

# Gopher Canyon Water Pipeline Improvement Project

Initial Study/Mitigated Negative Declaration

Prepared for:



**Rainbow Municipal Water District**  
3707 Old Highway 395  
Fallbrook, CA 92028

Prepared by:

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# 1.0 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970, as amended, and the CEQA Guidelines, as revised. This IS/MND evaluates the environmental effects of the Gopher Canyon Water Pipeline Improvement Project (project). The project site is located within the Rainbow Municipal Water District (District) service area in the unincorporated community of Bonsall in the County of San Diego. The District is the lead agency for the proposed project. The IS/MND includes the following components:

- A Draft MND and the formal findings made by the District that the project would not result in significant effects on the environment, as identified in the IS Checklist.
- A detailed Project Description.
- The CEQA IS Checklist, which provides standards to evaluate the potential for significant environmental impacts from the proposed project, is adapted from Appendix G of the CEQA Guidelines. The project is evaluated in 20 environmental issue categories to determine whether the project's environmental impacts would be significant in any category. Brief discussions are provided that further substantiate the project's anticipated environmental impacts in each category.

Because the proposed project fits into the definition of a "project" under Public Resources Code Section 21065 requiring discretionary approval by the District and because it could result in a significant effect on the environment, the project is subject to CEQA review. The IS Checklist was prepared to determine the appropriate environmental document to satisfy CEQA requirements: an Environmental Impact Report, an MND, or a Negative Declaration. The analysis in this IS Checklist supports the conclusion that the project would not result in significant environmental impacts with the incorporation of mitigation measures; therefore, an MND has been prepared.

This IS/MND will be circulated for 30 days for public and agency review, during which time individuals and agencies may submit comments on the adequacy of the environmental review. Following the public review period, the District will consider any comments received on the IS/MND when deciding whether to adopt the MND.

## 2.0 PROJECT DESCRIPTION

### 2.1 Project

Gopher Canyon Water Pipeline Improvement Project

### 2.2 Lead Agency

Rainbow Municipal Water District

## **2.3 Contact Person and Phone**

Chad Williams, Acting District Engineer  
Rainbow Municipal Water District  
(760) 728-1178 ext. 114

## **2.4 Project Location**

The proposed project is located in the unincorporated community of Bonsall, west of Interstate 15 and approximately 12 miles inland from the Pacific Ocean in northwest San Diego County, California (Figure 1, *Regional Location*). More specifically, the project sites are located within the roadways of Disney Lane, Gopher Canyon Road, Integrity Court, and Margale Lane (Figure 2, *Project Vicinity [Aerial Photograph]*).

## **2.5 General Plan Designations**

Public Agency Lands, Public/Semi-Public Facilities, Semi-Rural Residential (SR-10)

## **2.6 Zoning**

Rural Residential, Residential - Variable

## **2.7 Project Description**

The pipelines along Gopher Canyon Road and Integrity Court are fragmented and have several dead ends which inhibit flow between the Gopher Canyon Tank and the Turner Tank. In addition, the 1,340-foot stretch of 4-inch and 6-inch pipeline between Margale Lane and Disney Lane, north of Gopher Canyon Road, was constructed in 1960 in an easement which is very difficult to access for repairs and maintenance.

The project proposed by the District includes several pipeline improvements that remedy looping issues by connecting dead ends along Integrity Court and Gopher Canyon Road. The Disney Lane component would connect the pipelines along Gopher Canyon Road between Margale Lane and Disney Lane. Also, the fire hydrants, meters, and private water laterals which are currently connected to the pipeline in the easement that is difficult to access would be relocated to Gopher Canyon Road. The 4-inch and 6-inch pipeline would be abandoned and the portion of the pipeline currently in the roadway along Margale Lane would be replaced with 8-inch high pressure polyvinyl chloride (PVC) pipe which is not vulnerable to corrosion.

The proposed project includes the construction of three pipeline improvement components: Integrity Court (1,068 feet of 8-inch polyvinyl chloride [PVC] pipeline connecting two existing pipelines to create a single looped pipeline); Gopher Canyon Road Sections 1 and 2 (comprising the addition of a total of 2,125 feet of 8-inch PVC pipeline in two separate sections of pipeline within the public right-of-way that will connect existing pipelines, creating a single looped pipeline); replacement of 550 feet of pipeline between Disney Lane and Margale Lane and the addition of 287 feet of pipeline within the paved section of Margale Lane; and replacement of 300 feet of pipeline in Margale Lane; and Disney Lane (addition of 1,363 feet of 12-inch PVC pipeline; Figures 3a through 3e, *Site Photos*). The work for the Disney Lane component also includes the installation of valves, fire hydrants, air release and vacuum

relief assemblies, blow off assemblies, relocation of water meters, constructing private service laterals, abandoning old pipelines, reestablishing survey monuments, and tying into existing water mains.

Construction of the proposed project would occur within the existing roadway rights-of-way (ROW) and adjacent disturbed areas. Ground disturbing activities would occur in previously graded and disturbed areas and would be limited to relatively shallow depths (no greater than five feet). Construction equipment would include an excavator, dump truck, pump, and loader. Construction could temporarily block portions (e.g., up to one lane at a time) of Gopher Canyon Road, Margale Lane, and Integrity Court. Project construction would occur during daylight hours and no lighting would be required. Following construction, all materials associated with construction would be removed and the project sites would be returned to their original condition. Construction is anticipated to be completed in 2021.

## **2.8 Surrounding Land Uses and Setting**

The proposed project is located within the unincorporated community of Bonsall. Bonsall is a rural community in the foothills of the Peninsular Mountain Range in northern San Diego County. Local topography is characterized by hills and valleys. Development in the area is predominantly low density, estate-type residential, with agricultural uses occupying the majority of the land use. The project sites are composed entirely of existing paved roads. The surrounding area includes rural residential development, non-native vegetation, and agricultural uses. Undisturbed, native vegetation communities consisting of southern riparian forest located to the southwest of the Disney Lane pipeline and Diegan coastal sage scrub to the west of the Integrity Court pipeline also occur in the project area.

The Integrity Court pipeline is located within the roadway of Integrity Court between Protea Vista Terrace and Protea Vista Road (*Figure 4a, Preliminary Alignment Plan – Integrity Court*). The area surrounding the Integrity Court segment includes modern, estate-style residences with landscaped vegetation along the street and Diegan coastal sage scrub located to the west.

The Disney Lane segments consists of two pipelines located within Gopher Canyon Road between Disney Lane and within Margale Lane and along Margale Lane and the southern portion of the adjacent residence (*Figure 4b, Preliminary Alignment Plan – Disney Lane; 4c, Preliminary Alignment Plan – Margale Lane*). The area surrounding the Disney Lane segment within Gopher Canyon Road is characterized by rural residential development to the north, agricultural uses consisting of citrus orchards to the south, and southern riparian forest to the southwest. The area surrounding the Disney Lane segment within Margale Lane is characterized by rural residential development and landscaped vegetation to the north and south with agricultural uses and greenhouses to the east.

The Gopher Canyon Road (Sections 1 and 2) segments consists of two pipelines are located within Gopher Canyon Road between Reza Court and Valley of the King Road and between Avohill Drive and El Paseo (*Figure 4d, Preliminary Alignment Plan – Gopher Canyon Road [Section 1]; Figure 4e, Preliminary Alignment Plan – Gopher Canyon Road [Section 2]*). The Gopher Canyon Road Section 1 is surrounded by agricultural uses including citrus orchards to the south, rural residential developments to the north, and disturbed southern willow scrub to the southwest. The Gopher Canyon Road Section 2 is surrounded by non-native vegetation and greenhouses to the north, avocado orchards to the south, and Diegan coastal sage scrub to the southwest.

## 2.9 Other Required Agency Approvals

The District is both the project proponent and the Lead Agency under CEQA. In its role as Lead Agency, the District is responsible for ensuring the adequacy of this IS/MND. Internal review and approvals would be handled by District staff.

## 2.10 Consultation with California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Pursuant to Public Resources Code Section (PRC) 21080.3.1

HELIX contacted the Native American Heritage Commission (NAHC) for a Sacred Lands File (SLF) search of the project sites and for a list of consultant tribes with traditional lands or cultural places within the project sites. A response was received from the NAHC on October 7, 2020 which indicated that the results were negative for the project area but stated that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources.

The District extended meeting invitations and provided an overview of the proposed project on January 8, 2021 to tribes with traditional lands or cultural places within the project area. The following five tribes were consulted: The Pala Band of Mission Indians (Pala), the Rincon Band of Mission Indians (Rincon), the La Jolla Band of Luiseño Indians (La Jolla), the San Pasqual Band of Mission Indians (San Pasqual), and the Pauma Band of Luiseño Indians (Pauma). Response to the meeting invitations have not yet been received from the tribes.

## 2.11 Summary of Environmental Factors Potentially Affected

A summary of the environmental factors potentially affected by this project, consisting of Potentially Significant Impact Unless Mitigated, include:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Aesthetics                       | <input type="checkbox"/> Greenhouse Gas Emissions       | <input type="checkbox"/> Public Services                               |
| <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Hazards/Hazardous Materials    | <input type="checkbox"/> Recreation                                    |
| <input type="checkbox"/> Air Quality                      | <input type="checkbox"/> Hydrology/Water Quality        | <input checked="" type="checkbox"/> Transportation                     |
| <input checked="" type="checkbox"/> Biological Resources  | <input checked="" type="checkbox"/> Land Use & Planning | <input checked="" type="checkbox"/> Tribal Cultural Resources          |
| <input checked="" type="checkbox"/> Cultural Resources    | <input type="checkbox"/> Mineral Resources              | <input type="checkbox"/> Utilities/Service Systems                     |
| <input type="checkbox"/> Energy                           | <input checked="" type="checkbox"/> Noise               | <input checked="" type="checkbox"/> Wildfire                           |
| <input type="checkbox"/> Geology/Soils                    | <input type="checkbox"/> Population & Housing           | <input checked="" type="checkbox"/> Mandatory Findings of Significance |



## 3.0 ENVIRONMENTAL CHECKLIST

This section analyzes the potential environmental impacts which may result from the proposed project. For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and answers are provided according to the analysis undertaken as part of the Initial Study. The analysis considers the project's short-term impacts (i.e., construction-related), and its operational or day-to-day impacts. For each question, there are four possible responses. They include:

1. **No Impact.** Future development arising from the project's implementation will not have any measurable environmental impact on the environment and no additional analysis is required.
2. **Less Than Significant Impact.** The development associated with project implementation will have the potential to impact the environment; these impacts, however, will be less than the levels or thresholds that are considered significant, and no additional analysis is required.
3. **Potentially Significant Unless Mitigated.** The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the project's physical or operational characteristics can reduce these impacts to levels that are less than significant.
4. **Potentially Significant Impact.** Future implementation will have impacts that are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

### 3.1 Aesthetics

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Have a substantial adverse effect on a scenic vista?*

**Less Than Significant Impact.** A scenic vista is defined as a viewpoint that provides expansive view of a highly valued landscape for the benefit of the general public. The project sites are composed of existing paved roads within rural residential development, with a General Plan land use designation of Semi-Rural Residential and Public/Semi-Public Facilities (County of San Diego [County] 2011a). The San Marcos Mountains, located approximately one mile south of the project sites, are an important visual landmark for the community of Bonsall (County 2011a). Gopher Canyon Road is a County-designated scenic road for the rural mountain views it provides (County 2011b). Views of the hillsides are available to vehicular passengers and pedestrians traveling along Gopher Canyon Road.

Construction activities would involve the presence of construction equipment, fencing/signage, and vehicles; however, the presence of construction equipment would be temporary. Project-related effects on scenic vistas would be both minimal and temporary as they would only occur during construction. Upon completion of construction, the proposed pipelines would be underground and would have no impact on scenic vistas. Therefore, the proposed project would result in a less than significant impact to scenic vistas.

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

**No Impact.** Highway 76, located approximately three miles northwest of the project sites, is listed by the California Department of Transportation (Caltrans) as an Eligible State Scenic Highway, but is not officially designated (Caltrans 2018). As described above, impacts to visual resources would be minimal and temporary and confined to construction activities. Due to topography and distance, the project would likely not be visible from the highway. Therefore, the project would not damage scenic resources within a state scenic highway, and no impacts would occur.

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

**Less Than Significant Impact.** The existing visual quality of the site is considered high due to the scenic rural landscape. During the construction period, the presence of construction vehicles and equipment would result in short-term visual effects to the project sites and their surroundings. Due to the short-term nature of these potential effects, however, impacts related to existing visual character or quality of the sites and surrounding areas would be less than significant during construction. Upon project completion, all materials associated with construction would be removed and the roads and surrounding areas would be restored to their original condition. Therefore, impacts related to existing visual character or quality of the sites and surrounding areas would remain less than significant upon project completion.

*e. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

**No Impact.** The proposed project involves underground pipelines that would not be visible and would not require any associated lighting. As noted in the Project Description, project construction would occur during daylight hours, during which time no lighting would be required. No impacts associated with light or glare would occur as a result of project implementation.

### 3.2 Agriculture and Forestry Resources

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency?*

**No Impact.** According to the California Department of Conservation's Important Farmland Finder, the undeveloped land located south of Margale Lane is designated as Farmland of Statewide Importance (California Department of Conservation [CDC] 2012). However, the project improvements would occur within the existing roadway ROW and would not affect the agricultural resource area. Therefore, the proposed project would not result in the conversion of existing farmland to non-agricultural use.

b. *Conflict with existing zoning for agricultural use, or a Williamson Act Contract?*

**No Impact.** There are no Williamson Act contracts in the project vicinity (CDC 2013). Implementation of the proposed project would involve the installation of underground pipelines and would not result in conflicts with existing zoning for agricultural use. No associated impacts would occur.

- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

**No Impact.** The project site is not designated or zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not conflict with existing zoning for such lands, and no impact would occur.

- d. *Result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** As previously stated, the project site is not located in an area designated as forest land. Accordingly, project implementation would not convert forest land to non-forest use, and no impact would occur.

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

**No Impact.** There are no agricultural operations or timberland production operations within the project site or vicinity. The project does not propose changes that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

### 3.3 Air Quality

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following discussion is based on air emissions calculations and modeling prepared by HELIX Environmental Planning, Inc. (HELIX 2020a). The output worksheets are included as Appendix A to this IS/MND.

- a. *Conflict with or obstruct implementation of the applicable air quality plan?*

**No Impact.** The proposed project is located within the San Diego Air Basin (SDAB). Air quality in the SDAB is regulated by the San Diego Air Pollution Control District (SDAPCD). The SDAPCD is the government agency that regulates sources of air pollution within the County. Currently, the SDAB is in “non-attainment” status for criteria pollutants ozone (O<sub>3</sub>), 10-micron or less particulate matter (PM<sub>10</sub>),

and 2.5-micron or less particulate matter (PM<sub>2.5</sub>). The SDAPCD developed a Regional Air Quality Strategy (RAQS), the applicable air quality plan, to provide control measures to achieve attainment status for these criteria pollutants. The RAQS relies on information from the California Air Resources Board (CARB) and the San Diego Association of Governments (SANDAG), including mobile and area source emissions and information regarding projecting growth in the County, to project future emissions and then determine strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and the County. Projects that propose development that are consistent with the growth anticipated by the County's General Plan are therefore consistent with the RAQS. The project would not result in a significant air quality impact from operational activity, as described further in Item III.b. Moreover, the proposed project does not include growth-generating components. As such, the proposed project is consistent with the General Plan and would be consistent with the RAQS. No impact would occur.

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

**Less Than Significant Impact.** Air quality is defined by ambient air concentrations of six specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. These pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur dioxide, and lead. Air pollutants generated by the proposed project would be emissions associated with temporary construction activities.

#### Construction

Construction of the proposed project would result in temporary increases in air pollutant and dust emissions generated primarily from construction equipment exhaust, earth disturbance/excavation, and construction worker vehicle trips. Construction emissions were calculated using the South Coast Air Quality Control District's California Emissions Estimator Model (CalEEMod) emissions inventory model. Detailed construction emissions assumptions and CalEEMod inputs and outputs are provided in Appendix A.

Table 1, *Estimated Maximum Daily Construction Emissions*, provides a summary of the daily construction emission estimates. The maximum daily emissions are provided for each individual activity, as well as a total amount of emissions that assumes all activities would overlap concurrently. Screening thresholds established by the SDAPCD have been used based on SDAPCD Rules 20.2 and 20.3 Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources to determine significance for air emissions impacts.

Screening thresholds established by the SDAPCD have been used based on SDAPCD Rules 20.2 and 20.3 Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources to determine significance for air emissions impacts. According to Rules 20.2 and 20.3, if these incremental levels are exceeded, an AQIA must be conducted to demonstrate that the project would not cause or contribute to a violation of an air quality standard. For CEQA purposes, these screening-level thresholds can be used to demonstrate that a project's emissions would not result in a significant impact to air quality. Because the AQIA thresholds do not address reactive organic gases (ROG), the screening-level for ROG used in this analysis has been adopted from the County's Guidelines for Determining Significance. For PM<sub>2.5</sub>, the USEPA's "Final Clean Air Rule to Implement the Fine Particle National Ambient Air Quality Standards"

recommends a significance threshold of 10 tons per year, which equates to 55 pounds per day. The screening level thresholds are included in Table 1.

**Table 1**  
**ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS**  
**(pounds/day)**

<b>Activity</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Trenching	<1	4	4	<1	<1	<1
Pipeline Installation	<1	8	10	<1	<1	<1
<b>Maximum Daily Emissions</b>	<b>1</b>	<b>12</b>	<b>14</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>
Screening Level Threshold	75	250	550	250	100	55
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note: The results represent the maximum daily emissions for each activity, rounded to the nearest whole number (see Appendix A).

ROG = reactive organic gases; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>x</sub> = sulfur oxides;

PM<sub>10</sub> = particulate matter 10 microns or less in diameter; PM<sub>2.5</sub> = particulate matter 2.5 microns or less in diameter

As shown in the table, none of the criteria pollutant emissions would exceed the respective screening thresholds. Thus, construction-related air quality impacts would be less than significant.

Sensitive receptors, including adjacent residents along portions of Gopher Canyon Road, Margale Lane, and Integrity Court, would be exposed to particulate matter (fugitive dust) emissions during the construction period. This would be a temporary construction impact, which would exist on a short-term basis during, and would cease upon completion of, construction. To reduce the effects to sensitive receptors, the project would comply with all applicable SDAPCD Rules and Regulations, including Rule 55 related to fugitive dust emissions, as a matter of project design. Rule 55 requires the following:

1. No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period; and
2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of any of the equally effective track-out/carry-out and erosion control measures listed in Rule 55 that apply to the project or operation. These measures include: track-out grates or gravel beds at each egress point; wheel-washing at each egress during muddy conditions; soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; watering for dust control; and using secured tarps or cargo covering, watering, or treating of transported material for outbound transport trucks. Erosion control measures must be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations.

### Operations

Following the construction of the project, activities on site would be limited to routine maintenance. Thus, operations-related air quality impacts would be less than significant. Based on the foregoing, criteria pollutant emission impacts from project construction and operations would be less than significant.

c. *Expose sensitive receptors to substantial pollutant concentrations?*

**Less Than Significant Impact.** Sensitive populations (i.e., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than are the general population. Sensitive receptors in the project vicinity include nearby single-family residences. As discussed above in Item III.b, the project would not generate substantial concentrations of criteria pollutants. Diesel exhaust particulate matter would be emitted from heavy equipment used during project construction, however. Diesel exhaust particulate matter in California is known to contain carcinogenic compounds. The risks associated with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure (i.e., 24 hours per day, 365 days per year for 70 years). Because emissions of diesel exhaust would be temporary and short-term, construction of the project would not result in long-term chronic lifetime exposure to diesel exhaust from heavy equipment. In addition, diesel emissions control measures would be implemented during project construction as project design features that would require the construction fleet to use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters CARB/USEPA Engine Certification Tier 3 equipment, or other equivalent methods approved by CARB. Therefore, air quality impacts related to the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

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

**Less Than Significant Impact.** The proposed project could produce odors during construction activities resulting from heavy diesel equipment exhaust and application of asphalt; however, standard construction practices would minimize the odor emissions and their associated impacts. Odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of construction. The proposed project would install underground pipelines and associated infrastructure, which would not generate odors during operation. Therefore, odor impacts would be less than significant.

### 3.4 Biological Resources

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A Biological Resources Letter Report (BLR) for the project was prepared by HELIX (2020b) to document the biological conditions within the project study area, identify the potential for sensitive resources to occur within the study area, and evaluate the potential for project impacts. The results and conclusions of the survey and report are summarized herein, and the report is included as Appendix B to this IS/MND.

- 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?*

**Potentially Significant Unless Mitigated.** The BLR prepared for the proposed project included general biological surveys and a thorough review of relevant maps, databases, and literature pertaining to biological resources known to occur within the project vicinity. The project sites are composed entirely of existing paved roads. The surrounding area is primarily composed of rural residential development made up of private residences, non-native vegetation, and orchard. Undisturbed, native vegetation communities consisting of southern riparian forest located to the southwest of the Disney Lane pipeline and Diegan coastal sage scrub to the west of the Integrity Court pipeline occur outside the project area.

#### Plant Species

Special-status plant species are those listed as federally threatened or endangered by the U.S. Fish and Wildlife Service (USFWS); State listed as threatened or endangered or considered sensitive by the California Department of Fish and Wildlife (CDFW); and/or, are California Native Plant Society's (CNPS) California Rare Plant Rank (CRPR) List 1A, 1B, or 2 species, as recognized in the CNPS' Inventory of Rare and Endangered Vascular Plants of California and consistent with the CEQA Guidelines. No special-status plant species were observed during the survey; none have a high or moderate potential to occur. All project sites are situated entirely within developed land, which has eliminated the potential for special-status plant species to occur within the project sites.



## Animal Species

Special-status animal species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and considered sensitive animals by the CDFW. No special-status animals were observed during the biological survey. Furthermore, no special-status animal species are likely to reside or use the project sites as breeding habitat due to the lack of suitable habitat and developed and disturbed nature of the sites and surrounding lands.

Four special-status animals species have a moderate to high potential to occur outside of the project disturbance area within coastal sage scrub habitat that occurs east and west of the Integrity Court pipeline: southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), which is a state watch list species, coastal California gnatcatcher (*Poliophtila californica californica*), which is a federally threatened species and state species of special concern, coastal whiptail (*Aspidoscelis tigris stejnegeri*), which is a state species of special concern, and red diamond rattlesnake (*Crotalus ruber*), which is a state species of special concern. Disturbed Diegan coastal sage scrub southwest of Gopher Canyon Road Section 2 is too small, disturbed, and fragmented to support sensitive species. In addition, least Bell's vireo (*Vireo bellii pusillus*), which is a federally and state endangered species, has a high potential to occur within off site southern riparian forest habitat that occurs southwest of Disney Lane and northeast of Gopher Canyon Road Section 2. The potential for these species to utilize the off-site habitat is moderate to high because of the overall quality of the habitat. However, it is not possible for these species to utilize any of the project sites for breeding or foraging as none of the project sites contain suitable habitat since they are all within roadway ROWs.

## Nesting Birds

If avoidance measures are not in place, the project could result in significant indirect impacts to bird species, including several sensitive bird species, such as the least Bell's vireo, coastal California gnatcatcher, southern California rufous-crowned sparrow, and tree-nesting raptors, in the event they are found to be nesting on or within 500 feet of project construction. Because all project sites are located within existing asphalt roadways and no vegetation removal is proposed, no direct impacts are expected to occur to bird species. Direct and indirect impacts to coastal whiptail and red diamond rattlesnake are also not expected due to the extremely small project footprint and availability of higher quality habitat in the surrounding area.

The project is required to comply with the regulations and guidelines of the Migratory Bird Treaty Act (MBTA) and California Fish and Game (CFG) Code. As such, the project must ensure no direct or indirect impacts to nesting birds, tree-nesting raptors, and sensitive bird species. Implementation of mitigation measure BIO-1 would reduce impacts to below a level of significance by ensuring that no indirect impacts occur to nesting birds, tree-nesting raptors, and southern California rufous-crowned sparrow during project construction.

**BIO-1 Pre-Construction Nesting Bird Survey and Avoidance.** Project clearing, grubbing, and grading shall avoid the avian breeding season (February 15 to September 15) and shall occur within the non-breeding season (September 16 to February 14) to ensure no direct and indirect impacts to nesting birds and raptors, including sensitive species such as the southern California rufous-crowned sparrow. Should clearing, grubbing, and/or grading be necessary within the avian breeding season, the project would be required to comply with the regulations and guidelines of the MBTA and CFG Code, including completion of a pre-

construction survey conducted by a qualified biologist to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, then clearing, grubbing, and grading shall be allowed to proceed. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged.

#### Coastal California gnatcatcher

Direct impacts to the coastal California gnatcatcher are not expected due to the fact that no direct impacts would occur to suitable habitat for either of these species. However, these species have the potential to nest off site, within 500 feet of project construction. Suitable nesting habitat for the coastal California gnatcatcher occurs within 500 feet of the Integrity Court segment. The project has been specifically designed to avoid sensitive resources and habitats and would be implemented entirely within developed land. Nevertheless, if avoidance measures are not in place, then project construction of the Integrity Court segment could result in potential significant noise-related indirect impacts on the coastal California gnatcatcher, if breeding individuals become displaced from their nests and fail to breed. The following mitigation measure would ensure that potential indirect impacts on the coastal California gnatcatcher are avoided during construction of the Integrity Court segment.

- BIO-2 Pre-Construction Coastal California Gnatcatcher Surveys and Noise Attenuation.** Project clearing, grubbing, grading, or other construction activities associated with the Integrity Court segment shall avoid the coastal California gnatcatcher breeding season (March 15 to June 30) and shall occur within the non-breeding season (July 1 to March 14). Should clearing, grubbing, and/or grading be necessary within the coastal California gnatcatcher breeding season (March 15 to June 30), no project work shall occur until the following requirements have been met:
- A. A qualified biologist (possessing a valid Federal Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey appropriate habitat (coastal sage scrub) areas within the off-site lands that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the coastal California gnatcatcher. Surveys for the coastal California gnatcatcher shall be conducted within suitable habitat pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction.
  - I. If gnatcatchers are present within the off-site lands, then no construction activities shall occur that would result in noise levels exceeding 60 dB(A) at the edge of occupied gnatcatcher habitat within the off-site lands. If construction noise would exceed 60 dB(A) or existing noise levels, then noise attenuation measures (e.g., sound walls, blankets, etc.) shall be implemented to reduce construction noise levels, as demonstrated through noise monitoring. If noise attenuation and monitoring demonstrate that construction noise cannot be reduced below 60 dB(A) or to existing levels, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (June 30).

- II. If gnatcatchers are not detected within the off-site lands, then the qualified biologist shall submit substantial evidence concluding that no impacts to this species are anticipated and no mitigation measures would be necessary.

#### Least Bell's vireo

Direct impacts to the least Bell's vireo are not expected due to the fact that no direct impacts would occur to suitable habitat for this species. However, this species has the potential to nest off site, within 500 feet of project construction. Suitable nesting habitat for the least Bell's vireo occurs within 500 feet of the Disney Lane and Gopher Canyon Road Section 2 segments. As previously stated, all project components are located entirely within developed land. Nevertheless, if avoidance measures are not in place, then project construction of Disney Lane and Gopher Canyon Road Section 2 segments could result in potential significant noise-related indirect impacts on the least Bell's vireo, if breeding individuals become displaced from their nests and fail to breed. The following mitigation measure would ensure that potential indirect impacts on the least Bell's vireo are avoided during construction of the Disney Lane and Gopher Canyon Road Section 2 segments.

**BIO-3 Pre-Construction Least Bell's Vireo Surveys and Noise Attenuation.** Project clearing, grubbing, grading, or other construction activities associated with the Disney Lane and Gopher Canyon Road Section 2 segments, shall avoid the least Bell's vireo breeding season (March 15 to September 15) and shall occur during the non-breeding season (September 16 to March 14). Should clearing, grubbing, and/or grading be necessary within the least Bell's vireo breeding season (March 15 to September 15), no project work shall occur until the following requirements have been met:

- A. A qualified biologist (possessing a valid Federal Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey appropriate habitat (southern riparian forest) areas within the off-site lands that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the least Bell's vireo. Surveys for the least Bell's vireo shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:
  - I. If least Bell's vireo are present within the off-site lands, then no construction activities shall occur that would result in noise levels exceeding 60 dB(A) at the edge of occupied vireo habitat within the off-site lands. If construction noise would exceed 60 dB(A) or existing noise levels, then noise attenuation measures (e.g., sound walls, blankets, etc.) shall be implemented to reduce construction noise levels, as demonstrated through noise monitoring. If noise attenuation and monitoring demonstrate that construction noise cannot be reduced below 60 dB(A) or to existing levels, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 15).
  - II. If vireo are not detected within the off-site lands, then the qualified biologist shall submit substantial evidence concluding that no impacts to this species are anticipated and no mitigation measures would be necessary.

Implementation of mitigation measures BIO-1 through BIO-3 would ensure that the project would have no substantial adverse effect on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS. Impacts would be less than significant.

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

**No Impact.** The proposed project development would be entirely restricted to existing roads and developed areas. Since all project components are located within developed land, no impacts to sensitive vegetation communities would result from the project (HELIX 2020b). Therefore, the project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.

- 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?*

**Potentially Significant Unless Mitigated.** The BLR included a basic wetland delineation to identify and map any water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA); RWQCB jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; and CDFW jurisdiction pursuant to Sections 1600 et seq. of the CFG Code. Potentially jurisdictional roadside ditches were identified parallel Gopher Canyon Road Sections 1 and 2. These roadside ditches were specifically constructed to transport runoff and stormwater but could meet the minimum requirements to be considered jurisdictional waters by the RWQCB and CDFW.

The proposed project would be developed within existing developed land and no federally-protected wetlands as defined by CWA Section 404 occur within any of the proposed project sites. Jurisdictional and potentially jurisdictional features could be inadvertently impacted by the project. Implementation of mitigation measure BIO-4 would ensure that the project would have no substantial adverse effect on federally-protected wetlands.

**BIO-4 Sensitive Habitat and Jurisdictional Area Avoidance.** Environmentally sensitive areas along Gopher Canyon Road Sections 1 and 2, such as sensitive habitats and potentially jurisdictional areas, will be clearly identified on all final construction and grading plans in order to prevent inadvertent impacts. The sensitive habitats include Diegan coastal sage scrub (including disturbed), disturbed freshwater marsh, southern riparian forest (including disturbed), disturbed southern willow scrub, as depicted on Figures 7a through 7d of the project's biological report (Appendix B). The potentially jurisdictional areas include man-made roadside ditches, as depicted on Figures 7a and 7b of the project's biological report (Appendix B). The plans must state that no construction activities, materials, equipment, or personnel shall be permitted within sensitive habitats or potentially jurisdictional areas during project construction. In addition, plans will state that all construction activities, materials, equipment, and personnel must remain within existing roadways during project construction.

- 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?*

**No Impact.** The proposed project would be entirely restricted to existing roads and developed areas. No portions of any of the project sites function as linkage or corridor habitat. The proposed project sites and vicinities are generally composed of residential development and agriculture within rural areas. Wildlife are expected to travel relatively unobstructed through undeveloped habitat in the local area. Project development would not restrict or impede wildlife movement; therefore, no impacts to wildlife movement or nursery sites would occur.

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

**No Impact.** As described in the BLR (HELIX 2020b), the project would not conflict with any local policies or ordinances protecting biological resources. No related impact would occur.

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

**No Impact.** As described in the BLR (HELIX 2020b), the District is not a participating entity in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan; therefore, no impacts would occur to any such plans. No conflict with an adopted plan would occur.

### 3.5 Cultural Resources

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of CEQA?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A Cultural Resources Survey Letter Report was prepared by HELIX to document the existing cultural resources within the project study area and evaluate the potential for project impacts (HELIX 2020c). The conclusions of the survey and report are summarized below, and the report is included as Appendix C to this IS/MND.

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of CEQA?*

**Less Than Significant Impact.** Construction activities for the proposed project would occur entirely within the existing roadway ROW or previously disturbed areas. According to the Cultural Resources Survey Letter Report, the records search indicated there are four identified cultural resources within a 0.5-mile radius of the project area (HELIX 2020c). However, no historic resources have been identified within the project's Area of Potential Effects (APE). As such, impacts to historical resources would be less than significant.

- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?*

**Potentially Significant Unless Mitigated.** The project sites are located within areas that are highly disturbed. Construction activities would occur entirely within the existing roadway or previously disturbed areas. According to the Cultural Resources Survey Letter Report, no archaeological resources have been identified within the APE; however, there are four identified cultural resources within a 0.5-mile radius of the project area (HELIX 2020c). All four resources within the search area are prehistoric; two consist of artifact scatters and two are bedrock milling features and associated artifacts. No new cultural resources were identified during the field survey conducted by HELIX. In addition, the SLF search for the project area was negative. However, due to the potential for the occurrence of presently unknown prehistoric resources in the area, impacts to archaeological resources are conservatively considered potentially significant. Implementation of mitigation measure CUL-1 would reduce potential archaeological resource impacts to below a level of significance.

**CUL-1 Procedure for Unanticipated Discovery of Cultural Materials.** In the event that cultural resource(s) are unearthed during ground disturbing activities, the project archaeologist and a tribal representative would be contacted to evaluate the resource(s) and shall have the authority to temporarily halt or redirect ground disturbing activities away from the vicinity of these unanticipated discoveries so that they may be evaluated. The District, the project archaeologist, and a tribal representative shall assess the significance of such cultural resource(s) and, if the cultural resource(s) is determined to be culturally significant, they shall meet to confer regarding the appropriate treatment for the cultural resource(s). Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation. The archaeologist and the tribal representative shall make recommendations to the District on the measures that will be implemented to protect the newly discovered cultural resource(s), including but not limited to, avoidance in place, excavation, relocation, and further evaluation of the discoveries in accordance with CEQA. No further ground disturbance shall occur in the area of the discovery until the District approves the measures to protect the significant cultural resource(s).

- c. *Disturb any human remains, including those interred outside of formal cemeteries?*

**Less Than Significant Impact.** There are no known grave sites within the project limits, and the potential for encountering human remains during construction activities is considered low, since grading and excavation activities would occur within a previously disturbed area. In the unlikely event that human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition

pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of any human remains find immediately. If the remains are determined to be prehistoric, the Coroner would notify the NAHC, which would determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery, and shall complete the inspection within 24 of notification by the NAHC. The MLD would have the opportunity to make recommendations to the NAHC on the disposition of the remains. Accordingly, impacts would be less than significant.

### 3.6 Energy

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?*

**Less Than Significant Impact.** Energy used for construction would primarily consist of fuels in the form of diesel and gasoline for the operation of construction equipment and construction worker vehicles. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. The petroleum consumed during project construction would be typical of similar construction projects and would not require the use of new petroleum resources beyond what are typically consumed in California. Project operations would not require the use of energy. Based on these considerations, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

- b. *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**No Impact.** The project would be built and operated in accordance with existing, applicable regulations. Construction equipment would be maintained to allow for continuous energy-efficient operations. Furthermore, the project would not result in a substantial increase in energy use. Accordingly, the project would not conflict with state or local plans related to energy, and no impacts would occur.

### 3.7 Geology and Soils

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42)?; (ii) strong seismic ground shaking?; (iii) seismic-related ground failure, including liquefaction?; or (iv) landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the 1994 Uniform Building Code (UBC), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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)?*

**Less Than Significant Impact.** The project area, like the rest of southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. The closest known active fault is the Newport-Inglewood-Rose Canyon fault zone located off-shore approximately 14 miles southwest of the site. Due to this distance, it is unlikely that the project would be subjected to fault rupture. Furthermore, the sites are not located in an Alquist-Priolo Earthquake Fault Zone (CDC 2015). No active faults are known to underlie or project towards the sites. Additionally, the project does not propose any structures intended for human use or occupancy. Impacts would be less than significant.



ii) *Strong seismic ground shaking?*

**Less Than Significant Impact.** The project sites are located within the seismically active southern California region. Active faults in the County include segments within the San Jacinto, Elsinore, and Rose Canyon fault zones. Active faults are those faults which have had surface displacement within Holocene times (about the last 11,000 years). Near-Source Shaking Zones have been mapped by the County where velocity effects need to be considered in the design of buildings within a specified distance of an active fault. The proposed project is approximately 13 miles from the closest Near-Source Shaking Zone, which occurs along the Elsinore fault zone east of the community of Pala (County 2007).

The project proposes the installation of pipelines and associated infrastructure in previously disturbed areas. The proposed project does not include the development of any above-ground structures that would pose a threat during an earthquake event. Engineering and construction of the proposed project would be required to be in conformance with the International Code Council (ICC) International Building Code (IBC, formerly the Uniform Building Code; 2006) and related California Building Code (CBC; California Building Standards Commission 2010), and other applicable standards. Conformance with standard engineering practices and design criteria would reduce the effects of seismic ground shaking to less than significant levels.

iii) *Seismic-related ground failure, including liquefaction?*

**Less Than Significant Impact.** Liquefaction is the phenomenon where saturated granular soils develop high-pore water pressures during seismic shaking and behave like a heavy fluid. This phenomenon generally occurs in areas of high seismicity where groundwater is shallow and loose granular soils or hydraulic fill soils subject to liquefaction are present. For liquefaction to occur, loose granular sediments below the groundwater table must be present and shaking of sufficient magnitude and duration must occur. The proposed project is not located in an area with the potential for liquefaction hazards (County 2007). Additionally, the pipelines, fire hydrants, and water meters would be designed to appropriate engineering standards. Therefore, impacts related to liquefaction would be less than significant.

iv) *Landslides?*

**No Impact.** The project sites are not located within an area identified as susceptible to landslides (County 2007). Project construction would occur within the existing ROW and adjacent disturbed areas. Following construction, the project sites would be returned to their original condition. The potential for the proposed project to expose people or structures to landslides is negligible, and related impacts would not occur.

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

**Less Than Significant Impact.** Trenching and earthwork activities during construction of the proposed project would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. As required by the Clean Water Act, the District would obtain permit coverage under the National Pollutant Discharge Elimination System (NPDES) and State Water Resources Control Board (SWRCB) with implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) for project construction. With implementation of a SWPPP that incorporates sediment control and erosion control measures, impacts from soil erosion and topsoil loss would be less than significant.

- 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?*

**Less Than Significant Impact.** Refer to Item VII.a above, regarding soil instability related to seismic effects. No water extractions or similar practices that are typically associated with project-related subsidence effects are proposed. Adherence to standard engineering practices would result in less than significant impacts related to subsidence of the land.

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

**Less Than Significant Impact.** The majority of soils that underlie the project sites have a low to moderate potential for shrinking and swelling. According to Figure 6 of the County's Guidelines for Determining Significance, the project sites are not located within an expansive soil area (County 2007). As described above, the proposed pipelines would be installed via trenching. Adherence to standard engineering practices contained within the IBC and CBC would reduce any potential impacts to less than significant levels.

- 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?*

**No Impact.** The proposed project does not include the implementation of septic tanks or alternative wastewater disposal systems. No impact would occur.

- f. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Less Than Significant Impact.** The project sites are underlain with alluvial valley floodplain deposits. Based on its relatively young age and high-energy depositional history, younger alluvium is considered unlikely to produce unique fossil remains and is assigned a low paleontological resource sensitivity (Deméré and Walsh 1994; County 2007). Ground-disturbing activities associated with the proposed project would occur in previously graded and disturbed areas and would be limited to relatively shallow depths (less than five feet). This greatly reduces the potential for encountering intact paleontological resources during ground-disturbing activities. Therefore, impacts to paleontological resources would be less than significant.

### 3.8 Greenhouse Gas Emissions

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following discussion is based on greenhouse gas (GHG) emissions calculations and modeling prepared by HELIX (2020a). Detailed construction emissions assumptions and model inputs and outputs are provided in Appendix A.

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

**Less Than Significant Impact.** Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone, and certain hydro-fluorocarbons. These gases, known as GHGs, allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Greenhouse gases are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contributing to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative; direct impacts cannot be evaluated because the impacts themselves are global rather than localized impacts.

California Health and Safety Code Section 38505(g) defines GHGs to include the following compounds: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, ozone, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. As individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO<sub>2</sub>e) units for comparison. The CO<sub>2</sub>e is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure.<sup>1</sup> The most common GHGs related to the project are those primarily related to energy usage: CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, set the state-wide goal to reduce GHG emissions to 1990 levels by 2020. In January 2008, the California Air Pollution Control Officers Association prepared a white paper entitled "CEQA & Climate Change," which developed a 900-metric ton (MT) screening to determine whether further analysis was needed to assess whether a residential or commercial project would hinder the statewide attainment of GHG emissions reduction goals described in AB 32. Senate Bill (SB) 32 was passed as a follow up to AB 32 and extended the reduction target to 40 percent below 1990 levels by 2030. For projects that would be developed after 2020, this goal is proportionally reduced by 4.98 percent each year. The proposed project is expected to be constructed in 2021; therefore, the threshold used in this analysis is 855 MT CO<sub>2</sub>e .

Modeling was conducted that showed project GHG emissions would not exceed this screening threshold, using CalEEMod. The calculations included estimated emissions from construction since operation of the proposed project would not result in emissions. It is standard practice to amortize construction emissions over a typical duration of 20 years when analyzing GHG emissions. Detailed construction emissions assumptions and CalEEMod inputs and outputs are provided in Appendix A.

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<sup>1</sup> The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere and is expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. For instance, CH<sub>4</sub> has a global warming potential of 21, meaning that 1 gram of CH<sub>4</sub> traps the same amount of heat as 21 grams of CO<sub>2</sub>. N<sub>2</sub>O has a global warming potential of 310.

Table 2, *Estimated GHG Emissions*, provides a summary of the total annual GHG emissions generated by the project.

**Table 2**  
**ESTIMATED GHG EMISSIONS**

Emission Source	Emissions (MT CO <sub>2</sub> e)
Trenching	22
Pipeline Installation	46
<b>TOTAL</b>	<b>68</b>
<b>Amortized Construction</b>	<b>3.4</b>
Screening Level Threshold	<b>855</b>
Exceeds Threshold?	No

Refer to Appendix A for full modeling results.

MT = metric tons; CO<sub>2</sub>e = carbon dioxide equivalent

As shown in Table 2, project emissions would only result from construction activities. As shown above, the total annual GHG emissions generated by the project would be approximately 68 MT CO<sub>2</sub>e, and amortized over 20 years would be 3.4 MT CO<sub>2</sub>e, which is substantially below the screening threshold of 855 MT CO<sub>2</sub>e per year. Impacts would be less than significant.

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

**No Impact.** As discussed above in Item VIII.a, the proposed project would not result in significant GHG emissions. The project would not result in emissions that would adversely affect state-wide attainment of GHG emission reduction goals as described in AB 32 and SB 32. Emissions would therefore have a less than cumulatively considerable contribution to global climate change impacts, and the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. No impact would occur.

### 3.9 Hazards and Hazardous Materials

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

**Less Than Significant Impact.** Small amounts of potentially hazardous materials (e.g. fuel, lubricants, and solvents) may be used during construction activities. Hazardous materials used during project construction would be transported, used, and stored in accordance with state and federal regulations regarding hazardous materials. Operation of the proposed project would not require or result in the transport, use, or disposal of potentially hazardous materials. The use of these materials would be temporary, and impacts would be less than significant.

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

**Less Than Significant Impact.** The proposed project is not anticipated to result in a release of hazardous materials into the environment. During the temporary, short-term construction period, there is the possibility of accidental release of hazardous substances such as spilling of hydraulic fluid or diesel fuel associated with construction equipment maintenance. The level of risk associated with the accidental release of these hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials. The construction contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. Therefore, the impact of the proposed project with respect to exposing the public or the environment to hazardous materials through upset and accident conditions would be less than significant.

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

**No Impact.** The school nearest the project sites is Bonsall Elementary School, located approximately 3 miles northwest of the project area. Hazardous materials used during construction would not be handled within one-quarter mile of the school. Furthermore, the use of these materials would be

temporary and in accordance with applicable standards and regulations. Therefore, impacts related to the handling of hazardous materials within one-quarter mile of a school would not occur.

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**No Impact.** Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the SWRCB GeoTracker database (SWRCB 2020) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2020) were searched for hazardous materials sites within the project area. According to the SWRCB GeoTracker database, there are three Irrigated Lands Regulatory Program Sites associated with nearby agricultural uses in the project area. However, the project sites are not listed as hazardous materials sites on either of these databases. There are no active or inactive cleanup sites mapped in the vicinity of the project sites. Therefore, no impact related to hazardous materials sites would occur.

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

**No Impact.** The nearest airport is the Fallbrook Community Airpark, which is located approximately 8 miles north of the project area. The Oceanside Municipal Airport is approximately 10 miles west of the project area. The project does not propose features that would result in a safety hazard or excessive noise for people residing or working in the project area. No related impacts would occur.

- f. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less Than Significant Impact.** Construction of the proposed project could temporarily block portions (e.g., up to one lane at a time) of Gopher Canyon Road, Margale Lane, and Integrity Court. As a matter of project design, the contractor would be required to prepare and comply with a traffic control plan which would include measures to minimize effects related to lane closures and ensure safe passage of evacuees or emergency response vehicles. Impacts would therefore be reduced to less than significant.

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

**No Impact.** The project would not expose people or structures to a significant risk of wildland fires because the project does not propose structures that would be at risk for fire damage or buildings meant for human occupancy. No related impacts would occur.

### 3.10 Hydrology and Water Quality

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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; or (iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**Less Than Significant Impact.** The project sites are located within the RWQCB San Diego Region Basin Plan. Under Section 402 of the Clean Water Act, the RWQCB issues NPDES permits to regulate discharges to “waters of the nation,” which include rivers, lakes, and their tributary waters. Waste discharges include stormwater and construction-related releases. Potential impacts related to water quality could occur during trenching and construction when the potential for erosion, siltation, sedimentation, and accidental release of hazardous materials would be the greatest. Implementation of a SWPPP would be required under the NPDES Construction General Permit (NPDES No. CAS000002, SWRCB Order No. 2009-0009-DWQ; as amended by Order No. 2010-0014-DWQ and Order No. 2012-0014-DWQ), administered by the RWQCB. The SWPPP would include specific best management practices (BMPs) to avoid or reduce potential impacts related to the use and potential discharge of construction-related hazardous materials. The construction contractor would be required to comply with the NPDES and SWPPP requirements regarding the implementation of BMPs during construction. Compliance with these requirements would ensure that the proposed project would have a less than significant impact on water quality standards and waste discharge requirements. Furthermore, the proposed project would not require the use of or otherwise substantially impair groundwater quality or interfere with groundwater recharge.

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

**No Impact.** The proposed project would not require the use of, or otherwise substantially interfere with, groundwater supplies or recharge. No impacts would occur.

- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

- i) *Result in substantial erosion or siltation on- or off-site?* **Less Than Significant Impact.** Existing surfaces within the disturbance areas would be temporarily removed during trenching and installation of the pipeline segments. Removal of impermeable surfaces would be limited to sections of the ROW being worked on at any given time. Following construction, the trench would be back-filled and surfaces would be repaved and/or returned to their existing condition. Drainage patterns may change temporarily during construction; however, required BMPs prescribed in the SWPPP would minimize on- and off-site erosion through temporary sediment control measures. Conformance with required BMPs would reduce potential impacts related to erosion and siltation during construction to less than significant. Additional work for the Disney Lane project would include the construction of associated infrastructure such as valves, fire hydrants, assemblies, and private service laterals within and adjacent to Margale Lane. Construction of these features would not substantially alter the existing drainage pattern of the surrounding area. Related operational effects would be negligible and, therefore, less than significant
- ii) *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?* **Less Than Significant Impact.** The proposed project would result in a negligible increase in impermeable surfaces that could contribute to increased surface runoff. Drainage patterns would potentially be affected temporarily by construction activities; however, the SWPPP would require implementation of specific BMPs to reduce drainage alteration impacts to less than significant. No associated flooding would occur.
- iii) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?* **Less Than Significant Impact.** The proposed project would repave the existing roadways upon the completion of trenching and construction activities. The associated infrastructure for the Disney Lane project, such as valves and fire hydrants, would be constructed within or adjacent to Margale Lane. As a result, the project would result in a negligible increase in impermeable surfaces. The project would not 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. Additionally, the contractor would comply with NPDES and SWPPP requirements and implement erosion and sedimentation control measures to minimize on- and off-site erosion. Impacts would be less than significant.
- iv) *Impede or redirect flood flows?* **Less Than Significant Impact.** According to the Federal Emergency Management Agency (FEMA) Flood Map Service Center (FEMA 2020), Integrity Court and Margale Lane are not mapped within a special flood hazard area. However, portions of Gopher Canyon Road Section 1 are located within Zone AE. This designation describes areas



within the channel of a stream as well as any adjacent floodplains. The southern boundary of Gopher Canyon Road runs parallel to the Gopher Canyon Creek floodway. This zone is within the 100-year floodplain that is subject to inundation by a one-percent-annual-chance flood event. While the project would result in a minor increase in impermeable surfaces, the construction of buried pipelines within existing roadways would not substantially impede or redirect flows. Therefore, impacts would be less than significant.

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

**Less Than Significant Impact.** As described above, portions of Gopher Canyon Road Section 1 are located within a special flood hazard area (FEMA 2020). However, BMPs would ensure that hazardous materials equipment would not be in the area during a flood event. In addition, the possibility of seiches and tsunamis impacting the project sites is considered remote due to the great distance to large bodies of water. Once constructed, the pipelines would be below ground and would not be affected by flooding. As such, impacts related to the release of pollutants due to inundation in flood hazard, tsunami, and seiche zones would be less than significant.

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

**Less Than Significant Impact.** As specified above, the project would be required to obtain coverage under the NPDES General Construction Permit. The project would not adversely impact a groundwater management plan because the project would not impede groundwater replenishment and would not require the use of groundwater. No related impacts would occur.

### 3.11 Land Use and Planning

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a. *Physically divide an established community?*

**No Impact.** The proposed pipelines would be constructed underground within the existing roadway ROW in Integrity Court, Margale Lane, and two separate sections of pipeline within Gopher Canyon Road. Additional work on the Disney Lane project would include the construction of associated infrastructure such as valves, fire hydrants, assemblies, and private service laterals within or adjacent to Margale Lane. The project would occur within close proximity to existing residences, but it would not change the existing land uses. Since the project would not have an impact on the physical arrangement of an established community, no impacts are anticipated to occur.

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

**Potentially Significant Unless Mitigated.** The proposed project would not change the current land use in the project area and is consistent with the Bonsall Community Plan's designation for the project sites, and with the County Zoning Map designation of the same area. The project would potentially conflict with local ordinances related to noise control, but these impacts would be reduced to less than significant with the implementation of mitigation measure NOI-1. See 3.13, *Noise* for additional discussion.

### 3.12 Mineral Resources

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b. *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

**No Impact.** According to the County (2008), the project sites are located within an MRZ-3 zone. The MRZ-3 designation refers to lands containing known mineral deposits, the significance of which cannot be evaluated from available data. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2 category. However, the area does not currently meet the State Mining and Geology Board's guidelines as eligible to be designated of regional or statewide significance. Furthermore, the project does not propose a land use that would preclude mineral extraction, nor would it permanently restrict access to areas for potential future mining operations. The proposed project is consistent with the Bonsall Community Plan and the County General Plan, with respect to the protection of mineral resources. Project construction would occur within the existing ROW. Therefore, there would be no impacts to mineral resources.

### 3.13 Noise

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following discussion was informed by construction noise modeling prepared for the project by HELIX (2020d). Construction noise modeling outputs are contained within Appendix D to this IS/MND.

#### Fundamentals of Sound and Environmental Noise

Noise can be defined as unwanted sound. Sound (and therefore noise) consists of energy waves that people receive and interpret. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Sound intensity or acoustic energy is measured in decibels (dB) that are weighted to correct for the relative frequency response of the human ear. Unlike linear units (inches or pounds), dB are measured on a logarithmic scale, representing points on a sharply rising curve.

Since dBs are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. As a general rule, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dBA.<sup>2</sup> Conversely, halving the traffic volume or speed will reduce the traffic noise level by 3 dBA. A 3-dBA change in sound is the level where humans generally notice a barely perceptible change in sound and a 5-dBA change is generally readily perceptible. A 10-dBA change is generally considered substantial.

The predominant rating scales for human communities are the Noise Equivalent ( $L_{EQ}$ ), and the Community Noise Equivalent Level (CNEL), both of which are based on dBA. The  $L_{EQ}$  is the total sound energy of time-varying noise over a sample period. The CNEL is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 5 dBA to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 dBA to sound levels in the night from 10:00 p.m. to

<sup>2</sup> To account for the range of sound that human hearing perceives, a modified scale is utilized known as the A-weighted decibel, dBA. Sound intensity or acoustic energy is measured in dBs that are weighted to correct for the relative frequency response of the human ear. For example, an A-weighted noise level includes a de-emphasis on high frequencies of sound that are heard by a dog's ear but not by a human's ear.

7:00 a.m. CNEL is utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night.

### Sensitive Noise Receptors

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise. NSLUs in the project vicinity include the adjacent residences and nearby sensitive habitat that occurs within 500 feet of Disney Lane, Integrity Court, and Gopher Canyon Road. This suitable habitat may be used for nesting by federally protected avian species, such as coastal California gnatcatcher (see 3.4, *Biological Resources*).

### Regulatory Framework

The District has not established noise limits for its projects. For the purposes of this analysis, the County noise guidelines are used to assess potential noise impacts. Noise limits for construction activities and general exterior noise generation are described in Sections 36.401 through 36.423 of the County Municipal Code (the noise ordinance). It is unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level at any point on or beyond the boundaries of the property exceeds the sound level limits found in Table 36.404 of the noise ordinance. For the residences neighboring the project sites, the exterior one-hour average limit is 50 dBA between 7:00 a.m. to 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m.

Sections 36.408 through 36.411 of the Municipal Code establish noise limitations for construction activities. Except for emergency work, it is unlawful for any person to operate or cause to be operated, construction equipment between 7:00 p.m. and 7:00 a.m., or that exceeds an average sound level of 75 dBA for an 8-hour period, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Regarding federally listed biological species, guidelines produced by the USFWS recommend that project noise be limited to a one-hour average of 60 dBA or, if the existing ambient noise level is above 60 dBA, noise levels should not increase the ambient noise level by more than 3 dBA at the edge of occupied habitat during the avian species breeding season.

- 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?*

### ***Potentially Significant Unless Mitigated***

#### Short-term Construction Impacts

Construction of the project would result in temporary increases in noise levels from operation of the construction equipment. Construction activities could temporarily produce elevated short-term noise levels that would potentially impact NSLUs. The nearest existing NSLUs to the project sites are the nearby single-family residences along Integrity Court and Margale Lane. During pipeline trenching and installation, an excavator would move along the pipeline route digging the trench and loading the materials into a dump truck. Trenching could occur within 45 feet of the single-family residences, particularly along Margale Lane. An excavator, dump truck, pump, and loader would generate 75 dBA at

a distance of approximately 63 feet. This assumes operation of the dump truck, loader, and excavator for 40 percent of an 8-hour construction day. Trenching activities would therefore exceed the 75-dBA noise limit for nearby NSLUs. An operating portable generator would result in 78.5 dBA at 45 feet and an excavator would result in 77.6 dBA at 45 feet. See Appendix D, Construction Noise Modeling Outputs, for construction equipment calculations.

Implementation of mitigation measure **NOI-1** would reduce construction impacts to below a level of significance. This mitigation measure would apply to the use of construction equipment, specifically loaders and dump trucks, operating within 63 feet of a single-family residence. In addition, this mitigation measure would apply to the use of portable generator during construction, which must be located at least 67 feet from the nearest single-family residence to avoid exceeding the 75-dBA threshold.

Suitable nesting habitat for the coastal California gnatcatcher occurs within 500 feet of the Integrity Court segment. Similarly, suitable least Bell's vireo habitat occurs within 500 feet of the Disney Lane and Gopher Canyon Road Section 2 segments. However, construction equipment would not generate noise levels exceeding 60 dBA at this distance. A portable generator would result in 57.6 dBA at 500 feet and an excavator would result in 56.7 dBA at 500 feet. As previously discussed, mitigation measures **BIO-1** and **BIO-3** also include avoidance measures to reduce potential impacts on nesting birds to below a level of significance.

#### Long-term Operation Impacts

As noted in the Project Description, the project would involve the installation of underground pipelines and associated infrastructure. Operation of the project may require occasional worker trips for maintenance. However, the infrequent nature of and minimal noise associated with these maintenance trips would not impact single-family residences in the project vicinity. Noise levels would not exceed the County's 50-dBA exterior daytime and the 45-dBA exterior nighttime limits at the property line nearest to future residential uses. Therefore, impacts associated with operational noise would be less than significant.

The term "substantial increase" in permanent noise is generally considered to be 10 dBA above current levels. However, an increase of 3 dBA is the smallest change that would be perceptible by humans, and this differential is often conservatively used to determine the significance of an impact. An increase of this magnitude would typically be caused by a doubling of traffic. Transportation noise sources for the project would be associated with intermittent vehicular trips by District employees for maintenance. However, project facilities would not increase the number of maintenance trips typically required compared to existing conditions.

Implementation of mitigation measure NOI-1 would be required to reduce impacts to below a level of significance.

**NOI-1      General Construction Noise Reduction Limits.** Noise levels from project-related construction activities shall not exceed 75 dBA (8-hour average). This would generally occur if loaders and dump trucks are within 63 feet or a portable generator is within 67 feet of a residence.

The District shall employ measures to reduce construction/demolition noise including, but not be limited to, the following:

- Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment shall be operated with closed engine doors and equipped with factory-recommended mufflers.
- Mobile or fixed “package” equipment (e.g., arc-welders and air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) shall be prohibited.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise sensitive receptors.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- Any truck or equipment equipped with back-up alarm moving within 300 feet of a noise-sensitive land use (residence) should have the normal back-up alarm disengaged and safety provided by lights and flagman or broad-spectrum noise backup alarm (as appropriate for conditions) used in compliance with the Occupational Safety and Health Administration safety guidelines.
- Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive receptors. The project Contractor shall construct a 12-foot high temporary noise barrier meeting the specifications listed below (or of a Sound Transmission Class [STC] 19 rating or better) to attenuate noise.
- The District shall notify residences within 300 feet of the project’s disturbance area in writing within one week of any construction activity. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure.
- The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

Implementation of mitigation measure **NOI-1** would ensure that ambient noise levels in the project vicinity would not be 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?*

**Less Than Significant Impact.** No vibration-sensitive land uses (i.e., land uses where equipment or operations would be disrupted by excessive vibration) are located within the vicinity of the project sites. However, excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to residential uses. The construction activities required for the proposed pipelines are not anticipated to generate excessive groundborne vibrations or noise levels. No pile driving is anticipated to be necessary as part of project construction. The potential use of a vibratory roller for project construction would not occur frequently during construction. As there is a relatively limited need for this piece of equipment during construction, it would likely be used very briefly and would affect an individual location for only a matter of minutes during a pass-by. Due to the temporary nature of construction activities and the infrequent potential use of a vibratory roller, impacts related to vibration are considered less than significant.

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?*

**No Impact.** The nearest airports to the project area are Fallbrook Community Airpark, located approximately 8 miles to the north, and Oceanside Municipal Airport, located approximately 9 miles to the west. The project sites are not located within noise impact zones for either airport. Therefore, there would be no impact associated with aircraft noise.

### 3.14 Population and Housing

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

**No Impact.** The proposed project does not include any new homes or businesses and would not directly induce population growth. The project does not include land uses, such as homes or businesses, that would directly induce population growth. As such, the project would not induce direct or indirect population growth, and impacts would be less than significant.

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

**No Impact.** The proposed project would not require the removal of existing housing, and therefore, would not necessitate the construction of replacement housing elsewhere. No impact would occur.

### 3.15 Public Services

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
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:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### a. Fire Protection?

**No Impact.** Implementation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities. Construction and operation of the proposed project would generate no additional demand for increased public services, as it would involve the installation of underground pipelines and associated infrastructure. During construction, fire protection may be required, but these would be short-term demands and would not require increases in the level of public service offered or affect response times. No impact would occur.

#### b. Police Protection?

**No Impact.** There are no significant impacts related to police protection or service anticipated with implementation of the proposed project, for the same reasons described above under Item XV.a.

#### c. Schools?

**No Impact.** The project does not propose new housing and would not directly or indirectly induce population growth such that there would be an increase in demand for school services. Therefore, implementation of the proposed project would not result in the need for construction of additional school facilities. No impact would occur.



d. *Parks?*

**No Impact.** Implementation of the proposed project would not affect existing park facilities or increase the demand for additional recreational facilities. Therefore, no impacts to parks are anticipated as a result of this project.

e. *Other Public Facilities?*

**No Impact.** No impacts to other public facilities are anticipated to occur with project implementation.

### 3.16 Recreation

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?*

**No Impact.** Implementation of the proposed project would not generate an increase in demand on existing public or private parks or other recreational facilities that would either result in or accelerate physical deterioration of these facilities. No impact would occur.

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

**No Impact.** The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities. No impact would occur.

### 3.17 Transportation

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**Potentially Significant Unless Mitigated.** No long-term increase in traffic generation would occur as a result of the proposed project, as only minimal maintenance activity is anticipated for project operations. Project construction activities would temporarily contribute to additional vehicle trips on local roadways. Short-term construction traffic impacts would result from delivering construction materials and supplies to the site and transporting construction personnel to and from the site. It is assumed that primary access for construction traffic would be from Highway 76 or Interstate 15. If closures would be necessary, they would last for no more than a few days on the affected road segment, and alternate routes/detours would be established to accommodate diverted traffic. Driveway closures would be kept to a minimum, with blockages likely occurring for no more than a few hours at a time. Residents would be notified well in advance of impending closures or blockages related to project construction. Furthermore, the proposed project is not anticipated to affect public transit, bicycle, or pedestrian facilities. Potential impacts associated with project construction activities would be reduced to below a level of significance upon implementation of mitigation measure TRA-1. Therefore, the proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

**TRA-1 Traffic Control Plan.** A construction Traffic Control Plan would be prepared prior to construction and implemented by the District. The plan would ensure that traffic flow and roadway safety are maintained in the project area during construction. The Traffic Control Plan would include provisions for adequate notices, sign-postings, detours, phased construction, provisions for pedestrians and bicycles, and the permitted hours of construction activities.

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

**No Impact.** Refer to Item XVII.a, above. Since the proposed project would generate a short-term increase in construction traffic and no increase in traffic associated with operation, the project would not conflict with *CEQA Guidelines section 15064.3, subdivision (b)*. No impact would occur.

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

**No Impact.** The proposed project would not include the construction of hazards (e.g., sharp curves or dangerous intersections), and would not result in incompatible uses with the surrounding developed area. Therefore, no impacts regarding design features or incompatible uses would occur.

d. *Result in inadequate emergency access?*

**Less Than Significant Impact.** Adequate emergency access would be maintained at all times during construction of the proposed project, as ensured by implementation of the traffic control plan described in Item XVII.a. Specifically, lane closures and/or blockages would be temporary and safe passage of vehicles approaching and passing through the area would be ensured by measures in the traffic control plan, including use of a flag person(s). Upon the completion of construction, the affected roadways and surrounding areas would be returned to their original condition. Therefore, impacts would be less than significant.

### 3.18 Tribal Cultural Resources

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource (TCR), defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Discussion

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

**Less Than Significant Impact.** A Tribal Cultural Resource (TCR) may be considered significant if included in a local or state register of historical resources; determined by the lead agency to be significant pursuant to criteria set forth in Public Resources Code §5024.1; is a geographically defined cultural landscape that meets one or more of these criteria; is a historical resource described in Public Resources Code §21084.1, a unique archaeological resources described in Public Resources Code §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

HELIX conducted a SLF search of the project sites and for a list of consultant tribes with traditional lands or cultural places within the project sites. A response was received from the NAHC on October 7, 2020 which indicated that the results were negative for the project area but stated that the absence of specific site information in the SLF does not necessarily indicate the absence of cultural resources. The Cultural Resources Survey Report concluded that no significant impact to TCRs would occur as a result of project implementation and did not recommend the use of monitoring due to the highly disturbed nature of the project area (HELIX 2020c). As a result, impacts would be less than significant.

- b. *Would the project cause a substantial adverse change in the significance of a TCR that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

**Potentially Significant Unless Mitigated.** AB 52 introduced TCR as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As described above under item 3.17a, the SLF search was negative for the project area. Furthermore, the Cultural Resources Survey Report concluded that no significant impact to TCRs would occur as a result of project implementation and did not recommend the use of monitoring due to the highly disturbed nature of the project area (HELIX 2020c). The District extended meeting invitations and provided an overview of the proposed project on January 8, 2021 to tribes with traditional lands or cultural places within the project area. The following five tribes were consulted: Pala, Rincon, La Jolla, San Pasqual, and Pauma. Response to the meeting invitations have not yet been received from the tribes. Implementation of mitigation measure **CUL-1** would reduce potential impacts to TCRs to a less than significant level.

### 3.19 Utilities and Service Systems

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**No Impact.** The proposed project does not involve the construction of habitable structures that would generate water, electricity, or natural gas demand or require telecommunications facilities or wastewater storage and treatment facilities. The proposed pipeline improvements have been designed to connect existing pipelines and improve access for repairs and maintenance. Therefore, the project would not require the construction or relocation of new facilities. No impacts would occur.

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

**Less Than Significant Impact.** The project would use a minimal amount of water required for dust control during the temporary construction period. The project would not require a substantial water supply, and no water supplies would be needed to serve the project during operation. Therefore, impacts would be less than significant.

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

**No Impact.** The proposed project would not require wastewater service. Therefore, the project would not exceed the wastewater capacity of the local wastewater treatment provider. No impact would occur.

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

**No Impact.** The proposed project would generate a minimal amount of construction waste and no ongoing operational waste. Based on the small quantity of material, the proposed project would not 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. Therefore, no impacts would occur.

e. *Comply with federal, state, and local statutes and regulations related to solid waste?*

**Less Than Significant Impact.** The proposed project would comply with applicable federal, state, and local statutes and regulations related to solid waste, including Title 14, Article 5.9 of the California Code of Regulations, which specifies regulatory requirements for the disposal of construction and demolition debris (CalRecycle 2016). Impacts would be less than significant.

### 3.20 Wildfire

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The California Department of Forestry and Fire Protection (CALFIRE) has mapped areas of significant fire hazards in the County through their Fire and Resource Assessment Program (FRAP). These maps place areas of the County into different Fire Hazard Severity Zones (FHSZ) based upon fuels, terrain, weather, and other relevant factors. The FRAP divides areas of significant fire hazard into two designations: State Responsibility Areas (SRA), which are areas where CALFIRE is responsible for wildfire protection, and

Local Responsibility Areas (LRA), where local fire protection agencies are responsible for wildfire protection. The majority of the unincorporated area of the County is SRA lands. The FHSZs are divided into three levels of fire hazard severity: Moderate, High, and Very High. The majority of the County is in the High and Very High FHSZ. According to the maps prepared for the project area by CALFIRE, the project includes components that are within High and Very High FHSZs (CALFIRE 2020).

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

**Less than Significant Impact.** The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. During construction, portions of Gopher Canyon Road, Margale Lane, and Integrity Court would be closed (e.g., up to one lane at a time). However, access would be maintained, and the project would utilize appropriate traffic control measures to ensure continued emergency response and evacuation access. As a matter of project design, the contractor would be required to prepare and comply with a traffic control plan which would include measures to minimize effects related to lane closures and ensure safe passage of evacuees or emergency response vehicles. Operation of the proposed project would not result in an increase in demand for emergency services, which could affect emergency response plan implementation. Therefore, emergency-related impacts would be less than significant.

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?*

**Potentially Significant Unless Mitigated.** The proposed project would not introduce permanent occupants. In addition, maintenance or construction workers would not be present for extended periods of time and would therefore not be exposed to substantial pollutants from wildfires that may occur in nearby areas. However, as discussed above, the project locations are within High and Very High FHSZs. To minimize the risk of losses resulting from wildfire, the following fire prevention strategies outlined in mitigation measure **FIRE-1** would be implemented during project construction.

Implementation of mitigation measure **FIRE-1** would be required to reduce impacts to below a level of significance.

**FIRE-1 Fire Safety Plan.** The following fire prevention strategies would be implemented during project construction:

- Construction within areas of dense foliage during dry conditions will be avoided, when feasible.
- In cases where avoidance is not feasible, brush fire prevention and management practices will be incorporated. Specifics of the brush management program will be incorporated into project construction documents.

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?*

**No Impact.** The project includes the installation of pipelines and associated infrastructure, which would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. No impacts would occur.

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

**No Impact.** The project sites are not located within an area identified as susceptible to landslides (County 2007). Project construction would occur within the existing roadways. Due to the location of the project sites and topography of the surrounding area, flooding from runoff is not anticipated to affect the project sites. Therefore, the project would not expose people or structures to significant risks associated with runoff, post-fire slope instability, or drainage changes, and impacts would be less than significant.

### 3.21 Mandatory Findings of Significance

	Potentially Significant	Potentially Significant Unless Mit.	Less Than Significant	No Impact
Would the project:				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means the project's incremental effects are considerable when compared to the past, present, and future effects of other projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 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?*

**Potentially Significant Unless Mitigated.** As described in 3.4, *Biological Resources*, construction-related noise during the general bird nesting season has the potential to result in impacts to nesting birds in violation of the MBTA and CFG Code. Implementation of mitigation measure BIO-1 would reduce potentially significant, temporary construction impacts to nesting birds to below a level of significance. No impacts to nesting birds are anticipated once the pipelines have been constructed. Project construction also has the potential to impact sensitive avian species including coastal California gnatcatcher and least Bell's vireo if construction activities were to take place adjacent to suitable habitat



during the species' respective breeding seasons. Implementation of mitigation measures BIO-2 and BIO-3 would reduce potentially significant, temporary construction impacts to coastal California gnatcatcher and least Bell's vireo to below a level of significance. The project would not reduce the habitat of a fish or wildlife species, as no sensitive habitat would be removed or impacted. Mitigation measure BIO-4 would ensure that the project would have no substantial adverse effect on federally-protected wetlands. The project would not cause a 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 or endangered plant or animal. As described in 3.5, *Cultural Resources*, no substantial adverse change in the significance of historical resources is anticipated to occur as a result of project implementation; thus, it would not eliminate important examples of the major periods of California history. Implementation of mitigation measure CUL-1 would reduce potential archaeological resource impacts during construction to below a level of significance.

- b. *Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means the project's incremental effects are considerable when compared to the past, present, and future effects of other projects)?*

**Potentially Significant Unless Mitigated.** Cumulative impacts are defined as two or more individual project effects that, when considered together or in concert with other projects, combine to result in a significant impact (CEQA Guidelines Section 15355). The proposed project, which is almost exclusively limited to construction-related effects, would not result in impacts that are cumulatively considerable. No significant air or GHG emissions would occur, no sensitive habitat would be permanently removed, and temporary noise effects would be limited through implementation of noise abatement measures as part of NOI-1.

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

**Potentially Significant Unless Mitigated.** With the adherence to regulatory codes, ordinances, regulations, standards, and guidelines for a number of issue areas addressed herein, in conjunction with the discussed mitigation measures for noise (**NOI-1**) and wildfire (**FIRE-1**), construction (and operation) of the proposed project would not result in a substantial adverse effect on human beings either directly or indirectly.

## 4.0 DETERMINATION

### 4.1 Determination

Based on this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this project. 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.

### 4.2 De Minimis Fee Determination (Chapter 1706, Statutes of 1990-AB 3158)

- ☐ It is hereby found that this project involves no potential for any adverse effect, either individually or cumulatively, on wildlife resources and that a "Certificate of Fee Exemption" shall be prepared for this project.
- ☒ It is hereby found that this project could potentially impact wildlife, individually or cumulatively, and therefore fees shall be paid to the County Clerk in accordance with Section 711.4(d) of the Fish and Game Code.

### 4.3 Environmental Determination

The initial study for this project has been reviewed and the environmental determination, contained in Section V. preceding, is hereby approved:

*Chad A Williams*

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Chad Williams, Acting District Engineer  
Rainbow Municipal Water District

## 5.0 REPORT PREPARERS

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2006 International Building Code.

State Water Resources Control Board (SWRCB)

2020 GeoTracker Database. Available at: <https://geotracker.waterboards.ca.gov/>.

## 7.0 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APE	Area of Potential Effects
AQIA	Air Quality Impact Analysis
BLR	Biological Resources Letter Report
BMPs	best management practices
CalEEMod	California Emission Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFG Code	California Fish and Game Code
CH <sub>4</sub>	methane
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
County	County of San Diego
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dB(A)	A-weighted decibels
District	Rainbow Municipal Water District
DTSC	California Department of Toxic Substances Control
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FRAP	Fire and Resource Assessment Program
GHGs	greenhouse gases
HELIX	HELIX Environmental Planning, Inc.
IBC	International Building Code
IS/MND	Initial Study/Mitigated Negative Declaration

L <sub>EQ</sub>	noise equivalent
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MT	metric ton
N <sub>2</sub> O	nitrous oxide
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
NSLU	noise-sensitive land use
O <sub>3</sub>	Ozone
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PVC	polyvinyl chloride
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SLF	Sacred Lands File
SRA	State Responsibility Area
STC	Sound Transmission Class
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCR	Tribal Cultural Resource
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USEPA	U.S. Environmental Protection Agency

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## Appendix A

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### Air Quality and GHG Modeling Outputs

RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

## RBW 04.06 - Gopher Canyon Pipeline San Diego County, Winter

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

#### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule based on rate of 80 feet per day

Off-road Equipment - Pipeline Installation Equipment

Off-road Equipment - Trenching Equipment

Trips and VMT - 5 truck trips per day per phase

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	64.00
tblConstructionPhase	PhaseEndDate	12/31/2020	4/7/2021
tblConstructionPhase	PhaseStartDate	1/1/2021	1/8/2021
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00

## 2.0 Emissions Summary

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## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.3010	11.4354	13.9525	0.0247	0.1909	0.5512	0.7421	0.0522	0.5250	0.5772	0.0000	2,381.6189	2,381.6189	0.4670	0.0000	2,393.2942
Maximum	1.3010	11.4354	13.9525	0.0247	0.1909	0.5512	0.7421	0.0522	0.5250	0.5772	0.0000	2,381.6189	2,381.6189	0.4670	0.0000	2,393.2942

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.3010	11.4354	13.9525	0.0247	0.1909	0.5512	0.7421	0.0522	0.5250	0.5772	0.0000	2,381.6189	2,381.6189	0.4670	0.0000	2,393.2942
Maximum	1.3010	11.4354	13.9525	0.0247	0.1909	0.5512	0.7421	0.0522	0.5250	0.5772	0.0000	2,381.6189	2,381.6189	0.4670	0.0000	2,393.2942

[illegible]

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.3000e-004</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.3000e-004</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Installation	Grading	1/8/2021	4/7/2021	5	64	
2	Trenching	Trenching	1/1/2021	3/31/2021	5	64	

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Excavators	1	6.00	158	0.38
Pipeline Installation	Generator Sets	1	8.00	84	0.74
Pipeline Installation	Welders	1	6.00	46	0.45
Pipeline Installation	Concrete/Industrial Saws	0	8.00	81	0.73
Trenching	Excavators	1	6.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline Installation	Rubber Tired Dozers	0	1.00	247	0.40
Pipeline Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	2	5.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	4	10.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction****3.2 Pipeline Installation - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8976	7.3428	9.1351	0.0147		0.3859	0.3859		0.3729	0.3729		1,381.3376	1,381.3376	0.2470		1,387.5121
<b>Total</b>	<b>0.8976</b>	<b>7.3428</b>	<b>9.1351</b>	<b>0.0147</b>	<b>0.0000</b>	<b>0.3859</b>	<b>0.3859</b>	<b>0.0000</b>	<b>0.3729</b>	<b>0.3729</b>		<b>1,381.3376</b>	<b>1,381.3376</b>	<b>0.2470</b>		<b>1,387.5121</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**3.2 Pipeline Installation - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.5078	0.1445	1.3200e-003	0.0339	1.1100e-003	0.0350	9.7400e-003	1.0600e-003	0.0108		141.9097	141.9097	0.0111		142.1860
Worker	0.0392	0.0252	0.2493	7.7000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		76.4548	76.4548	2.2000e-003		76.5097
<b>Total</b>	<b>0.0552</b>	<b>0.5330</b>	<b>0.3938</b>	<b>2.0900e-003</b>	<b>0.1160</b>	<b>1.6800e-003</b>	<b>0.1177</b>	<b>0.0315</b>	<b>1.5800e-003</b>	<b>0.0331</b>		<b>218.3644</b>	<b>218.3644</b>	<b>0.0133</b>		<b>218.6957</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8976	7.3428	9.1351	0.0147		0.3859	0.3859		0.3729	0.3729	0.0000	1,381.3376	1,381.3376	0.2470		1,387.5121
<b>Total</b>	<b>0.8976</b>	<b>7.3428</b>	<b>9.1351</b>	<b>0.0147</b>	<b>0.0000</b>	<b>0.3859</b>	<b>0.3859</b>	<b>0.0000</b>	<b>0.3729</b>	<b>0.3729</b>	<b>0.0000</b>	<b>1,381.3376</b>	<b>1,381.3376</b>	<b>0.2470</b>		<b>1,387.5121</b>



## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**3.2 Pipeline Installation - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.5078	0.1445	1.3200e-003	0.0339	1.1100e-003	0.0350	9.7400e-003	1.0600e-003	0.0108		141.9097	141.9097	0.0111		142.1860
Worker	0.0392	0.0252	0.2493	7.7000e-004	0.0822	5.7000e-004	0.0827	0.0218	5.2000e-004	0.0223		76.4548	76.4548	2.2000e-003		76.5097
<b>Total</b>	<b>0.0552</b>	<b>0.5330</b>	<b>0.3938</b>	<b>2.0900e-003</b>	<b>0.1160</b>	<b>1.6800e-003</b>	<b>0.1177</b>	<b>0.0315</b>	<b>1.5800e-003</b>	<b>0.0331</b>		<b>218.3644</b>	<b>218.3644</b>	<b>0.0133</b>		<b>218.6957</b>

**3.3 Trenching - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3126	3.0392	4.1544	6.2200e-003		0.1622	0.1622		0.1492	0.1492		601.7799	601.7799	0.1946		606.6456
<b>Total</b>	<b>0.3126</b>	<b>3.0392</b>	<b>4.1544</b>	<b>6.2200e-003</b>		<b>0.1622</b>	<b>0.1622</b>		<b>0.1492</b>	<b>0.1492</b>		<b>601.7799</b>	<b>601.7799</b>	<b>0.1946</b>		<b>606.6456</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**3.3 Trenching - 2021****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.5078	0.1445	1.3200e-003	0.0339	1.1100e-003	0.0350	9.7400e-003	1.0600e-003	0.0108		141.9097	141.9097	0.0111		142.1860
Worker	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
<b>Total</b>	<b>0.0356</b>	<b>0.5204</b>	<b>0.2691</b>	<b>1.7000e-003</b>	<b>0.0749</b>	<b>1.3900e-003</b>	<b>0.0763</b>	<b>0.0206</b>	<b>1.3200e-003</b>	<b>0.0220</b>		<b>180.1370</b>	<b>180.1370</b>	<b>0.0122</b>		<b>180.4409</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3126	3.0392	4.1544	6.2200e-003		0.1622	0.1622		0.1492	0.1492	0.0000	601.7799	601.7799	0.1946		606.6456
<b>Total</b>	<b>0.3126</b>	<b>3.0392</b>	<b>4.1544</b>	<b>6.2200e-003</b>		<b>0.1622</b>	<b>0.1622</b>		<b>0.1492</b>	<b>0.1492</b>	<b>0.0000</b>	<b>601.7799</b>	<b>601.7799</b>	<b>0.1946</b>		<b>606.6456</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**3.3 Trenching - 2021****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.5078	0.1445	1.3200e-003	0.0339	1.1100e-003	0.0350	9.7400e-003	1.0600e-003	0.0108		141.9097	141.9097	0.0111		142.1860
Worker	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
<b>Total</b>	<b>0.0356</b>	<b>0.5204</b>	<b>0.2691</b>	<b>1.7000e-003</b>	<b>0.0749</b>	<b>1.3900e-003</b>	<b>0.0763</b>	<b>0.0206</b>	<b>1.3200e-003</b>	<b>0.0220</b>		<b>180.1370</b>	<b>180.1370</b>	<b>0.0122</b>		<b>180.4409</b>

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile**

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

## 4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

## 4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

## 5.0 Energy Detail

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 Historical Energy Use: N

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Winter

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
<b>Total</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**7.0 Water Detail**

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## 7.1 Mitigation Measures Water

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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## RBW 04.06 - Gopher Canyon Pipeline

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## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Schedule based on rate of 80 feet per day

Off-road Equipment - Pipeline Installation Equipment

Off-road Equipment - Trenching Equipment

Trips and VMT - 5 truck trips per day per phase

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	64.00
tblConstructionPhase	PhaseEndDate	12/31/2020	4/7/2021
tblConstructionPhase	PhaseStartDate	1/1/2021	1/8/2021
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00

## 2.0 Emissions Summary

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## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0414	0.3663	0.4460	7.9000e-004	5.9700e-003	0.0176	0.0236	1.6400e-003	0.0168	0.0184	0.0000	69.2983	69.2983	0.0135	0.0000	69.6367
Maximum	0.0414	0.3663	0.4460	7.9000e-004	5.9700e-003	0.0176	0.0236	1.6400e-003	0.0168	0.0184	0.0000	69.2983	69.2983	0.0135	0.0000	69.6367

### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0414	0.3663	0.4460	7.9000e-004	5.9700e-003	0.0176	0.0236	1.6400e-003	0.0168	0.0184	0.0000	69.2983	69.2983	0.0135	0.0000	69.6367
Maximum	0.0414	0.3663	0.4460	7.9000e-004	5.9700e-003	0.0176	0.0236	1.6400e-003	0.0168	0.0184	0.0000	69.2983	69.2983	0.0135	0.0000	69.6367

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.3873	0.3873
2	4-1-2021	6-30-2021	0.0221	0.0221
		Highest	0.3873	0.3873

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Installation	Grading	1/8/2021	4/7/2021	5	64	
2	Trenching	Trenching	1/1/2021	3/31/2021	5	64	

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**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Excavators	1	6.00	158	0.38
Pipeline Installation	Generator Sets	1	8.00	84	0.74
Pipeline Installation	Welders	1	6.00	46	0.45
Pipeline Installation	Concrete/Industrial Saws	0	8.00	81	0.73
Trenching	Excavators	1	6.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline Installation	Rubber Tired Dozers	0	1.00	247	0.40
Pipeline Installation	Tractors/Loaders/Backhoes	1	6.00	97	0.37

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	2	5.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	4	10.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

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**3.2 Pipeline Installation - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0287	0.2350	0.2923	4.7000e-004		0.0124	0.0124		0.0119	0.0119	0.0000	40.1001	40.1001	7.1700e-003	0.0000	40.2794
<b>Total</b>	<b>0.0287</b>	<b>0.2350</b>	<b>0.2923</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>0.0124</b>	<b>0.0124</b>	<b>0.0000</b>	<b>0.0119</b>	<b>0.0119</b>	<b>0.0000</b>	<b>40.1001</b>	<b>40.1001</b>	<b>7.1700e-003</b>	<b>0.0000</b>	<b>40.2794</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0164	4.3800e-003	4.0000e-005	1.0600e-003	3.0000e-005	1.1000e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	4.1830	4.1830	3.1000e-004	0.0000	4.1908
Worker	1.1100e-003	7.9000e-004	7.9900e-003	2.0000e-005	2.5700e-003	2.0000e-005	2.5800e-003	6.8000e-004	2.0000e-005	7.0000e-004	0.0000	2.2417	2.2417	6.0000e-005	0.0000	2.2433
<b>Total</b>	<b>1.6000e-003</b>	<b>0.0172</b>	<b>0.0124</b>	<b>6.0000e-005</b>	<b>3.6300e-003</b>	<b>5.0000e-005</b>	<b>3.6800e-003</b>	<b>9.9000e-004</b>	<b>5.0000e-005</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>6.4247</b>	<b>6.4247</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>6.4341</b>

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**3.2 Pipeline Installation - 2021****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0287	0.2350	0.2923	4.7000e-004		0.0124	0.0124		0.0119	0.0119	0.0000	40.1001	40.1001	7.1700e-003	0.0000	40.2793
<b>Total</b>	<b>0.0287</b>	<b>0.2350</b>	<b>0.2923</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>0.0124</b>	<b>0.0124</b>	<b>0.0000</b>	<b>0.0119</b>	<b>0.0119</b>	<b>0.0000</b>	<b>40.1001</b>	<b>40.1001</b>	<b>7.1700e-003</b>	<b>0.0000</b>	<b>40.2793</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0164	4.3800e-003	4.0000e-005	1.0600e-003	3.0000e-005	1.1000e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	4.1830	4.1830	3.1000e-004	0.0000	4.1908
Worker	1.1100e-003	7.9000e-004	7.9900e-003	2.0000e-005	2.5700e-003	2.0000e-005	2.5800e-003	6.8000e-004	2.0000e-005	7.0000e-004	0.0000	2.2417	2.2417	6.0000e-005	0.0000	2.2433
<b>Total</b>	<b>1.6000e-003</b>	<b>0.0172</b>	<b>0.0124</b>	<b>6.0000e-005</b>	<b>3.6300e-003</b>	<b>5.0000e-005</b>	<b>3.6800e-003</b>	<b>9.9000e-004</b>	<b>5.0000e-005</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>6.4247</b>	<b>6.4247</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>6.4341</b>



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**3.3 Trenching - 2021****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0100	0.0973	0.1329	2.0000e-004		5.1900e-003	5.1900e-003		4.7800e-003	4.7800e-003	0.0000	17.4696	17.4696	5.6500e-003	0.0000	17.6109
<b>Total</b>	<b>0.0100</b>	<b>0.0973</b>	<b>0.1329</b>	<b>2.0000e-004</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>		<b>4.7800e-003</b>	<b>4.7800e-003</b>	<b>0.0000</b>	<b>17.4696</b>	<b>17.4696</b>	<b>5.6500e-003</b>	<b>0.0000</b>	<b>17.6109</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0164	4.3800e-003	4.0000e-005	1.0600e-003	3.0000e-005	1.1000e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	4.1830	4.1830	3.1000e-004	0.0000	4.1908
Worker	5.6000e-004	4.0000e-004	4.0000e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1208	1.1208	3.0000e-005	0.0000	1.1216
<b>Total</b>	<b>1.0500e-003</b>	<b>0.0168</b>	<b>8.3800e-003</b>	<b>5.0000e-005</b>	<b>2.3400e-003</b>	<b>4.0000e-005</b>	<b>2.3900e-003</b>	<b>6.5000e-004</b>	<b>4.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>5.3039</b>	<b>5.3039</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>5.3124</b>

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**3.3 Trenching - 2021****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0100	0.0973	0.1329	2.0000e-004		5.1900e-003	5.1900e-003		4.7800e-003	4.7800e-003	0.0000	17.4696	17.4696	5.6500e-003	0.0000	17.6109
<b>Total</b>	<b>0.0100</b>	<b>0.0973</b>	<b>0.1329</b>	<b>2.0000e-004</b>		<b>5.1900e-003</b>	<b>5.1900e-003</b>		<b>4.7800e-003</b>	<b>4.7800e-003</b>	<b>0.0000</b>	<b>17.4696</b>	<b>17.4696</b>	<b>5.6500e-003</b>	<b>0.0000</b>	<b>17.6109</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.9000e-004	0.0164	4.3800e-003	4.0000e-005	1.0600e-003	3.0000e-005	1.1000e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	4.1830	4.1830	3.1000e-004	0.0000	4.1908
Worker	5.6000e-004	4.0000e-004	4.0000e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1208	1.1208	3.0000e-005	0.0000	1.1216
<b>Total</b>	<b>1.0500e-003</b>	<b>0.0168</b>	<b>8.3800e-003</b>	<b>5.0000e-005</b>	<b>2.3400e-003</b>	<b>4.0000e-005</b>	<b>2.3900e-003</b>	<b>6.5000e-004</b>	<b>4.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>5.3039</b>	<b>5.3039</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>5.3124</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**4.2 Trip Summary Information**

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

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## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

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## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

**Mitigated**

[illegible]

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

## 6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**



## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use****Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## RBW 04.06 - Gopher Canyon Pipeline - San Diego County, Annual

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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### User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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## Appendix B

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### Biological Resources Letter Report

December 22, 2020

RBW-04.06

Mr. Chad Williams  
Rainbow Municipal Water District  
3707 Highway 395  
Fallbrook, CA 92028

Subject: Biological Resources Letter Report for the Gopher Canyon Water Pipeline Improvements Project

Dear Mr. Williams:

On behalf of Rainbow Municipal Water District, HELIX Environmental Planning, Inc. (HELIX) has prepared this letter report to document the results of a biological resources technical study for the proposed Gopher Canyon Water Pipeline Improvements Project (project) located in the community of Bonsall, San Diego County, California. This report summarizes the methods, results, and recommendations based on a review of existing information and a general biological survey in accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Figures and other supporting information are provided as enclosures attached to this letter report.

## PROJECT LOCATION AND DESCRIPTION

The project consists of five pipeline segments within three pipeline improvement components located within the roadways, east of Highway 76 and west of Interstate 15, in the community of Bonsall, California (Figure 1, *Regional Location*). The project area is located within Sections 2 and 3 of Township 11 South, Range 3 West on the U.S. Geological Survey 7.5-minute Bonsall and San Marcos quadrangle maps (Figure 2, *Project Vicinity [USGS Topography]*). Residential and agricultural developments are found in the surrounding areas along with undeveloped habitat. The Integrity Court pipeline is located within the roadway of Integrity Court between Protea Vista Terrace and Protea Vista Road (Figure 3, *Aerial Vicinity*). Disney Lane segments consists of two pipelines located within Gopher Canyon Road between Disney Lane and within Margale Lane and along Margale Lane and the southern portion of the adjacent residence (Figure 3). The Gopher Canyon Road (Sections 1 and 2) segments consists of two pipelines are located within Gopher Canyon Road between Reza Court and Valley of the King Road and between Avohill Drive and El Paseo (Figure 3).

The District proposed project includes the construction of three pipeline improvement components: Integrity Court (1,068 feet of 8-inch PVC pipeline connecting two existing pipelines to create a single

looped pipeline); Gopher Canyon Road Sections 1 and 2 (comprising the addition of a total of 2,125 feet of 8-inch PVC pipeline in two separate sections of pipeline within the public right-of-way that will connect existing pipelines, creating a single looped pipeline ); replacement of 550 feet of pipeline between Disney Lane and Margale Lane and the addition of 287 feet of pipeline within the paved section of Margale Lane; and replacement of 300 feet of pipeline in Margale Lane; and Disney Lane (addition of 1,363 feet of 12-inch PVC pipeline; Figure 4, *Site Plan*). The work for the Disney Lane project also includes the installation of valves, fire hydrants, air release and vacuum relief assemblies, blow off assemblies, relocation of water meters, constructing private service laterals, abandoning old pipelines, reestablishing survey monuments, and tying into existing water mains.

## **METHODS**

### **Pre-Survey Investigation**

Prior to conducting field surveys in 2020, a thorough review of relevant maps, databases, and literature pertaining to biological resources known to occur within the project vicinity was performed. Recent and historical aerial imagery (Google 2020), topographic maps, soils maps (USDA 2019), and other maps of the project sites and vicinity were acquired and reviewed to obtain updated information on the natural environmental setting.

In addition, a query of sensitive species and habitats databases was conducted, including the USFWS Critical Habitat Portal (2020a), USFWS species records (USFWS 2020b), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2020), and California Native Plant Society (CNPS) Electronic Inventory (CNPS 2018). The USFWS National Wetlands Inventory was also reviewed (USFWS 2020c). Recorded locations of species, habitat types, wetlands, and other resources were mapped and overlaid onto aerial imagery using Geographic Information Systems (GIS).

### **General Biological Survey**

HELIX biologist Katie Bellon performed initial, general biological surveys on May 22, 2020 and September 17, 2020, which included visual coverage of the project sites and immediate vicinity. The total area surveyed for the general biological surveys was approximately 28.7 acres. The general biological survey included a general inventory of existing conditions and focused primarily on verifying existing vegetation communities or habitat types, preliminarily mapping potential jurisdictional waters and wetlands, assessing suitability for sensitive plant and animal species, and identifying potential sensitive resources. Off-site areas were visually inspected by visual scans. Physical parameters assessed included vegetation and soil conditions, presence of indicator plant and animal species, slope, aspect and hydrology.

Vegetation was mapped on 1"=100' scale aerial imagery. Plant and animal species observed or otherwise detected during biological surveys at the project sites are included in Attachments A and B, respectively. Sensitive species and habitats recorded within two miles of the project sites were analyzed for potential to occur (Attachments C and D). A complete list was compiled and recorded locations were mapped and overlaid onto aerial imagery using GIS. Plant identifications were made in the field. Animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. Representative site photos are located in Attachment E.

## Basic Wetland Delineation

Prior to beginning fieldwork, aerial photographs (1"=100' scale), topographic maps (1"=100' scale), and National Wetland's Inventory (NWI) maps were reviewed to assist in determining the presence or absence of potential jurisdictional areas in the survey area. Ms. Bellon performed the basic wetland delineation on May 22, 2020 and September 17, 2020 concurrent with the general biological survey. The delineation was conducted to identify and map any water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344); Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; and California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game Code (CFG Code). Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated.

### Waters of the U.S.

Potential USACE-jurisdictional waters of the U.S. were delineated in accordance with the Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Mapping of drainage features was performed in the field based on the ordinary high water mark (OHWM) and surface indications of hydrology. Areas were assumed to be potential wetland waters of the U.S. if there was a dominance of hydrophytic vegetation, presumed hydric soils, and wetland hydrology indicators. Areas were determined to be non-wetland waters of the U.S. if there was evidence of regular surface flow within an OHWM, but the vegetation and/or soils criterion were not met.

### Waters of the State

Potential RWQCB-jurisdictional waters of the State were generally delineated following the methodology for waters of the U.S., except that potential jurisdictional boundaries of non-wetland waters were taken to the top-of-bank (i.e., top-of-slope to top-of-slope), extending beyond the OHWM.

### Streambed and Riparian Habitat

Potential CDFW-jurisdictional streambed and riparian habitat were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Potential CDFW jurisdictional unvegetated-streambed encompasses the top-of-slope to top-of-slope width for the ephemeral streams within the survey area.

## Survey Limitations

Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that utilize the survey area as species that are nocturnal, secretive, or seasonally



restricted may not have been observed. Those species that are of special status and have potential to occur in the survey area, however, are still addressed in this report (Attachments C and D).

## Nomenclature

Nomenclature used in this report generally comes from Holland (1986) and Oberbauer (2008) for vegetation; Baldwin et al. (2014) for plants; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2014) for birds; and Bradley et al. (2014) for mammals. Plant species status is from the California Native Plant Society (CNPS; 2018) and CDFW (2018a). Animal species status is from CDFW (2018b and 2018c).

## EXISTING CONDITIONS SUMMARY

### General Land Use

The project sites are composed entirely of existing paved roads. The surrounding area is primarily composed of rural residential development made up of private residences, non-native vegetation, and orchard. Undisturbed, native vegetation communities consisting of southern riparian forest located to the southwest of the Disney Lane pipeline and Diegan coastal sage scrub to the west of the Integrity Court pipeline also occur within the survey area.

### Disturbance

The project sites have been subject to regular disturbance as a result of residential and infrastructure development. All project sites are located within paved roads in the community of Bonsall. The slopes within and surrounding the project sites have also been cut and recontoured for the roadways. Non-native vegetation, including ornamental landscaping, orchard, and invasive species, surround the project sites.

### Topography and Soils

Elevations within the project sites range from approximately 465 feet to 760 feet above mean sea level. Ten soil types have been mapped in the survey area (Figure 5, *Soils*): Cienega very rocky coarse sandy loam, 30 to 75 percent slopes; Escondido very fine sandy loam, 15 to 30 percent slopes, eroded; Friant rocky fine sandy loam, 30 to 70 percent slopes; Huerhuero loam, 5 to 9 percent slopes, eroded; Las Posas fine sandy loam, 15 to 30 percent slopes, eroded; Ramona sandy loam, 5 to 9 percent slopes; Ramona sandy loam, 9 to 15 percent slopes, eroded; steep gullied land; Vista coarse sandy loam, 9 to 15 percent slopes, MLRA 20; and Wyman loam, 5 to 9 percent slopes. The only soil within the survey area listed as hydric is steep gullied land (USDA 2019). The surface soils throughout the entire site show evidence of a high degree of disturbance, primarily as a result of residential and transportation developments.

### Vegetation Communities

Seven vegetation communities/habitat types occur in the survey area, as presented in Table 1 and shown on Figures 6a-c. The numeric codes in parentheses following each community/habitat type name are taken from the Holland (Holland 1986) and Oberbauer (2008) classification systems.

**Table 1**  
**Vegetation Communities/Habitat Types**

Vegetation Communities/Habitat Types	Survey Area (acres) <sup>1</sup>					
	Integrity Court	Disney Lane		Gopher Canyon Road		Total
		Disney	Margale	Section 1	Section 2	
Diegan Coastal Sage Scrub – including disturbed (32520)	1.0	--	--	--	0.2	1.2
Freshwater Marsh – disturbed (52400)	--	--	--	0.28	--	0.28
Southern Riparian Forest Scrub – including disturbed (61300)	--	1.59	--	--	0.21	0.22
Southern Willow Scrub – disturbed (63320)	--	--	--	0.22	--	1.81
Orchard (18100)	--	0.7	--	0.4	1.2	2.2
Non-Native Vegetation (11000)	--	0.4	--	--	2.2	2.6
Urban/Developed (12000)	4.6	4.4	4.8	3.0	3.6	20.3
TOTAL	5.6	7.0	4.8	3.9	7.3	28.7

<sup>1</sup> The survey area extends 100 feet from the proposed projects. Totals reflect rounding

### Diegan Coastal Sage Scrub (including disturbed)

Diegan coastal sage scrub typically consists of low-growing, soft woody sub-shrubs, up to one meter in height, that bloom in the winter and early spring. The community commonly occurs on low moisture availability sites characterized by steep xeric slopes or clay rich soils that have high water retention. Dominants of this community observed onsite consists primarily of California buckwheat (*Eriogonum fasciculatum*) and California sagebrush (*Artemisia californica*). The disturbed phase of this community consists of the same vegetation, but with a higher proportion of non-native species. Diegan coastal sage scrub occurs east and west of the Integrity Court pipeline (Figure 6a, *Vegetation and Sensitive Resources*). Disturbed Diegan coastal sage scrub is located southwest of Gopher Canyon Road Section 2 (Figure 6d).

### Freshwater Marsh (disturbed)

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs around the margins of lakes and springs, freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species in this community include cattail (*Typha angustifolia*) and non-native species such horseweed (*Erigeron bonariensis*), castor bean (*Ricinus communis*), and curly dock (*Rumex crispus*). Freshwater marsh occurs southwest of the Gopher Canyon Road Section 1 adjacent to the road (Figure 6c).

## Southern Riparian Forest

Southern riparian forests are composed of winter-deciduous trees that require water near the soil surface. Willow (*Salix* sp.), cottonwood (*Populus* sp.), and western sycamore (*Platanus racemosa*) form a dense medium height woodland or forest in moist canyons and drainage bottoms. The canopies of individual tree species do overlap so that a canopy cover exceeding 100 percent may occur in the upper tree stratum. The disturbed phase of this community consists of the same vegetation, but with a higher proportion of non-native species. Southern riparian forest located south of the western half of the Disney Lane site and is dominated by mature willows (Figure 6b). A small patch of disturbed southern riparian forest is located north of Gopher Canyon Road Section 2 (Figure 6d).

## Southern Willow Scrub (disturbed)

Disturbed southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat (*Baccharis salicifolia*) with a high proportion of non-native species. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). Disturbed southern willow scrub within the survey area is dominated by arroyo willow (*Salix lasiolepis*) and pampas grass (*Cortaderia selloana*) and occurs southwest of the Gopher Canyon Road Section 1 adjacent to the road (Figure 6c).

## Orchard

Orchards are defined broadly as land used primarily for production of food and fiber. Orchards are usually comprised of artificially irrigated habitat dominated by one, or sometimes several, tree species. Orchard habitat occurs immediately south of the Disney Lane and Gopher Canyon Road Sections 1 and 2 project sites. The orchard is dominated by avocado (*Persea americana*) and orange trees (*Citrus x sinensis*). Orchards occur southwest of Gopher Canyon Road Section 1, south of Gopher Canyon Road Section 2, and south of Disney Lane pipelines (Figures 6b-6d).

## Non-Native Vegetation

Non-native vegetation is a category describing stands of naturalized trees, shrubs, and grasses, many of which are also used in landscaping. In addition, non-native vegetation generally contains a high proportion of invasive and weedy species. Dominant tree and shrub species in this plant community within the survey area include eucalyptus trees (*Eucalyptus* spp.) and peppertrees (*Schinus* spp.), while the herbaceous layer is composed of ornamental vegetation with several weedy species such as thistles (*Centaurea* sp., *Salsola tragus*, and *Sonchus* sp.). While this community is primarily made up of non-native vegetation, several scattered, native individuals are present. Native species within the survey area are generally small and sporadic within the non-native vegetation community. Native species include California sagebrush, California buckwheat, and mulefat. Non-native vegetation within the Disney Lane survey area consists of predominantly non-native species including tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and mustard (*Brassica nigra*). Non-native vegetation occur southeast of Disney Lane and north and south of Gopher Canyon Road Section 2 pipelines (Figures 6a and 6d).

## Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. All project sites are entirely developed. Within the survey area developed land consists of residential development and landscaping surrounding the Margale Lane project site, north of Disney Lane and Gopher Canyon Road Section 1, northeast and west of Gopher Canyon Road Section 2, and to the north, east, and south of Integrity Court (Figures 6a-6d).

## Flora

HELIX identified a total of 36 plant species in the survey area, of which 27 (75 percent) are non-native species (Attachment A).

## Fauna

A total of 19 animal species were observed or otherwise detected in the survey area during the biological surveys, including one reptile, 16 bird, and two mammal species (Attachment B).

## SENSITIVE BIOLOGICAL RESOURCES

### Sensitive Natural Communities

Sensitive natural communities include land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines.

Diegan coastal sage scrub (including disturbed), disturbed freshwater marsh, southern riparian forest (including disturbed), and disturbed southern willow scrub are sensitive vegetation communities/habitat types mapped in the survey area (Figures 6a-6d).

### Special-Status Plant Species

Special-status plant species are those listed as federally threatened or endangered by the USFWS; State listed as threatened or endangered or considered sensitive by the CDFW; and/or, are CNPS California Rare Plant Rank (CRPR) List 1A, 1B, or 2 species, as recognized in the CNPS's Inventory of Rare and Endangered Vascular Plants of California and consistent with the CEQA Guidelines. Special-status plant species analyzed for their potential to occur are included in Attachment C.

No special-status plant species were observed during the survey; none have a high or moderate potential to occur. All project sites are situated entirely within developed land, which has eliminated the potential for special-status plant species to occur within the project sites. Existing uses and disturbances, proximity to developments, and overall poor-quality habitat strongly reduce the potential for sensitive plants to occur within the surrounding area. The cut slope and existing landscaping has modified the landscape, soil, hydrology, and vegetation composition of the site, which has substantially reduced the potential for special-status plant species to occur within the surrounding area.

## Special-Status Animal Species

Special-status animal species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and considered sensitive animals by the CDFW. Special-status animal species with potential to occur on the project sites are included in Attachment D.

No special-status animals were observed during the survey. Furthermore, no special-status animal species are likely to reside or use the project sites as breeding habitat due to the lack of suitable habitat and developed and disturbed nature of the sites and surrounding lands. The project sites are composed entirely of developed land within roadways and are primarily surrounded by orchard and non-native vegetation. Native communities, including disturbed communities, occur adjacent to all of the project segments except for Margale Lane. No native or naturalized habitat occurs within any of the project sites. The sites do not support resources that would attract and sustain special-status animal species that occur in the region. The lack of resources, existing uses, and regular vehicular traffic within the area would likely preclude most special-status animals from moving onto any of the sites. Existing uses and disturbances, proximity to developments, and lack of suitable habitat strongly reduce the potential for special-status animals to occur.

Four special-status animals species have a moderate to high potential to occur off site within coastal sage scrub habitat that occurs east and west of the Integrity Court pipeline: southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), which is a state watch list species, coastal California gnatcatcher (*Poliophtila californica californica*), which is a federally threatened species and state species of special concern, coastal whiptail (*Aspidoscelis tigris stejnegeri*), which is a state species of special concern, and red diamond rattlesnake (*Crotalus ruber*), which is a state species of special concern. Disturbed Diegan coastal sage scrub southwest of Gopher Canyon Road Section 2 is too small, disturbed, and fragmented to support sensitive species. The potential for these species to utilize the off-site habitat is moderate to high because of the overall quality of the habitat; however, it is unlikely that these species would utilize any of the project sites for breeding or foraging as it does not contain habitat.

In addition, the least Bell's vireo (*Vireo bellii pusillus*), which is a federally and state endangered species, has a high potential to occur within off site southern riparian forest habitat that occurs southwest of Disney Lane and northeast of Gopher Canyon Road Section 2. The potential for this species to utilize the off-site habitat is high due to the overall quality of the habitat. Better quality habitat occurs south of Disney Lane further from the roadways. It is not possible for this species to utilize any of the project sites for breeding or foraging as none of the project sites contain suitable habitat.

### Nesting Birds and Raptors

The survey areas contain suitable nesting habitat (e.g., trees, shrubs, structures) for several common bird species, including raptors, protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code); however, all of the project sites are entirely developed and none contain suitable nesting habitat.

## Jurisdictional Waters and Wetlands

In the context of this assessment, jurisdictional waters and wetlands include waters of the U.S., including wetlands, regulated by the USACE pursuant to CWA Section 404; waters of the State regulated by the

Regional Water Quality Control Board pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; and streambed and riparian habitat regulated by the CDFW pursuant to Sections 1600 et seq. of CFG Code.

Potentially jurisdictional roadside ditches parallel Gopher Canyon Road Sections 1 and 2. The Gopher Canyon Road Section 1 roadside ditch consists of an approximately three-foot-wide, highly disturbed man-made ditch with culverts (Figure 6c). Plant species within the roadside ditch consist of small willows, cattails, curly dock, and castor bean. The Gopher Canyon Road Section 2 roadside ditch consists of an approximately 1.5-foot-wide, disturbed earthen ditch with culverts (Figure 6d). The roadside ditch flows through primarily non-native vegetation and a patch of disturbed southern riparian forest consisting primarily of pepper trees, eucalyptus trees, palms, and mature willows. These roadside ditches were specifically constructed to transport runoff and stormwater. These roadside ditches could meet the minimum requirements to be considered jurisdictional waters by the RWQCB and CDFW. They are not likely to qualify as waters of the U.S. subject to USACE jurisdiction based on the fact that they are roadside ditches constructed wholly or partially within dry lands for the purpose of stormwater conveyance.

Within the Disney lane survey area, a man-made swale is located along the north, uphill side of Gopher Canyon Road. A second man-made, unvegetated swale is located along the west side of Margale Lane. Neither swale contained wetland or riparian vegetation and represent low spots in the uplands where storm water collects after sheet flowing off the roadways. These swales could meet the minimum requirements to be considered jurisdictional waters by the RWQCB and/or CDFW.

At least six non-jurisdictional concrete-lined v-ditches occur within the Integrity Court survey area. The purpose of these concrete-lined ditches is to prevent flooding and erosion on the slopes manufactured and were likely installed as a component of the residential home development. None of the concrete-lined ditches meet the criteria to be subject to the regulatory jurisdiction of the USACE, RWQCB, and CDFW.

The proposed project activities will be restricted to the developed roadway and no impacts would occur potentially jurisdictional or non-jurisdictional features.

## **Wildlife Corridors and Linkages**

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A corridor is a specific route that is used for the movement and migration of species and may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance.

The project sites do not occur within any known corridors or linkages. No portions of any of the project sites function as linkage or corridor habitat. The proposed project sites and vicinities are generally

composed of residential development and agriculture within rural areas. Wildlife are expected to travel relatively unobstructed through undeveloped habitat in the local area. The project would be entirely situated within existing developed roadways. Wildlife would have the potential to travel adjacent to project components as no individual component or components have the potential to impede movement.

## PROJECT IMPACT SUMMARY

Project impacts to biological resources are depicted on the enclosed Figures 7a-7d, *Vegetation and Sensitive Resources Impacts*. Approximately 0.3 acre of developed land is proposed to be temporarily impacted through the implementation of project components. Project impacts will be located entirely within existing asphalt roadways and no direct impacts would occur to sensitive biological resources.

## SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

This section provides a project-level biological resources impact analysis for the proposed project in support of environmental review. The issues addressed in this section are derived from Appendix G of the CEQA Guidelines. Mitigation, monitoring, and reporting requirements to eliminate or reduce project impacts to a less than significant level are also provided in this section. Figures 7a-7d overlays the current site plans and depicts the project impacts to biological resources.

### ISSUE 1: Special-Status Species

***Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?***

#### ISSUE 1 Impact Analysis

Less than Significant with Mitigation. Project development has been specifically targeted within existing developed land associated with existing roadways. Special-status plant species are not likely to occur within the project sites; therefore, none are expected to be impacted by the project. Existing developments have substantially reduced the potential for special-status plant species to occur. Therefore, special-status plant species are not likely to occur and none would be impacted by the project.

If avoidance measures are not in place, the project could result in significant indirect impacts to bird species, including several sensitive bird species, such as the least Bell's vireo, coastal California gnatcatcher, southern California rufous-crowned sparrow, and tree-nesting raptors, in the event they are found to be nesting on or within 500 feet of project construction. Because all project sites are located within existing asphalt roadways and no vegetation removal is proposed, no direct impacts are expected to occur to bird species. Direct and indirect impacts to coastal whiptail and red diamond rattlesnake are also not expected due to the extremely small project footprint and availability of higher quality habitat in the surrounding area.

The project is required to comply with the regulations and guidelines of the MBTA and CFG Code. As such, the project must ensure no direct or indirect impacts to nesting birds, tree-nesting raptors, and



sensitive bird species such as southern California rufous-crowned sparrow. The following mitigation measure will ensure that no indirect impacts occur to nesting birds, tree-nesting raptors, and southern California rufous-crowned sparrow during project construction:

**BIO-1** Project clearing, grubbing, and grading shall not occur within the avian breeding season (February 15 to September 15) and shall be limited to the non-breeding season (September 16 to February 14) to ensure no direct and indirect impacts to nesting birds and raptors, including sensitive species such as the southern California rufous-crowned sparrow. Should clearing, grubbing, and/or grading be necessary within the avian breeding season, the project would be required to comply with the regulations and guidelines of the MBTA and CFG Code, including completion of a pre-construction survey conducted by a qualified biologist to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, then clearing, grubbing, and grading shall be allowed to proceed. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged.

Direct impacts to the coastal California gnatcatcher are not expected due to the fact that no direct impacts will occur to suitable habitat for either of these species. However, these species have the potential to nest off site, within 500 feet of project construction. Suitable nesting habitat for the coastal California gnatcatcher occurs within 500 feet of the Integrity Court segment.

The project has been specifically designed to avoid sensitive resources and habitats and will be implemented entirely within developed land. Nevertheless, if avoidance measures are not in place, then project construction of the Integrity Court segment could result in potential significant noise-related indirect impacts on the coastal California gnatcatcher, if breeding individuals become displaced from their nests and fail to breed. The following mitigation measure will ensure that potential indirect impacts on the coastal California gnatcatcher are avoided during construction of the Integrity Court segment.

**BIO-2** All project clearing, grubbing, grading, or other construction activities shall not occur within the coastal California gnatcatcher breeding season (March 15 to June 30) and shall be limited to the non-breeding season (July 1 to March 14). Should clearing, grubbing, and/or grading be necessary within the coastal California gnatcatcher breeding season (March 15 to June 30), no project work shall occur until the following requirements have been met:

- A. A qualified biologist (possessing a valid Federal Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey appropriate habitat (coastal sage scrub) areas within the off-site lands that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the coastal California gnatcatcher. Surveys for the coastal California gnatcatcher shall be conducted within suitable habitat pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction.
- I. If gnatcatchers are present within the off-site lands, then no construction activities shall occur that would result in noise levels exceeding 60 dB(A) at the edge of occupied gnatcatcher habitat within the off-site lands. If construction noise would exceed 60dB(A)



or existing noise levels, then noise attenuation measures (e.g., sound walls, blankets, etc.) shall be implemented to reduce construction noise levels, as demonstrated through noise monitoring. If noise attenuation and monitoring demonstrate that construction noise cannot be reduced below 60dB(A) or to existing levels, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (July 1).

- II. If gnatcatchers are not detected within the off-site lands, then the qualified biologist shall submit substantial evidence concluding that no impacts to this species are anticipated and no mitigation measures would be necessary.

Direct impacts to the least Bell's vireo are not expected due to the fact that no direct impacts will occur to suitable habitat for this species. However, this species has the potential to nest off site, within 500 feet of project construction. Suitable nesting habitat for the least Bell's vireo occurs within 500 feet of the Disney Lane and Gopher Canyon Road Section 2 segments.

As previously stated, all project components are located entirely within developed land. Nevertheless, if avoidance measures are not in place, then project construction of Disney Lane and Gopher Canyon Road Section 2 segments could result in potential significant noise-related indirect impacts on the least Bell's vireo, if breeding individuals become displaced from their nests and fail to breed. The following mitigation measure will ensure that potential indirect impacts on the least Bell's vireo are avoided during construction of the Disney Lane and Gopher Canyon Road Section 2 segments.

**BIO-3** All project clearing, grubbing, grading, or other construction activities shall not occur within the least Bell's vireo breeding season (March 15 to September 15) and shall be limited to the non-breeding season (September 16 to March 14). Should clearing, grubbing, and/or grading be necessary within the least Bell's vireo breeding season (March 15 to September 15), no project work shall occur until the following requirements have been met:

- A. A qualified biologist (possessing a valid Federal Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey appropriate habitat (southern riparian forest) areas within the off-site lands that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the least Bell's vireo. Surveys for the least Bell's vireo shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:
  - I. If least Bell's vireo are present within the off-site lands, then no construction activities shall occur that would result in noise levels exceeding 60 dB(A) at the edge of occupied vireo habitat within the off-site lands. If construction noise would exceed 60dB(A) or existing noise levels, then noise attenuation measures (e.g., sound walls, blankets, etc.) shall be implemented to reduce construction noise levels, as demonstrated through noise monitoring. If noise attenuation and monitoring demonstrate that construction noise cannot be reduced below 60dB(A) or to existing levels, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

- II. If vireo are not detected within the off-site lands, then the qualified biologist shall submit substantial evidence concluding that no impacts to this species are anticipated and no mitigation measures would be necessary.

#### ISSUE 1 Mitigation Measures

Implementation of mitigation measures **BIO-1** through **BIO-3** would ensure that the project would have no substantial adverse effect on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS.

#### ISSUE 2: Sensitive Natural Communities

***Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?***

#### ISSUE 2 Impact Analysis

No Impact. Project development would be restricted to existing asphalt roadways. Developed land is not a sensitive natural community and does not require mitigation; therefore, no impacts to sensitive natural communities would occur.

#### ISSUE 2 Mitigation Measures

No mitigation measures are required.

#### ISSUE 3: Wetlands

***Would the project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?***

#### ISSUE 3 Impact Analysis

Less than Significant with Mitigation. Project development has been specifically targeted within existing developed land and no federally-protected wetlands as defined by CWA Section 404 occur within any of the proposed project sites. Jurisdictional and potentially jurisdictional features that occur within the survey areas have the potential to be inadvertently impacted by project implementation. The following mitigation measure will ensure that inadvertent impacts to jurisdictional and potentially jurisdictional features do not occur.

- BIO-4** Environmentally sensitive areas, such as sensitive habitats and potentially jurisdictional areas, will be clearly identified on all final construction and grading plans in order to prevent inadvertent impacts. The sensitive habitats include Diegan coastal sage scrub (including disturbed), disturbed freshwater marsh, southern riparian forest (including disturbed), disturbed southern willow scrub, as depicted on Figures 7a through 7d of the project's biological report. The potentially jurisdictional areas include man-made roadside ditches, as depicted on Figures 7a and 7b of the project's biological report. The plans must state that no construction activities, materials, equipment, or personnel shall be permitted within sensitive habitats or potentially

jurisdictional areas during project construction. In addition, plans will state that all construction activities, materials, equipment, and personnel must remain within existing roadways during project construction.

#### ISSUE 3 Mitigation Measures

Implementation of mitigation measure **BIO-4** would ensure that the project would have no substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act.

#### **ISSUE 4: Wildlife Movement and Nursery Sites**

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

#### ISSUE 4 Impact Analysis

No Impact. Project development would be restricted to existing asphalt roadways and would not restrict or impede wildlife movement or the use of nursery sites; therefore, no impacts to wildlife movement or nursery sites would occur.

#### ISSUE 4 Mitigation Measures

No mitigation measures are required.

#### **ISSUE 5: Local Policies and Ordinances**

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

#### ISSUE 5 Impact Analysis

No Impact. There are no local policies or ordinances protecting biological resources that are applicable to the project; therefore, no conflict would occur.

#### ISSUE 5 Mitigation Measures

No mitigation measures are required.

#### **ISSUE 6: Adopted Conservation Plans**

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

#### ISSUE 6 Impact Analysis

No Impact. Rainbow Municipal Water District is not a participating entity in any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state

habitat conservation plan; therefore, no impacts would occur to any such plans. No conflict with an adopted plan would occur.

#### ISSUE 6 Mitigation Measures

No mitigation measures are required.

## CLOSING

We appreciate the opportunity to provide you with this letter report. Please do not hesitate to contact me or Joanne Dramko at (619) 462-1515 if you have any questions or require further assistance.

Sincerely,



Katie Bellon  
Biologist

#### Attachments:

- Figure 1: Regional Location
- Figure 2: USGS Topography
- Figure 3: Aerial Vicinity
- Figure 4a: Site Plan – Integrity Court
- Figure 4b: Site Plan – Disney Lane
- Figure 4c: Site Plan – Margale Lane
- Figure 4d: Site Plan – Gopher Canyon Road (Section 1)
- Figure 4e: Site Plan – Gopher Canyon Road (Section 2)
- Figure 5: Soils
- Figure 6a: Vegetation and Sensitive Resources
- Figure 6b: Vegetation and Sensitive Resources
- Figure 6c: Vegetation and Sensitive Resources
- Figure 6d: Vegetation and Sensitive Resources
- Figure 7a: Vegetation and Sensitive Resources Impacts
- Figure 7b: Vegetation and Sensitive Resources Impacts
- Figure 7c: Vegetation and Sensitive Resources Impacts
- Figure 7d: Vegetation and Sensitive Resources Impacts

- Attachment A: Plant Species Observed
- Attachment B: Animal Species Detected or Observed
- Attachment C: Special-Status Plant Species with Potential to Occur
- Attachment D: Special Status Animal Species with Potential to Occur
- Attachment E: Representative Site Photos

## REFERENCES

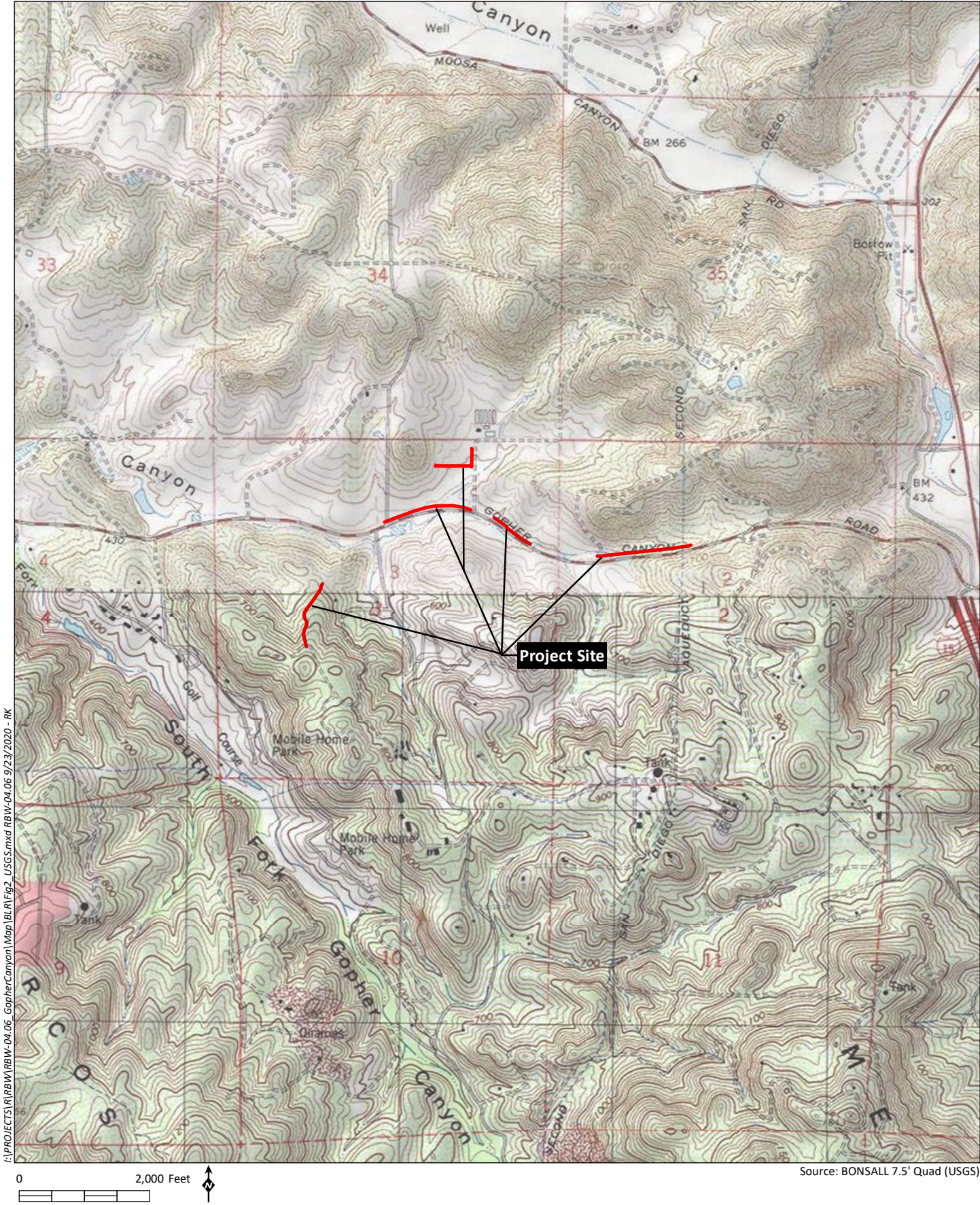
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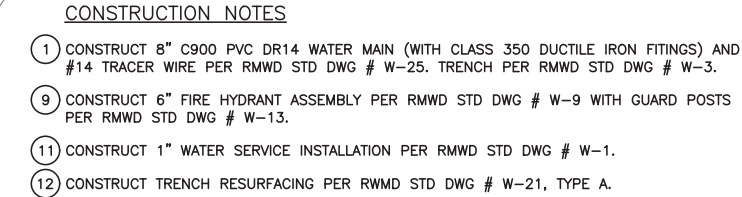








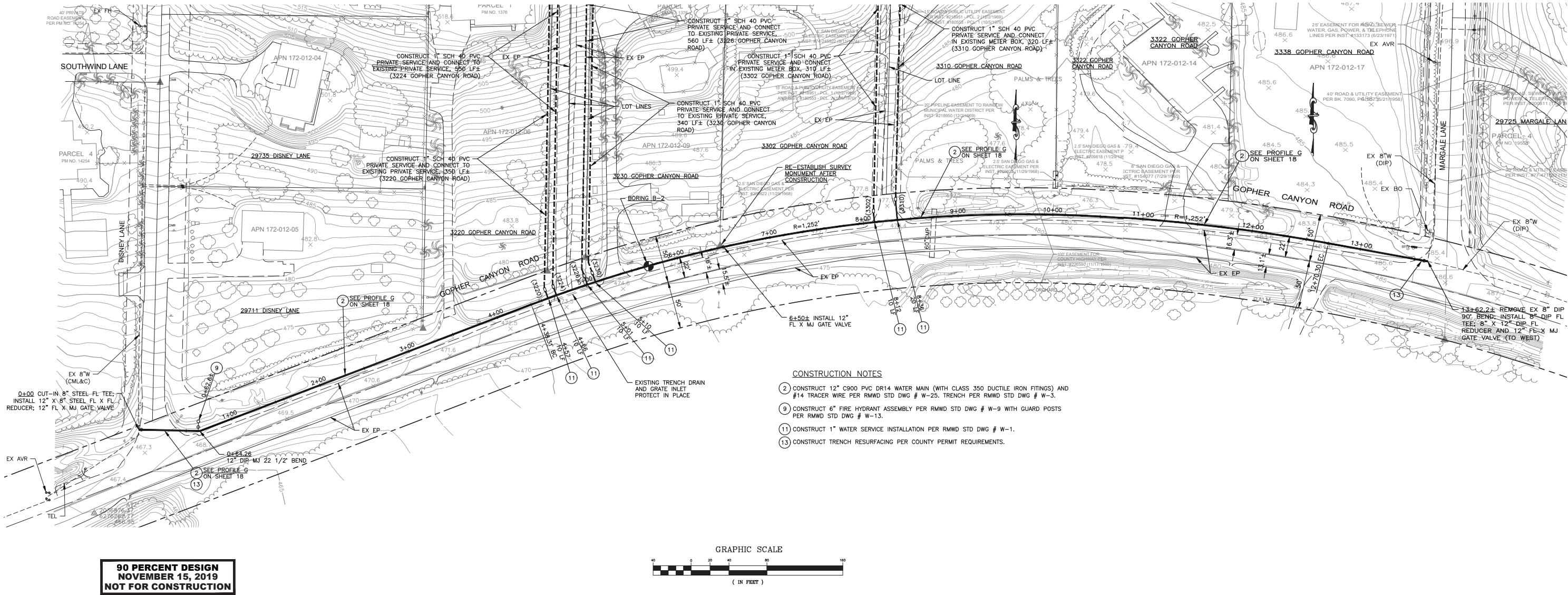




**HELIX**  
Environmental Planning

Figure 4a

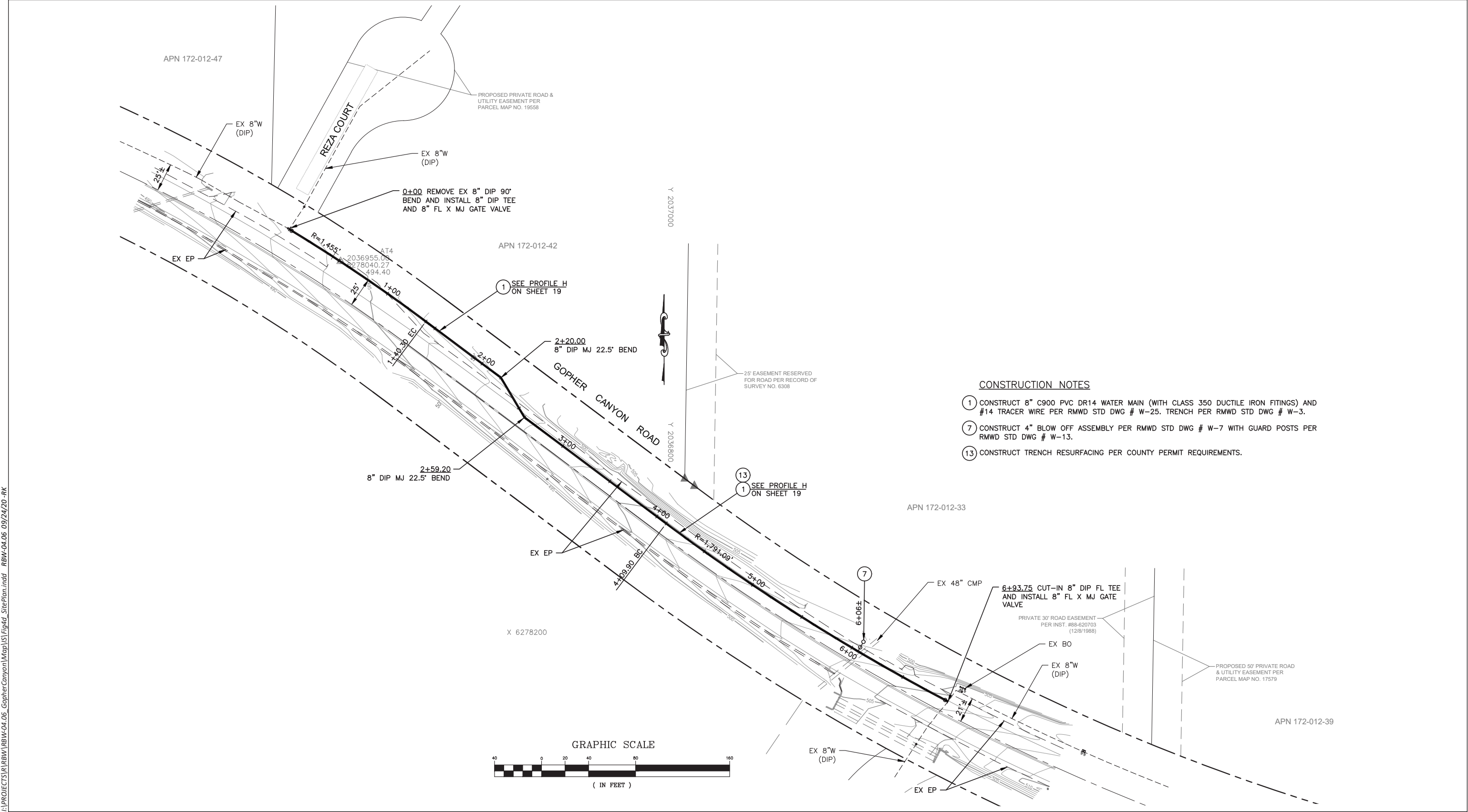
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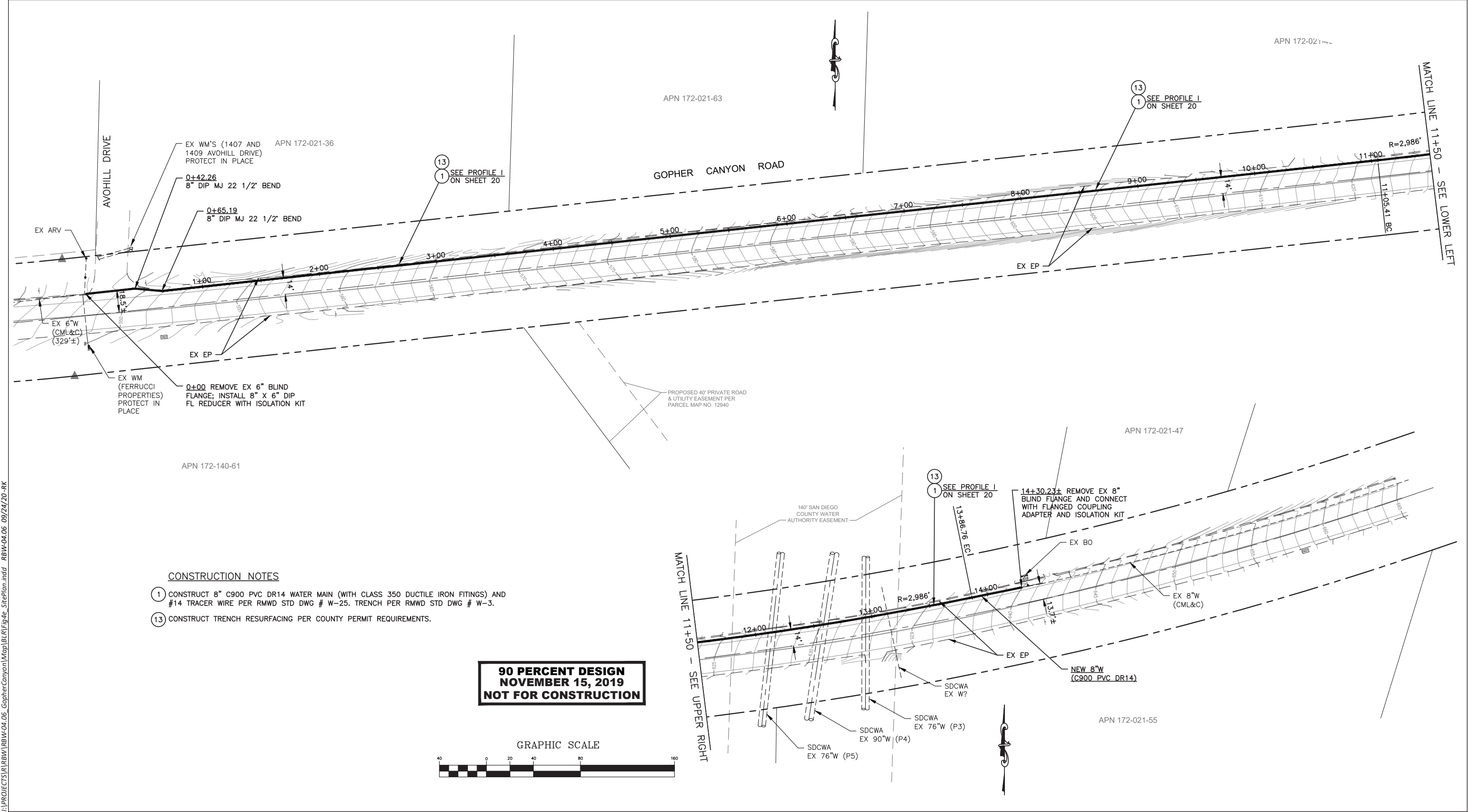
Source: Omnis Consulting 2019





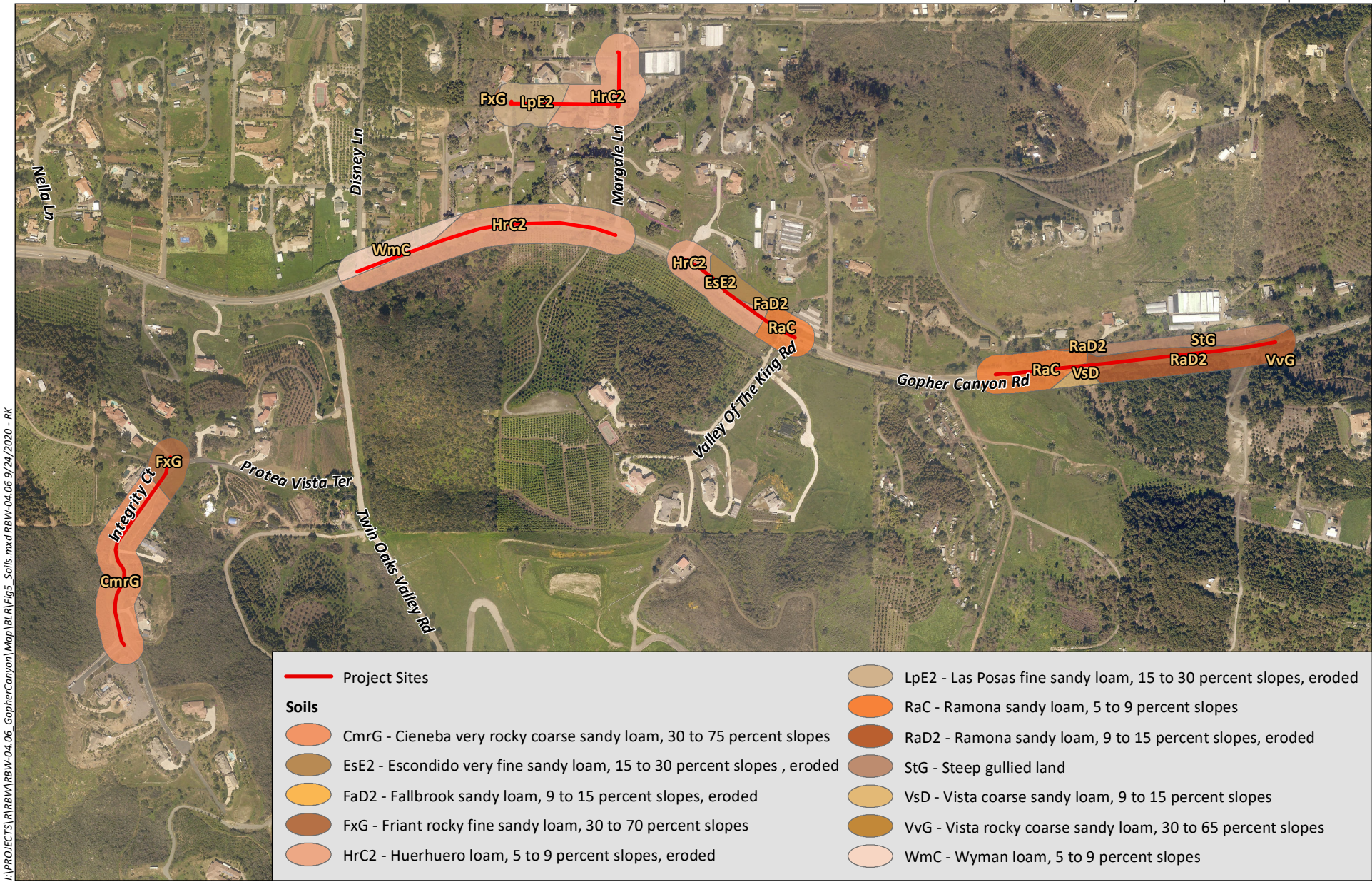


Source: Omnis Consulting 2019



Source: Omnis Consulting 2019

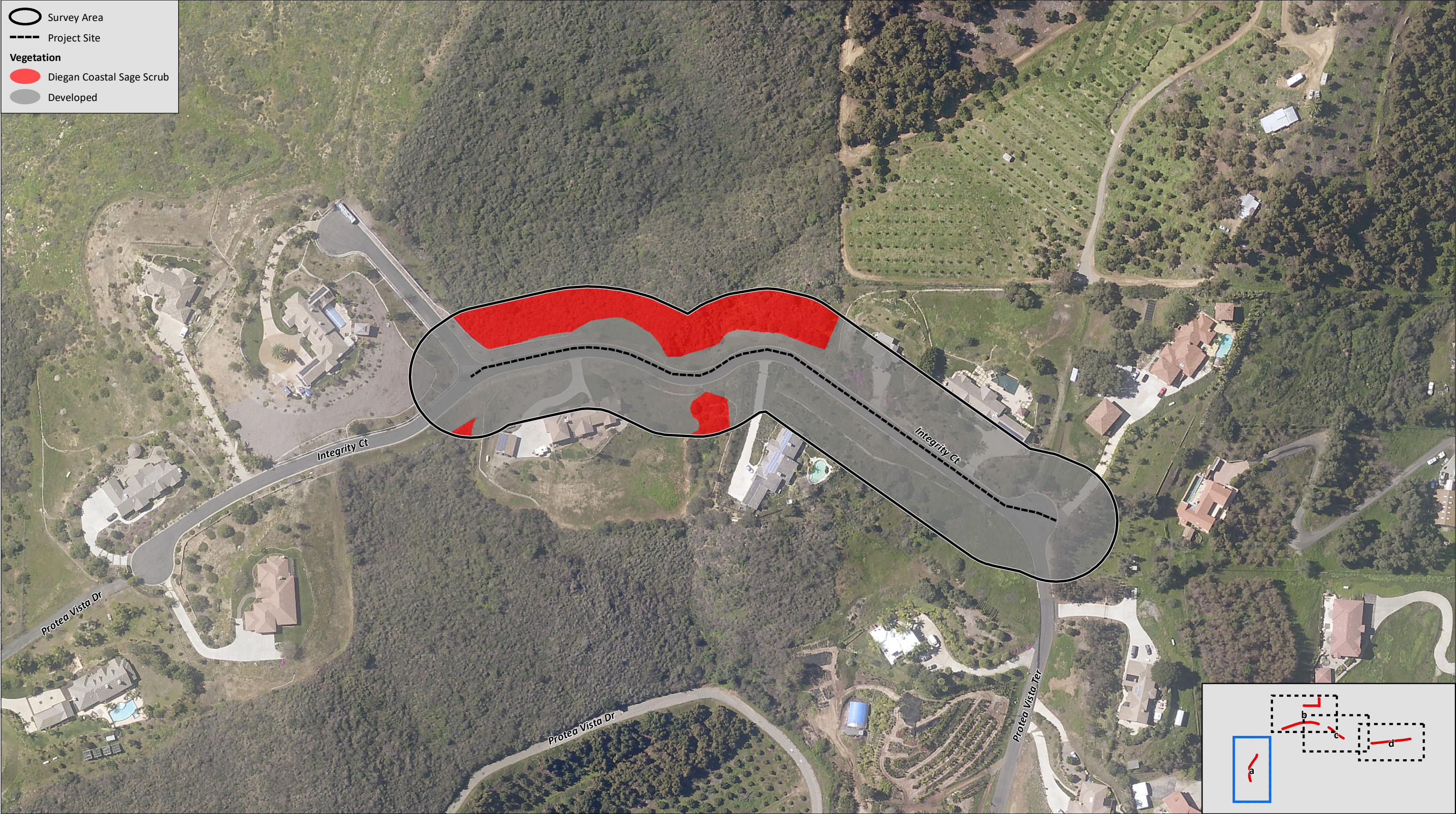




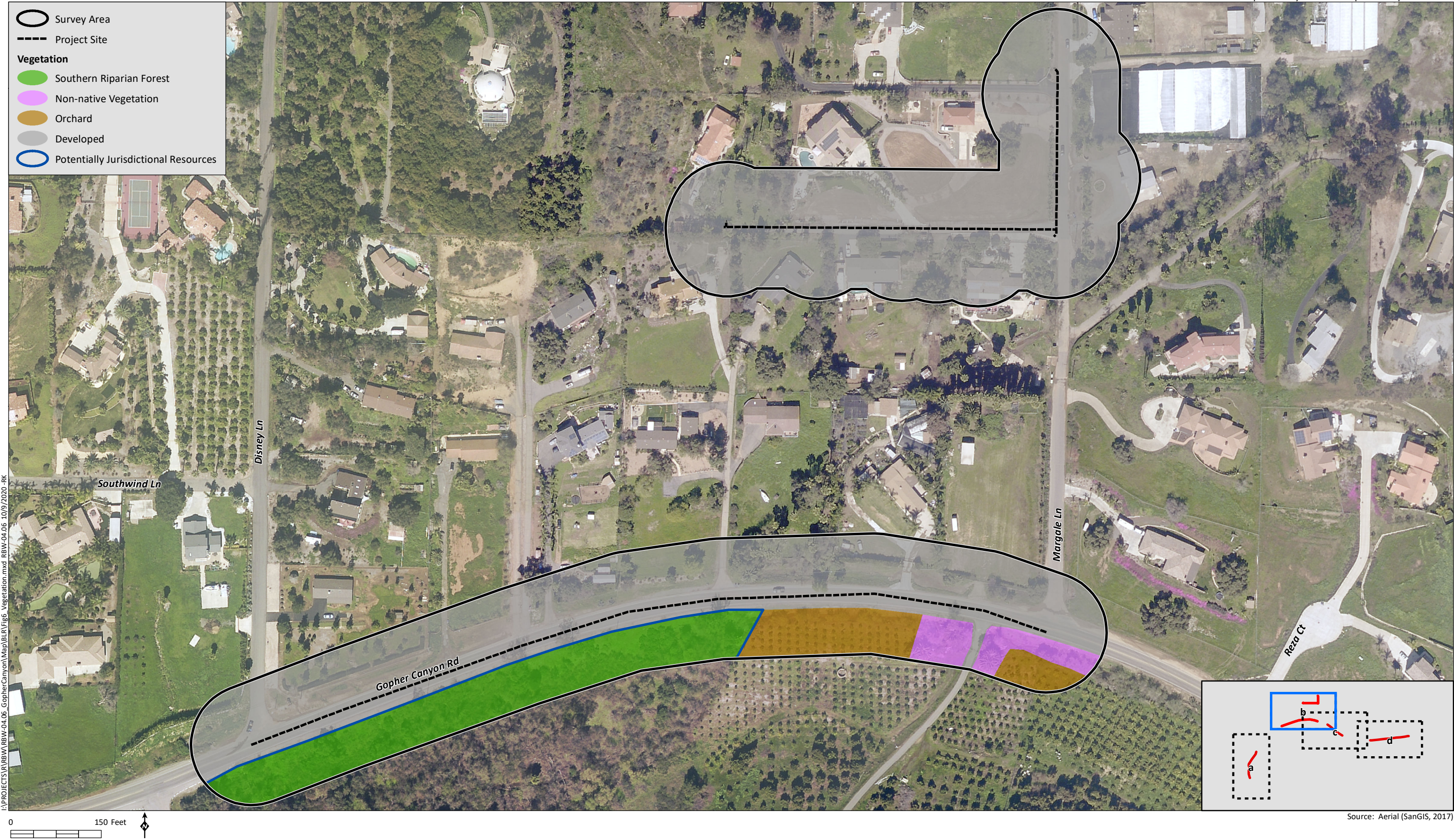
Source: Aerial (SanGIS 2017), Soils (U.S. Department of Agriculture, Natural Resources Conservation Service 2005)



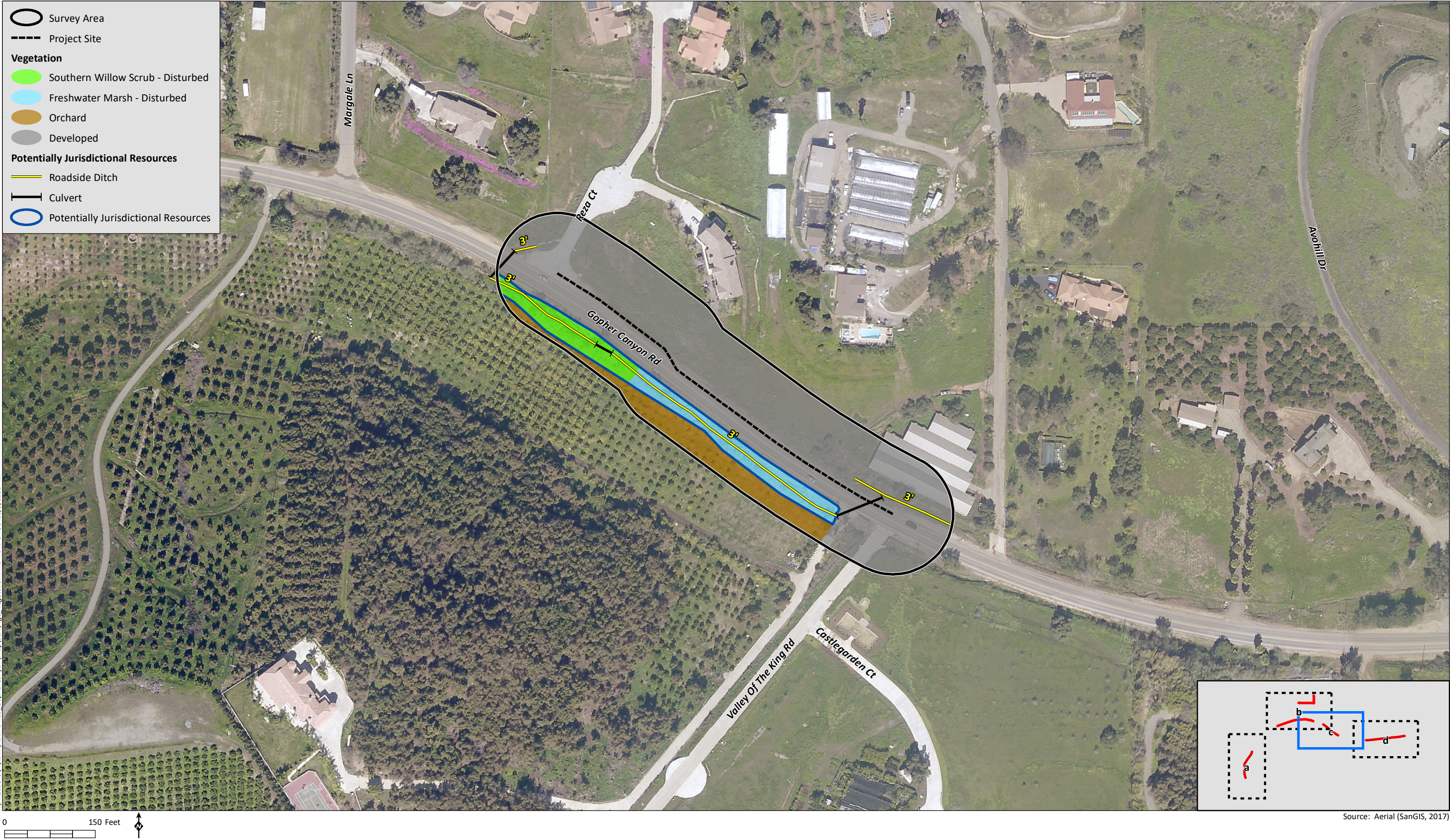








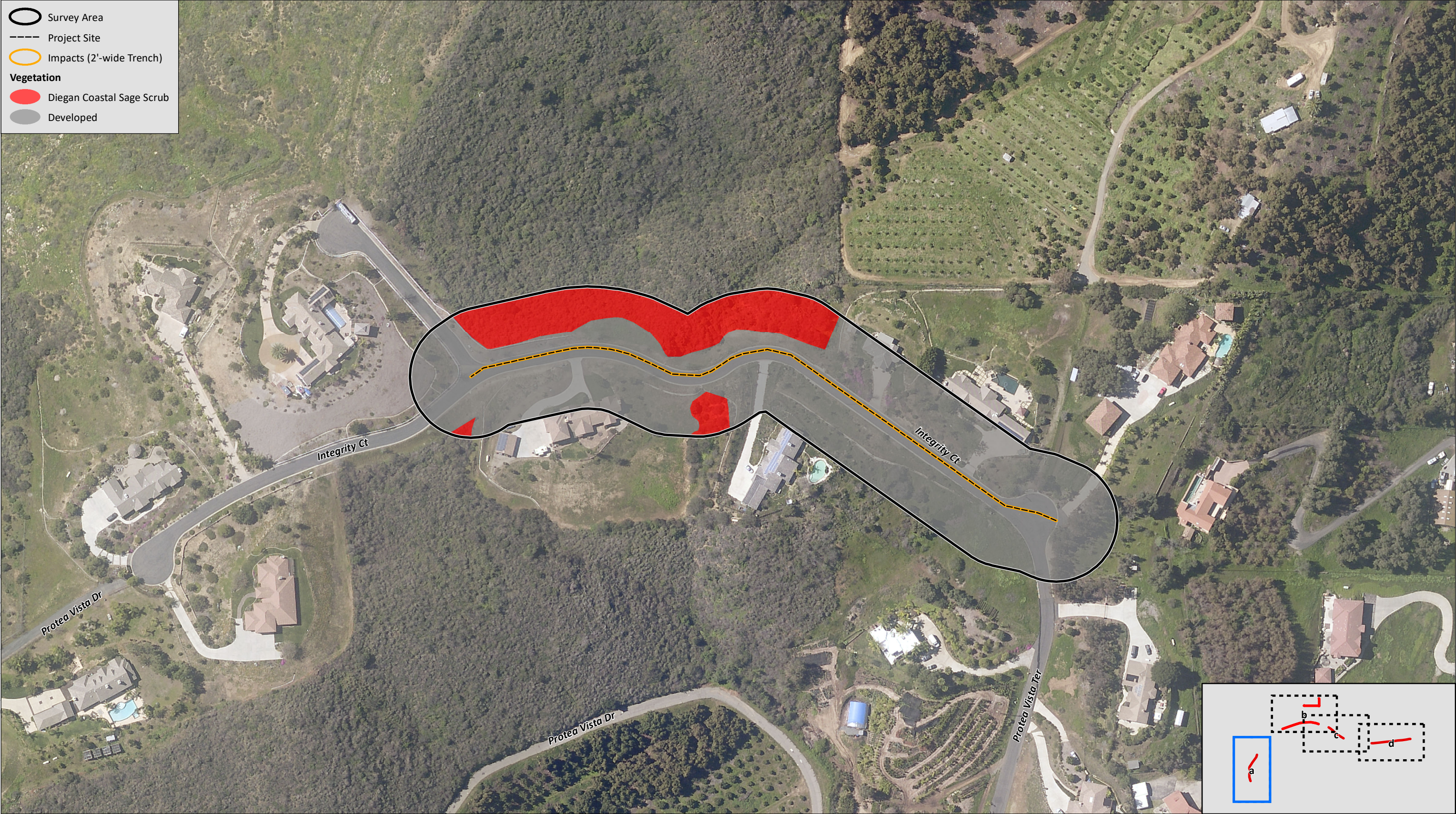




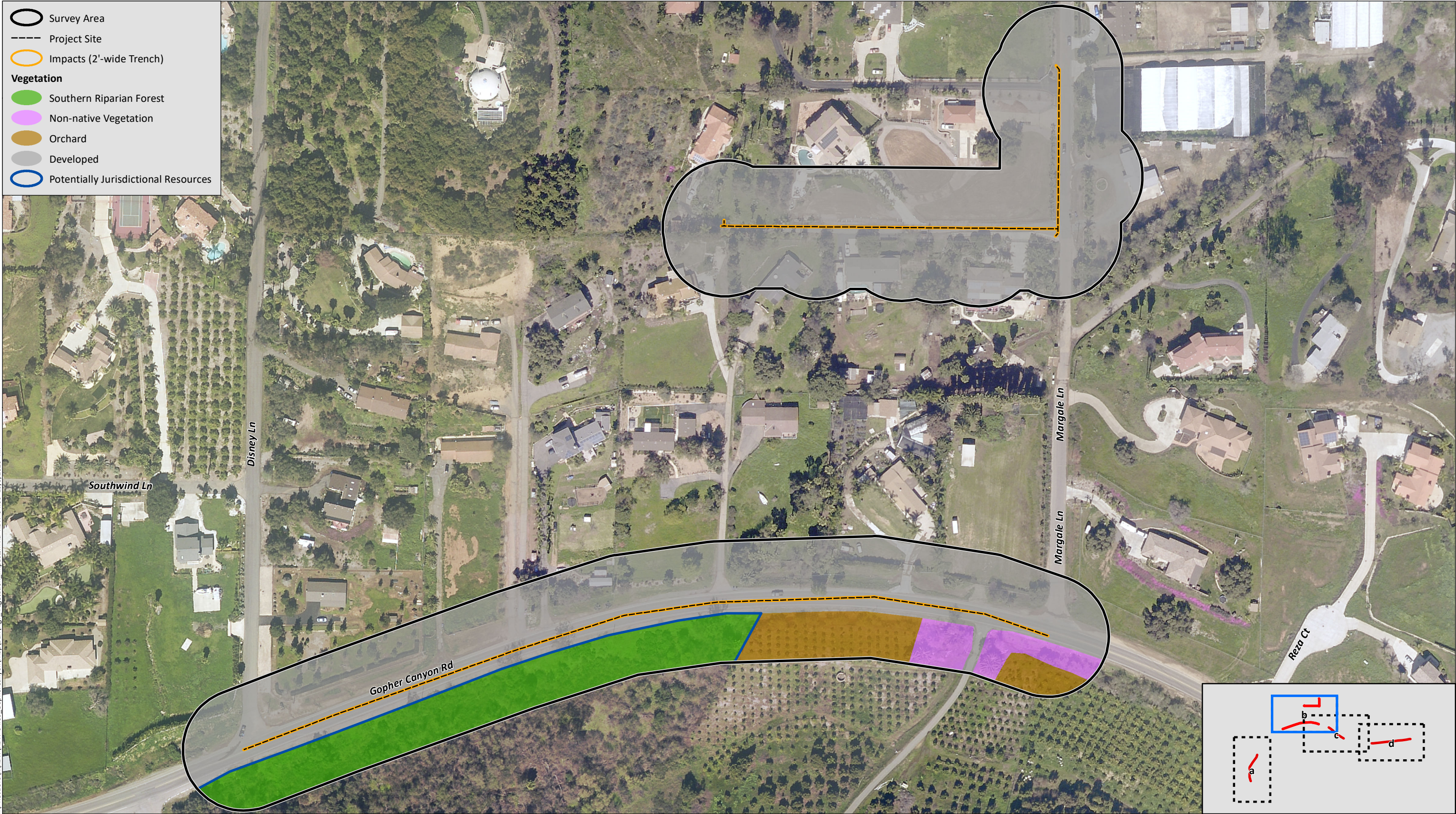






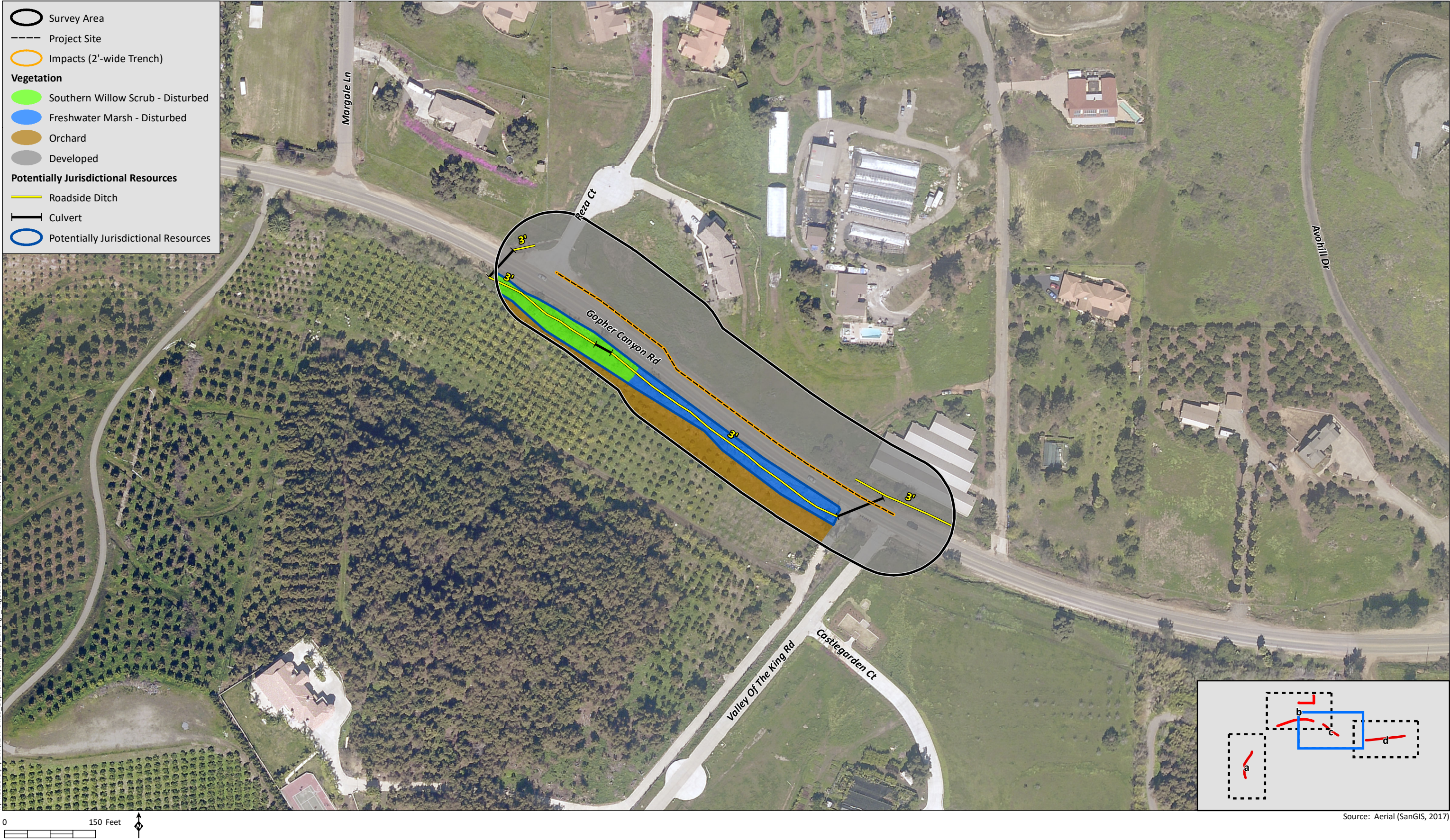






Source: Aerial (SanGIS, 2017)





Source: Aerial (SanGIS, 2017)







**Attachment A**  
**Plant Species Observed**

Family	Scientific Name*	Common Name	Habitat**
Aizoaceae	<i>Carpobrotus edulis</i> *	ice plant	DEV, NNV
Anacardiaceae	<i>Malosma laurina</i>	laurel sumac	DCSS, D-DCSS, NNV
	<i>Schinus molle</i> *	Peruvian pepper tree	DEV, NNV
	<i>Schinus terebinthifolius</i> *	Brazilian pepper tree	DEV, NNV
Arecaceae	<i>Phoenix canariensis</i> *	Canary Island date palm	DEV, NNV
	<i>Phoenix dactylifera</i> *	date palm	DEV
	<i>Washingtonia robusta</i> *	Mexican fan palm	DEV
Asteraceae	<i>Artemisia californica</i>	California sagebrush	DCSS, D-DCSS, DH, NNV
	<i>Baccharis pilularis</i>	coyote brush	DEV, NNV
	<i>Baccharis salicifolia</i>	mulefat	DEV, NNV
	<i>Centaurea sp.</i> *	star thistle	DEV, NNV
	<i>Erigeron bonariensis</i> *	flax-leaved horseweed	DEV, D-FWM
	<i>Helminthotheca echinoides</i> *	bristly ox-tongue	DEV, DH, NNV
	<i>Sonchus oleraceus</i> *	sow thistle	DEV, DH, NNV
Brassicaceae	<i>Brassica nigra</i> *	black mustard	DEV, DH, NNV
	<i>Hirschfeldia incana</i> *	mustard	DEV, DH, NNV
Chenopodiaceae	<i>Salsola tragus</i> *	Russian thistle	DEV, DH, NNV
Euphorbiaceae	<i>Croton setigerus</i>	dove weed	NNV
	<i>Ricinus communis</i> *	castor bean	DEV, D-FWM, NNV
Fabaceae	<i>Acacia sp.</i> *	acacia	NNV
Fagaceae	<i>Quercus agrifolia</i>	coast live oak	NNV, SRF
Geraniaceae	<i>Erodium sp.</i> *	filaree	DEV, DH, NNV
Juncaceae	<i>Juncus acutus</i>	spiny rush	DEV
Lauraceae	<i>Persea americana</i> *	avocado tree	ORCH
Myrtaceae	<i>Eucalyptus sp.</i> *	eucalyptus	DEV, SRF
Nyctaginaceae	<i>Bougainvillea spectabilis</i> *	bougainvillea	DEV
Poaceae	<i>Avena sp.</i> *	wild oat	DEV, NNV
	<i>Bromus madritensis</i> *	foxtail chess	DEV, DH, NNV
	<i>Cortaderia selloana</i> *	pampas grass	D-FWM, D-SWS
	<i>Pennisetum setaceum</i> *	fountain grass	NNV
Polygonaceae	<i>Eriogonum fasciculatum</i>	California buckwheat	DCSS, D-DCSS, NNV
	<i>Rumex crispus</i> *	curly dock	D-FWM
Rutaceae	<i>Citrus x sinensis</i> *	orange tree	ORCH
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow	D-SWS, SRF
Solanaceae	<i>Nicotiana glauca</i> *	tree tobacco	NNV
Typhaceae	<i>Typha angustifolia</i> *	narrow leaf cattail	D-FWM

\*Non-native Species

\*\* DCSS=Diegan coastal sage scrub; D-DCSS=disturbed Diegan coastal sage scrub; D-SWS=disturbed southern willow scrub; DEV=developed land; DH=disturbed habitat; NNV=non-native vegetation; ORCH=orchard; SRF=southern riparian forest

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## Attachment B

### Animal Species Detected or Observed

Taxon		Scientific Name	Common Name
Order	Family		
VERTEBRATES			
Reptiles			
Squamata	Phrynosomatidae	<i>Sceloporus occidentalis</i>	western fence lizard
Birds			
Accipitriformes	Accipitridae	<i>Buteo jamaicensis</i>	red-tailed hawk
		<i>Buteo lineatus</i>	red-shouldered hawk
Caprimulgiformes	Trochilidae	<i>Calypte anna</i>	Anna’s hummingbird
Passeriformes	Aegithalidae	<i>Psaltriparus minimus</i>	bushtit
	Columbidae	<i>Zenaida macroura</i>	mourning dove
	Corvidae	<i>Aphelocoma californica</i>	California scrub jay
		<i>Corvus brachyrhynchos</i>	American crow
	Fringillidae	<i>Haemorhous mexicanus</i>	house finch
		<i>Spinus psaltria</i>	lesser goldfinch
	Icteridae	<i>Molothrus ater</i>	brown headed cowbird
	Mimidae	<i>Mimus polyglottos</i>	northern mockingbird
	Paradoxornithidae	<i>Chamaea fasciata</i>	wrentit
	Passerellidae	<i>Melospiza crissalis</i>	California towhee
		<i>Melospiza melodia</i>	song sparrow
	Troglodytidae	<i>Thryomanes bewickii</i>	Bewick’s wren
Tyrannidae	<i>Sayornis nigricans</i>	black phoebe	
Mammals			
Rodentia	Cricetidae	<i>Peromyscus sp.</i>	deer mouse (dead)
	Sciuridae	<i>Otospermophilus beecheyi</i>	California ground squirrel

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**Attachment C**  
**Sensitive Plant Species Potential to Occur**

<b>Species Name</b>	<b>Common Name</b>	<b>Status</b>	<b>Habit, Ecology and Life History</b>	<b>Potential to Occur</b>
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	FE/ST	Annual herb. Occurs on clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral. Flowering period: April – June. Elevation: below 3,281 feet	<b>Not Likely to Occur.</b> Vernal pools do not occur within the survey area.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	--/-- CRPR 2B.2	Perennial evergreen shrub. Occurring in xeric chamise or southern maritime chaparral on rocky soil. Flowering period: January -April. Elevation: below 1,148 feet.	<b>Not Likely to Occur.</b> Chamise and maritime chaparral habitats do not occur within the survey area. Additionally, this species is a conspicuous shrub and would have been observed if present.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	--/-- CRPR 1B.2	Perennial shrub. Occurs in chaparral. Large shrub visible all year. Flowering period April – June. Elevation: 130-1,835 feet	<b>Not Likely to Occur.</b> Chaparral habitat does not occur within the survey area. Additionally, this species is a conspicuous shrub and would have been observed if present.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	--/-- CRPR 1B.2	Perennial shrub. Found in coastal scrub habitats, especially on sandy soils and often in disturbed sites. Flowering period April-November. Elevation: 65-1,640 feet.	<b>Low Potential to Occur.</b> Suitable coastal scrub habitat and soil occurs within the study area; however, the majority of the study area is highly disturbed and the all of the project sites are entirely within developed land.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	--/-- CRPR 1B.2	Perennial herb. Typically occurs in the understory of mature stands of chamise in xeric situations. Flowering period June – August. Elevation: 985-3,545 feet	<b>Not Likely to Occur.</b> Chamise chaparral habitat does not occur within the survey area. Additionally, this species is a conspicuous shrub and would have been observed if present.

**Attachment C (cont.)**  
**Sensitive Plant Species Potential to Occur**

Species Name	Common Name	Status	Habit, Ecology and Life History	Potential to Occur
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	--/-- CRPR 1B.2	Perennial shrub. Occurs in chamise chaparral with a preference for Las Posas soils. Habitat conditions are typically quite xeric with only limited annual growth. Flowering period April – May. Elevation: 490-2,725 feet	<b>Not Likely to Occur.</b> Chamise chaparral habitat does not occur within the survey area. Additionally, this species is a conspicuous shrub and would have been observed if present.

<sup>1</sup>Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare

<sup>2</sup>CNPS = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either rare or extinct elsewhere; 1B – rare, threatened, or endangered in California and elsewhere; 2A – presumed extirpated in California, but more common elsewhere; 2B – rare, threatened, or endangered in California, but more common elsewhere; 3 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

<sup>3</sup>MSCP Covered Species: Covered Species under City of San Diego MSCP Subarea Plan; NE = Narrow Endemic Species under City MSCP Subarea Plan.

**Not Likely to Occur** – There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

**Low Potential to Occur** – There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

**Moderate Potential to Occur** – The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

**High Potential to Occur** – There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

**Present** – The species was observed on the Project Site at the time of the survey or during a previous biological survey.

**Attachment D**  
**Sensitive Animal Species Potential to Occur**

Species Name	Common Name	Status	Habitat Associations	Potential to Occur
<b>Invertebrates</b>				
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/--	Sunny openings within chaparral and coastal sage shrublands. Host plants include <i>Plantago erecta</i> , <i>Cordylanthus rigidus</i> , <i>Collinsia</i> spp., <i>Plantago patagonica</i> , <i>Antirrhinum coulterianum</i> , and <i>Castilleja exserta</i> .	<b>Low Potential to Occur:</b> Coastal sage scrub occurs within the survey area; however, suitable sunny opening do not occur and no host plants were detected during project surveys.
<b>Reptiles and Amphibians</b>				
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail	--/SSC	Suitable habitat includes coastal sage scrub, chaparral, juniper woodland, oak woodland, and grasslands along with alluvial fan scrub and riparian areas. Occurrence of the species correlated with the presence perennial plants (such as California buckwheat, California sagebrush, black sage, or chaparral) to provide a food base for its major food source, termites.	<b>Low Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the study area; however, the study area does not contain riparian or alluvial habitats. In addition, the project sites are completely developed and surrounded by disturbed habitats.
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	--/SSC	Occurs in open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions.	<b>Moderate Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the study area; however project sites are completely developed. It is unlikely this species would occur within any of the project sites.

**Attachment D (cont.)**  
**Sensitive Animal Species Potential to Occur**

Species Name	Common Name	Status	Habitat Associations	Potential to Occur
<b>Reptiles and Amphibians (cont.)</b>				
<i>Crotalus ruber</i>	red diamond rattlesnake	--/SSC	Found in chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey.	<b>Moderate Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the survey area; however, the project sites are completely developed. It is unlikely this species would occur within any of the project sites.
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	--/SSC	Inhabits a wide variety of vegetation types including sagebrush scrub, chaparral, grasslands, forests, and woodlands but is restricted to areas with suitable sandy, loose soils with open areas for basking. Diet primarily composed of native harvester ants ( <i>Pogonmyrmex</i> sp.) and are generally excluded from areas invaded by Argentine ants ( <i>Linepithema humile</i> ).	<b>Low Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the survey area; however, loose, sandy soils are not present within the study area. In addition, ants were not detected within the survey area.
<i>Plestiodon skiltonianus interparietalis</i>	Coronado skink	--/SSC	Suitable habitats include grassland, woodlands, pine forests, and chaparral, especially in open sunny areas such as clearings and edges of creeks or rivers. Prefers rocky areas near streams with lots of vegetation but can also be found in areas away from water. Occasionally seen foraging in leaf litter but more commonly found underneath surface objects, such as bark or rocks, where it lives in extensive burrows.	<b>Not Likely to Occur:</b> Suitable open areas along creeks, rivers, and streams are not present within the survey area.

**Attachment D (cont.)**  
**Sensitive Animal Species Potential to Occur**

Species Name	Common Name	Status	Habitat Associations	Potential to Occur
<b>Reptiles and Amphibians (cont.)</b>				
<i>Spea hammondi</i>	western spadefoot	--/SSC	Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs ( <i>Rana catesbiana</i> ) or crayfish ( <i>Procambarus</i> sp.).	<b>Not Likely to Occur.</b> Gravelly washes, floodplains, alluvial fans, playas, and temporary pools do not occur within the survey area.
<b>Birds</b>				
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	--/WL	Occurs in coastal sage scrub and sparse mixed chaparral on rocky hillsides and in canyons; also found in open sage scrub/grassy areas of successional growth.	<b>Moderate Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the survey area; however, the survey area contains dense sage scrub.
<i>Polioptila californica californica</i>	Coastal California Gnatcatcher	FT/SSC	An obligate, permanent resident of coastal sage scrub below 2,500 feet in southern California. Occurs within low, coastal sage scrub in arid washes, on mesas, and slopes. Not all areas classified as coastal sage scrub are occupied.	<b>High Potential to Occur:</b> Suitable coastal sage scrub habitat occurs within the survey area
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE/SE	Summer resident of Southern California. Inhabits riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat with a canopy of tall willows.	<b>High Potential to Occur:</b> Suitable riparian woodland habitat occurs within the survey area.

**Attachment D (cont.)**  
**Sensitive Animal Species Potential to Occur**

Species Name	Common Name	Status	Habitat Associations	Potential to Occur
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<sup>1</sup>Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; ST = State of California Threatened; SCE = State of California Candidate Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SSC = State of California Species of Special Concern.

<sup>2</sup>MSCP Covered Species: Covered Species under City of San Diego MSCP Subarea Plan; NE = Narrow Endemic Species under City MSCP Subarea Plan.

**Not Likely to Occur** - There are no present or historical records of the species occurring on or in the immediate vicinity, (within 1 mile) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

**Low Potential to Occur** - There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

**Moderate Potential to Occur** - The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 1 mile). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

**High Potential to Occur** - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 1 mile).

**Present** - The species was observed on the Project Site at the time of the survey or during a previous biological survey.



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Northern end of Integrity Court looking south.



Southern end of Integrity Court looking north.



Western end of Disney Lane looking east.



Eastern end of Disney Lane looking west.

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Middle of Margale Lane looking north.



Middle of Margale Lane looking west.

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Western end of Gopher Canyon Road (Section 1) looking east.



Eastern end of Gopher Canyon Road (Section 1) looking west.

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Western end of Gopher Canyon Road (Section 2) looking east.



Eastern end of Gopher Canyon Road (Section 2) looking west.

## Appendix C

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### Cultural Resources Survey

# Gopher Canyon Water Pipeline Improvements Project

## Cultural Resources Survey

OCTOBER 2020 | RBW-04.06

*Prepared for:*

**Rainbow Municipal Water District**

3707 Highway 395  
Fallbrook, CA 92028



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**Stacie Wilson**  
Senior Archaeologist

*Prepared by:*

**HELIX Environmental Planning, Inc.**

7578 El Cajon Boulevard  
La Mesa, CA 91942

# Gopher Canyon Water Pipeline Improvements Project

## Cultural Resources Survey

*Prepared for:*

**Rainbow Municipal Water District**  
3707 Highway 395  
Fallbrook, CA 92028

*Prepared by:*

**HELIX Environmental Planning, Inc.**  
7578 El Cajon Boulevard  
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OCTOBER 2020 | RBW-04.06



### **National Archaeological Database Information**

Authors:	Stacie Wilson, RPA, Theodore Cooley, RPA, James Turner, RPA
Firm:	HELIX Environmental Planning, Inc.
Client/Project:	Rainbow Municipal Water District / Gopher Canyon Water Pipeline Improvements Project
Report Date:	October 2020
Report Title:	Cultural Resources Survey for the Gopher Canyon Water Pipeline Improvements Project, Bonsall, San Diego County, California
Submitted to:	Rainbow Municipal Water District
Type of Study:	Cultural Resources Survey
New Sites:	None
Updated Sites:	None
USGS Quad:	Bonsall and San Marcos 7.5' Quadrangle
Acreage:	Approximately 5,314 linear feet
Key Words:	San Diego County; Township 11 South, Range 3 West; Bonsall; Disney Lane, Gopher Canyon Road, Integrity Court, Margale Lane; negative survey results.

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## ACRONYMS AND ABBREVIATIONS

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AB	Assembly Bill
AMSL	above mean sea level
BLM	Bureau of Land Management
BP	Before Present
CEQA	California Environmental Quality Act
CCR	California Code of Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
GLO	General Land Office
HELIX	Helix Environmental Planning, Inc.
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
SCIC	South Coastal Information Center
USGS	U.S. Geological Survey

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## EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by the Rainbow Municipal Water District (District) to conduct a cultural resources study for the proposed Gopher Canyon Water Pipeline Improvements Project (project), located in the community of Bonsall, San Diego County, California. The project includes several pipeline improvement components: Integrity Court (1,068 feet of 8-inch pipeline connecting two existing pipelines to create a single looped pipeline); Gopher Canyon Road Sections 1 and 2 (comprising the addition of a total of 2,125 feet of 8-inch pipeline in two separate sections of pipeline within the public right-of-way that will connect existing pipelines, creating a single looped pipeline); replacement of 550 feet of pipeline between Disney Lane and Margale Lane and the addition of 287 feet of pipeline within the paved section of Margale Lane; and replacement of 300 feet of pipeline in Margale Lane; and Disney Lane (addition of 1,363 feet of 12-inch pipeline). The overall project alignment is approximately one mile (5,314 feet) in length.

This report details the methods and results of the cultural resources study, which included a records search, Sacred Lands File search, Native American outreach, a review of historic maps and aerial photographs, and a field survey, conducted in compliance with the California Environmental Quality Act (CEQA).

The records search obtained from the South Coastal Information Center (SCIC) indicated that 22 previous cultural resources studies have been conducted within a half mile of the project area. In house records indicated that a total of four cultural resources have been previously recorded within a half mile of the project location, none of which are mapped within or adjacent to the project site. These resources include two prehistoric artifact scatters and two bedrock milling features. A Sacred Lands File (SLF) search by the Native American Heritage Commission (NAHC) was negative for the project area.

The field investigations included intensive pedestrian survey of the project alignments by HELIX archaeologists and Luiseño Native American monitors in 2020. The results of the field survey were negative; no cultural resources were observed. All of the project alignments are situated within established, paved roadways, with the majority of the roadways appearing to have been cut into hillsides.

Based on the results of the current study, no cultural resources will be affected by the project. No further cultural resources efforts, including archaeological monitoring, are recommended for this project.

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# 1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) was contracted by the Rainbow Municipal Water District (District) to provide cultural resources services for the Gopher Canyon Water Pipeline Improvements Project (project) in the community of Bonsall, San Diego County, California. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of in-house records, review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project alignment. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA).

## 1.1 PROJECT LOCATION AND DESCRIPTION

The project is located within the community of Bonsall in northwestern San Diego County, west of Interstate (I-) 15 and south of State Route 76 (Figure 1, *Regional Location*). The project alignment is within Sections 2 and 3 of Township 11 South, Range 3 West, on the U.S. Geological Survey (USGS) 7.5' Bonsall and San Marcos quadrangles (Figure 2, *Project Vicinity [USGS Topography]*). The overall project alignment is approximately one mile (5,314 feet) in length, and is located along Gopher Canyon Road, Integrity Court, Margale Lane, and Disney Lane (Figure 3, *Project Vicinity [Aerial Photograph]*). These roadways are situated among rural residential and agricultural developments.

The project consists of five pipeline segments within three pipeline improvement components (Figure 3): the Integrity Court pipeline is located within the roadway of Integrity Court between Protea Vista Terrace and Protea Vista Road; the Disney Lane segments consist of two pipelines located within Gopher Canyon Road between Disney Lane and Margale Lane, and along Margale Lane and the southern portion of the adjacent residence; and the Gopher Canyon Road segments consist of two pipelines located within Gopher Canyon Road between Reza Court and Valley of the King Road and between Avohill Drive and El Paseo. These pipelines are fragmented and have several dead ends; because of this, the flow between the Gopher Canyon Tank and the Turner Tank has been greatly inhibited.

The District-proposed project includes the construction of three pipeline improvement components: Integrity Court (1,068 feet of 8-inch PVC pipeline connecting two existing pipelines to create a single looped pipeline); Gopher Canyon Road Sections 1 and 2 (comprising the addition of a total of 2,125 feet of 8-inch PVC pipeline in two separate sections of pipeline within the public right-of-way that will connect existing pipelines, creating a single looped pipeline); replacement of 550 feet of pipeline between Disney Lane and Margale Lane and the addition of 287 feet of pipeline within the paved section of Margale Lane; and replacement of 300 feet of pipeline in Margale Lane; and Disney Lane (addition of 1,363 feet of 12-inch PVC pipeline). The work for the Disney Lane project also includes the installation of valves, fire hydrants, air release and vacuum relief assemblies, and blow off assemblies; relocation of water meters; constructing private service laterals; abandoning old pipelines; reestablishing survey monuments; and tying into existing water mains.

## 1.2 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources which have been found eligible to the California Register of Historical Resources (CRHR).



CEQA, Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as “historical resources,” which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])
- resource(s) either listed in the National Register of Historic Places (NRHP) or in a “local register of historical resources” or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (14 CCR Section 15064.5[a][2])
- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

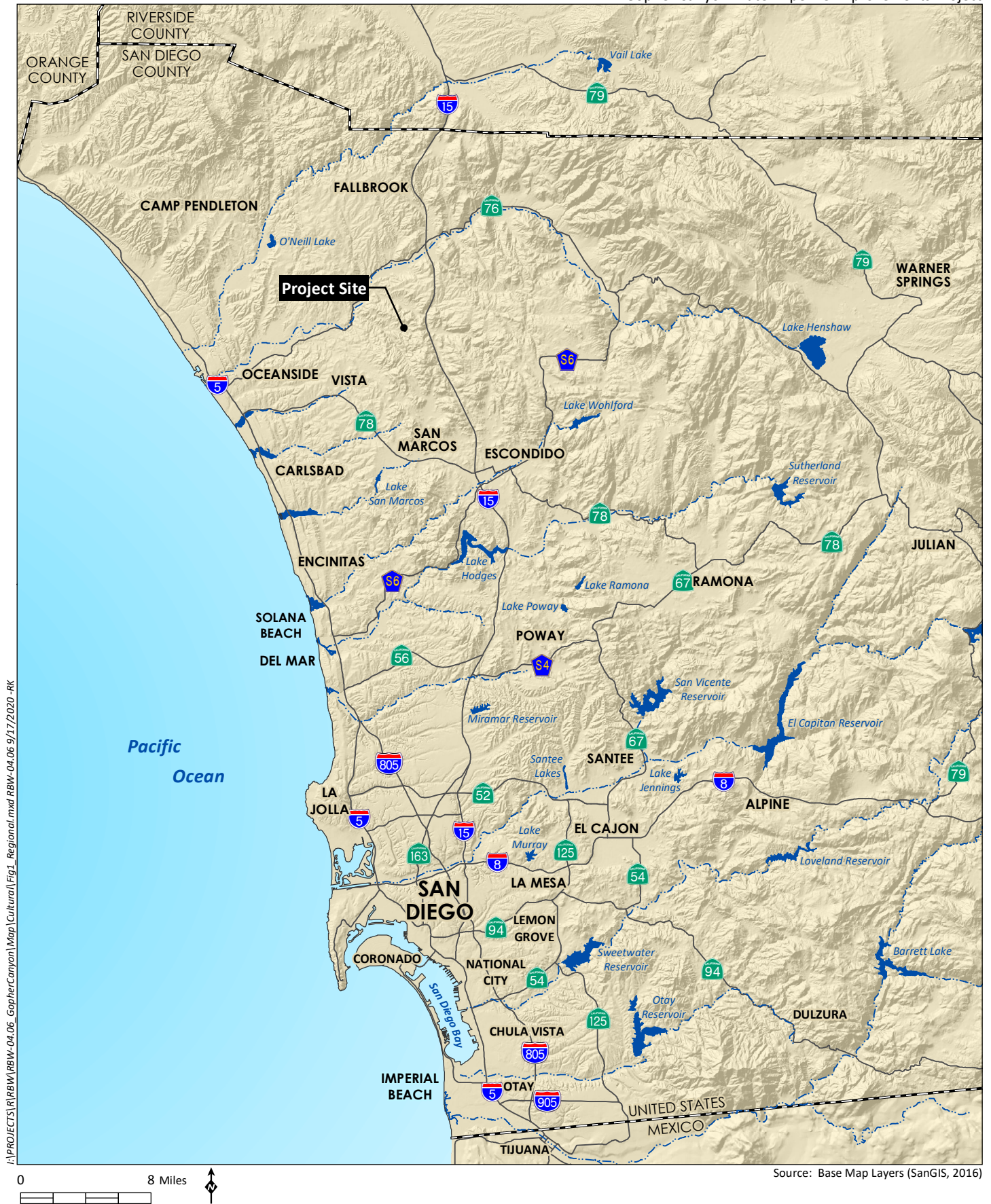
For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

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

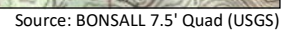
Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a “historical resource” for the purposes of CEQA at the discretion of the lead agency.

Significant resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Resource integrity, which is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance, is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular CRHR criteria under which it is proposed for eligibility.

California State Assembly Bill (AB) 52 revised PRC Section 21074 to include Tribal Cultural Resources as an area of CEQA environmental impact analysis. Further, per new PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.













## 1.3 PROJECT PERSONNEL

Stacie Wilson, M.S., RPA served as principal investigator and is the primary author of this technical report. Ms. Wilson meets the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. Theodore Cooley, M.A., RPA also served as a report contributor. Mary Robbins-Wade, M.A., RPA provided senior technical review. James Turner, M.A., RPA. conducted the field survey and served as report contributor. Mary Villalobos, B.A. also conducted a field survey for a portion of the project. Luiseño Native American Monitors Banning Taylor, PJ Stoneburner, and Shawnee Ventura from Saving Sacred Sites participated in the pedestrian survey. Resumes for key project personnel are presented in Appendix A.

## 2.0 PROJECT SETTING

### 2.1 NATURAL SETTING

The project area is situated within the coastal plain and the western foothills of the Peninsular Ranges mountains of western San Diego County, where the climate is characterized as semi-arid steppe, with warm, dry summers and cool, moist winters (Hall 2007; Pryde 2004). The project area lies within the watershed of the San Luis Rey River with the project locations situated along the Gopher Canyon drainage, a tributary to the San Luis Rey River. The project area is located approximately 13 miles from the coast, in an area where the foothills transition into the coastal plain. The elevation in the project area ranges from approximately 465 to 760 feet above mean sea level (AMSL).

Geologically, the project area is underlain by several types of bedrock including granitic rocks of Cretaceous age, marine sedimentary and metasedimentary rocks of upper Jurassic age, and metavolcanic bedrock of Jurassic and/or Triassic age. The adjacent San Luis Rey River watershed contains substantial quantities of Cenozoic, mostly Quaternary-age alluvial deposits (Rogers 1965; Weber 1963).

The soil series present in the project area consist of several types, most derived from decomposed granitic or basic igneous rocks and alluvium eroded from these rocks. The soil series present in the three project alignment segments along Gopher Canyon Road between Disney Lane and El Paseo consist of Wyman loam (5 to 9 percent slopes), Ramona sandy loam (5 to 9 percent slopes and 9 to 15 percent slopes, eroded), Huerhuero loam (5 to 9 percent slopes), Vista coarse sandy loam (9 to 15 percent slopes), and Escondido very fine sandy loam (15 to 30 percent slopes). The soils underlying the project segment located along Margale Lane and a private road that intersects with Margale Lane consist of Huerhuero loam (5 to 9 percent slopes) and Las Posas fine sandy loam (15 to 30 percent slopes). The soils underlying the project segment located along Integrity Court consist of Friant rocky fine sandy loam (30 to 70 percent slopes) and Cieneba very rocky coarse sandy loam (30 to 75 percent slopes). While both the Friant and Cieneba soil series are shallow, well drained loams, the Friant soils are weathered from mica and quartz schist, and Cieneba soils are weathered from granitic rock (Bowman 1973).

Prehistorically, the natural vegetation communities in the project area and general vicinity varied principally by elevation and distance from the coast, as well as by association with different types of hydrological features. In the lower elevation coastal foothills and coastal plain areas, plants of the coastal sage scrub community, interspersed with areas of native plants of the grassland community

predominate. Along the coastline and in coastal lagoon and slough areas, freshwater and saltwater marsh vegetation are present. Major drainages such as the San Luis Rey River contain plants of the riparian community. Plants of the coastal sage scrub community include California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), flat-top buckwheat (*Eriogonum fasciculatum*), broom baccharis (*Baccharis sarothroides*), wild onion (*Allium haematochiton*), laurel sumac (*Malosma laurina*), San Diego sunflower (*Bahiopsis laciniata*), golden-yarrow (*Eriophyllum confertiflorum*), sawtooth goldenbush (*Hazardia squarrosa*), yucca (*Yucca schidigera*, *Hesperoyucca whipplei*), prickly pear cactus (*Opuntia* sp.), and scrub oak (*Quercus dumosa*). Native grassland plants include *Stipa*, *Elymus*, *Poa*, and *Muhlenbergia* species. Plants of the riparian and riparian woodland communities include western sycamore (*Platanus racemosa*), willow (*Salix* sp.), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), cattail (*Typha latifolia*), bulrush (*Scirpus* spp.), mule fat (*Baccharis* spp.), and poison oak (*Toxicodendron diversiloba*) (Beauchamp 1986; Munz 1974).

Major wildlife species found in these environments prehistorically included mammals such as coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), grizzly bear (*Ursus arctos*), mountain lion (*Puma concolor*), desert cottontail (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus bachmani*), and jackrabbit (*Lepus californicus*); reptiles such as western pond turtle (*Actinemys marmorata*), southern pacific diamondback rattlesnake (*Crotalus oreganus helleri*), gopher snake (*Pituophis melanoleucus catenifer*), and several lizard species; and various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Ostospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*) (Burt and Grossenheider 1976; Stebbins 1966).

These plant communities and the native plant resources supported by these habitats, would have been used by Native American populations for clothing, food, tools, decorative, and ceremonial purposes (Bean and Shipek 1978; Cuero 1970; Hedges and Beresford 1986; Luomala 1978; Sparkman 1908). Many of the animal species living within these vegetation communities (such as rabbits, deer, small mammals, and pond turtles, as well as birds and fish) would have been utilized by native inhabitants as well. Desert cottontails, jackrabbits, and rodents were very important to the prehistoric diet; deer were somewhat less significant for food, but were an important source of leather, bone, and antler (Bean and Shipek 1978; Christenson 1990; Luomala 1978; Sparkman 1908).

## 2.2 CULTURAL SETTING

### 2.2.1 Prehistoric Period

#### 2.2.1.1 Early Prehistoric Period

The Early Prehistoric Period represents the time period of the first known inhabitants in California. In some areas of California it is referred to as the Paleo-Indian period and is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age, occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene, beginning circa 10,000 years ago (Erlandson 1994, 1997; Erlandson et al. 2007). In the western United States, most evidence for the Paleo-Indian or Big-Game-Hunting peoples during this time period derives from finds of large fluted spear and projectile points (Fluted-Point Tradition) in places such as Clovis and Folsom in the Great Basin and the Desert Southwest (Moratto 1984:79–88). In California, most evidence for the Fluted-Point Tradition derives principally from areas along the margins of the Great Basin and the Desert Southwest, such as the Sierras, the southern Central Valley, and the deserts of southeastern California (Moratto 1984:79–88) with mostly only isolated occurrences of fluted spear points encountered on or near the coast of California

(Dillon 2002; Rondeau et al. 2007). Three of these isolated fluted points or point fragments, however, have occurred in San Diego County, all in the mountainous or eastern areas of the county, with one occurring approximately 28 miles to the east of the project area, near Warner Springs (Kline and Kline 2007); one to the south in Cuyamaca Pass (Dillon 2002; Rondeau et al. 2007); and one near Ocotillo Wells (Rondeau et al. 2007). Several others have occurred in relative proximity to the project area, including one along the coast in adjacent Orange County to the northwest (Fitzgerald and Rondeau 2012), and two in Baja California to the south (Des Lauriers 2008; Hyland and Gutierrez 1995).

While a few isolated fluted points or point fragments have been found in San Diego County, the earliest well-documented sites in the San Diego area belong to the San Dieguito Tradition, now documented to be close to 10,000 years old (Warren and Ore 2011; Warren et al. 1998). The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition, has been documented mostly in the coastal and near coastal areas in San Diego County (Carrico et al. 1993; Rogers 1966; True and Bouey 1990; Warren 1966; Warren and True 1961), as well as in the southeastern California deserts (Rogers 1939, 1966; Warren 1967). Some evidence for it, however, has been recently proposed in the eastern mountains of San Diego County (Pignoli 2005) and in the coastal area north of San Diego County (Sutton and Grenda 2012). The content of the earliest component of the C.W. Harris Site (CA-SDI-149), located along the San Dieguito River, approximately 15 miles to the south of the project area, formed the basis upon which Warren and others (Rogers 1966; Warren 1966, 1967; Warren and True 1961) identified the “San Dieguito complex,” and Warren later defined as the San Dieguito Tradition (1968). Diagnostic artifact types and categories recovered from the deepest stratum at the Harris Site as well as in the lowest strata at two nearby stratigraphically-associated sites (CA-SDI-316 and CA-SDI-4935B) (Carrico et al. 1993; Cooley 2013) include elongated bifacial knives, leaf-shaped projectile points, scraping tools, and crescentics (Carrico et al. 1993; Knell and Becker 2017; Rogers 1966, Vaughan 1982; Warren 1966, 1967; Warren and True 1961). The Harris Site is also the source for the oldest calibrated radiocarbon date of 9,968 years before the present (BP), found in association with a deeply buried subsurface San Dieguito artifact assemblage (Warren and Ore 2011; Warren et al. 1998). Another calibrated radiocarbon date of 9,130 BP has also recently been acquired from a San Dieguito-associated deep subsurface stratum at site CA-SDI-316, located immediately adjacent to, and associated stratigraphically with, the Harris Site (Cooley 2013). This latter date further documents the presence and antiquity of the buried San Dieguito stratum at the Harris Site.

While the San Dieguito Tradition shares a similarity to the Fluted Point Tradition, in that it is characterized by an artifact inventory consisting primarily of hunting-associated tools, it lacks the distinctive fluted points associated with the Fluted Point Tradition. Based on this artifact inventory, Warren initially suggested that the subsistence system or principal emphasis of the San Dieguito Tradition was toward a hunting, rather than a gathering, economy in contrast to the more gathering-oriented complexes that were to follow in the Archaic Period (Warren 1967, 1968, 1987; Warren et al. 1998). Other researchers, however, have interpreted the San Dieguito subsistence system to be possibly ancestral to, and, therefore, to represent a developmental stage for, the predominantly gathering-oriented “La Jolla/Pauma complex” of the subsequent Archaic Period (e.g., Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991).

### 2.2.1.2 Archaic Period

The Archaic Period, in the southern California coastal region, dates from circa 8600 years BP to circa 1,500 years ago (Warren et al. 1998). A large number of archaeological site assemblages dating to this period have been identified at a range of coastal and inland sites (Masters and Gallegos 1997; True and

Beemer 1982; Warren et al. 1961). This appears to indicate that relatively stable, sedentary complexes apparently focused during the early half of the period more on gathering than hunting. These complexes, possibly associated with one people, were present in the coastal and immediately inland areas of what is now San Diego County for more than 7,000 years (Warren 1968). The focus on gathering is suggested by the prominence of vegetal grinding tools relative to tools associated with hunting in the archaeological assemblages of these sites. These assemblages, designated as the La Jolla/Pauma complexes, are considered part of Warren's (1968) "Encinitas tradition" and Wallace's (1955) "Milling Stone Horizon." In general, the content of these site assemblages includes manos and metates; shell middens; terrestrial and marine mammal remains; burials; rock features; bone tools; doughnut stones; discoids; stone balls; plummets; biface points/knives; beads made of stone, bone, or shell; and cobble-based tools at coastal sites and increased hunting equipment and quarry-based tools at inland sites. As defined by True (1958), the "Pauma complex" aspect of this culture is associated with sites located in inland areas that lack shellfish remains but are otherwise similar in content to the La Jolla complex. The Pauma complex may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1980; True and Beemer 1982).

During the latter half of the Archaic Period, beginning approximately 5500 BP, a major shift in the subsistence system of prehistoric populations in the southern coastal region appears to have occurred (Warren et al. 1998). Artifacts such as dart points and mortars and pestles, which are essentially absent during the early Archaic Period, become increasingly present in site assemblages dating after circa 5500 BP. This evidence in the archaeological record is indicative of an increase in hunting activity and the gathering and processing of acorns for subsistence. The new, and subsequently increasing, use of these resources represents a major shift in the Encinitas/La Jolla/Pauma complex subsistence system in the southern coastal region (Warren 2012; Warren et al. 1998).

### **2.2.1.3 The Late Prehistoric Period**

The Late Prehistoric Period (1500 BP to 200 BP) is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive but effective technological innovations. The beginning of the Late Prehistoric Period, for example, is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record. Compared to those shifts noted for the middle and late Archaic Period, the ones that occurred at the onset of the Late Prehistoric Period were rather abrupt changes. The magnitude of these changes and the short period of time within which they took place seem to indicate a significant alteration in subsistence practices in what is now San Diego County circa 1500 to 1300 BP. The changes observed include a technological shift from the use of atlatl and dart to the bow and arrow; subsistence shifts that include a reduction in shellfish gathering in some areas (possibly due to silting of the coastal lagoons); and the storage of crops, such as acorns, by Yuman- and Takic-speaking peoples. Other new traits such as the production of pottery and cremation of the dead were also introduced during the Late Prehistoric Period.

Early archeological research identified two distinct archaeological complexes for the Late Prehistoric Period in what is now San Diego County (Meighan 1954; True 1970). Analysis by True (1970) of collections from archaeological excavations within Cuyamaca Rancho State Park and from the San Diego Museum of Man resulted in the definition of a Late Prehistoric Period complex, the Cuyamaca complex, for southern San Diego County that was distinct from the San Luis Rey complex previously defined for the northern county area by Meighan (1954). The presence or absence, or differences in the relative



occurrence, of certain diagnostic artifacts in site assemblages provides the principal distinctions between these archaeological complexes. Cuyamaca complex sites, for example, generally contain both Cottonwood Triangular-style points and Desert Side-notched arrow points, while Desert Side-notched points are quite rare or absent in San Luis Rey complex sites (cf. Pignuolo 2004). Other examples include Obsidian Butte obsidian, which is far more common in Cuyamaca complex sites than in San Luis Rey complex sites, and ceramics that, while present during the Late Prehistoric Period throughout what is now San Diego County, are more common in the southern or Cuyamaca complex portions of San Diego County, where they occur earlier in time and appear to be somewhat more specialized in form. Based on ethnographic data, including the areas defined for the Takic-speaking peoples (Luiseño) and the Hokan-based Yuman-speaking peoples (Diegueño/Kumeyaay) at the time of contact, it is generally accepted that the San Luis Rey complex is associated with the Takic Luiseño/Juaneño, and the Cuyamaca complex with the Yuman Diegueño/Kumeyaay (Robbins-Wade 1986; True 1970; True and Waugh 1982). The project area lies in an area that is most likely to contain archaeological evidence of the San Luis Rey complex.

Similarly, by inference from ethnographic information, subsistence in the Late Prehistoric Period in the area of the San Luis Rey complex is thought to have focused on acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources, except in areas immediately adjacent to the coast, where they assumed primary importance (Bean and Shipek 1978:552; Sparkman 1908:200). Based on archaeological evidence, a significant shift in the settlement system has also been hypothesized by True and Waugh (1982) to have occurred during the Late Prehistoric Period. They indicate that during early San Luis Rey complex times (San Luis Rey I) a more dispersed pattern of settlements associated multiple drainages was evident, while in later times (San Luis Rey II) a more concentrated central-based subsistence strategy was utilized (True and Waugh 1982). They hypothesize that this shift may have been due to a change in the availability of water (True and Waugh 1982:52; True 1990).

San Luis Rey complex material culture is characterized by steatite arrow shaft straighteners, pendants, and comals (heating stones); ceramics including Tizon Brown Ware pottery, figurines reminiscent of Hohokam styles, straight tubular and “Yuman bow pipes”, rattles, and miniature pottery vessels; various cobble-based tools (e.g., scrapers, choppers, hammerstones); bone awls; and ground stone tools including manos and portable metates, pestles and portable mortars, as well as bedrock milling stations containing metate surfaces and/or mortars (True et al. 1974; True 1993). The arrow-point assemblage is dominated by the Cottonwood series, but the Sonoran Serrated (Dos Cabezas) series, while rarer, also occurs (Koerper et al. 1996). The Desert Side-Notch series, as previously noted, while abundant in Cuyamaca complex site assemblages in central and southern San Diego County, is uncommon in San Luis Rey complex sites in northern San Diego County and Orange County (Pignuolo 2004). Interment of the dead at San Luis Rey complex sites is by both inhumation and cremation, while archaeological evidence from Cuyamaca complex sites indicates almost exclusive use of cremation, often in special burial urns for interment.

## 2.2.2 Ethnohistory

By the time Spanish colonists began to settle California in the eighteenth century, the project area was within the traditional territorial boundary of the cultural group historically known as the Luiseño, the name deriving from their historic affiliation with Mission San Luis Rey. The Luiseño spoke a Takic language, differentiating them from their nearby neighbors to the south, the Yuman-speaking Kumeyaay (Tipai-Ipai) or Northern Diegueño (Bean and Shipek 1978; Luomala 1978). The Luiseño followed a

seasonal gathering cycle, with bands occupying a series of campsites within their territory (Bean and Shipek 1978; White 1963). The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas (Bean and Shipek 1978; Sparkman 1908; White 1963). As a predominant determining factor for placement of villages and campsites was areas where water was readily available, preferably on a year-round basis (True 1990), in the San Diego County area, many of the major known Luiseño settlements are located along the Santa Margarita River Valley and the San Luis Rey River Valley (Bean and Shipek 1978; Kroeber 1925; White 1963). In the vicinity of the project, the San Luis Rey River Valley, in addition to being a prime location for settlement, was also an important resource area for the Luiseño (Sparkman 1908:190).

Ethnographers and ethnohistorians have noted several Luiseño villages in proximity to the project area. Kroeber (1925:648, Plate 57) somewhat vaguely, indicates a place name, *Kwalam* (or *Opila*), for a Luiseño settlement located along the San Luis Rey River in the vicinity of the project area. Oxendine (1983), however, subsequently indicated the location of *Kwalam* to be associated with archaeological site CA-SDI-674 in the vicinity of the community of Bonsall, approximately 3.5 miles to the northwest of the project area. Several sources indicate that another ethnohistoric village or rancheria, *Tom-kav*, was present in the San Luis Rey River valley, and associated with archaeological site CA-SDI-682, located approximately six miles to the northeast of the project area (Oxendine 1983; Sparkman 1908:191; True et al. 1991; White 1963:90, Figure 1, 123). Another ethnohistoric Luiseño village relatively close to the project area was the village of *Wagaumaj*, located along the San Luis Rey River, approximately four miles to the southwest of the project area (Oxendine 1983).

## 2.2.3 Historical Background

### 2.2.3.1 Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. In the mid-eighteenth century, Spain had escalated its involvement in California from exploration to colonization (Weber 1992) and in that year, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra established the Royal Presidio of San Diego. Portolá then traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California.

Initially, both a mission and a military presidio were located on Presidio Hill overlooking the San Diego River. A small pueblo, now known as Old Town San Diego, developed below the presidio. The Mission San Diego de Alcalá was constructed in its current location five years later. The missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Cattle ranching, animal husbandry, and agriculture were the main pursuits of the missions.

In 1798, the Mission San Luis Rey de Francia was founded in northern San Diego County. Controlling almost 950,400 acres of land, the Mission raised about 26,000 cattle, as well as other livestock (Young and Levick 1988). In the years that followed its establishment, the population of the Luiseño people declined rapidly due to disease (Lightfoot 2004).

### **2.2.3.2 Mexican Period**

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

In order to obtain a rancho, an applicant submitted a petition containing personal information and a land description and map (*diseño*). Three such ranchos are located in the project vicinity, Rancho Monserate to the north, Rancho Guajome to the west, and Rancho Buena Vista to the southwest.

Rancho Buena Vista was granted to a Luiseño Indian named Felipe Tubua (sometimes referred to as Felipe Subria) in 1845, who had first occupied the land in 1836 (Van Wormer 1988). Governor Pio Pico granted Rancho Guajome to Luiseño Indians Andres and Jose Manuel in the same year—the 2,200-acre section of land was south of the San Luis Rey River and Rancho Monserate, and north of present-day Vista (Ogden 1882). In 1846, Governor Pio Pico granted Rancho Monserate to Ysidro María Alvarado. The 13,322-acre swath of land stretched from south of the San Luis Rey River to modern-day Fallbrook, from Morro Hill in the west to Couser Canyon in the east (Rivers 1998).

### **2.2.3.3 American Period**

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican-American War. A great influx of settlers to California and the San Diego region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years. In 1853, a claim for Rancho Monserate was filed with the Public Land Commission and granted to Ysidro María Alvarado in 1872 (US District Court 1852; Willey 1886).

By 1853, Jesus Machado had become the owner of the Buena Vista rancho; it was the Machado family who built the original Rancho Buena Vista adobe (Willey 1886). The rancho was sold to Lorenzo Soto in 1860 and eventually became the property of Colonel Cave J. Coutts, who also held Rancho Guajome. Rancho Buena Vista was primarily used for grazing cattle and horses, but the two ranchos were also the center of much social activity, and dozens of Indians worked at the ranchos (Van Wormer 1988).

In 1862, a smallpox epidemic began in Mission San Juan Capistrano and spread to San Diego in 1863 (San Diego History Center n.d.). The epidemic ravaged the rancho, killing Ysidro Alvarado and his wife, along with 21 others (Frew 2020). Before he died, Alvarado made it known that he wished to be buried at the

San Luis Rey Mission, which was then part of Rancho Guajome. This was not meant to be, however, as Coutts, the owner of Rancho Guajome, made it clear that there were to be no victims of smallpox buried at the mission. A skirmish broke out when Coutts happened upon the burial in progress, resulting in two wounded and the death of Leon Vasquez, a member of the burial party (Crawford 1992). Ultimately, charges against Coutts were dropped because of paperwork technicalities (Crawford 1992; Frew 2020).

After the death of Alvarado, and because his children were too young to assume the responsibilities of operating Rancho Monserate, Simon Goldbaum rented the Alvarado home and used it as a general store (Frew 2020). Over the following decades, a number of settlers moved into the eastern portion of the rancho; by the early 1870s, a school and post office had been built (Frew 2020).

The 1880s saw “boom and bust” cycles that brought thousands of people to the area of San Diego County. By the end of the decade, many had left, although some remained to form the foundations of small communities based on dry farming, orchards, dairies, and livestock ranching. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. The influence of military development, beginning in 1916 and 1917 during World War I, moved much of the population away from this life, and the need to fight a two-ocean war during World War II resulted in substantial development in infrastructure and industry to support the military and accommodate soldiers, sailors, and defense industry workers.

## **Bonsall**

The area of Bonsall went through several names since the community was established in the latter half of the 1800s. Originally known as Mount Fairview, the town changed its name in the 1880s to Osgood, in an attempt to win over the chief engineer who was in charge of the Southern California Railroad Survey Crew (Bonsall Chamber of Commerce 2016; Fleming 2007). The chief engineer oversaw the land survey for a prospective railroad that would have run from National City in San Diego County to Colton in Riverside County – if selected, the route would have run through the town, bringing much-needed revenue (Fleming 2007). This name was short-lived, however, as another route was ultimately selected for the railroad. In 1885, the town’s post office closed due to lack of a postmaster; the town later requested that the Federal government reopen the post office, only to find the name “Mount Fairview” had been given to another community. A petition in 1889 included three potential names for the post office: “Reed,” “Favorite,” or “Bonsall”; each of the names came from landowners in the area (Bonsall Chamber of Commerce 2016; Fleming 2007). Ultimately, the post office headquarters in Washington DC selected Bonsall, and the post office opened for business in 1890 (Fleming 2007).

## **3.0 METHODS**

HELIX utilized in-house records and obtained a records search of the project site and a half-mile radius from the South Coastal Information Center (SCIC) from the San Diego State University on October 5, 2020. The records search included the site records for historic and archaeological resources within the search radius, as well as citations for previous cultural resources studies. The records search maps are included as Confidential Appendix B to this report.

Various additional archival sources were also consulted, including historic topographic maps, aerial imagery and the Bureau of Land Management (BLM) General Land Office (GLO) Records. These include



historic aerials from 1938, 1946, 1953, 1964, 1967, 1982, and 1989 (NETR Online 2020) and several historic USGS topographic maps, including the 1901 San Luis Rey (1:125,000), the 1948 Bonsall and San Marcos (1:24,000), the 1968 Bonsall and San Marcos (1:24,000), and the 1975 Bonsall (1:24,000) topographic maps. The purpose of this research was to identify historic structures and land use in the area and assess the potential for historic archaeological resources to be present.

The Native American Heritage Commission (NAHC) was contacted on October 5, 2020 for a Sacred Lands File search. The results of the Sacred Lands File search were received on October 7, 2020. Native American correspondence is included as Confidential Appendix C to this report.

A pedestrian field survey of one segment of the project site was conducted by HELIX archaeologist Mary Villalobos and Luiseño Native American monitor Banning Taylor from Saving Sacred Sites on May 24, 2020. The remainder of the project site was surveyed for cultural resources by HELIX archaeologist James Turner and Luiseño Native American monitors PJ Stoneburner and Shawnee Ventura from Saving Sacred Sites on September 25, 2020.

## 4.0 RESULTS

### 4.1 RECORDS SEARCH

#### 4.1.1 Previous Surveys

The records search results identified 22 previous cultural resource studies within the record search limits, none of which occurred within the project area (Table 1, *Previous Studies within a Half-Mile of the Project Alignments*).

**Table 1**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE PROJECT ALIGNMENTS**

Report Number	Report Title	Author, Year
SD-00627	Archaeological and Historical Survey of the Vista Valley Country Club San Diego County, California.	Eckhardt, 1978
SD-00854	Cultural Resource Survey of Potential Quarry Localities, Gopher Canyon, Oceanside, California	Kyle and Gallegos, 1987
SD-00915	Phase II Archaeological-Historical Investigation of Vista Valley Country Club, Vista, California SDI-5423, SDI-5424, SDI-5425, Tourmaline Mine	Flower, Ike, Roth, and Sapone, 1979
SD-01078	Excavations at SDI-5423 Addendum to: Phase II Archaeological-Historical Investigation of Vista Valley Country Club Vista, California	Flower, Ike, and Roth, 1980
SD-01482	Curve Realignment and Road Widening Along State Route 76 11-SD-76 10.5/11.0 11359-18450	Rosen, 1984
SD-02044	Vista Valley Country Club Draft Environmental Impact Report for the Department of Land Use and Environmental Regulation County of San Diego	HCH & Associates, 1978
SD-02124	Panoramic Estates Draft Focused Environmental Impact Report TM 4392 EAD Log Number 83-8-14 County of San Diego	Michael F. Coleman Land Planning Consultant, 1983

**Table 1 (cont.)**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE PROJECT ALIGNMENTS**

<b>Report Number</b>	<b>Report Title</b>	<b>Author, Year</b>
SD-02147	Vista Valley Country Club Draft Supplemental Environmental Impact Report	HCH And Associates, 1984
SD-02458	Draft Environmental Impact Report for the Polo Club at Vista Valley	Ogden Environmental and Energy Services Co., Inc., 1992
SD-02760	Cultural Resources Survey and Testing for Polo Club Project Gopher Canyon, San Diego County, California	Kyle et al, 1990
SD-02866	Draft Environmental Impact Report for: Hidden Hills, A Proposed Residential Subdivision of 55 Lots on 131 Acres in Bonsall, California	Coleman Planning Group, 1992
SD-08151	Cultural Resource Assessment AT&T Wireless Service Facility No. 27007A Vista, San Diego County, California	Duke, 2003
SD-09203	Cultural Resource Survey Tran Minor Residential Subdivision for Tentative Parcel Map 20835 Located on Gopher Canyon Road, Bonsall, County of San Diego, California	Kyle, 2004
SD-10381	Cultural Resources Survey and Assessment of a 25.2-Acre Parcel on the East Side of Tarek Terrace Road, South of Gopher Canyon Road Near Bonsall, San Diego County, California	de Barros, 2005
SD-12614	Negative Cultural Resources Survey Report for Wild Minor Subdivision	Kwiatkowski, 2010
SD-12615	Negative Cultural Resources Survey Report for Foulad Agricultural Clearing Permit	Kwiatkowski, 2010
SD-13826	Class I And III Cultural Resources Inventory for the Polo Club at Vista Valley Project, San Diego County, California	Morgan, Clowery, and Whitaker, 2012
SD-13833	Polo Club at Vista Valley	U.S. Army Corps of Engineers, 2012
SD-14008	Vista Valley Country Club EIR	McDonald, 1977
SD-14909	A Negative Cultural Resources Survey Report for the Vista Valley Pool Center San Diego County, California	Smith and Stropes, 2014
SD-15063	Cultural Resource Survey, Testing, and Evaluation of the Proposed Twin Oaks 4 Minor Subdivision Project, San Diego County, California	Pignuolo, Kwiatkowski, and Aguilar, 2006
SD-18028	Cultural Resources Review for the Sac Wireless LLC #647512 SD34XC662 Project, 29507 Hoxie Ranch Road, City of Vista, San Diego County, California	Neal and Stephens, 2019

#### 4.1.2 Previously Recorded Resources

The records search indicated that there are four previously recorded cultural resources within a half-mile radius of the project, but none have been recorded along the project alignments (Table 2, *Previously Recorded Resources within a Half-Mile of the Project Alignments*). All four resources within the search area are prehistoric; two consist of artifact scatters (P-37-005423 and P-37-005424) and two are bedrock milling features and associated artifacts (P-37-011292 and P-37-12552).

**Table 2**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE PROJECT ALIGNMENTS**

<b>Primary Number (P-37-##)</b>	<b>Trinomial (CA-SDI-#)</b>	<b>Age</b>	<b>Description</b>	<b>Recorder, Date</b>
005423	5423	Prehistoric	Artifact scatter consisting of ground stone and flaked stone artifacts.	Flower, Ike, and Roth, 1978
005424	5424	Prehistoric	Artifact scatter consisting of ground stone and flaked stone artifacts.	Flower, Ike, and Roth, 1978
011292	11292	Prehistoric	Bedrock milling features with associated lithic scatter.	Briggs, Eighmey, and Kyle, 1989; Clowery, Morgan, Tennesen, and Whitaker, 2011
012552	12552	Prehistoric	Bedrock milling feature and a mano fragment.	Strudwick, Linehan, and Sespe, 1991

## 4.2 OTHER ARCHIVAL RESEARCH

No buildings or structures appear in or near the project alignment on the 1949, 1968, and 1983 San Marcos and Bonsall (1:24,000) topographic maps. The aerial photographs show Gopher Canyon Road as existing in its current alignment as far back as 1938. Additionally, the aerial photographs show the area surrounding Integrity Court as newly graded in 2003 (NETR Online 2020).

The sections in which the project area lies were surveyed in 1876 (GLO 1876). According to GLO records, the sections of land on which the Gopher Canyon Road and Margale Lane project alignments lay were granted to Linn Hull, George Liggett, and James Perry under the authority of the April 24, 1820: Sale-Cash Entry (3 Stat. 566) (GLO 1884, 1891, 1893). The section which contained the Integrity Court alignment was granted to George Peters under the authority of the May 20, 1862 Homestead Entry Original (12 Stat. 392) (GLO 1920).

## 4.3 NATIVE AMERICAN CONTACT PROGRAM

The Sacred Lands File search response received from the NAHC on October 7, 2020 indicated that the results were negative for the project area, but stated that the absence of specific site information in the Sacred Lands File does not necessarily indicate the absence of cultural resources. No additional outreach to the Native American community was conducted as part of this study. The correspondence from the NAHC is included as Appendix C (Confidential Appendices, bound separately).

Per AB 52, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe. The City has initiated consultation with the registered tribes; the consultation results will be addressed in the CEQA document for the project.

## 4.4 FIELD SURVEY

The portions of the project located within Gopher Canyon Road between Disney Lane and Margale Lane and along Margale Lane and the southern portion of the adjacent residence were surveyed by HELIX

archaeologist Mary Villalobos and Luiseño Native American monitor Banning Taylor from Saving Sacred Sites on May 24, 2020. On September 25, 2020, HELIX archaeologist James Turner and Luiseño Native American Monitors PJ Stoneburner and Shawnee Ventura from Saving Sacred Sites surveyed the portions of the project alignment along the roadway of Integrity Court between Protea Vista Terrace and Protea Vista Road, and two sections of Gopher Canyon Road between Reza Court and Valley of the King Road and between Avohill Drive and El Paseo. All of the project alignments are situated within established, paved roadways. During the survey, the shoulders and embankments on both sides of the roads were checked.

The portion of the project alignment between Disney Lane and Margale Lane appeared to be highly disturbed, with introduced trees, grasses, and shrubs present in many areas (Plate 1). The northern side of Gopher Canyon Road was highly disturbed due to construction of roadways, houses, and drainages. The southern side of the roadway consisted of a steep slope leading to a citrus orchard at the east end and undisturbed native and non-native trees and shrubs at the west end. The portion of the alignment along Margale Lane and south of the adjacent residence appeared heavily disturbed due to utility, road, and residential construction (Plate 2).

Most of the project alignment situated within Integrity Court appears to have been cut into the hillside during the residential development that occurred in the early 2000s; the northern half and southern quarter of the road had hill cuts on both sides (Plate 3). The visibility along these sections was good, with very little vegetation obscuring the ground. The section that did not appear to have been cut from the hillside also had good visibility with some native vegetation, including sumac and grasses, being present.

The northern side of the section of the alignment from Reza Court to Valley of the King Road also appeared to be cut into a hillside, while the southern side had been built up (Plate 4). The visibility of the northern embankment ranged from 40 to 80 percent due to native grasses and weeds. The cut into the hillside along the roadway appears to have been eroded in places. Visibility along the southern section was poor, approximately 0 percent, due to the dense vegetation.

The third section of the project, situated within Gopher Canyon Road from Avohill Drive to El Paseo, appears to have been cut into the southern slope of a hillside, while the northern side appears to have been built up with the use of fill material (Plate 5). Visibility of the northern side of the road along the project alignment was virtually zero, with dense vegetation and numerous trees obscuring the ground surface. The southern side of the roadway was cut into a hillside; granite bedrock was exposed in several locations. Visibility was also poor along this side, ranging from 10 to 40 percent due to dense grasses and trees.

No cultural resources were observed during the survey.





Plate 1. Overview of Gopher Canyon Road from Disney Lane to Margale Lane, view to the east.



Plate 2. Overview of project area along Margale Lane, view to the north.



Plate 3. Overview of Integrity Court from southern edge of alignment, view to the north.



Plate 4. Overview of Gopher Canyon Road between Reza Court and Valley of the King Road, view to the west.





Plate 5. Overview of project alignment between Avohill Drive and El Paseo, view to the northwest.

## 5.0 STUDY SUMMARY AND RECOMMENDATIONS

A study was undertaken to identify cultural resources that are present in the Gopher Canyon Water Pipeline Improvements project area and to determine the effects of the project on cultural resources. The survey did not identify any cultural resources within the project area; therefore, no impacts to cultural resources are anticipated.

While the project area remained relatively undeveloped until the 1960s, it has since been highly disturbed by residential development, agricultural activities, utility installations, and road formation. The majority of the project alignment is located along existing roads, most of which have been cut into hillsides or built up using fill material during the development of infrastructure and residential improvements.

### 5.1 RECOMMENDATIONS

Based on the negative results of the Sacred Lands File search and the field survey, and because of the highly disturbed nature of the project area, no impacts to cultural resources are expected to result from the project. As such, no further cultural resources efforts, including archaeological monitoring, are recommended for this project.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

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# Appendix A

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## Resumes

### Summary of Qualifications

Ms. Wilson has been professionally involved in cultural resources management for 15 years and has more than 17 years of unique experience in both archaeology and GIS. She has served as principal investigator on numerous cultural resources management projects, and regularly coordinates with local, state, and federal agencies and Native American tribal representatives. She is skilled in project management, archaeological inventories and excavation, and report documentation and has broad experience with utility, municipal, federal, renewable energy, and private development projects. Her years of experience also encompass an understanding of CEQA and NEPA compliance regulations. She is proficient at creating, organizing, and analyzing GIS data; technical skills include ArcGIS 10.4, Spatial Analyst, Geostatistical Analyst, and working with datasets in Microsoft Word and Excel. Ms. Wilson is detail-oriented and has strong organizational and coordination capabilities.

### Selected Project Experience

**Eastern Municipal Water District As-Needed Environmental Services** (2015 - 2019). Serving as Senior Archaeologist on several individual task orders for HELIX's as-needed environmental services agreement with EMWD, including Well 59 Wellhead Treatment Facilities (2018), Cactus II Feeder Transmission Pipeline (2017 - 2018), and Fox Tank Replacement (2017). Responsible for coordinating cultural resources studies including records searches, Sacred Lands File searches, Native American outreach, reviews of historic aerial photographs and maps, and pedestrian surveys. Authored cultural resources technical reports.

**Crescent Drive Sewer Improvements Project** (2018). Cultural Task Lead for a sewer improvements project in the City of Vista. The project proposes to conduct improvements to the sewer main and connecting sewer laterals within Crescent Drive. Duties included conducting a record search and a Sacred Lands File search; reviewing existing cultural resources information for the project site and immediate vicinity; coordinating a field visit; and preparing a constraints report. Work performed for KEH and Associates, Inc. with the City of Vista as the lead agency.

**Padre Dam Municipal Water District East County Advanced Water Purification Program** (2018). Senior Archaeologist for cultural resources inventory and assessment of approximately 10 miles of pipeline. The East County Advanced Water Purification project proposes to increase the region's supply of potable water. Duties included preparation of a cultural resources study, assisting with community outreach with regard to the historic resources, and working with the agencies and interested parties to develop appropriate measures to avoid or minimize impacts. Work performed for Kennedy/Jenks Consultants, Inc., with Padre Dam Municipal Water District as the lead agency and Helix Water District, the County of San Diego, and the City of El Cajon as participating agencies.

### Education

Master of Science,  
Applied  
Geographical  
Information Science,  
Northern Arizona  
University, 2008

Bachelor of Arts,  
Anthropology,  
University of  
California,  
San Diego, 2001

Bachelor of Science,  
Biological  
Psychology,  
University of  
California,  
San Diego, 2001

### Registrations/ Certifications

The Register of  
Professional  
Archaeologists  
#16436, 2008

Riverside County  
Approved Cultural  
Resources  
Consultant, 2017

### Professional Affiliations

Society for California  
Archaeology

# Stacie Wilson, RPA

## Senior Archaeologist

**City of San Diego Water Group Job 939** (2018). Principal Investigator for the Water Group Job 939, located in the Sorrento Valley area of the City of San Diego. Conducted as part of an as-needed contract with the City of San Diego, Public Works Department, Project Implementation Division, the project proposes approximately 6,846 linear feet of water main replacement and installation. Duties included conducting background research, reviewing previous cultural resource surveys, and coordination of Native American and archaeological monitors.

**Alvarado 2nd Pipeline Extension** (2018 - 2019). Principal Investigator overseeing completion of cultural resource management services for the geotechnical investigations related to this approximately 8.5-mile pipeline project, which will include the extension of the existing Alvarado 2nd Pipeline along Friars Road between Interstate 805 and West Mission Bay Drive. Responsibilities included overseeing a record search and submitting a request for a Sacred Lands File search; reviewing environmental, geological, and existing cultural resources information for the project alignment; coordinating a field visit; and preparing a report that provided monitoring recommendations. Oversaw subsequent archaeological and Native American monitoring program. Work performed for Kennedy/Jenks Consultants, Inc., with the City of San Diego as the lead agency.

**City of San Diego Sewer Group 806** (2017 - 2018). Principal Investigator for the Sewer Group Job 806, located in the College Area and Mid City Kensington-Talmadge community planning areas in the City of San Diego. Conducted as part of an as-needed contract with the City of San Diego, Public Works Department, Project Implementation Division, the project proposes both the replacement and rehabilitation of existing sewer mains, including replacing-in-place approximately 2,158 linear feet of existing vitrified clay pipe sewer mains. Duties included conducting background research, reviewing previous cultural resource surveys, conducting a field survey with a Native American monitor, and the preparation of a cultural resources technical report.

**Quince Street Senior Housing Project** (2017). Principal Investigator for the demolition of an existing warehouse complex within a developed property in order to construct affordable housing for seniors. Managed reconnaissance survey of the project area, which included photography of the built environment within the project site and documentation/evaluation of structures over 50 years of age. Assisted with cultural resources technical report preparation. Work performed for San Diego InterFaith Housing Foundation, with the City of Escondido as the lead agency.

**City of San Diego Long-term Mitigation Strategy Development** (2016). Principal Investigator for a cultural resources study of the Kearny Mesa East Mitigation Site, a 7.57-acre City of San Diego owned parcel located in Murphy Canyon. Conducted as part of an as-needed contract with the City of San Diego, Transportation & Storm Water Department, the project evaluated the potential mitigation opportunities for the parcel. Duties included conducting background research, a field survey and recording of cultural resources, Native American outreach and coordination, and report preparation. Work performed for the City of San Diego.

## Appendix D

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### Construction Noise Modeling Outputs



Reference @ 50 ft

[illegible]

50 ft.

[illegible]

Reference @ 50 ft

[illegible]

50 ft.

[illegible]