, reviews of the literature and institutional records were conducted to determine the biological resources that might exist within the general area and to determine the possible occurrence of special-status species. Records, collections, websites and/or staff of the University of California at Riverside Herbarium, the Boyd Deep Canyon Desert Research Center and the Coachella Valley Association of Governments were consulted for specific information as to the occurrence of selected species. The California Department of Fish & Game Natural Diversity Database was also consulted.

Field surveys were initiated in April of 2023. Specific dates of biological surveys were April 9, 15, 16, 17, 18, 19, and 20, 2023. Night surveys were conducted on the evenings of April 15 and 16, 2023.

Survey dates were in mid-spring when both ephemeral and perennial plant species, as well as migratory and resident vertebrate species, were likely to be detected. Reducing the likelihood that any species would be detected was the existence of successive years of drought prior to 2023. Drought dictates against the reproduction and survival of both plant and animal species. Nevertheless, it was concluded the above-average precipitation in the winter of 2022-2023 would result in the maximum number of species detected.

Surveys were conducted by walking east/west transects at 10-yard intervals through the project site and 100 yards beyond site boundaries. At places, dense vegetation, debris, or structures prohibited the walking of straight transects. Offsite surveys to the northwest of the project site were not possible due to the existence of a private residential community (see Figure 3). The survey intensity and pattern has been approved by the U.S. Fish & Wildlife Service for determining the presence or absence of the burrowing owl and desert tortoise and represents an intensive survey effort that resulted in no officially listed or federally protected species being overlooked (see Results section).

Animal surveys were conducted simultaneously with plant surveys. In addition, twenty live-animal traps (which capture animals unharmed) for large and small mammals were set within the project site for twenty-four-hour periods on April 15 and 16, 2023.

To determine if large animal corridors existed on the project site special attention was given to observing and identifying animal tracks. In addition, sand sifting and smoothing was done around the site's four corners so that tracks would be more prominent and identifiable. Josefina Avenue was monitored for road kills on all site visits.

Invertebrate sampling was conducted on the evenings of April 15 and 16, 2023. Two Bioquip Light Traps were used for attracting and live-capturing flying insects and some terrestrial arthropods. Black lights were the attracting mechanism with each trap powered by a 12-volt battery.

Though scientific name changes occur as new discoveries are made in plant and animal taxonomy, the scientific names used in this report are taken from the standard and most available references describing the species found in the desert regions of Southern California—Bruce G. Baldwin's *The Jepson Manual* (Second Edition) published in 2012; D. P. Tibor's *Inventory of rare and endangered vascular plants of California* published in 2001; R. A. Stebbins and S. M. McGinnis' *Field guide to amphibians and reptiles of California* published in 2012; Peterson's *Bird of North America* published in 2008; and E. W. Jameson's and H. J. Peeters' *California mammals* published in 2004. Plant common names used in this report were taken from Baldwin (2012), Jaeger (1969) and Tibor (2001). Animal common names are taken from Stebbins and McGinnis (2012), Peterson (2008) and Jameson and Peeter (2004).

Fieldwork was conducted by James Cornett (M.S.) and Blake Gonzales (B.S.). Plant identifications were made by Andrew Sanders (B.S.) and Mr. Cornett. Animal remains were identified by Mr. Cornett. The literature review was conducted by Terry Belknap (B.S.). The report was written by Mr. Cornett.

IV. PLANT SURVEY RESULTS

No native plant community was found within the site boundaries. The site was completely graded in the 1980s then planted with exotic ornamental landscape plants including lantana (*Lantana camara*), rubber tree (*Ficus elastica*), eucalyptus (*Eucalyptus* spp.), Desert Museum palo verde (*Parkinsonia* x. Desert Museum), and Bougainvillea (*Bougainvillea* spp.).

About a dozen native species have re-established on the project site due to the cessation of landscape management protocols. The natives include two perennials—wingscale (*Atriplex canescens*) and Emory's dalea (*Psorothamnus emoryi*)—and several ephemerals including brown-eyed primrose (*Chylismia claviformis*), Spanish needle (*Palafoxia arida*), and bugseed (*Dicoria canescens*).

Many exotic weed species have germinated within the site boundaries. These include Sahara mustard (*Brassica tournefortii*), common Mediterranean grass (*Schismus barbatus*), Russian thistle (*Salsola australis*), red brome grass (*Bromus rubens*), and Egyptian knapweed (*Volutaria tubuliflora*).

The Inventory of Rare and Endangered Vascular Plants of California, published by the California Native Plant Society (2001), the *CNDDB Special Plant List* (2022) or the *Endangered, Threatened, and Rare Plants of California* (2022) lists a total of five plant species that could conceivably occur on, or immediately adjacent to, the project site. They are the glandular ditaxis (*Ditaxis clariana*), ribbed cryptantha (*Cryptantha costata*), flat-seeded spurge (*Chamaesyce platysperma*), Coachella Valley milk vetch (*Astragalus lentiginosus coachellae*), and Salton milkvetch (*Astragalus crotalareiae*).

1. The glandular ditaxis, Ditaxis clariana, is a rare perennial herb that blooms from December through March. It is restricted to sandy environments in the Sonoran Desert and has been found in the Coachella Valley at elevations like those found on the project site. Since the glandular ditaxis is a perennial, it likely would be detected during the plant surveys. It was not detected and therefore presumed to not occur onsite. This species is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. Though considered sensitive by the California Native Plant Society, the glandular ditaxis is not a covered species under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) .

2. The ribbed cryptantha is an uncommon ephemeral known to occur on sandy soils in the Coachella Valley. The project site edges can be considered suitable habitat for this species. It was not detected. The surveys were conducted in spring following above-average winter rainfall. Thus, if it was present, it would be detected. The ribbed cryptantha is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be

listed at this time. The California Native Plant Society considers the ribbed cryptantha a sensitive species. It is not a covered species under the CVMSHCP.

3. The flat-seeded spurge is an extremely rare ephemeral herb known to occur on sandy soils in the Sonoran Desert. There has been at least one specimen found in the Coachella Valley. The species was not detected. The flat-seeded spurge is not listed as rare, threatened, or endangered by either the state or federal governments nor is it proposed to be listed at this time. The California Native Plant Society considers it a sensitive species. It is not covered under the CVMSHCP.

4. The Coachella Valley milk vetch is an uncommon, spring-blooming ephemeral herb that is known to occur on sandy soils in the Coachella Valley, specifically in the area of the project site. It was expected due to ample winter rains. However, no individual plants or seed pods were found. The milk vetch is listed as endangered by the U.S. Fish & Wildlife Service. It has no formal state status. Impacts to the milk vetch are fully mitigated by the CVMSHCP through the payment of the Plan mitigation fee. No further action is necessary regarding this species.

5. The Salton milkvetch (*Astragalus crotalariae*) is a perennial herb found in the Sonoran Desert of California and Arizona. No individuals, evidence or records of the Salton milkvetch were found on or near the project boundaries. The Salton milkvetch is neither state nor federally listed. It is a rare plant usually encountered on sandy or gravelly soils below 1,000 feet in elevation. Though considered sensitive by the California Native Plant Society it is not a covered species under the CVMSHCP.

A complete list of vascular plant species found within the project boundaries has been placed in Table 1 of the Appendix. Planted ornamental species are not included within this list. Taxonomic nomenclature follows Baldwin (2012). Common names are taken from Jaeger (1969), Baldwin (2012), Munz (1974) or Tibor (2001).

V. ANIMAL SURVEY RESULTS

The fauna of the project site is composed of species expected along the edges of residential areas adjacent to sandy, windswept creosote scrub habitat on the floor of the Coachella Valley.

Arthropods

Encountered arthropods within the site boundaries included the harvester ant (*Pogonomyrmex californicus*), honeybee (*Apis mellifera*), California carpenter bee (*Xylocopa californica*), domestic house cricket (*Acheta domesticus*), and gray bird grasshopper (*Schistocerca nitens*). Arthropods found in undisturbed desert areas just beyond site boundaries include the ghost beetle (*Asbolus verrucosus*), fuzz beetle (*Edrotes ventricosus*), sand scorpion (*Paruroctonus mesaensis*), gray walking stick (*Pseudosermyle straminea*), and Eleodes beetle (*Eleodes armata*).

Three insect species known to occur within the Coachella Valley have been placed on the California Department of Fish and Game's *Special Animals* list. They are the Coachella giant sand treader cricket (*Macrobaenetes valgum*), Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*) and Coachella Valley grasshopper (*Spaniacris deserticola*). None of these three insect species were found during the surveys and none have any official status with governmental agencies. The Coachella giant sand treader cricket and Jerusalem cricket are covered species under the Plan.

Amphibians and Reptiles

No amphibian species were found during the surveys, and none are expected.

Detected reptiles found within site boundaries included the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), desert iguana (*Dipsosaurus dorsalis*), western shovel-nosed snake (*Chionactis occipitalis*) and Coachella Valley fringe-toed lizard (*Uma inornata*).

One observation of the officially threatened Coachella Valley fringe-toed lizard was recorded in the extreme northeastern corner of the project site. Several consecutive drought years have likely reduced the population of this species in and near the project area. Impacts to the fringe-toed lizard are fully mitigated by the payment of a habitat acquisition fee as required under the Plan.

A concerted effort was made to find sign of the officially listed desert tortoise (*Goperhus agassizi*). However, no evidence of any kind was found, and no direct observations were made. In addition, the California Natural Diversity Database has no records of the tortoise on or within one mile of the project site. It is concluded this species does not occur within the project site and

immediate vicinity and no additional surveys for this species are recommended.
An intensive effort was made to find individuals or signs of the flat-tailed horned lizard, *Phrynosoma mcallii.* The habitat is suitable within and near the northeast corner of the site. Nonetheless, no observations or evidence of this species was found in or within three hundred feet of the project boundaries. Impacts to the horned lizard are fully mitigated under the Plan.

Birds

Detected birds within the project area were the mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), American kestrel (*Falco sparverius*), common raven (*Corvus corax*), and house finch (*Carpodacus mexicanus*). No nest of any avian species was found within the project boundaries. However, there are numerous suitable nesting sites (large trees and covered structures). Population declines due to several successive years of drought (ending in the winter of 2022-2023) may have depressed bird populations which may explain the inability to find active nests. Cold winter weather in 2023 may have also delayed nesting.

No observations of LeConte's thrasher (*Toxostoma lecontei*) were recorded during surveys. In the Coachella Valley this species is associated with golden cholla, an arborescent cactus that provides a nesting site for the thrasher. The cactus species was not found on, or near, the site and it was concluded the thrasher does not occupy the project site or vicinity. LeConte's thrasher is a covered species under the Plan.

Two functionally non-covered and sensitive avian species were possible occupants of the project site and vicinity: the burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludovicianus*).

Burrowing Owl

An intensive survey for the burrowing owl was undertaken following protocols established by state and federal governments. No observations of the owl were recorded, and no evidence of its presence was found. The habitat of the project site is suitable for the owl and active burrows of the species have been found several times within three miles of the project site (Cornett, personal files). Because the project site habitat is considered suitable and owls are known to occur in the immediate area, it was concluded that the burrowing owl could take up residence on the site at any time. The burrowing owl is not functionally covered under the Plan.

Loggerhead Shrike

The loggerhead shrike, a state Species of Special Concern, was not observed or detected on or near the project site. The project site and immediate area, however, are considered suitable habitat for the shrike and it could breed within project site boundaries. The shrike is not a covered species under the Plan.

Mammals

Recorded mammals included the black-tailed jackrabbit (*Lepus californicus*), Palm Springs ground squirrel (*Spermophilus tereticaudus chlorus*) and coyote (*Canis latrans*). No individuals of the Palm Springs Pocket Mouse (*Perognathus longimembris bangsi*), a covered species, were found.

No individuals of the desert kit fox (*Vulpes macrotis arsipus*) were seen or detected on or near the project site. Human activity in the area is the likely explanation for its absence. The desert kit fox is fully protected in California and is not a covered species under the Plan.

The Palm Springs Ground Squirrel is the only covered mammalian species discovered within the project boundaries. It was detected two times (burrows) but should be expected throughout the project site as the habitat is suitable. It currently is not a listed species and has a much broader range than was previously thought (Federal Register, 2009). It is, therefore, unlikely that it will be listed in the near future. It is a covered species under the Plan and impacts to the squirrel are fully mitigated by the payment of the required habitat acquisition fee.

Wildlife Corridors

Smoothing of surfaces to yield tracks was performed on each site visit to determine if important wildlife corridors existed on the site. Tracks of ravens, roadrunners and coyotes were recorded. However, no discernable and routinely used corridors could be found.

A complete list of vertebrate species seen or detected on the project site can be found in Table 2 of the Appendix.

VI. FINDINGS AND RECOMMENDATIONS

An intensive plant and animal survey was conducted within the proposed project boundaries. An observation of the federally threatened Coachella Valley fringe-toed lizard was recorded. The site appears to be suitable for the sensitive Coachella Valley Jerusalem cricket, Coachella Valley giant sand-treader cricket and Palm Springs pocket mouse even though they were not detected. The Palm Springs ground squirrel was detected within the site boundaries. Each of the above organisms is *covered* under the Coachella Valley Multiple Species Habitat Conservation Plan. Mitigation for impacts to these species is accomplished through the payment of a fee to the Coachella Valley Association of Governments. Fees vary depending upon the use to which the land is put, acreage, density, and cost of living index. Contact the Coachella Valley Association of Governments to determine current fees.

The remaining comments are restricted to those species or habitats not covered under the CVMSHCP or that are not functionally covered.

Casey's June Beetle

Though Casey's June beetle is known to occur in the Coachella Valley, trapping surveys did not detect this species. Thus far, this officially endangered, non-covered species has not been found east of Cathedral City. Therefore, no further surveys are recommended for Casey's June beetle and no mitigation is needed or recommended.

Desert Tortoise

Though the desert tortoise is a covered species under the CVMSHCP, clearance surveys for the tortoise can still be required by the United State Fish & Wildlife Service prior to grubbing, grading or other site disturbance. The desert tortoise occurs in the Coachella Valley but is not currently known to be present on the valley floor. Observations have been on upper bajadas surrounding the valley. In keeping with this distribution pattern, protocol-level surveys revealed no evidence of the desert tortoise within or adjacent to the project site. Therefore, no additional surveys or actions regarding this species are recommended or required.

Desert Dry Wash Woodland

No bodies of standing water, no streams and no washes (as indicated by wash plant species) are present on site. Therefore, streambed alteration permits from state or local agencies should not be necessary.

CVMSHCP and Conservation Areas

The project site is not within a Conservation Area as shown in the CVMSHCP. Additionally, the site does not abut a Conservation Area. Therefore, the project is not subject to Plan requirements regarding lands adjoining Conservation Areas.

Indirect Impacts

Though many parcels of undeveloped land exist around the project site, in an area context the site is surrounded by residential and commercial developments (see Figure 2). As a result, the site is an ecological island with little or no biological interactions with natural habitats elsewhere in the Coachella Valley. Therefore, it is concluded the development of the project site will have no significant indirect impacts to biological resources in the region.

Burrowing Owl

The burrowing owl was not seen nor detected on or near project site boundaries. However, site habitat is considered suitable for this species and the owl is known to breed in the area. The burrowing owl could take up residence on the site at any time. For this reason, the State of California recommends in the Staff Report on Burrowing Owl Mitigation (March 7, 2012), that a clearance survey for this species occur not more than 14 days prior to grading, grubbing or other site disturbance.

Loggerhead Shrike

The loggerhead shrike is not a covered species under the Plan and is a state Species of Special Concern. Though no shrikes were observed or detected, the project site is considered suitable habitat for the shrike with suitable nesting sites and hunting habitat. It is recommended a breeding survey for this species be conducted 14 days prior to any construction activities that are planned between February 15 and June 15, the breeding season of the shrike in the Coachella Valley. If a shrike nest is found, a buffer should be established in which construction activities are prohibited until all young have fledged. The width of the buffer should be determined by a

qualified biologist. (The shrike breeding survey can be conducted simultaneously with the burrowing owl survey if disturbance is to occur between February 15 and June 15.) Surveys for any breeding avian species are recommended as well during this period.

Mitigation Summary

1. Contact CVAG to determine precise mitigation fees applicable under the CVMSHCP.

2. Conduct a loggerhead shrike and general breeding bird survey not more than 14 days prior to site disturbance if such disturbance is planned between February 15 and June 15.

3. Conduct a burrowing owl clearance survey not more than 14 days prior to site disturbance.

Conclusion

Development of the proposed project site is not expected to have significant adverse impacts upon biological resources in the region providing the mitigation described in this report is implemented.

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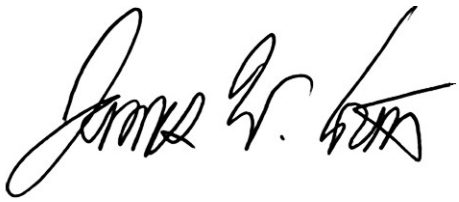
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VIII. CERTIFICATION STATEMENT

I, James W. Cornett, hereby certify the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



April 26, 2023 _____

Date

Principal Investigator

APPENDIX

Species Status Terms Used in This Report

State, Federal, Tribal and local governments, and occasionally private conservation organizations, determine certain plant and animal species are in need of special protection because their numbers are declining, and extinction may be likely. Collectively, such species are referred to as special-status species.

Species or subspecies officially classified as **Endangered** are in imminent danger of becoming extinct. State and federal endangered species laws require that government agencies take direct steps to prevent further decline in the numbers of each endangered species. Persons or companies wishing to develop land on which endangered animal species occur will be required to mitigate adverse impacts to the endangered species so that there is no reduction in numbers and no net loss of the species' habitat. Mitigation may take the form of avoiding development on that part of the site inhabited by the species, acquiring habitat for the species elsewhere (accomplished by the CVMSHCP) or, in rare instances, relocating the project to an alternate site. In certain instances, an endangered species may be adversely impacted even though it does not actually occur on site. If such a finding is made, mitigation will likely be required.

Species or subspecies officially classified as **Threatened** are likely to become endangered if action is not forthcoming from government agencies. These species are not in imminent danger of becoming extinct and there is more time to find ways to prevent their extinction. Mitigation requirements for threatened species are the same as those for endangered species.

The state of California has an additional classification known as **Species of Special Concern**. In brief, these are plant and animal species whose numbers may be declining or who status may be in jeopardy but there is insufficient data to formerly classify them as threatened or endangered. Mitigation for these species can be required under the California Environmental Quality Act (CEQA) but is not automatic.

Governmental agencies sometimes erect Habitat Conservation Plans (HCPs) that protect selected **Covered** species. Specific mitigation for Covered species may not be required under such a plan. However, occasionally Covered species may not be **functionally** covered because state or federal agencies have refused to allow the taking of such species despite an approved HCP.

If officially threatened or endangered species not fully covered under an HCP are adversely impacted by a development the project proponents should expect to meet with staff of the United States Fish & Wildlife Service and/or the California Department of Fish & Game to review and decide upon mitigation alternatives.

TABLE 1

PLANT SPECIES RECORDED

PALARI RANCHO MIRAGE 10-ACRE SITE

ANGIOSPERMAE – DICOTYLEDONES

ASTERACEAE - SUNFLOWER FAMILY
Conyza canadensis - Horseweed
Dicoria canescens - Desert Dicoria
Encelia farinosa - Brittlebush
Hymenoclea salsola - Cheese-bush
Palafoxia arida - Spanish Needle
Stephanomeria exigua - Mitra

BORAGINACEAE - BORAGE FAMILY
Cryptantha micrantha - Purple-rooted Forget-me-not
Tiquilia plicata - Plicate Coldenia

BRASSICACEAE - MUSTARD FAMILY
Brassica tournefortii - Sahara Mustard

CHENOPODIACEAE - GOOSEFOOT FAMILY
Atriplex canescens – Wingscale
Salsola tragus - Russian Thistle

EUPHORBIACEAE - SPURGE FAMILY
Croton californicus - Desert Croton
Chamaesyce polycarpa - Sand-mat

FABACEAE - PEA FAMILY
Astragalus lentiginosus coachellae - Coachella Valley milk vetch ?
Psorothamnus emoryi - Emory Dalea

GERANIACEAE - GERANIUM FAMILY
Erodium cicutarium – Filaree

NYCTAGINACEAE - FOUR-O'CLOCK FAMILY
Abronia villosa - Hairy Sand-Verbena

PLANTAGINACEAE - Plantain Family
Plantago ovata - Woolly Plantain

SOLANACEAE - NIGHTSHADE FAMILY
Datura metaloides - Jimson Weed

ZYGOPHYLLACEAE - CALTROP FAMILY
Larrea tridentata - Creosote Bush

ANGIOSPERMAE - MONOCOTYLEDONES

POACEAE - GRASS FAMILY
Bromus madritensis - Foxtail Grass
Cynodon dactylon – Bermuda Grass
Panicum urvilleanum - Desert panicgrass
Schismus barbatus - Abu-mashi

TABLE 2

EXPECTED BREEDING OR OBSERVED VERTEBRATES

PALARI RANCHO MIRAGE 10-ACRE SITE

REPTILES

GEKKONIDAE - GECKOS
Coleonyx variegatus - Western Banded Gecko *

IGUANIDAE - IGUANIDS
Dipsosaurus dorsalis - Desert Iguana *
Gambelia wislizenii - Long-nosed Leopard Lizard ?
Phrynosoma mcallii - Flat-tailed Horned Lizard ?
Uma inornata – Coachella Valley Fringe-toed Lizard *
Urosaurus graciosus - Long-Tailed Bush Lizard *
Uta stansburiana - Side-Blotched Lizard *

TEIIDAE - WHIPTAILS
Cnemidophorus tigris - Western Whiptail *

LEPTOTYPHLOPIDAE - BLIND SNAKES
Leptotyphlops humilis - Western Blind Snake

COLUBRIDAE - COLUBRIDS
Arizona elegans - Glossy Snake *
Chionactis occipitalis - Western Shovel-nosed Snake *
Lampropeltis getulus - Common Kingsnake ?
Masticophis flagellum – Coachwhip *
Phyllorhynchus decurtatus - Spotted Leaf-nosed Snake ?

VIPERIDAE - VIPERS
Crotalus cerastes - Sidewinder

BIRDS

CATHARTIDAE – NEW WORLD VULTURES
Cathartes aura – Turkey Vulture *

ACCIPITRIDAE - OSPREY, HAWKS, EAGLES
Buteo jamaicensis - Red-Tailed Hawk *
Buteo swainsoni – Swainson's Hawk *

FALCONIDAE - FALCONS
Falco sparverius - American Kestrel *

LARIDAE – GULLS
Larus delawarensis – Ring-Billed Gull *

COLUMBIDAE - PIGEONS AND DOVES
Columba livia - Rock Dove *
Zenaida macroura - Mourning Dove *
Streptopelia decaocto - Eurasian Collared-Dove *

CUCULIDAE - CUCKOOS
Geococcyx californianus - Greater Roadrunner *

TROCHILIDAE - HUMMINGBIRDS
Calypte costae - Costa's Hummingbird

TURDIDAE – THRUSHES
Catharus guttatus – Hermit Thrush *

PARULIDAE – WOOD-WARBLERS
Vermivora celata – Orange-Crowned Warbler *

TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis saya - Say's Phoebe *

CORVIDAE - CROWS AND JAYS
Corvus corax - Common Raven *

MIMIDAE - MOCKINGBIRDS AND THRASHERS
Mimus polyglottos - Northern Mockingbird *

BIRDS (CONTINUED)

ICTERIDAE – BLACKBIRDS AND ORIOLES
Euphagus cyanocephalus - Brewer's Blackbird *

PLOCEIDAE - WEAVER FINCHES
Passer domesticus - House Sparrow *

FRINGILLIDAE - FINCHES
Carpodacus mexicanus - House Finch *

MAMMALS

VESPERTILIONIDAE - EVENING BATS
Pipistrellus hesperus - Western Pipistrelle *

LEPORIDAE - HARES AND RABBITS
Lepus californicus - Black-tailed Jackrabbit *
Sylvilagus audubonii - Audubon Cottontail *

SCIURIDAE - SQUIRRELS
Spermophilus tereticaudus chlorus – Palm Springs Ground Squirrel *

GEOMYIDAE - POCKET GOPHERS
Thomomys bottae - Botta Pocket Gopher *

HETEROMYIDAE - POCKET MICE, KANGAROO RATS
Dipodomys deserti - Desert Kangaroo Rat *

CRICETIDAE - DEER MICE AND WOODRATS
Peromyscus maniculatus - Deer Mouse *

MURIDAE – RATS, MICE, VOLES
Mus musculus – House Mouse *

CANIDAE - FOXES, WOLVES, AND COYOTES
Canis latrans - Coyote *

* = Sign or individual observed on site
? = Possible occurrence on or near site; not detected during surveys

NTS
GEOTECHNICAL

February 6, 2023
(Revised February 8, 2023)

Project No. 22587

Mr. Adam Nester
Palari Group
133 S Bedford Drive
Beverly Hills, CA 90212

Subject: Preliminary Geotechnical Investigation Report
Proposed Subdivision
APN 685-100-007 & 685-110-017
35050 Via Josefina, Rancho Mirage, California

Dear Mr. Nester:

In accordance with your request and authorization, we are presenting the results of our geotechnical investigation for the proposed tract homes to be constructed at 35050 Via Josefina, in the City of Rancho Mirage, California. The purpose of this investigation has been to evaluate the subsurface conditions at the site and to provide geotechnical engineering recommendations for the proposed construction.

Based on our findings, the proposed project is geotechnically feasible, provided that the recommendations in this report are incorporated into the design and are implemented during construction of the project. This report was prepared in accordance with the requirements of the 2022 California Building Code and the City of Rancho Mirage requirements.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned at (657) 888-4608 or info@ntsgeo.com.

Respectfully submitted,
NTS GEOTECHNICAL, INC.



Nadim Sunna, M.Sc., Q.S.P, P.E., G.E 3172
Principal Engineer

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Attachment(s):

Plate 1 – Location Map
Plate 2 – Geotechnical Map

Appendix A – Field Exploration
Appendix B – Geotechnical Laboratory Test Result

INTRODUCTION

This report presents the results of our geotechnical engineering evaluation performed for the proposed construction of tract homes located at 35050 Via Josefina in the City of Rancho Mirage, California. See (Plate 1, Location Map). The purpose of this study has been to evaluate the subsurface conditions at the site and to provide geotechnical recommendations related to the design and construction of the proposed structures.

SITE AND PROJECT DESCRIPTION

The project site is located at 35050 Via Josefina, in the City of Rancho Mirage. The two lots are bound by Via Josefina on the west, and vacant lots on the north, south and east. The two lots are approximately 5 acres each and comprise of relatively flat vacant land. The lot near Via Josefina is currently occupied by an existing equestrian center that is planned to be demolished.

It is our understanding that the proposed project consists of construction of 30 lots that are comprised of a single-family residence and ADU within each lot. Cuts and fills of up to 5 feet are anticipated to rough grade these lots. Detailed plans such as civil and structural plans were not available during the preparation of this report, and thus this report is subject to change based on the final plans.

SCOPE OF WORK

As part of the preparation of this report, we have performed the following tasks:

Background Review

We reviewed readily available background data including in-house geologic maps, topographic maps, and aerial photographs relevant to the subject site in preparation of this report.

Field Exploration

The subsurface conditions were evaluated on January 13, 2023 by advancing six (6) hollow-stem-auger borings to maximum depth of 20 feet below the existing grade. The approximate location of the boring is shown on Plate 2 – Geotechnical Map. Detailed exploration information of soils borings are presented in Appendix A, Field Exploration.

Geotechnical Laboratory Testing

Laboratory tests were performed on selected samples obtained from the boring in order to aid in the soil classification and to evaluate the engineering properties

of the foundation soils. The following tests were performed in general accordance with ASTM standards:

- In-situ moisture and density;
- No. 200 wash;
- Direct Shear;
- Consolidation; and
- Corrosivity.

Laboratory results are presented in Appendix B of this report.

SUBSURFACE CONDITIONS

Subsurface Materials

Earth materials encountered during our subsurface investigation consist of Quaternary alluvium. The mapped native materials are identified as Quaternary (Holocene), alluvial sand and gravel of valley areas. The alluvium consists of fine to coarse-grained sands and gravelly sands.

Alluvial materials were encountered during our surface investigation. In the alluvium consists of light brown to light gray to gray, dry, medium dense to very dense, silty sands and sands.

Groundwater

Groundwater was not observed during our exploration to a maximum depth of 20 feet below the existing grade. Groundwater conditions may vary across the site due to stratigraphic and hydrologic conditions, and may change over time as a consequence of seasonal and meteorological fluctuations, or activities by humans at this site and nearby sites. However, based on the above findings, groundwater is unlikely to impact the proposed development.

GEOLOGIC HAZARDS

Faulting and Seismicity

The site is not located within an Alquist-Priolo Earthquake Fault Zone, and no known active faults are shown on the reviewed geologic maps crossing the site, however, the site is located in the seismically active region of Southern California. The nearest known active fault is the San Andreas fault system, which is located approximately 3.7 miles from the subject site.

Liquefaction and Seismic Settlement

Liquefaction occurs when the pore pressures generated within a soil mass approach the effective overburden pressure. Liquefaction of soils may be caused by cyclic loading such as that imposed by ground shaking during earthquakes. The increase in pore pressure results in a loss of strength, and the soil then can undergo both horizontal and vertical movements, depending on the site conditions. Other phenomena associated with soil liquefaction include sand boils, ground oscillation, and loss of foundation bearing capacity. Liquefaction is generally known to occur in loose, saturated, relatively clean, fine-grained cohesionless soils at depths shallower than approximately 50 feet. Factors to consider in the evaluation of soil liquefaction potential include groundwater conditions, soil type, grain size distribution, relative density, degree of saturation, and both the intensity and duration of ground motion.

Based on our review of the County of Riverside, Map My County website, the site is situated within an area identified to having a moderate susceptibility to liquefaction, however, based on the lack of shallow groundwater, it is our professional opinion that liquefaction potential is low.

Landslides

Based on our review of the referenced geologic maps, literature, topographic maps, aerial photographs, and our subsurface evaluation, no landslides or related features underlie or are adjacent to the subject site. Due to the relatively level nature of the site and surrounding areas, the potential for landslides at the project site is considered low.

Flooding

The Federal Emergency Management Agency (FEMA) has prepared flood insurance rate maps (FIRMs) for use in administering the National Flood Insurance Program. Based on our review of the FEMA flood map, the site is located in an Area of Minimal Flood Hazard (Zone X).

Tsunami and Seiches

Tsunamis are waves generated by massive landslides near or under sea water. The site is not located on any State of California Tsunami Inundation Map for Emergency Planning. The potential for the site to be adversely impacted by earthquake-induced tsunamis is considered to be negligible because the site is located several miles inland from the Pacific Ocean shore, at an elevation exceeding the maximum height of potential tsunami inundation.

Seiches are standing wave oscillations of an enclosed water body after the original driving force has dissipated. The potential for the site to be adversely

impacted by earthquake-induced seiches is considered to be negligible due to the lack of any significant enclosed bodies of water located in the vicinity of the site.

GEOTECHNICAL ENGINEERING FINDINGS

Expansive Soil

Based on our evaluation, laboratory testing and experience with similar material types, the soils encountered near the ground surface at the site exhibit a very low expansion potential.

Hydroconsolidation

Based on our laboratory test results, and the loose nature of the upper approximately 3 feet of the site soils, the potential for hydrocollapse settlement to affect the proposed structures should be considered low to moderate. Grading recommendations to minimize hydroconsolidation are provided in this report.

Soil Corrosion

The potential for the on-site materials to corrode buried steel and concrete improvements was evaluated. Laboratory testing was performed on representative soil samples to evaluate pH, minimum resistivity, and soluble chloride and sulfate contents. The results of our corrosivity testing is presented within Appendix B of this report. General recommendations to address the corrosion potential of the on-site soils are provided below. Imported fill materials, if used, should be tested to evaluate whether their corrosion potential is more severe than those assumed.

Structural Concrete

Laboratory tests indicate that the potential of sulfate attack on concrete in contact with the on-site soils is “negligible” or “S0” exposure in accordance with ACI 318, Table 19.3.1.1. Therefore, restriction on the type of cement, water to cement ratio, and compressive strength is not required.

The aforementioned recommendations in regards to concrete are made from a soils perspective only. Final concrete mix design is beyond our purview. All applicable codes, ordinances, regulations, and guidelines should be followed in regard to the designing a durable concrete with respect to the potential for sulfate exposure from the on-site soils and/or changes in the environment.

Ferrous Metal

The results of the laboratory chemical tests performed on a sample of soil collected within the site indicate that the on-site soils are moderately corrosive to ferrous metals. Consequently, metal structures which will be in direct contact with the soil (i.e., underground metal conduits, pipelines, metal sign posts, etc.) and/or in close proximity to the soil (wrought iron fencing, etc.) may be subject to corrosion. The use of special coatings or cathodic protection around buried metal structures has been shown to be beneficial in reducing corrosion potential.

Laboratory tests reveal a low chloride level, which indicates that the onsite soil is considered non-corrosive toward reinforcing steel. The laboratory testing program performed for this project does not address the potential for corrosion to copper piping. In this regard, a corrosion engineer should be consulted to perform more detailed testing and develop appropriate mitigation measures (if necessary).

The above discussion is provided for general guidance in regards to the corrosiveness of the on-site soils to typical metal structures used for construction. Detailed corrosion testing and recommendations for protecting buried ferrous metal and/or copper elements are beyond our purview. If detailed testing is required, a corrosion engineer should be consulted to perform the testing and develop appropriate mitigation measures.

Excavation Characteristics

The majority of the soil materials underlying the site can be excavated with excavators and other conventional grading equipment.

Shrinkage

The shrinkage factor for earthwork is expected to range from 5 to 10 percent for the site soils. This estimate is based on a compactive effort to achieve an average relative compaction of 90 percent and may vary with contractor means and methods and actual comp active efforts. Subsidence is estimated to be approximately 0.20 feet. Losses from site clearing and removal of existing site improvements may affect earthwork quantity and should be considered.

Site Infiltration

Site infiltration testing has not been performed as part of the scope of this report due to the absence of the location of the proposed retention basins and anticipated depth of infiltration, however, for preliminary design and based on the gradation of the onsite soils, we have estimated a preliminary infiltration rate of 1.5 inches per hour may be used for conceptual design. Final design of the

retention basins should be based on actual infiltration testing perform at the planned location of the retention basins and anticipated depth of infiltration.

GEOTECHNICAL ENGINEERING CONLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the results of our field exploration and engineering analyses, it is our opinion that the proposed development is feasible from a geotechnical standpoint, provided that the recommendations in this report are incorporated into the design plans and are implemented during construction.

Based on the geotechnical findings, the following is a summary of our conclusions:

- The proposed structure may be supported on a shallow spread/continuous footing foundation system underlain by engineered fill.
- Groundwater is not anticipated to directly impact the planned precise grading or during the installation of shallow underground utilities.
- The site is not located within a fault zone, however, the site will experience strong ground shaking due to it's proximity to the San Andreas fault.
- Based on the lack of shallow groundwater and relatively dense nature of the subsurface soil, the liquefaction potential is considered low.
- The magnitude of total static settlements beneath the structure is expected to be less than 1.0 inch, with differential settlement on the order of ½ -inch over a span of 30 feet.
- The on-site soils has a negligible sulfate exposure to concrete (i.e., as defined by the CBC) and reinforcement.

Our geotechnical engineering analyses performed for this report were based on the earth materials encountered during the subsurface exploration for the site. If the design substantially changes, then our geotechnical engineering recommendations would be subject to revision based on our evaluation of the changes. The following sections present our conclusions and recommendations pertaining to the engineering design for this project.

Site Preparation

Site preparation should begin with the removal of utility lines, asphalt, concrete, vegetation, and other deleterious debris from areas to be graded. Tree stumps

and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend to the outside edges of the proposed excavation and fill areas. We recommend that unsuitable materials such as organic matter or oversized material be selectively removed and disposed offsite. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed at a legal dump site away from the project area.

Remedial Grading

Due to the dry / loose nature of the near surface soils, we recommend that the upper 3 feet of the site soils be removed and recompacted to achieve a uniform blanket of properly moisture conditioned and compacted fill material prior to placement of new fill or new foundation.

It should be noted that the recommendations provided herein are based on our subsurface exploration and knowledge of the on-site geology. Actual removals may vary in configuration and volume based on observations of geologic materials and conditions encountered during grading. The bottom of all corrective grading removals should be observed by a representative of NTS to verify the suitability of in-place soil prior to performing scarification and recompaction. Remedial grading recommendations are outlined below.

Fill Areas:

Areas to receive structural fill should be prepared by removing organic growth from the pad surface and other existing improvements. These areas should then be moisture conditioned to at least 2 percent above optimum to a depth of 3 feet below the existing grade, and should be compacted to achieve 90 percent relative compaction. A representative of NTS should be onsite to determine the actual depth of removal and perform compaction testing to verify the required moisture compaction is achieved in the field. Fill placed above the existing grade should be placed in accordance with the Compacted Fill section of this report.

Cut Areas:

Areas that are planned to be cut should be thoroughly watered after the proposed cuts are made to obtain a moisture content that is 2 percent above optimum moisture content to a depth of 3 feet below the finish grade. The moisture conditioned soil should be compacted to at least 90 percent relative compaction. Wherever a building pad spans a cut/fill transition, then the building pad area should be overexcavated to a depth of 3 feet below the footing and recompacted to achieve a uniform blanket of compacted fill.

Building Pads

In order to create a firm and stable platform on which to construct the new building pads, we recommend the following:

- The proposed building pads should be excavated to a depth of at least 2 feet from finish rough grade.
- The bottom of the over excavation should then be scarified to a depth of at least 8 inches, thoroughly flooded to raise the moisture content of the underlying soils to at least 2 percent above optimum moisture content, and should be recompacted using heavy vibratory compaction equipment prior to placement of any fill.
- Following the approval of the over-excavation bottom by a representative of NTS, the onsite material may be used as fill material to achieve the planned pad grade.
- The fill material should then be placed in 6- to- 8-inch-thick lifts, moisture conditioned to near optimum moisture content and compacted to achieve 90 percent relative compaction.

Streets Improvement

In order to create a firm and stable platform on which to construct the new vehicular pavement, we recommend the following:

- The proposed pavement should be excavated to the planned subgrade (i.e., bottom of aggregate base for pavement).
- The bottom of the excavation should then be scarified to a depth of 12 inches below the planned subgrade.
- The bottom of the over excavation should then be scarified to a depth of at least 6 inches, moisture conditioned to 2 percent above optimum moisture content and recompacted to at least 90 percent relative compaction as determined in accordance with ASTM D1557.
- Following the approval of the over-excavation bottom by a representative of NTS, the onsite material may be used as fill material to achieve the planned pad grade.
- The fill material should then be placed in 6- to- 8-inch-thick lifts, moisture conditioned to near optimum moisture content and compacted to achieve 90 percent relative compaction.

If the existing loose fill materials are found to be disturbed to depths greater than the proposed remedial grading, then the depth of over-excavation and re-compaction should be increased accordingly in local areas as recommended by a representative of NTS.

The zones of compaction should extend at least 5 feet outside the perimeter of the building pads, and may change based on actual side conditions during grading and proposed elevations of the final approved grading plan.

Materials for Fill

On-site soils with an organic content of less than 3 percent by volume (or 1 percent by weight) are suitable for use as fill. Soil material to be used as fill should not contain contaminated materials, rocks, or lumps over 6 inches in largest dimension, and not more than 40 percent larger than ¾ inch. Utility trench backfill material should not contain rocks or lumps over 3 inches in largest dimension. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or may be disposed offsite.

Any imported fill material should consist of granular soil having a “very low” expansion potential (that is, expansion index of 20 or less). Import material should also have low corrosion potential (that is, chloride content less than 500 parts per million [ppm], soluble sulfate content of less than 0.1 percent, and pH of 5.5 or higher). Materials to be used as fill should be evaluated by a representative of NTS prior to importing or filling.

Compacted Fill

Prior to placement of compacted fill, the contractor should request an evaluation of the exposed excavation bottom by NTS. Unless otherwise recommended, the exposed ground surface should then be scarified to a depth of at least 6 inches and watered or dried, as needed, to achieve generally consistent moisture contents approximately 2 percent above the optimum moisture content. The scarified materials should then be compacted to 90 percent relative compaction in accordance with the latest version of ASTM Test Method D1557.

Compacted fill should be placed in horizontal lifts of approximately 6 to 8 inches in loose thickness. Prior to compaction, each lift should be watered or dried as needed to achieve near optimum moisture condition, mixed, and then compacted to a relative compaction of 90 percent as evaluated by ASTM D1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved.

Personnel from NTS should observe the excavations so that any necessary modifications based on variations in the encountered soil conditions can be made. All applicable safety requirements and regulations, including CalOSHA requirements, should be met.

Temporary Excavations

Temporary excavations for the demolishing, earthwork, footing and utility trench are expected. We anticipate that unsurcharged excavations with vertical side slopes less than 3 feet high will generally be stable; however, sloughing of cohesionless sandy materials encountered at the site should be expected.

Where the space is available, temporary, unsurcharged excavation sides over 3 feet in height should be sloped no steeper than an inclination of 1.5H:1V (horizontal:vertical).Where sloped excavations are created, the tops of the slopes should be barricaded so that vehicles and storage loads do not encroach within 10 feet of the top of the excavated slopes. A greater setback may be necessary when considering heavy vehicles, such as concrete trucks and cranes. NTS should be advised of such heavy vehicle loadings so that specific setback requirements can be established. If the temporary construction slopes are to be maintained during the rainy season, berms are recommended to be graded along the tops of the slopes in order to prevent runoff water from entering the excavation and eroding the slope faces. Where space for sloped excavations is not available, temporary shoring may be utilized.

Personnel from NTS should observe the excavation so that any necessary modifications based on variations in the encountered soil conditions can be made. All applicable safety requirements and regulations, including CalOSHA requirements, should be met.

Seismic Design

Based on our subsurface investigation, the site is designated as Site Class D (“stiff soil” soil profile). The seismic design parameters based on ASCE 7-16 and 2022 CBC are listed in the following table.

2022 CBC and ASCE 7-16 Seismic Design Parameters
(To be utilized as per the requirements of Section 11.4.8 of ASCE 7-16)

Seismic Item	Design Value	2016 ASCE 7-16 or 2019 CBC Reference
Site Class based on soil profile (ASCE 7-16 Table 20.3-1)	D[a]	ASCE 7-16 Table 20.3-1
Short Period Spectral Acceleration S_s	1.779[a]	CBC Figures 1613.2.1 (1-8)
1-sec. Period Spectral Acceleration S_1	0.739[a]	CBC Figures 1613.2.1 (1-8)
Site Coefficient F_a (2019 CBC Table 1613.2.3(1))	1.000[a]	CBC Table 1613.2.3 (1)
Site Coefficient F_v (2019 CBC Table 1613.2.3(2))	1.700[b]	CBC Table 1613.2.3 (2)
Short Period MCE* Spectral Acceleration S_{MS} $S_{MS} = F_a S_s$	1.779[a]	CBC Equation 16-36
1-sec. Period MCE Spectral Acceleration S_{M1} $S_{M1} = F_v S_1$	1.256[b]	CBC Equation 16-37
Short Period Design Spectral Acceleration S_{DS} $S_{DS} = 2/3S_{Ms}$	1.186[a]	CBC Equation 16-38
1-sec. Period Design Spectral Acceleration S_{D1} $S_{D1} = 2/3S_{M1}$	0.838[b]	CBC Equation 16-39
Short Period Transition Period T_S (sec) $T_S = S_{D1}/S_{DS}$	0.707[b]	ASCE 7-16 Section 11.4.6
Long Period Transition Period Tl (sec)	8[b]	ASCE 7-16 Figures 22-14 to 22-17
MCE[c] Peak Ground Acceleration (PGA)	0.773[a]	ASCE 7-16 Figures 22-9 to 22-13
Site Coefficient F_{PGA} (ASCE 7-16 Table 11.8-1)	1.100[a]	ASCE 7-16 Table 11.8-1
Modified MCE[c] Peak Ground Acceleration (PGA_M)	0.850[a]	ASCE 7-16 Equation 11.8-1

(a) Design Values Obtained from USGS Earthquake Hazards Program website that are based on the ASCE-7-16 and 2022 CBC and site coordinates of N33.7939221° and W116.3984606°.
(b) Design Values Determined per ASCE Table 11.4-2 and CBC Equations 16-36 through 16-39.
(c) MCE: Maximum Considered Earthquake.

Since the Site Class is designated as D and the S_1 value is greater than or equal to 0.2, the 2022 CBC requires either a site-specific seismic hazard analysis per Section 21.2 of ASCE 7-16 or the application of Exception 2 of Section 11.4.8 of ASCE 7-16. The project structural engineer should apply all requirements of Section 11.4.8 of ASCE 7-16 to determine if increases to the seismic response coefficient (i.e. increases to the loading of the structure) are required.

It should be recognized that much of southern California is subject to some level of damaging ground shaking as a result of movement along the major active (and potentially active) fault zones that characterize this region. Design utilizing the 2022 CBC is not meant to completely protect against damage or loss of function. Therefore, the preceding parameters should be considered as minimum design criteria.

Foundation Design and Construction

A shallow foundation system may be used for support of the proposed buildings, provided that all the footings are placed on engineered fill prepared as described in the "**Remedial Grading**" section of this report. Our geotechnical foundation design parameters are presented in the table below:

Foundation Design Parameters

Bearing Material	▪ Engineered Fill
Minimum Footing Size	▪ Width: 12 inches ▪ Depth: 18 inches below the lowest adjacent soil grade
Minimum Footing Reinforcement	▪ Footings reinforcement should consist of at least four No. 4 bars (two on top and two on bottom). ▪ Final reinforcement should be determined by the project structural engineer.
Allowable Bearing Capacity	▪ 2,000 psf for the minimum footing size given above. ▪ The above value may be increased by 1/3 for temporary loads such as wind or earthquake.
Static Settlement	▪ Total static settlement of 1 inch with differential settlement estimated to be approximately ½ inch over a span of 40 feet
Allowable Lateral Passive Resistance	• 300 pcf (equivalent fluid pressure)
Allowable Coefficient of Friction	• 0.35

Slab-On-Grade Design and Construction

The slab-on-grade should be designed and constructed with the minimum recommendations presented below, however, final design of the slab should be determined by the project structural engineer.

Slab Thickness: Slab thickness and final reinforcement of the slab-on-grade are contingent on the recommendations of the structural engineer or architect. Based on our findings, a modulus of subgrade reaction of approximately 100 pci may be used in concrete slab design for the expected very low expansion subgrade. The slab should be designed to sufficiently support both dead and live loads and account for variation in soil conditions at the completion of rough grading.

Minimum Slab Reinforcement: Minimum slab reinforcement shall not be less than No. 4 bars placed at 16 inches on center. Welded wire mesh is not recommended. Care should be taken to position the reinforcement bars in the center of the slab.

Slab Subgrade:

- The upper 24 inches of the on-site soil encountered at the slab subgrade should be moisture conditioned to near optimum moisture content and compacted to a minimum relative compaction of compacted to 90 percent relative compaction in accordance with the latest version of ASTM D1557.

- A moisture vapor retarder should be placed in accordance with the "Moisture Vapor Retarder" section below.

Pole Foundations

It is expected that the canopy structures and light poles will be supported on pole foundations. As a minimum, the pole foundations should be at least 18 inches in diameter and at least 4 feet deep; however, the actual dimensions should be determined by the project structural engineer based on the following design parameters.

Bearing Materials: The pole foundations may bear into competent native soils approved by a representative from NTS.

Bearing Values: End-bearing capacity may be combined to determine the allowable bearing capacities of the pole foundations. An allowable bearing pressure of 3,000 pounds per square foot (psf) may be used for pole foundations at least 18 inches in diameter and embedded a minimum of 4 feet below the lowest adjacent grade.

Lateral Load Design: Lateral loads may be resisted by passive resistance within the adjacent earth materials. For passive resistance, an allowable passive earth pressure of 300 pounds per foot of pile diameter per foot of depth into competent bearing material may be used; however, passive resistance should be disregarded within the upper foot due to possible disturbance during drilling. The passive resistance value may be applied over an area equivalent to two pile diameters.

Moisture Vapor Retarder

A vapor retarder, such as a 15-mil-thick moisture vapor retarder that meets the requirements of ASTM E1745 Class C (Stego Wrap or equivalent) should be placed directly over the prepared soil subgrade to provide protection against

vapor transmission through concrete floor slabs thatare anticipated to receive carpet, tile or other moisture sensitive coverings. The use of moisture vapor retarder should be determined by the project architect. At minimum, the vapor retarder should be installed as follows:

- Per the manufacture's specifications as well as with the applicable recognized installation procedures such as ASTM E1643;
- Joints between the sheets and the openings for utility piping should be lapped and taped. If the barrier is not continuously placed across footings/ribs, the barrier should at minimum be lapped into the side of the footing/rib trenches down to the bottom of the trench; and,
- Punctures in the vapor retarder should be repaired prior to concrete placement.

It should be noted that the moisture retarder is intended only to reduce moisture vapor transmissions from the soil beneath the concrete and is consistent with the current standard of the industry in the building construction in Southern California. It is not intended to provide a "waterproof" or "vapor proof" barrier or reduce vapor transmission from sources above the retarder (i.e., concrete). The evaluation of water vapor from any source and its effect on any aspect of the proposed building space above the slab (i.e., floor covering applicability, mold growth, etc.) is beyond our purview and the scope of this report.

Utility Trench Backfill Considerations

New utility line pipeline trenches should be backfilled with select bedding materials beneath and around the pipes (pipe zone) and compacted soil above the pipe bedding. Recommendations for the types of the materials to be used and the proper placement of these materials are provided in the following sections.

Pipe Zone (Bedding and Shading)

The pipe bedding and shading materials should extend from at least 6 inches below the pipes to at least 12 inches above the crown of the pipes. Pipe bedding and shading should consist of either clean sand with a sand equivalent (SE) of at least 30, or crushed rock. If crushed rock is used, it should consist of ¾-inch crushed rock that conforms to Table 200-1.2.1 (A) of the 2022 "Greenbook." Pipe bedding and shading should also meet the minimum requirements of the City of Los Angeles. If the requirements of the City are more stringent, they should take precedence over the geotechnical recommendations. Sufficient laboratory testing should be performed to verify the bedding and shading meets the minimum requirements of the Greenbook and City of Rancho Mirage grading codes.

Granular pipe bedding and shading material should be properly placed in thicknesses not exceeding 3 feet, and then sufficiently flooded or jetted in place.

Crushed rock, if used, should be capped with filter fabric (Mirafi 160N, or equivalent; Mirafi 140N filter fabric is suitable if available) to prevent the migration of fines into the rock.

Trench Backfill

All existing soil material within the limits of the site are considered suitable for use as trench backfill above the pipe bedding and shading zone if care is taken to remove all significant organic and other decomposable debris, moisture condition the soil materials as necessary, and separate and selectively place and/or stockpile any inert materials larger than 6 inches in maximum diameter.

Imported soils are not anticipated for backfill since the on-site soils are suitable. However, if imported soils are used, the soils should consist of clean, granular materials with physical and chemical characteristics similar to or better than those described herein for on-site soils. Any imported soils to be used as backfill should be evaluated and approved by NTS prior to placement.

Soils to be used as trench backfill should be moistened, dried, or blended as necessary to achieve near optimum moisture content, placed in lifts which, prior to compaction shall not exceed the thickness specified in Section 306-12.3 of the 2018 “Greenbook” for various types of equipment, and mechanically compacted/densified to at least 90 percent relative compaction as determined by ASTM Test Method D 1557. Jetting is not permitted in this trench zone.

No rock or broken concrete greater than 6 inches in maximum diameter should be utilized in the trench backfills.

Asphalt Concrete Pavement Design

In accordance with Chapter 600 of the Caltrans Highway Design Manual, we have performed pavement structural design utilizing assumed traffic indices (TI) of 5.5 and 6.0 and assumed R-value of 30. Based on our analysis, we have developed the pavement structural sections presented in the following table. We note that the assumed TI’s should be reviewed by a traffic engineer to confirm their applicability to the project. Additionally, the R-value testing should be performed at the completion of rough grading of the roadways to confirm the pavement thickness provided herein.

Asphalt Concrete Pavement Structural Sections

Location	Traffic Index	Asphalt Concrete (in.)	Aggregate Base (in.)*
Driveways	5.5	4.0	5.0
Private Streets	6.0	4.0	6.0

The planned pavement structural sections should consist of the following:

- Aggregate Base materials (AB) consisted of either Crushed Aggregate Base (CAB) or Crushed Miscellaneous Base (CMB).
- Asphalt Concrete (AC) material of a type meeting the minimum City of Rancho Mirage standards.
- The subgrade soils should be moisture conditioned to near optimum moisture content to a depth of at least 18 inches and compacted to 90 percent relative compaction.
- The AB and AC should be compacted to at least 95 percent relative compaction.

Exterior Flatwork/Hardscape Design Considerations

For exterior flatwork and hardscape planned as part of the proposed development, the following design may be considered by the project civil engineer. These recommendations may be considered as minimal design based on the soils conditions encountered during our investigation. Final design of the proposed flatwork and hardscape area should be provided by the project civil engineer. Based on the conditions encountered, we recommend that the subgrade for the subject concrete flatwork and hardscape be moisture conditioned to near optimum to a depth of 18 inches below finish subgrade elevation and compacted to 90 percent relative compaction. A Type II/V cement may be used from a geotechnical perspective. Our flatwork and hardscape design considerations are presented in the table below.

Concrete Flatwork Table

Description	Subgrade Preparation [1]	Minimum Concrete Thickness	Cut-Off Barrier Or Edge Thickness	Joint Spacing (Maximum)	Concrete[3]
Concrete Sidewalks and Walkways [4]	1) 2 percent above optimum to 12"[1], 2) 2" of sand or well graded rock (i.e., Class II base or equiv.) above moisture conditioned subgrade.	4 inches	Not Required	5 feet	Type II/V
Concrete Driveways[4]	1) 2 percent above optimum to 12"[1], 2) 2" of sand or well graded rock (i.e., Class II base or equiv.) above moisture conditioned subgrade.	6 inches	Where adjacent to landscape areas – 12" from adjacent finish grade. Min. 8" width	10 feet	Type II/V

(1) The moisture content of the subgrade must be verified by the geotechnical consultant prior to sand/rock placement.
(2) Reinforcement to be placed at or above the mid-point of the slab (i.e., a minimum of 2.0 to 2.5 inches above the prepared subgrade).
(3) The site has negligible levels of sulfates as defined by the CBC. Concrete mix design is outside the geotechnical engineer's purview.
(4) Where flatwork is adjacent a stucco surface, a ¼" to ½" foam separation/expansion joint should be used.
(5) If dowels are placed in cored holes, the core holes shall be placed at alternating in-plane angles (i.e., not cored straight into slab).

Planters and Trees

Where new trees or large shrubs are to be located in close proximity to new concrete flatwork, rigid moisture/root barriers should be placed around the perimeter of the flatwork to at least 12 inches in depth in order to offer protection to the adjacent flatwork against potential root and moisture damage. Existing mature trees near flatwork areas should also incorporate a rigid moisture/root barrier placed at least 2 feet in depth below the top of the flatwork.

Drainage Control

The control of surface water is essential to the satisfactory performance of the building and site improvements. Surface water should be controlled so that conditions of uniform moisture are maintained beneath the improvements, even during periods of heavy rainfall. The following recommendations are considered minimal:

- Ponding and areas of low flow gradients should be avoided.
- If bare soil within 5 feet of the structure is not avoidable, then a gradient of 5 percent or more should be provided sloping away from the improvement. Corresponding paved surfaces should be provided with a gradient of at least 2 percent.
- The remainder of the unpaved areas should be provided with a drainage gradient of at least 2 percent.
- Positive drainage devices, such as graded swales, paved ditches, and/or catch basins should be employed to accumulate and to convey water to appropriate discharge points.
- Concrete walks and flatwork should not obstruct the free flow of surface water.
- Brick flatwork should be sealed by mortar or be placed over an impermeable membrane.
- Area drains should be recessed below grade to allow free flow of water into the basin.
- Enclosed raised planters should be sealed at the bottom and provided with an ample flow gradient to a drainage device. Recessed planters and landscaped areas should be provided with area inlet and subsurface drain pipes.
- Planters should not be located adjacent to the structures wherever possible. If planters are to be located adjacent to the structures, the planters should be positively sealed, should incorporate a subdrain, and should be provided with free discharge capacity to a drainage device.
- Planting areas at grade should be provided with positive drainage. Wherever possible, the grade of exposed soil areas should be established above adjacent paved grades. Drainage devices and curbing should be provided to prevent runoff from adjacent pavement or walks into planted areas.
- Gutter and downspout systems should be provided to capture discharge from roof areas. The accumulated roof water should be conveyed to off-site disposal areas by a pipe or concrete swale system.
- Landscape watering should be performed judiciously to preclude either soaking or desiccation of soils. The watering should be such that it just sustains plant growth without excessive watering. Sprinkler systems should be checked.

Plans and Specifications Review

The recommendations presented in this report are contingent upon review of final plans and specifications for the project by NTS. NTS Geotechnical, Inc. should review and verify in writing the compliance of the final grading plan and the final foundation plans with the recommendations presented in this report.

Construction Observation and Testing

It is recommended that NTS be retained to provide Geotechnical Consulting services during the earthwork operations and foundation installation process. This is to observe compliance with the design concepts, specifications and recommendations and to allow for design changes in the event that subsurface conditions differ from those anticipated during our subsurface investigation.

It is the responsibility of the owner and their representative to bring any deviations or unexpected conditions observed during construction to the attention of NTS Geotechnical, in order for supplemental recommendations can be made with a minimum delay to the project. Construction should be observed and/or testing at the following stages by NTS Geotechnical, Inc.:

- During all phases of precise grading, including over-excavation, temporary excavations, removals, scarification, ground preparation, moisture condition, proof-rolling, and placement and compaction of all fill material.
- All foundation excavation prior to placement of steel
- During backfill of underground utilities
- During placement of pavement structural section, including verifying the subgrade prior to placement of aggregate base, testing of aggregate base, and testing of asphalt concrete pavement.
- When unusual conditions are encountered.

If any of these inspections to verify site geotechnical conditions are not performed by NTS Geotechnical, liability for the safety and stability of the project is limited only to the actual portions of the project that is observed and approved by NTS Geotechnical.

LIMITATIONS

All parties reviewing or utilizing this report should recognize that the findings, conclusions, and recommendations presented represent the results of our professional geological and geotechnical engineering efforts and judgments. Due to the inexact nature of the state of the art of these professions and the possible occurrence of undetected variables in subsurface conditions, we cannot guarantee that the conditions actually encountered during grading and site construction will be identical to those observed, sampled, and interpreted during our study, or that there are no unknown subsurface conditions which could have an adverse effect on the use of the property. We have exercised a degree of care comparable to the standard of practice presently maintained by other professionals in the fields of geotechnical engineering and engineering geology, and believe that our findings present a reasonably representative description of

geotechnical conditions and their probable influence on the grading and use of the property.

Our conclusions and recommendations are based on the assumption that our firm will act as the geotechnical engineer of record during construction and grading of the project to observe the actual conditions exposed, to verify our design concepts and the grading contractor's general compliance with the project geotechnical specifications, and to provide our revised conclusions and recommendations should subsurface conditions differ significantly from those used as the basis for our conclusions and recommendations presented in this report. Since our conclusions and recommendations are based on a limited amount of current and previous geotechnical exploration and analysis, all parties should recognize the need for possible revisions to our conclusions and recommendations during grading of the project.

It should be further noted that the recommendations presented herein are intended solely to minimize the effects of post-construction soil movements. Consequently, minor cracking and/or distortion of all on-site improvements should be anticipated.

This report has not been prepared for the use by other parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

REFERENCES

American Concrete Institute, 2014, Building Code Requirements for Structural Concrete (ACI 318-14).

American Society of Civil Engineers (ASCE), 2017, Minimum Design Loads for Buildings and Other Structures, ASCE 7-16.

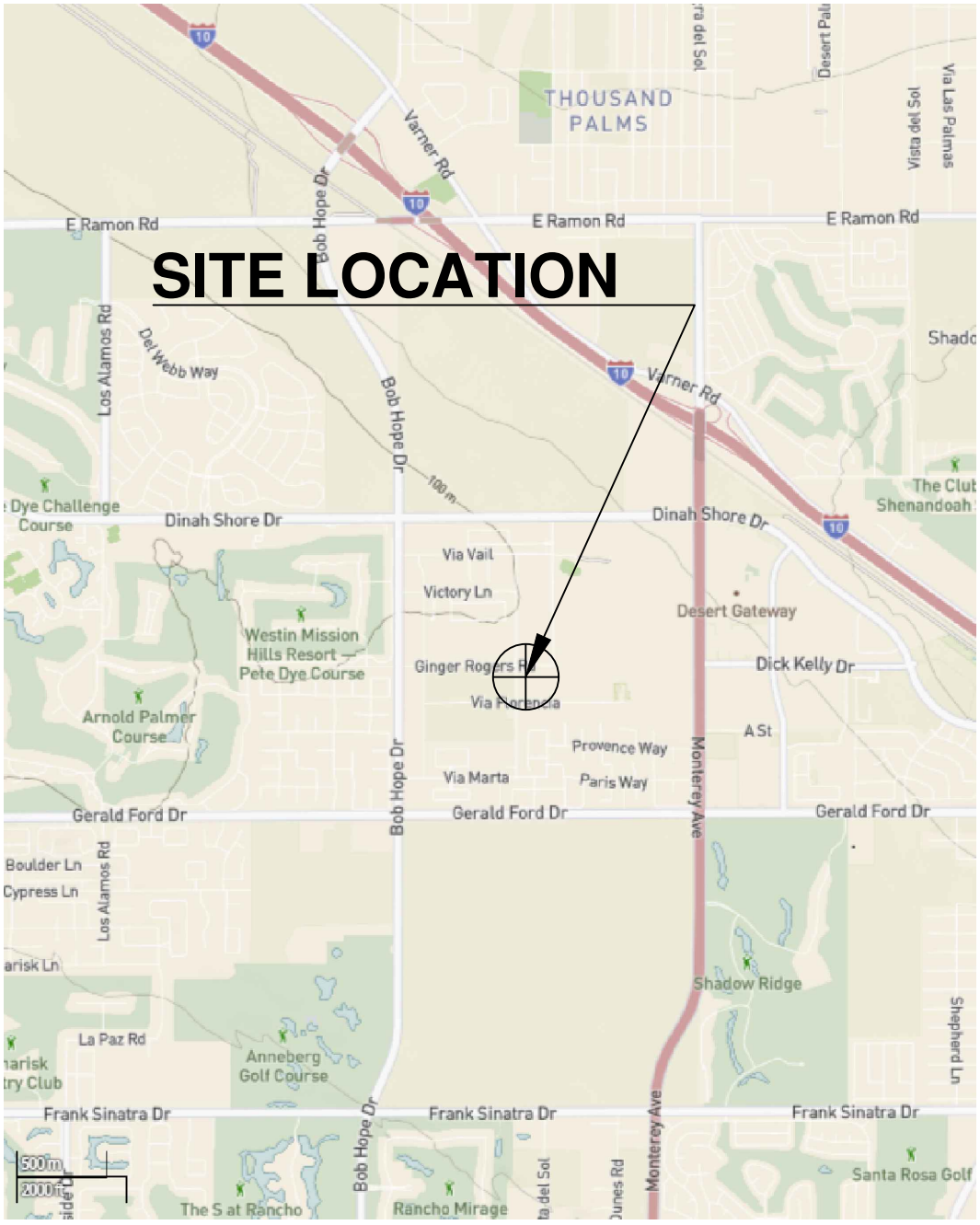
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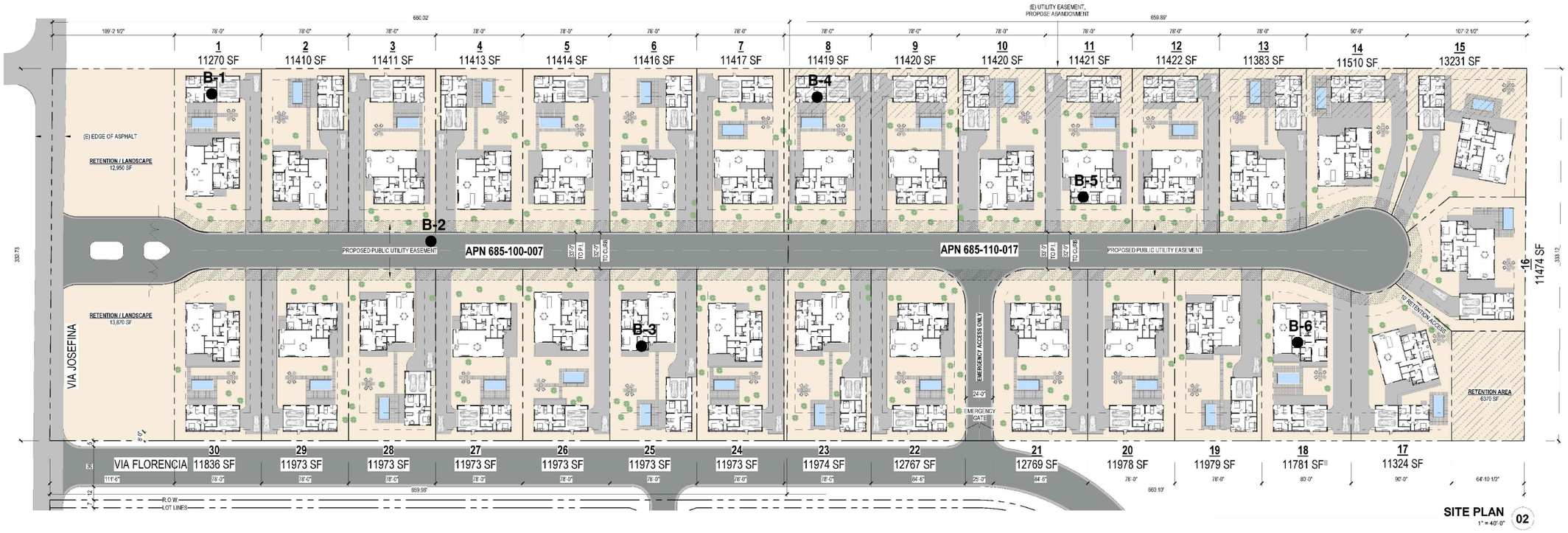
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LOCATION MAP

NTS GEOTECHNICAL	Date: February 3, 2023	Plate 1
	Project No.: 22587	



SITE PLAN 02
1" = 40'-0"

NTS
GEOTECHNICAL

0 100'

GEOTECHNICAL LEGEND

B-1 ● APPROXIMATE LOCATION OF BORING

GEOTECHNICAL MAP

Date: 2/3/2023	Project No.: 22587	Plate: 2

NTS GEOTECHNICAL

APPENDIX A

Field Exploration

NTS GEOTECHNICAL

Appendix A
Field Exploration

The subsurface exploration program for the proposed project consisted of advancing six (6) 8-inch-diameter, hollow-stem-auger drill rig borings at the subject site. The borings were advanced to depths ranging from 10 to 20 feet below the existing grade. The Boring Logs are presented within Appendix A.

The Boring Logs are presented as Figures A-2 to A-7. The Boring Logs describe the earth materials encountered, samples obtained, and show the field and laboratory tests performed. The log also shows the boring number, drilling date, and the name of the logger and drilling subcontractor. The borings were logged by an engineer using the Unified Soil Classification System. The boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual. Drive and bulk samples of representative earth materials were obtained from the borings.

Disturbed samples were obtained using a Standard Penetration Sampler (SPT). This sampler consists of a 2-inch O.D., 1.4-inch I.D. split barrel shaft that is advanced into the soil at the bottom of the drilled hole a total of 18 inches. The number of blows required to drive the sampler 18 inches is presented on the boring logs. Soil samples obtained by the SPT were retained in plastic bags. A California modified sampler was used to obtain drive samples of the soil encountered. This sampler consists of a 3-inch outside diameter (O.D.), 2.4-inch inside diameter (I.D.) split barrel shaft that was driven a total of 12-inches into the soil at the bottom of the boring by a safety hammer weighing 140 pounds at a drop height of approximately 30 inches. The soil was retained in brass rings for laboratory testing. Additional soil from each drive remaining in the cutting shoe was usually discarded after visually classifying the soil. The number of blows required to drive the sampler 18 inches is presented on the boring logs.

Upon completion of the borings, the boreholes were backfilled with soil from the cuttings.

Project: APN 685-100-007 & 685-110-017APN 685-100-007 &	NTS GEOTECHNICAL	Key to Log of Boring
Project Location: 685-110-017, Rancho Mirage		**Sheet 1 of 1**
Project Number: 22587		

Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9

COLUMN DESCRIPTIONS

1. Depth (feet): Depth in feet below the ground surface.
2. Sample Type: Type of soil sample collected at the depth interval shown.
3. Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
4. Material Type: Type of material encountered.
5. Graphic Log: Graphic depiction of the subsurface material encountered.
6. MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
7. Water Content, %: Water content of the soil sample, expressed as percentage of dry weight of sample.
8. Dry Unit Weight, pcf: Dry weight per unit volume of soil sample measured in laboratory, in pounds per cubic foot.
9. REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.

FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity
COMP: Compaction test
CONS: One-dimensional consolidation test
LL: Liquid Limit, percent
PI: Plasticity Index, percent
SA: Sieve analysis (percent passing No. 200 Sieve)
UC: Unconfined compressive strength test, Qu, in ksf
WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS

Silty SAND (SM)

Poorly graded SAND with Silt (SP-SM)

TYPICAL SAMPLER GRAPHIC SYMBOLS

Auger sampler

CME Sampler

Pitcher Sample

Bulk Sample

Grab Sample

2-inch-OD unlined split spoon (SPT)

3-inch-OD California w/ brass rings

2.5-inch-OD Modified California w/ brass liners

Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

Water level (at time of drilling, ATD)

Water level (after waiting, AW)

Minor change in material properties within a stratum

Inferred/gradational contact between strata

Queried contact between strata

GENERAL NOTES

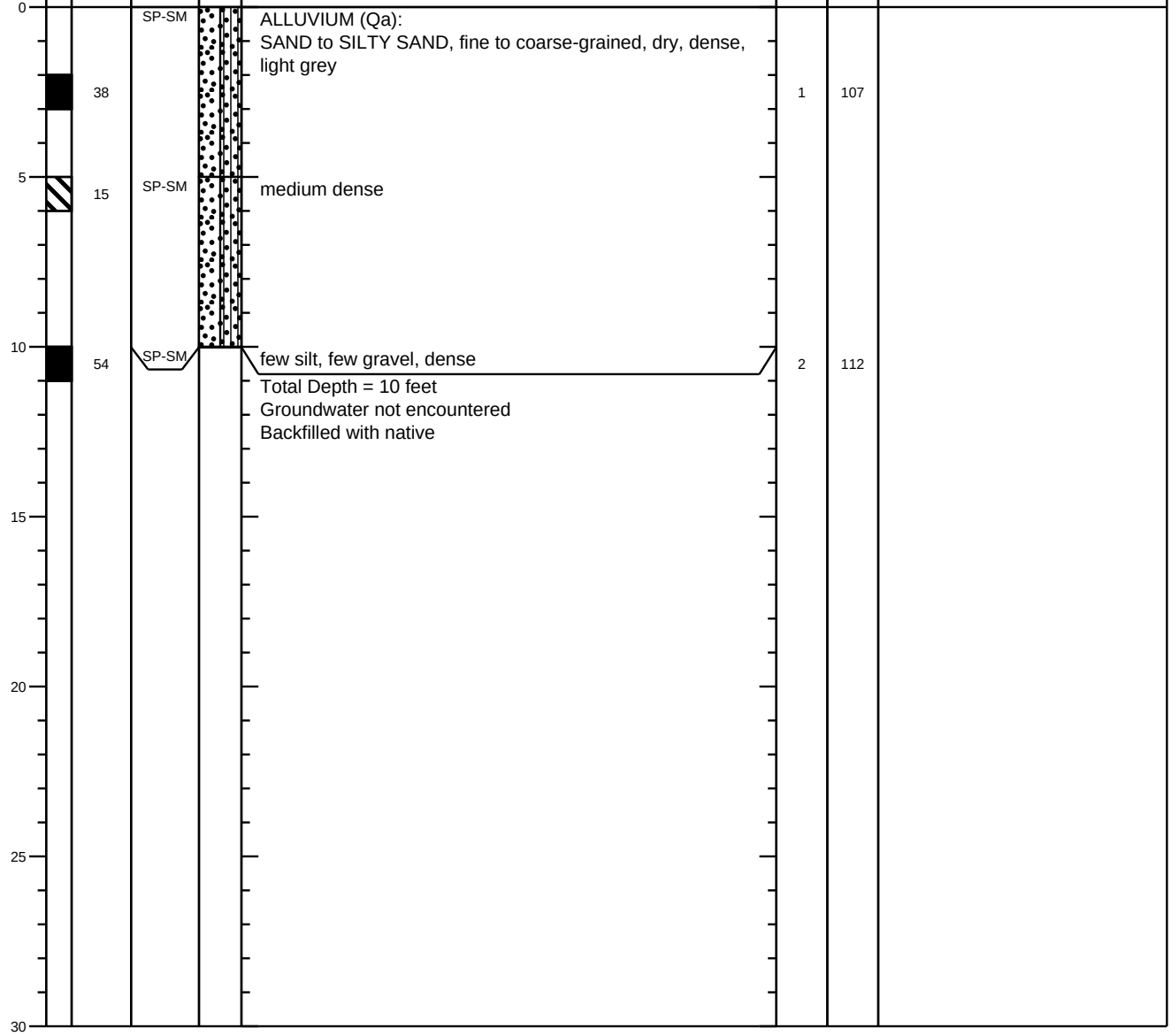
1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

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Figure A-1

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-1
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **10 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	



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Figure A-2

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-2
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **20 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	

Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
0			SP-SM		ALLUVIUM (Qa): SAND to SILTY SAND, fine to coarse-grained sand, few gravel, medium dense, light grey			
		13						
5		42	SP-SM		dry, medium dense	1	115	
10		25	SP-SM		few silt, medium dense			
15		50/4"	SP-SM		some gravel, dry, dense, light grey to olive grey	2	125	
20		42	SP-SM		dense			
					Total Depth = 20 feet Groundwater not encountered Backfilled with native			
25								
30								

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Figure A-3

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-3
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **10 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	

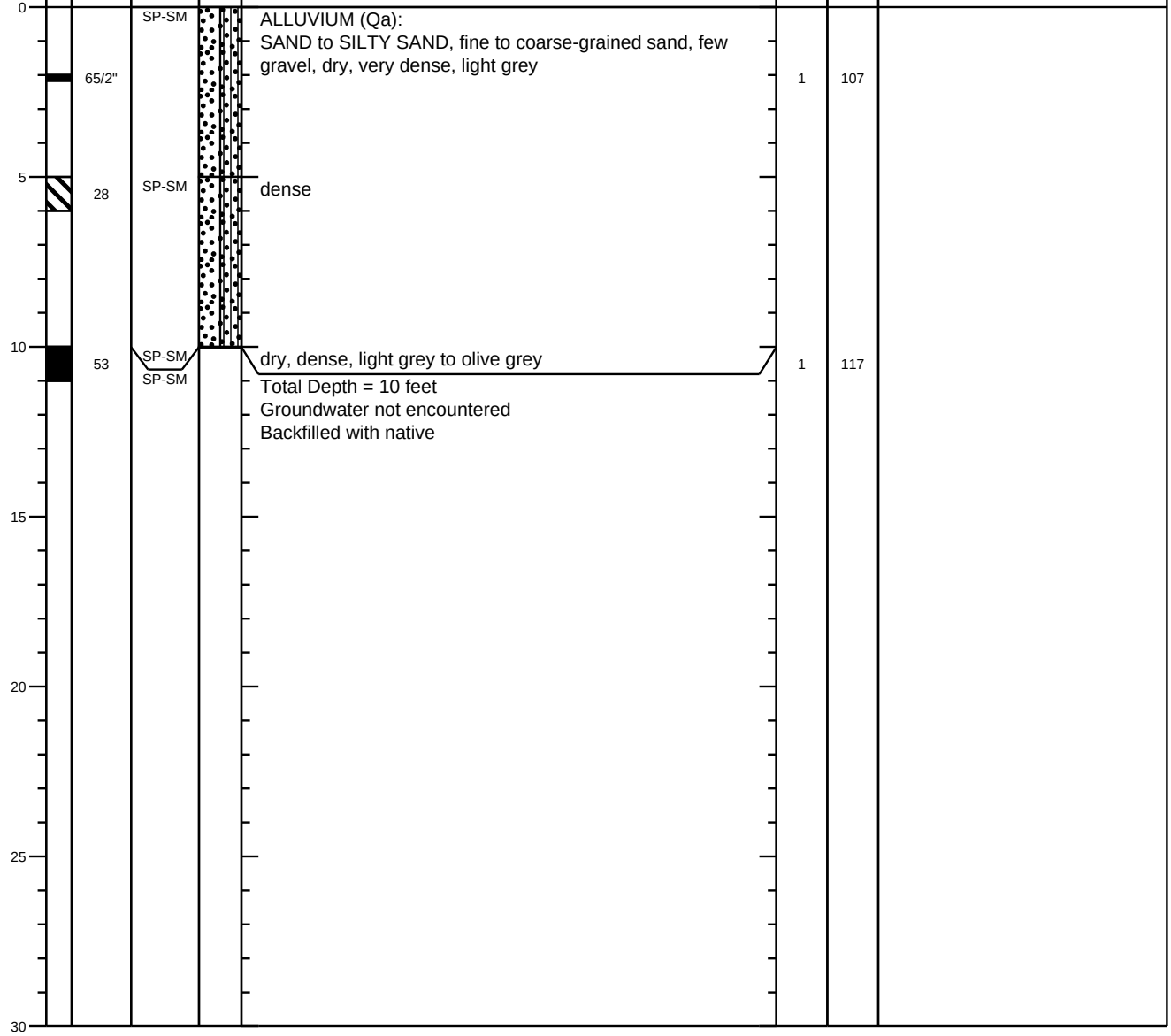
Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
0			SP-SM		ALLUVIUM (Qa): SAND to SILTY SAND, fine to coarse-grained sand, few gravel, dry, medium dense, light grey			
		35				1	111	
5		16	SP-SM		medium dense			
10		36	SP-SM		dry, medium dense, light grey to olive grey	2	110	
			SP-SM		Total Depth = 10 feet Groundwater not encountered Backfilled with native			
15								
20								
25								
30								

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Figure A-4

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-4
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **10 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	

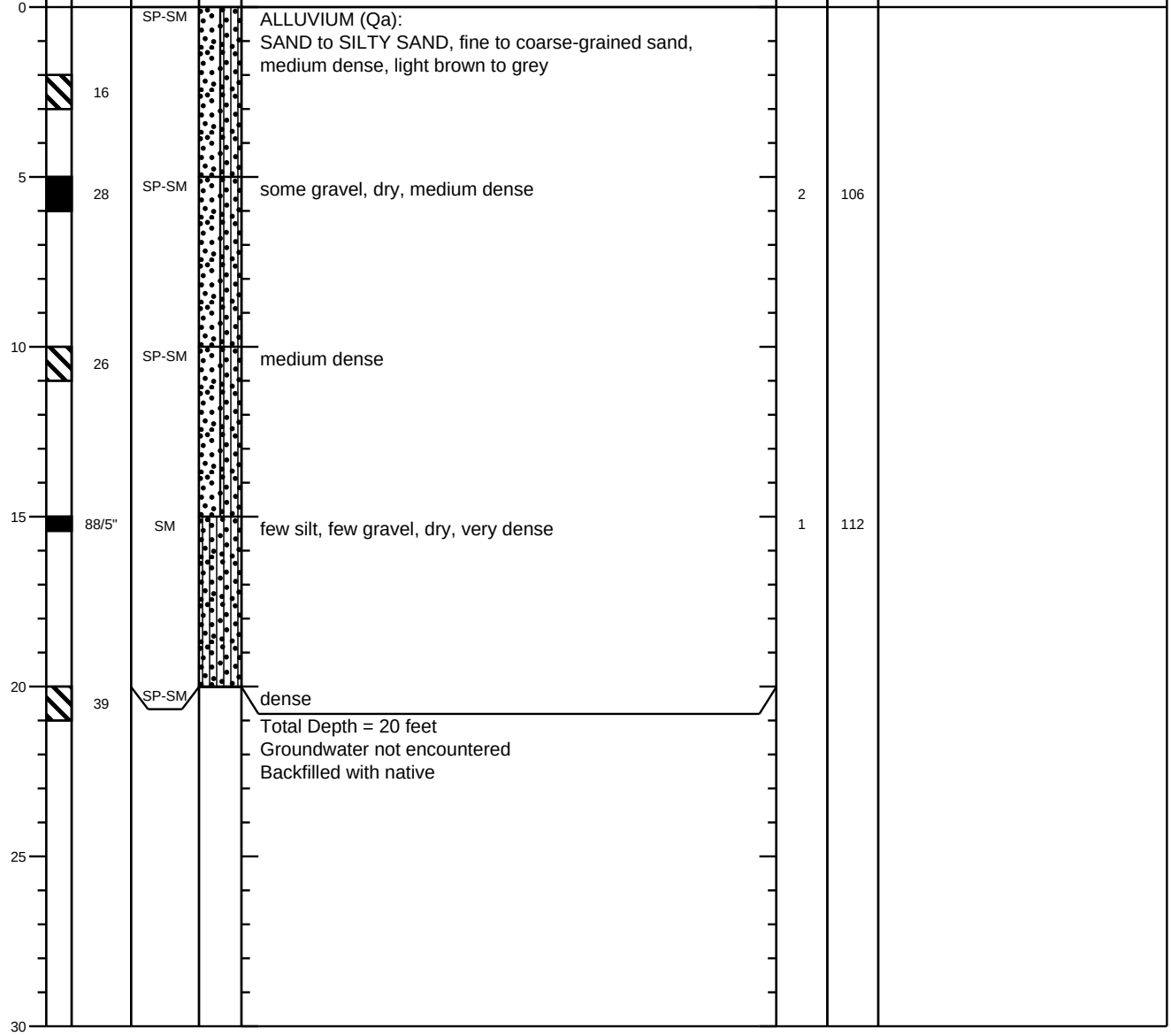


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Figure A-5

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-5
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **20 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	

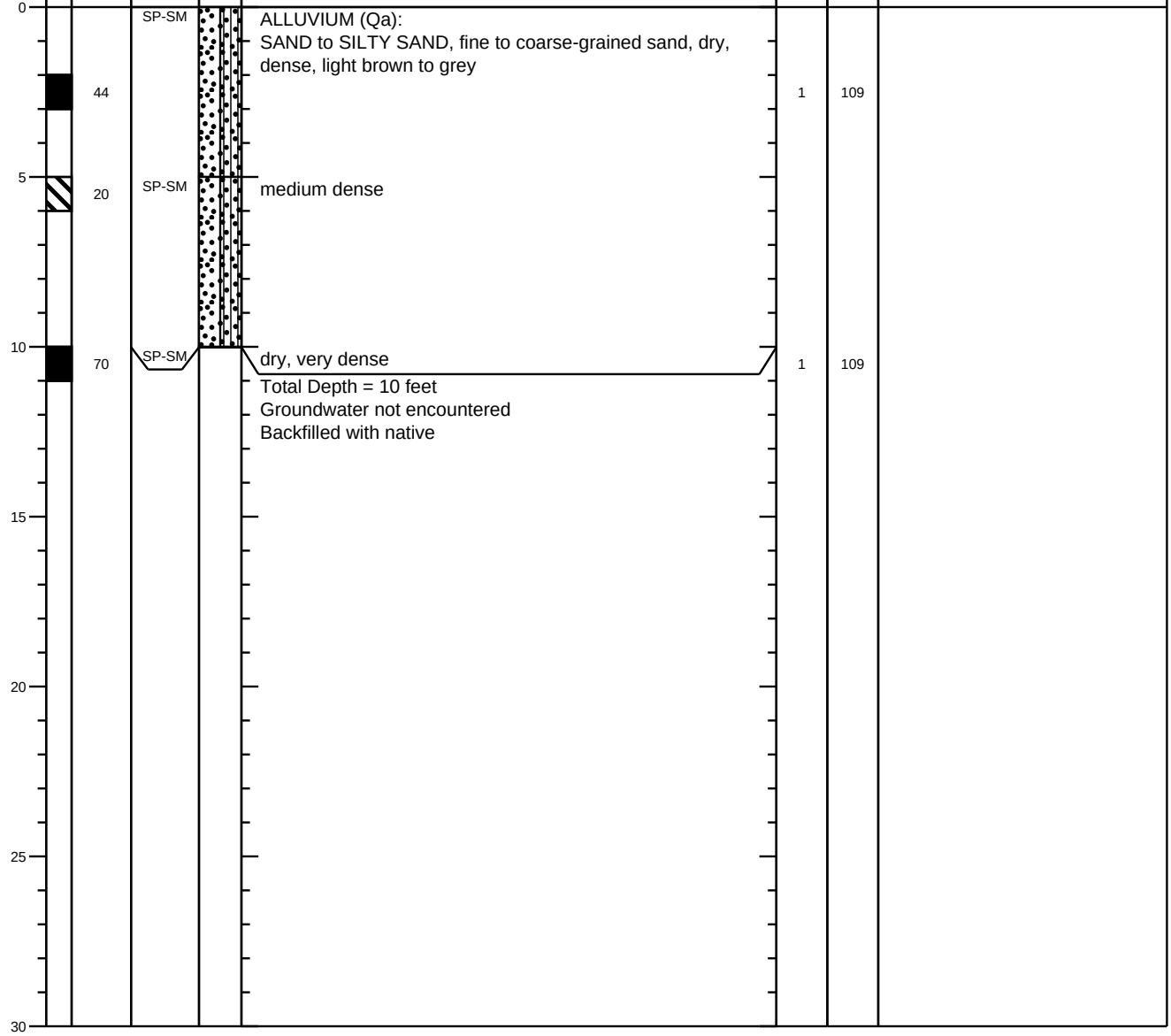


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Figure A-6

Project: APN 685-100-007 & 685-110-017	NTS GEOTECHNICAL	Log of Boring B-6
Project Location: APN 685-100-007 & 685-110-017, Rancho Mirage		Sheet 1 of 1
Project Number: 22587		

Date(s) Drilled **1/13/2023**	Logged By **ERL**	Checked By **NS**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type **8"**	Total Depth of Borehole **10 feet**
Drill Rig Type **CME 75**	Drilling Contractor **OWD**	Approximate Surface Elevation **N/A**
Groundwater Level and Date Measured **Not Encountered**	Sampling Method(s) **Modified California, SPT**	Hammer Data **140-lb Autohammer**
Borehole Backfill **Native**	Location **APN 685-100-007 & 685-110-017, Rancho Mirage**	



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Figure A-7

NTS GEOTECHNICAL

APPENDIX B

Geotechnical Laboratory Testing

NTS GEOTECHNICAL

Appendix B
Geotechnical Laboratory Testing

Laboratory Moisture Content and Density Tests

The moisture content and dry densities of selected driven samples obtained from the exploratory boring was evaluated in general accordance with the latest version of ASTM D 2937. The test results are presented on the log of the exploratory boring in Appendix A.

Corrosion Suite

The corrosion potential of typical on-site materials under long-term contact with both metal and concrete was determined by chemical and electrical resistance tests. The soluble sulfate test for potential concrete corrosion was performed in general accordance with ASTM D4327. The test results are attached to this Appendix B.

Grain Size Analysis

The number of fines passing the No. 200 sieve was evaluated by the wash sieve. The test procedure was in general accordance with ASTM D422. The results are attached to this Appendix B.

Boring No.	Depth (ft)	Fines Passing No. 200, %
B-1	5	6
B-2	10	7
B-3	20	9

Direct Shear Tests

Direct shear tests were performed on selected remolded and relatively undisturbed soil samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of the materials. The samples were inundated during shearing to represent adverse field conditions. Direct shear test results are attached to this Appendix B.

Consolidation Test

Consolidation tests was performed on a selected driven soil sample in general accordance with the latest version of ASTM D2435. The sample was inundated during testing to represent adverse field conditions. The percent consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. Consolidation testing results are attached to this Appendix B.

PROJECT NO.: 22587

PROJECT ADDRESS: APN 685-100-007

LABORATORY RECAPITULATION 1

Explorations	Depth (ft)	Material	Dry Density (p.c.f.)	Moisture Content (%)
B-1	2.0	Qa	107	1
	10.0	Qa	112	2
B-2	5.0	Qa	115	1
	15.0	Qa	125	2
B-3	2.0	Qa	111	1
	10.0	Qa	110	2
B-4	2.0	Qa	117	1
	10.0	Qa	117	1
B-5	5.0	Qa	106	2
	15.0	Qa	112	1
B-6	2.0	Qa	109	1
	10.0	Qa	109	1

LABORATORY RECAPITULATION 2

Explorations	Depth (ft)	pH	As-Is Soil Resistivity (ohm-cm)	Minimum Soil Resistivity (ohm-cm)	Chloride (ppm)	Sulfate (ppm)
B-2	2.0	7.80	55,000	4,400	140	70

Grain Size Analysis (ASTM D422)

PLATE:	**SV-1**
P.N.	**22587**

Explorations	Sample Depth (ft)	Soil Description	% of Fines (-200)
B-1	5	Qa	6
B-2	10	Qa	7
B-5	20	Qa	9

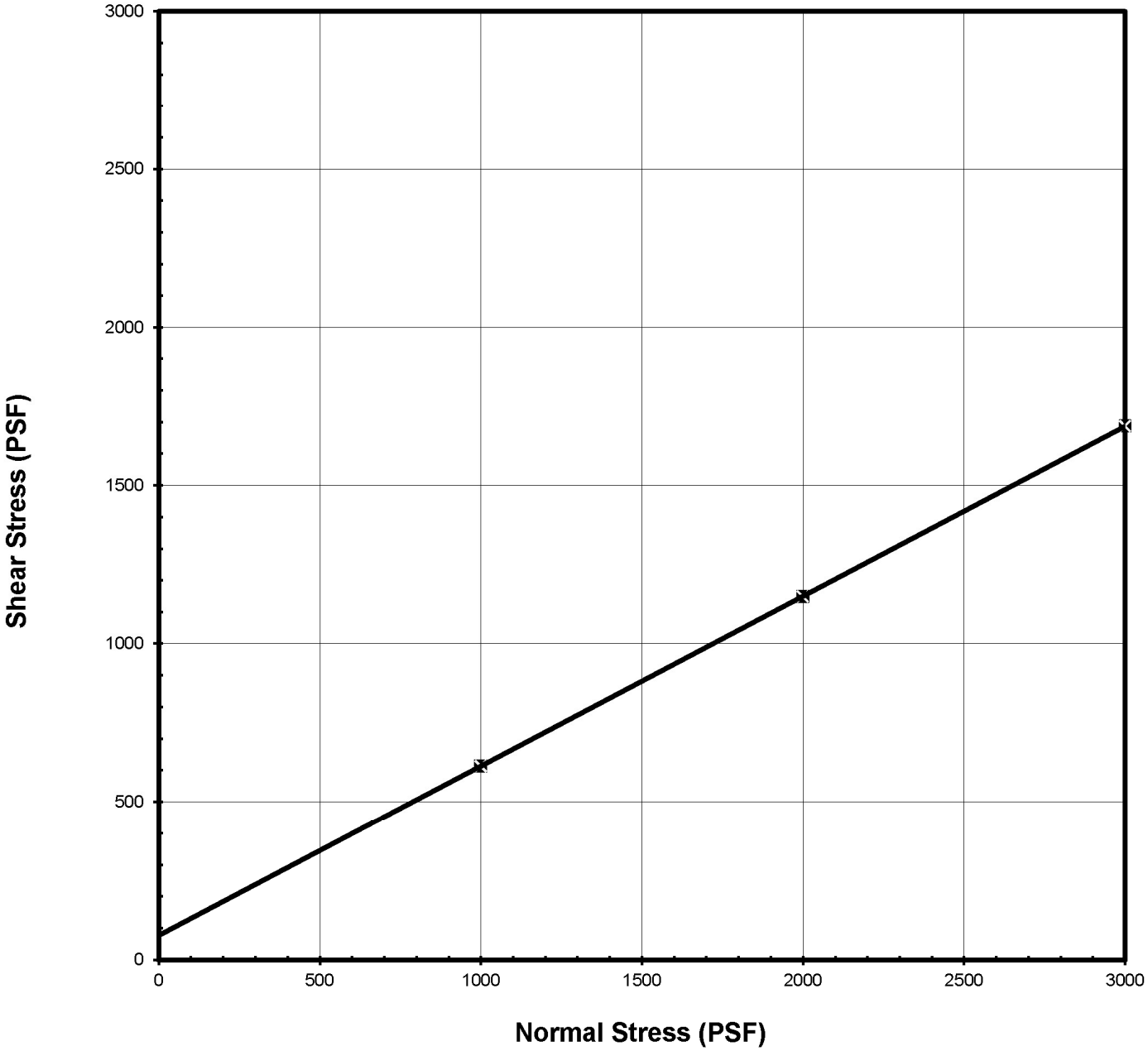
Direct Shear Test Diagram (D-3080)

PLATE: S-1

P.N. 22587

Sample Description	Sample Identification	Test Type	Sample Test State	Number of Passes
Qa	B-2 @ 5.0'	Ultimate	Saturated	1

Soil Dry Density (PCF)	115	Shear Strength Values:	
Soil Moisture Content (%)	16.5	Phi (Degrees)	28.2
Soil Saturation (%)	99.8	Cohesion (PSF)	77.3



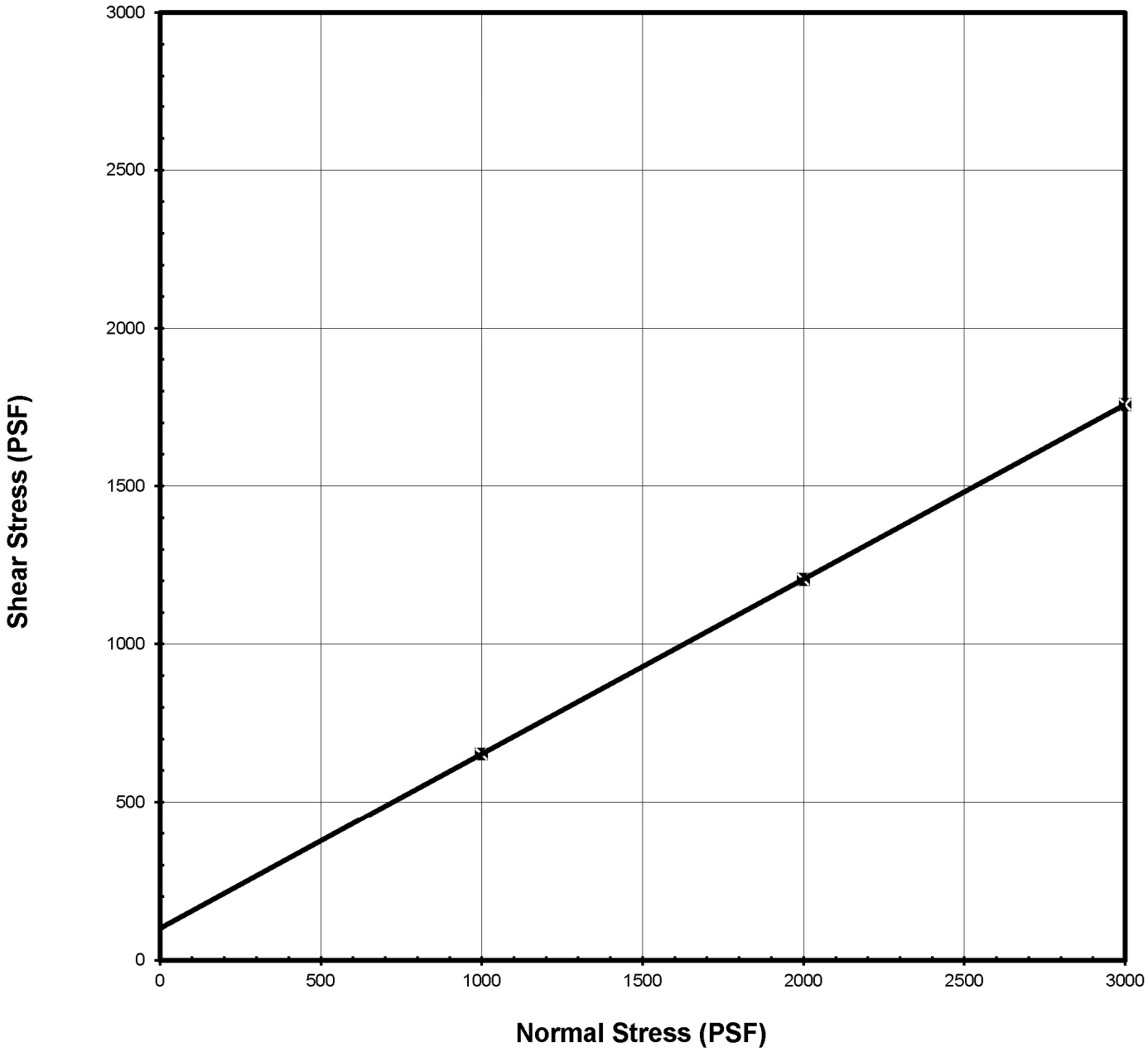
Direct Shear Test Diagram (D-3080)

PLATE: S-2

P.N. 22587

Sample Description	Sample Identification	Test Type	Sample Test State	Number of Passes
Qa	B-6 @ 2.0'	Ultimate	Saturated	1

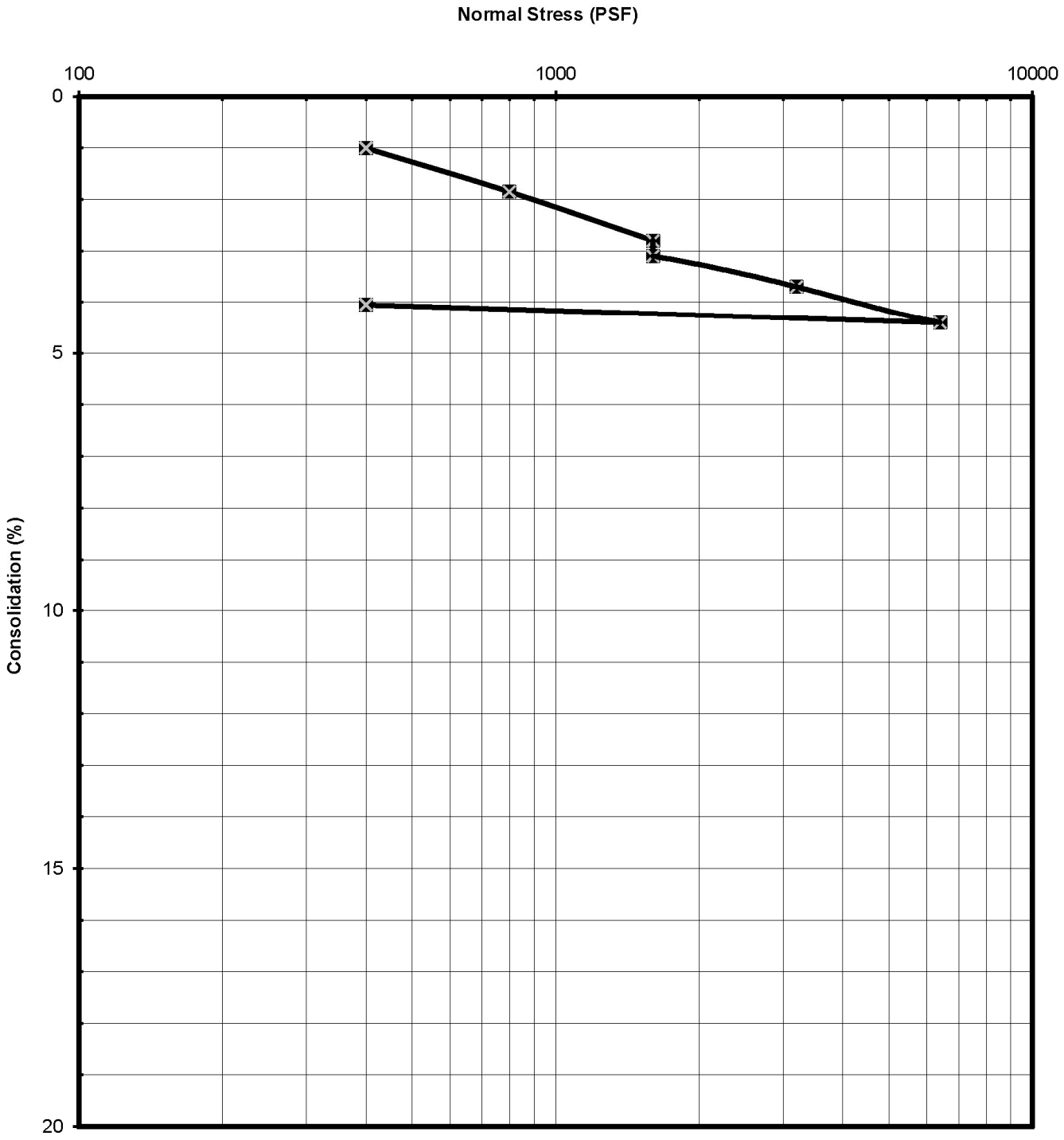
Soil Dry Density (PCF)	109	Shear Strength Values:	
Soil Moisture Content (%)	19.5	Phi (Degrees)	28.9
Soil Saturation (%)	99.9	Cohesion (PSF)	100.3



Consolidation Pressure Curve (D-2435)

Sample Identification	Sample Description
B-2 @ 15.0'	Qa

PLATE: C-1
P.N. 22587



Consolidation Pressure Curve (D-2435)

Sample Identification	Sample Description
B-3 @ 10.0'	Qa

PLATE: C-2
P.N. 22587

