Appendix D

Biological Resources Report

Jurisdictional Delineation and
Biological Resources Assessment

Sand Canyon Resort

City of Santa Clarita, California

PREPARED FOR:

Sand Canyon Country Club
27734 Sand Canyon Road
Santa Clarita, CA 91387
Attn: Mr. Steve Y Kim, CEO
(661)252-8484

PREPARED BY:

ENVICOM CORPORATION
4165 E. Thousand Oaks Boulevard, Suite 290
Westlake Village, California 91362
Attn: David West, Biologist/Restoration Ecologist
(818) 879-4700

June 25, 2019

JURISDICTIONAL DELINEATION
AND
BIOLOGICAL RESOURCES ASSESSMENT

Sand Canyon Resort
City of Santa Clarita, California

Prepared for:

SAND CANYON COUNTRY CLUB
27734 Sand Canyon Road
Santa Clarita, CA 91387
Attn: Mr. Steve Y. Kim, CEO
(661) 252-8484

Prepared by:

ENVICOM CORPORATION
4165 E. Thousand Oaks Boulevard, Suite 290
Westlake Village, California 91362
Contact: David West, Biologist / Restoration Ecologist
(818) 879-4700

January 2019
Revised June 2019

SECTION **PAGE**

FIGURES

PLATES

TABLES

APPENDICES

1.0 INTRODUCTION

Envicom Corporation was retained to prepare an assessment of biological resources for the Sand Canyon Resort Development Project (project) on part of the existing golf course at the Sand Canyon Country Club, located at 27734 Sand Canyon Road within the City of Santa Clarita, hereafter referred to as the project site (**Figure 1, Regional Location Map**). This assessment documents the vegetation and wildlife, the potential for occurrence of special-status species, and potential jurisdictional waters and habitat that may be subject to regulation by the California Department of Fish and Wildlife (CDFW), US Army Corps of Engineers (ACOE), and the Regional Water Quality Control Board (RWQCB) within the project site. This report was revised in June of 2019 to incorporate the expansion of the proposed project footprint, the delineation of an additional potential jurisdictional area, and the results of a spring floristic survey.

1.1 PROJECT DESCRIPTION

The proposed project would involve construction and operation of a 75-acre hotel and resort, including a hotel, restaurants, affiliated structures, a seven (7) acre park with trails, a 9-hole golf course, and a parking lot containing 508 spaces. A Tentative Tract Map prepared by Hunsaker and Associates dated March 15, 2019 is provided as **Appendix 1**.

1.2 PROJECT SITE AND SURVEY AREA

The project site is located on an existing golf course just under a mile south of the Santa Clara River and spanning east from Sand Canyon Road. The map location of the project site is within the southeastern quarter of the USGS 7.5' Mint Canyon topographical quadrangle, within Township 4N, Range 15W of the Bureau of Land Management (BLM) cadastral survey program. Elevation at the project site ranges from approximately 1,600 – 1,800 feet above mean sea level (amsl). An aerial image of the study area and vicinity is provided as **Figure 2, Aerial of the Survey Area and View Locations**.

The biological study area consists of the proposed development area plus an additional buffer, as shown on Figure 2. This report first covers the literature reviewed and field surveys conducted to inventory the biological resources within the study area, followed by a discussion of vegetation, plant communities, plant species, protected trees, wildlife species, and wildlife movement. A vegetation map and representative photographs of habitat conditions are provided. Lists of plant and wildlife species observed, as well as an assessment of the potential for occurrence of special-status plant and wildlife species within the study area are provided as appendices to the report.

Directions to the Project Site

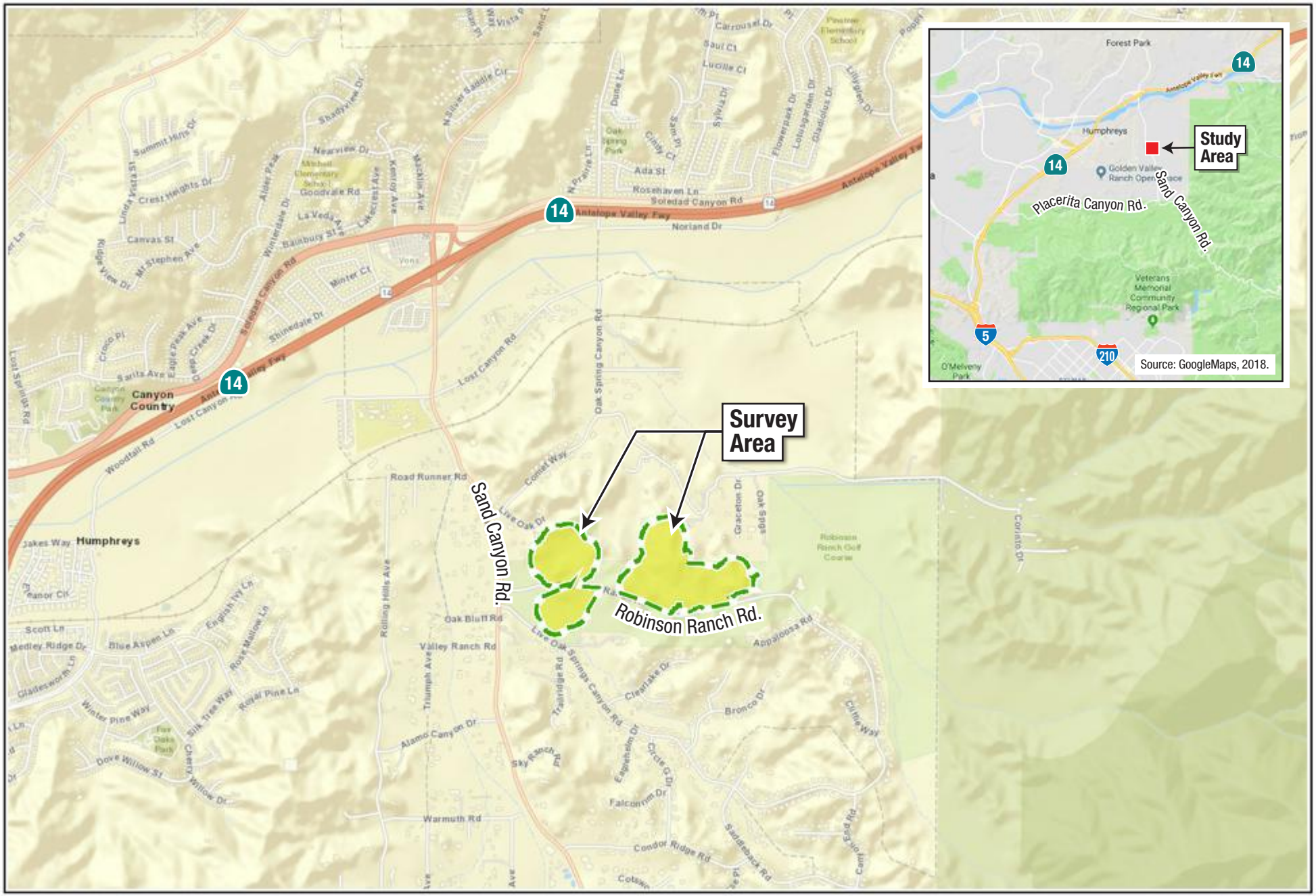
Directions to the project site are provided from the Santa Clarita City Planning Division to the project site.

1. Take Valencia Boulevard east toward Soledad Canyon Road
2. Continue onto Soledad Canyon Road
3. Turn right onto Sand Canyon Road
4. Project located at 27734 Sand Canyon Road

Contact Information

Contact information for the project proponent and biological consultant, respectively, are provided below.

Project Proponent	Biological Consultant
Sand Canyon Country Club Mr. Steve Y. Kim, CEO 27734 Sand Canyon Road Santa Clarita, CA 91387 (661) 252-8484	Envicom Corporation Mr. David West, Biologist/Restoration Ecologist 4165 E. Thousand Oaks Boulevard, Suite 290 Westlake Village, CA 91362 Office: (818) 879-4700



Sources: ESRI, World Street Map, 2016.

envicom

Project Location Map

0 1,000 2,000 Feet

FIGURE 1

Source: Valtus Imagery Services: Hexagon Imagery Program (HxIP), 2017.

SAND CANYON RESORT - JURISDICTIONAL DELINEATION AND BIOLOGICAL RESOURCES ASSESSMENT

envicom

Aerial of the Survey Area and View Locations

0 250 500 Feet

FIGURE 2

2.0 METHODS

2.1 PRE-FIELD EVALUATION

A literature review was performed in preparation for field surveys that included information available in standard biological references (e.g., Baldwin et al. 2012; Sawyer, Keeler-Wolf, and Evens 2009; Reid 2006; Sibley (2016); and Stebbins 2003), and relevant lists and databases pertaining to the status and known occurrences of sensitive and special-status resources. Other sources of information included aerial photographs, topographic maps, soil survey maps, climatic data, and relevant policy and planning documents. In addition, prior to engaging in fieldwork, a review of background reference materials was conducted for the Survey Area and to determine potential wetland, waterbody, and drainage areas to be further evaluated during field surveys. These materials included historic and current aerial photographs, the Natural Resources Conservation Service (NRCS) web soil survey, the National Hydrography Dataset (NHD), and the National Wetland Inventory (NWI). NWI and NHD datasets provide representation of wetlands and other surface water features that may be present in an area. Database records are compiled from historic and contemporary data collection efforts, and thus are a good starting point for indications of surface hydrology and soils; however, the data is reconnaissance level and therefore must be field verified as it is not comprehensively ground-truthed and also on-the-ground conditions may have changed.

- *Biogeographic Information and Observation System (BIOS)*, California Department of Fish and Wildlife (CDFW), data as of December 3, 2018;
- *California Natural Diversity Database (CNDDB) Rarefind 5* report for the 7.5' USGS Mint Canyon quadrangle and eight adjacent quadrangles, CDFW, data as of December 3, 2018;
- *California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California* report for the 7.5' USGS Mint Canyon quadrangle and eight adjacent quadrangles, CNPS, data as of December 3, 2018;
- *FWS Critical Habitat Mapper for Threatened and Endangered Species*, U.S. Fish and Wildlife Service (USFWS), data as of December 3, 2018;
- *List of Special Vascular Plants, Bryophytes, and Lichens*, CDFW, March 2019;
- *California Natural Communities List*, CDFW, October 2018; and,
- *Special Animals*, CDFW, November 2018.

The nearest available Wetland Determination (WETS) data is for Canyon Country, which is located 1.25 miles north / northwest of the project area. NRCS Total rainfall for the vicinity of the project site from 2018 – Present is provided in **Table 1, NRCS Precipitation Data** (NRCS 2019).

Table 1
NRCS Precipitation Data

Year	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Annual*
2018	2.05	0.19	3.67	T	0.00	0.00	0.00	0.01	0.00	0.51	1.21	2.34	9.98
2019	3.95	5.76	2.54	0.04	M	M	M	M	M	M	M	M	M
Mean	**3.00**	**2.98**	**3.11**	**0.02**	**T**	**T**	**T**	**0.01**	**T**	**0.51**	**1.21**	**2.34**	**9.98**

Source: NRCS National Water and Climate Center - Agricultural Applied Climate Information System. Precipitation Data for Canyon Country 2.6 E (US1CALA0014), station 1.25 miles N/NW. Note: trace precipitation/snowfall/snow depth amounts are treated as zero in sums, means, and frequency counts. Values of 'M' indicate missing data and 'T' indicates a trace.

2.1.1 PRIOR BIOLOGICAL STUDIES/REPORTS

Prior to the December 2018 assessment conducted by Envicom Corporation, other studies were conducted by other entities that were subsequently provided to Envicom for reference. These studies include a separate Oak Tree Report completed by Kay J. Greely in September 2018, a focused California gnatcatcher survey report completed by Compliance Biology in August 2017, and a vegetation and special-status plant assessment report completed by E. Read and Associates, Inc. that was completed in August of 2017.

2.2 FIELD SURVEYS AND HABITAT MAPPING

A biological survey to inventory the resources at the site was conducted in December 2018 by Mr. Tyler Barns and Mr. David West, Biologists at Envicom Corporation. The survey involved a search for rare, threatened, and endangered plant and wildlife species, special habitats, and sensitive natural communities, as well as an evaluation of the importance of the site for wildlife movement. The vegetation and land cover at the site was also mapped using high-resolution aerial imagery of the site from April 2017 (latest imagery available on Google Earth Pro).

The initial biological survey was conducted December 5, 2018 between the hours of 9:00 a.m. and 4:30 p.m. in cool cloudy conditions (upper-40s to low-50s °F) with periods of rain and winds of 1 to 5 m.p.h.

Further surveys were conducted by Mr. Jim Anderson, Senior Biologist at Envicom Corporation, in Spring of 2019 to address the added requests for delineation of an additional drainage basin and a spring floristic survey. The subsequent surveys that took place during Spring 2019 were conducted on the following dates and times and under the following conditions:

- May 2, 2019, between the hours of 9:50 a.m. and 2 p.m. under clear conditions with temperatures ranging from the low-60s to the high-70s ºF and winds from 0-10 m.p.h.;
- May 6, 2019, between the hours of 9:40 a.m. and 5:10 p.m. under clear conditions with temperatures ranging from the low-60s to high-60s ºF and winds from 0 to 10 m.p.h.;
- June 7, 2019, between the hours of 2:10 p.m. and 6:30 p.m. under clear conditions with temperatures ranging from the mid-80s to the low-70s ºF and winds from 5 to 15 m.p.h.; and,
- June 10, 2019, between the hours of 9:45 a.m. and 11:20 a.m. under clear conditions with temperatures in the low 80s ºF and winds from 0 to 5 m.p.h.

The surveys were performed by accessing the larger site area via golf cart and then walking transects over the landscape. Transects were approximate and were modified based on the site's terrain, conditions, and existing development. The survey methodology resulted in a thorough investigation of all plant communities and habitat types within the project area and accessible areas within the Survey Area. The vegetation communities at the site were correlated with the *California Natural Communities List* (CDFW, October 2018), where applicable. A complete inventory of vascular plants and wildlife observed was recorded, with all species identified to the taxonomic level necessary to determine their status. Vascular plant species determinations were made using *The Jepson Manual: Vascular Plants of California, 2nd edition* (Baldwin B. et al. 2012).

Plant species observed by Envicom staff during the site survey are presented as **Appendix 2**. Vertebrate wildlife species were identified during the survey by direct observation, sign (e.g., tracks, scat, or burrows), or vocalization. Wildlife species identification relied upon Reid (2006), Sibley (2016), and Stebbins (2003). Observations of wildlife have been recorded based on sight, or sign including, tracks,

scat or vocal recognition. **Appendix 3** provides a listing of vertebrate wildlife species observed. Photographs were taken as a record of site conditions at the time of the survey (**Plates 1 and 2, Representative Photographs of the Survey Area**).

Wetland delineations were completed in accordance with the 1987 USACE *Wetlands Delineation Manual* (ACOE 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (ACOE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2008b), and *A Field Guide to Mapping Episodic Stream Activity* [where applicable] (Brady and Vyverberg 2013).

Delineations were conducted in accordance with the statutory guidelines of the regulations listed below:

- California Department of Fish and Wildlife (CDFW) Lake or Streambed Alteration Agreement under Section 1600 et seq. of the California Fish and Game Code.
- United States Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act.
- Regional Water Quality Control Board (RWQCB) Water Quality Certification under Section 401 of the Clean Water Act.

The USACE, under Section 404 of the Clean Water Act (CWA), regulates the filling of "Waters of the United States" (WOUS), including associated wetlands (ACOE 1987). The ACOE defines wetlands as:

> "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally includes swamps, marshes, bogs and similar areas" (40 CFR 230.3(t))".

Wetlands are considered a subset of WOUS. This broad term incorporates aquatic systems that fall under the regulatory jurisdiction of the CWA (Section 404) and the Rivers and Harbors Act (Section 10), including deep-water aquatic habitats and special aquatic sites such as wetlands and mudflats (ACOE 1987). Waters of the US include the territorial sea, coastal and inland waters, lakes, rivers, and streams. The California State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) maintain regulatory responsibility for management of wetlands and waterbodies in California and may review wetland delineations in concert with the ACOE. With specific regard to wetlands, the delineation of boundaries of "Waters of the State of California" (WOS) is usually based on the ACOE's multi-parameter approach, as outlined in the 1987 Wetlands Delineation Manual and 2008 Regional Supplement. In addition, under California Fish and Game Code section 1600 *et seq*., CDFW maintains jurisdiction over activities that may substantially adversely affect certain waterbodies that provide habitat for fish or wildlife.

"Test plots" were recorded where needed to confirm indicators within the potential wetlands. The Wetland Determination Data Forms prepared for this survey are included in **Appendix 4.**

Photo 1A – View from above of western portion of the survey area.

Photo 1B – General site conditions, showing old fairway and surrounding scrub communities.

Representative Photographs of Survey Area

Photo 2A – View from above of eastern portion of survey area.

Photo 2B – View of dry pond feature with cattail marsh, old green in foreground, old fairway in background.

3.0 ENVIRONMENTAL SETTING

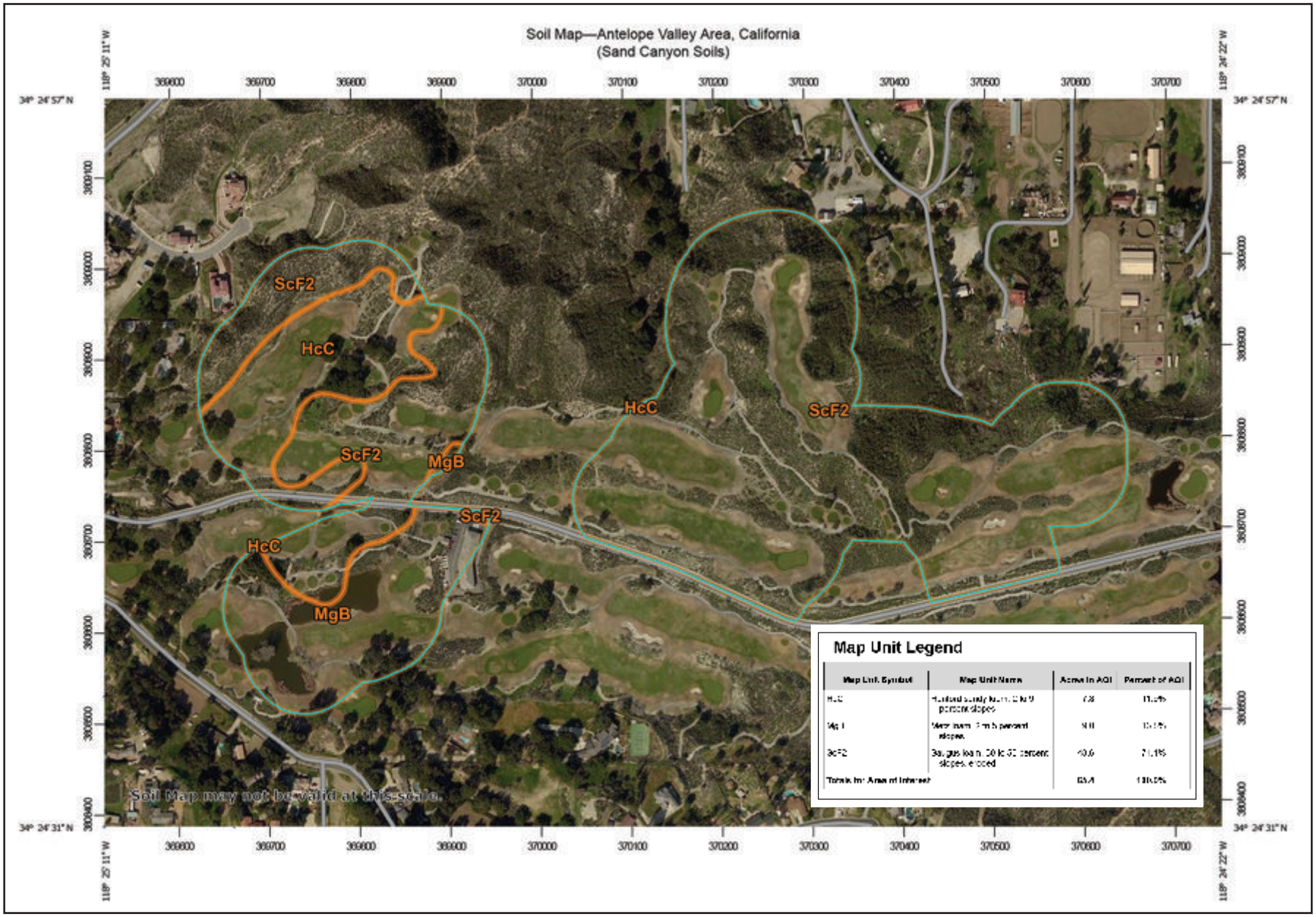
The project site is located on the existing property of the Sand Canyon Country Club. One of four nine-hole golf courses on the property has been closed, removed from irrigation, and left fallow in anticipation of project development. The project area is bound to the north by hills covered largely in native chamise chaparral, to the south and east by the remaining active golf courses of the Sand Canyon Country Club, and to the west by residences and ranch property. The proposed debris basin to the south of Robinson Ranch Road is surrounded by existing golf course fairway and associated developments. The Survey Area is generally dry and exposed (south-facing). The average high/low summer temperatures in the Survey Area are 92/53°F, average high/low winter temperatures are 66/37°F, and average precipitation is 14 inches per year.

The site is located in the Santa Clara River Valley Groundwater Basin, Santa Clara River Valley - Santa Clara River Valley East (California Department of Water Resources 2004). The Santa Clara River Valley East Sub-basin is bordered on the north by the Piru Mountains, on the west by impervious rocks of the Modelo and Saugus Formations and a constriction in the alluvium, on the south by the Santa Susana Mountains, and on the south and east by the Gabriel Mountains. The surface is drained by the Santa Clara River, Bouquet Creek, and Castaic Creek.

The Survey Area is located in the Santa Clara River watershed (HUC 180701020107) within the larger Ventura-San Gabriel Coastal watershed (HUC 1810701). It includes multiple concrete or plastic lined pond features, a wetland feature, and a County of Los Angeles Public Works storm drain and detention basin.

The soils at the site are of the Saugus loam, 30 to 50 percent slopes, Hanford sandy loam, 2 to 9 percent slopes, and Metz loam, 2 to 5 percent slopes. The Saugus Loam tends to have rapid runoff and is therefore subject to high erosion, whereas the Hanford sandy loam tends to have slow runoff and be more resistant to erosion. Metz loam is typified by very slow runoff, with low potential for erosion, and is therefore subject to periodic flooding in low-lying areas. These soils are typical of former grazing lands, and none are considered hydric (Natural Resources Conservation Service 2018). A map of the soil types within the Survey Area provided by NRCS is provided in **Figure 3, Natural Resources Conservation Service Soil Map of Survey Area** below.

Vegetation throughout the Survey Area is predominantly native and non-native grassland, which encompasses the majority of the area that used to be golf course. Surrounding it and in vegetation islands within it are stands of mixed chamise and California buckwheat chaparral, California brittlebush scrub, and Great Basin sagebrush scrub. Land uses adjacent to the site include active irrigated golf courses to the south and east, vegetated hills and residences to the north, and residential and ranch land to the west.



Source: NRCS Web Soil Survey, 2019.

Natural Resources Conservation Service Soil Map of Survey Area

FEET 0 250 500

FIGURE 3

4.0 BIOLOGICAL RESOURCES

4.1 VEGETATION AND SENSITIVE PLANT COMMUNITIES

The planned development areas consist of a fallow golf course and hillsides vegetated by mixed chamise chaparral and scrub communities, as well as some oak woodlands. The vegetation of the Survey Area can generally be characterized by four categories of condition; woodlands, shrub/scrublands, herbaceous, and developed / other (disturbed).

4.1.1 Vegetation / Land Cover Types

The majority of the planned development area is occupied by mixed native and non-native grassland (the former golf course), but the area also encompasses several coast live oak woodlands and both hillsides and vegetation islands within the grassland that are covered with mixed chaparral and scrub communities. Areas surrounding the proposed project area are vegetated hillsides, existing active golf course, and residential and ranch properties.

To the extent possible, plant communities were correlated with plant communities included in the *California Natural Communities List* (CDFW, October 2018), which provides a list of officially recognized plant communities occurring within the State of California. The list assigns a conservation status rank (also known as "rarity rank") to each plant community, which is used to determine the sensitivity of the plant community. Plant communities with global or state status ranks of G1 through G3, or S1 through S3, respectively, are considered to be sensitive, and are referred to as "natural communities of special concern." Plant communities are classified based on plant species composition and abundance, as well as the underlying abiotic conditions of the stand, such as slope, aspect, or soil type.

Of the communities mapped, four (4) are considered sensitive by CDFW. **Table 2** provides a summary of vegetation types/land uses for the under existing conditions and the corresponding acreage. **Figure 4**, **Generalized Vegetation Map and Impacts**, depicts the existing vegetation conditions with an overlay of the planned development footprint. The proposed development area may be loosely divided into eastern and western areas given the two separate development areas shown in Figure 4.

Below is a discussion of each Vegetation/Land Use Type.

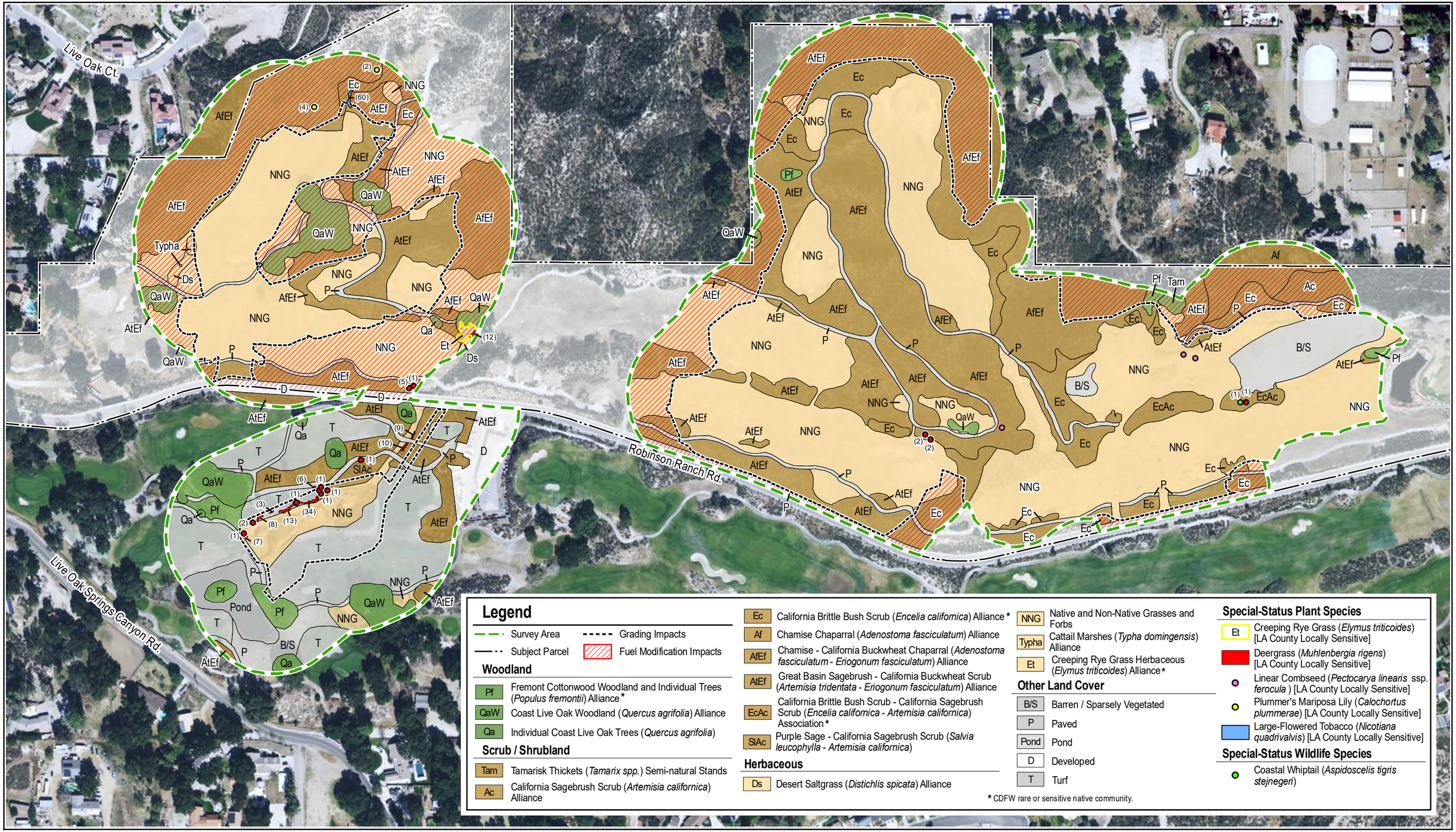
Woodland

Fremont Cottonwood Woodland Alliance [G2QS3]

This woodland association, which is considered sensitive by the CDFW, occurs in several small patches at several locations in the eastern portion of the Survey Area. Several more patches exist in the southwestern portion of the Survey Area around the location of the proposed debris basin, though no impacts to the trees in that area are projected.

Coast Live Oak Woodland Alliance [G5S4]

This woodland association occurs in patches scattered within the western portion of the Survey Area with one smaller patch in the eastern portion. In this association, the tree layer is dominated by coast live oak. Understory within these woodland associations within the Survey Area is generally dominated by the herbaceous layer, primarily comprised of grasses and forbs. A shrub layer is sometimes present, including California buckwheat (*Eriogonum fasciculatum*) and California sagebrush (*Artemisia californica*). This community is not considered sensitive by CDFW.



Source: Valtus Imagery Services: Hexagon Imagery Program (HxIP), 2017.

Generalized Vegetation and Impacts Map

0 125 250 Feet

FIGURE 4

Table 2
Summary of Vegetation/Land Cover Types for the Survey Area

Habitat Class	Plant Community or Land Cover[1]	Conservation Status Rank[2]	Acres
Woodland	Fremont Cottonwood (*Populus fremontii*) Alliance [61.130.06]*	G2QS3	0.57
	Coast Live Oak (*Quercus agrifolia*) Woodland Alliance [71.060.02]	G5S4	1.78
	Individual Coast Live Oak (*Quercus agrifolia*) Trees	Not ranked	0.26
Scrub/Shrubland	Tamarisk (*Tamarix ramosissima*) Semi-Natural Stands [63.810.01]	Not ranked	0.07
	California Sagebrush (*Artemisia californica*) Scrub Alliance [32.010.01]	G5S5	0.34
	California Brittlebush (*Encelia californica*) Scrub Alliance [33.050.02]*	G3S3	3.82
	Chamise (*Adenostoma fasciculatum*) Chaparral Alliance [37.101.16]	G5S5	0.89
	Chamise - California Buckwheat (*Adenostoma fasciculatum - Eriogonum fasciculatum*) Chaparral Alliance [37.101.14]	G5S5	14.54
	Great Basin Sagebrush – California Buckwheat (*Artemisia tridentada – Eriogonum fasciculatum*) Scrub Alliance [35.110.09]	G5S5	7.68
	California Brittlebush – California Sagebrush (*Encelia californica – Artemisia californica)* Scrub Association [32.050.01]*	G3S3	0.47
	Purple Sage – California Sagebrush (*Salvia leucophylla – Artemisia californica*) Scrub Alliance [32.090.01]	G4S4	0.18
Herbaceous	Desert Saltgrass (*Distichlis spicata*) Alliance [41.200.09]	G5S4	0.08
	Native and Non-Native Grassland (Formerly Golf Course Fairways)	Not ranked	26.08
	Narrowleaf Cattail Marshes (*Typha domingensis*) Alliance [52.050.03]	G5S5	0.03
	Creeping Ryegrass (*Elymus triticoides*) Herbaceous Alliance [41.080.01]*	G3S3	0.05
Other/Developed	Barren / Sparsely Vegetated	Not ranked	1.73
	Paved	Not ranked	2.99
	Pond	Not ranked	0.57
	Developed	Not ranked	1.13
	Turf Grass	Not ranked	4.82
		TOTAL ACREAGE	**68.1**

*** CDFW Sensitive Community**

[1] Numbers in brackets are unique codes for each plant community, as provided in the *Natural Communities List* (CDFW, October 2018).

[2] A conservation status rank (also known as "rarity rank") or a "high inventory priority" designation is used to determine the significance of project impacts to plant communities. The conservation status ranking system consists of a geographic scale (G=Global; S=State) and a degree of threat (1=critically imperiled; 2=imperiled; 3=vulnerable to extirpation or extinction; 4=apparently secure; and 5=demonstrably widespread, abundant, or secure). Plant community alliances with global or state conservation status ranks of G1 through G3, or S1 through S3, respectively, are considered to be "natural communities of special concern." A Q within the ranking indicates "Questionable taxonomy"—Taxonomic distinctiveness of this entity at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or the inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority conservation priority.

Coast Live Oak Individual Trees

Aside from the coast live oak woodlands, a number of individual coast live oak trees are scattered about the Survey Area, primarily in the southwestern and western area. These are simply coast live oak trees that are too far apart to constitute woodlands but occupy a large enough area to be mapped. Individual coast live oak do not possess any state, federal, or local special status, but are protected when meeting designated size criteria by the Los Angeles County oak tree ordinance. They do not constitute a plant community and therefore can not be assessed as a potential sensitive plant community.

Scrub / Shrubland

Tamarisk Semi-Natural Stands

Saltcedar (*Tamarix ramosissima*) trees were found in various areas around the Survey Area. In one place within the Survey Area, a thicket of saltcedar exists. This community is dominated by tamarisk, with Great Basin sagebrush growing around and partially underneath it. An herbaceous layer of grasses and forbs also grows around and underneath the tamarisk. Tamarisk is not a native plant and is not considered sensitive by the CDFW.

California Sagebrush Scrub Alliance [G5S5]

This community is typified by dominance California Sagebrush in the shrub layer with no other codominant plants. One patch was mapped at the far eastern edge of the survey area. While not within the proposed grading limits, the community would potentially be impacted by fuel modification activities. This community is not considered sensitive by the CDFW.

California Brittlebush Scrub Alliance [G3S3]

This plant community, considered sensitive by CDFW, occurs on both sides of the Survey Area, though primarily on the east side in areas often in between the Chamise / California Buckwheat Alliance and the former golf course areas. In this community, California brittlebush (*Encelia californica*) is dominant and often continuous. In places where it is not continuous, it is punctuated by California sagebrush and Great Basin sagebrush.

Chamise Chaparral Alliance [G5S5]

Chamise is common throughout the Survey Area, though in most places it is co-dominant with California buckwheat. One patch of this community, where chamise alone is dominant, exists in the far eastern portion of the Survey Area immediately north of the lone patch of California sagebrush. This plant community is not considered sensitive by the CDFW.

Chamise - California Buckwheat Shrubland Alliance [G5S5]

This shrub association occupies large swaths of the Survey Area on the hillsides and slopes north of the existing golf course. Chamise in the Survey Area is typically dominant or co-dominant with Great Basin sage, with individual chaparral yucca (*Hesperoyucca whipplei*) occurring frequently throughout the association. In transitional areas between communities, Great Basin sagebrush, California brittlebush, California buckwheat, and California sagebrush begin to appear as one approaches the neighboring communities. This community is not considered sensitive by CDFW.

Great Basin Sagebrush – California Buckwheat Shrubland Association [G5S5]

This shrub association occurs primarily at the southern extreme of the Survey Area and within vegetation islands surrounded by the existing golf course within both the eastern and western portions of the Survey Area. These areas are typified by dominant Great Basin sage, or co-dominant California buckwheat and Great Basin sagebrush. California sagebrush and California brittlebush are also found in parts of these areas in lesser quantities.

California Brittlebush – California Sagebrush Shrubland Association [G3S3]

This plant community, considered sensitive by CDFW, occurs in two vegetation "islands" within the non-native grassland in the eastern portion of the Survey Area. In this community, California brittlebush is co-dominant in the shrub canopy with California sagebrush and occupies greater than 30% of the canopy layer.

Purple Sage – California Sagebrush Scrub Association [G4S4]

This plant community was mapped in only one patch, which grows immediately north of the proposed location for the debris basin in the southwestern portion of the Survey Area. This community is typified by co-dominance of purple sage and California sagebrush in the shrub layer. This patch in particular is on the edge of the area to be graded for the debris basin. This community is not considered sensitive by the CDFW.

Herbaceous

Desert Saltgrass Alliance [G5S4]

This community occurs only in the western portion of the Survey Area where a seep was found. No historical imagery indicates the existence of this seep and therefore the water source for this may be faulty irrigation equipment. A carpet of desert saltgrass (*Distichlis spicata*) grows over an area just downslope of saturated turf, and is punctuated by a small growth of cattail. This community is not considered sensitive by CDFW.

Native and Non-Native Grassland

This community is the largest within the Survey Area. This community is comprised of the golf course fairways, which have been left fallow, where they has not been converted. Dominant species within this community now include various grasses and forbs, with non-natives including ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), Bermuda grass (*Cynodon dactylon*), smilo grass (*Stipa miliaceae*), and natives including foothill needlegrass (*Stipa lepida*) and giant wildrye (*Elymus condensatus*).

Narrowleaf Cattail Herbaceous Alliance [G5S5]

This community occurs in two patches, one in the western portion and one in the eastern portion of the Survey Area. In the eastern portion of the Survey Area, the cattail exists within the footprint of what used to be a pond. This plastic-lined feature has been drained, and most of the cattail observed was dead, though some was still green. In the western portion of the Survey Area, a concrete-lined pond supports cattail, though at the time of the survey most of it was dead despite the presence of water. This community is not considered sensitive by CDFW.

Creeping Ryegrass Herbaceous Alliance [G3S3]

This community, considered sensitive by CDFW, occurs along and adjacent to the northern end a modified stream. This area is located near the center of the proposed project, just north of Robinson Ranch Road, at the eastern edge of the western portion of the survey area. It occurs partially within the riparian zone, portions of which are underneath canopy cover of coast live oak trees.

Other/Developed

Barren or Sparsely Vegetated

Barren or areas with sparse cover of non-native ruderal species and areas that have been graded or cleared of vegetation, and may be mowed or otherwise disturbed on a regular basis. These areas are located in the eastern portion of the Survey Area, where equipment and piled vegetation indicate that the area has been cleared, perhaps to act as a staging area. Selected species observed include hoary mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tree tobacco (*Nicotiana glauca*). Due to their highly disturbed condition, these areas generally lack native species and are dominated by non-natives, and are not considered sensitive.

Paved

Paved areas include Robinson Ranch Road, which runs through the property at the southern end of the Survey Area, and the concrete paths that run throughout the area that used to serve as roads for golf carts to follow throughout the course. Paved areas are not sensitive.

Pond

One artificial decorative pond is maintained within the survey area in the far southwestern corner near the proposed location of the debris basin. The pond is outside of the grading limits for the debris basin, and should not be impacted by project activities.

Developed

Developed areas within the survey area include portions of the buildings that house maintenance operations for the golf course. Developed areas were within the Survey Area but are not sensitive or projected to be impacted by project activities.

Turf Grass

Portions of the existing golf course occur within the Survey Area around the proposed debris basin location. These areas are covered in turf grass, which is not sensitive.

4.1.2 Plant Communities/Habitats Listed in CNDDB

A review of the California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) Rarefind 5 application reveals twelve Sensitive Plant Communities/Habitats have been reported by other observers in the Mint Canyon quadrangle area, or within adjacent quadrangles have reported Sensitive Plant Communities/Habitats:

- California Walnut Woodland;
- Mainland Cherry Forest;
- Riversidian Alluvial Fan Sage Scrub;

- Southern California Arroyo Chub/Santa Ana Sucker Stream;
- Southern California Threespine Stickleback Stream;
- Southern Coast Live Oak Riparian Forest;
- Southern Cottonwood Willow Riparian Forest;
- Southern Mixed Riparian Forest;
- Southern Riparian Scrub;
- Southern Sycamore Alder Riparian Woodland;
- Southern Willow Scrub; and,
- Valley Oak Woodland.

None of these communities are present within the Survey Area.

4.2 PLANT SPECIES

4.2.1 Plant Species Observed

A total of 179 vascular plant taxa were identified during the surveys of the site, including 2 (two) gymnosperms, 144 dicots and 33 monocots. One hundred and ten (110) of the plants observed were native (61 percent) and 69 were non-native (39 percent). A complete list of the vascular plant species observed within the Survey Area is provided in Appendix 2.

4.2.2 Special-Status Plant Species

Special-status plant species either have unique biological significance, limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, or a combination of these factors. For the purposes of this report, special-status plant species are those plants listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act (CESA); and plants on the CNPS Inventory of Rare and Endangered Vascular Plants with a California Rare Plant Rank (CRPR) of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants considered to be rare, threatened, or endangered species in California and elsewhere), 2A (plants presumed extirpated in California, but more common elsewhere), and 2B (plants considered rare, threatened, or endangered in California, but more common elsewhere). The term "special-status" is also used herein to denote plants with a CRPR 3 (review list: plants about which more information is needed), which are evaluated on a case-by-case basis as well as plants on the CNPS Inventory with a CRPR 4 that meet criteria to be considered locally significant. The status codes for special-status plants are described in **Table 3.**

Special-Status Species Observed

No Federally listed or State-listed plant species were observed within the Survey Area, which is currently vegetated by chaparral, scrub communities, disturbed grasslands, golf course turf, and oak woodlands. All federal or state listed species that were judged to have had potential to occur at the project site in the initial December report were confirmed absent by the spring floristic surveys conducted by Envicom Corporation.

Table 3
Status Codes for Special-Status Plants

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become Endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as Endangered or Threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "Rare" on or before January 1, 1985, is a "Threatened species."
CR (California Rare)	A species, subspecies, or variety of plant is rare under the Native Plant Protection Act when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become Endangered if its present environment worsens. Animals are no longer listed as Rare; all animals listed as Rare before 1985 have been listed as threatened.
CALIFORNIA RARE PLANT RANK (CRPR) (formerly CNPS Lists)	
CRPR 1A	Plants presumed extirpated in California and either rare or extinct elsewhere.
CRPR 1B	Plants rare, threatened, or endangered in California and elsewhere.
CRPR 2A	Plants presumed extirpated in California, but more common elsewhere.
CRPR 2B	Plants rare, threatened, or endangered in California, but more common elsewhere.
CRPR 3	A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.
CRPR 4	A watch list for plants that are of limited distribution in California.
CALIFORNIA NATIVE PLANT SOCIETY (CNPS) THREAT RANK	
The CNPS Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment, as follows: • 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat). • 0.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat). • 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).	
LA County - Los Angeles County Locally Sensitive Plant	

Several plants that are considered Locally Sensitive by the County of Los Angeles were observed during the Spring 2019 surveys. The locations of these plants are shown on Figure 4 above. The following five (5) Locally Sensitive plants were observed and mapped during the Spring 2019 surveys:

- Deergrass (*Muhlenbergia rigens*);
- Plummer's Mariposa Lily (*Calochortus plummerae*);
- Large-Flowered Tobacco (*Nicotiana quadrivalvis*);
- Linear Combseed (*Pectocarya linearis* ssp. *ferocula*); and
- Creeping Wildrye (*Elymus triticoides*).

These plant species have been documented for informational purposes. Los Angeles County evaluates impacts to these species during environmental review for projects under their jurisdictions, but this is not required within the City of Santa Clarita.

Potential for Occurrence Analysis

An evaluation of the potential for occurrence at the site of special-status plant species known to occur in the region was undertaken through a search of the CNPS Online Inventory of Rare and Endangered Plants, 8th ed. (CNPS 2018) and the California Department of Fish and Wildlife's Natural Diversity Data Base (CNDDB) Rarefind 5 application (CDFW 2018) for sensitive "elements" reported within the Mint Canyon quadrangle and eight others that surround it, namely Warm Springs Mountain, Green Valley, Sleepy Valley, Newhall, Agua Dulce, Oat Mountain, San Fernando, and Sunland. The CNDDB/CNPS derived lists are provided in **Appendix 5**. Based upon a review of the resources and databases listed above, 42 special-status vascular plant species have been documented within the nine USGS quadrangles. The analysis of the potential for occurrence of special-status plants is presented in **Appendix 6**, including protection status, primary habitat associations, and an evaluation of their potential for occurrence at the site. The evaluation considers the potential for occurrence within the biological Survey Area, i.e., within the development footprint and vicinity. The potential for occurrence analysis does not include CRPR 4 plants. As discussed in Appendix 6, most special-status plant species known to occur in the region are precluded from occurring at the site due to lack of suitable habitat or because the site is outside of the known range of the species. Other species, particularly shrubs and many perennial herbs, could be confirmed as absent as they were not found during the survey. The following eleven (11) special-status plant species had low potential to occur at the site prior to floristic surveys conducted by Envicom Corporation. These species are listed here:

- chaparral ragwort (*Senecio aphanactis*) – CRPR 2B.2;
- Davidson's bush mallow (*Malacothamnus davidsonii*) – CRPR 1B.1;
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*) – CRPR 1B.2;
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) – CRPR 1B.1;
- Ross' pitcher sage (*Lepechinia rossii*) – CRPR 1B.2;
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) – FE / CE;
- San Gabriel bedstraw (*Galium grande*) – CRPR 1B.2;
- short-tailed beavertail (*Opuntia basilaris* var. *brachyclada*) – CRPR 1B.2;
- slender mariposa lily (*Calochortus clavatus* var. *gracilis*) – CRPR 1B.2;
- slender-horned spineflower (*Dodecahema leptoceras*) – FE / CE; and,
- white rabbit-tobacco (*Pseudognaphalium leucocephalum*) – CRPR 2B.2.

All of these species were confirmed absent by the spring floristic surveys conducted by Envicom Corporation in Spring 2019.

4.2.3 California Rare Plant Rank 4 Species

Plants with a CRPR of 4 are not rare, but rather are included on a "watch list" of species with limited distribution. While plants in this category cannot be called "rare" from a statewide perspective, and very few, if any, are eligible for state listing, many of them are significant locally. For this reason, CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents, which may be particularly appropriate for: the type locality of a CRPR 4 plant; populations at the periphery of a species' range; areas where the taxon is especially uncommon; areas where the taxon has sustained heavy losses; or, populations exhibiting unusual morphology or occurring on unusual substrates.

One CRPR Rank 4 plant was observed during the spring 2019 surveys:

- Plummer's mariposa lily (*Calochortus plummerae*), CRPR 4.2

4.3 PROTECTED TREES

The City of Santa Clarita oak tree ordinance (Chapter 17.51, Section 17.51.040 – Oak Tree Preservation of the City of Santa Clarita Municipal Code) protects and preserves oak trees in the City. The ordinance protects oak trees in the genus *Quercus* that measure at least six (6) inches or more in circumference when measured at a point four and one-half feet (4 ½) above the tree's natural grade, or for those trees on properties occupied by a single-family residence that do not exceed twelve and one-half (12 ½) inches in circumference when measured 4 ½ feet above the tree's natural grade. A heritage tree is defined as any oak measuring 108 inches or more in circumference or, in the case of a multiple trunk oak tree, two or more trunks measuring 72 inches each or greater in circumference, measured 4 ½ feet above natural grade. Unless allowed by an Oak Tree Permit, no person shall cut, remove, encroach into the protected zone or relocate a protected oak tree.

A separate oak tree report has been prepared for the project, which includes an assessment of protected trees on the subject property, an impact assessment, and general recommendations According to the oak tree report, the site contains 136 protected oak trees, including 121 coast live oak trees (*Quercus agrifolia*) and 15 scrub oaks (*Q. berberidifolia*). Thirteen of the coast live oaks are heritage trees. For more information, see the Oak Tree Report for the project prepared by K. Greeley, dated September 14, 2018.

4.4 JURISDICTIONAL WATERS / HABITAT

Potential federal and/or state jurisdictional features within the Survey Area include a man-made ditch, a pond, an ephemeral drainage, a modified stream, and a swale that was located within upland habitat (**Table 4, Summary of Potential Jurisdictional Features in Survey Area**). All features observed were evaluated per both ACOE and CDFW guidance and results are provided in Table 4.

4.4.1 Ditches and Drainages

Ditch 1 (DIT1) is a concrete and rock-lined channel that was dug within uplands and presumably supplemented by irrigation or nuisance water. The ditch contained impounded water that appeared be stagnant (i.e., not flowing). There was approximately three inches of accumulated soil materials on top of the concrete liner. DIT1 is hydrologically connected to another man-made impoundment south of the Survey Area via a concrete box culvert that runs under Robinson Ranch Road, which eventually leads to a secondary man-made pond system within the existing golf course. There is no nexus from the ponds to a

TNW. The ACOE generally does not assert jurisdiction over ditches or swales excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. CDFW and RWQCB would likely determine that DIT1 constitutes jurisdictional habitat.

Table 4
Summary of Potential Jurisdictional Features in Survey Area (Acres / Linear Feet)

Feature	Latitude	Longitude	USACE Wetland Waters of the U.S.	USACE Non-Wetland Waters of the U.S.	RWQCB Waters of the State	CDFW Streambed & Riparian Habitat*
Ditch 1 (DIT1)	34.412305	-118.415586	--	--	0.02/69	0.02/69
Drainage 1 (DR1)	34.413645	-118.412710	--	--	0.03/167	0.10/177
Swale 1 (SW1)	34.412916	-118.414817	--	--	0.09/171	0.09/171
Pond (P1)	34.412042	-118.406985	--	--	0.14/301	0.36/357
Stream 1 (ST1)	34.411111	-118.416861	0.03/117	0.26/713	0.26/712	0.55/716
		TOTAL	**0.03/117**	**0.26/713**	**0.54/1,420**	**1.12/1,490**

* North American Datum 1983, California State Plane Zone V. GPS coordinates are given for the upstream origin of the drainage or ditch and center point of debris basins as accessed during field surveys and/or as digitized from aerial imagery.

Drainage 1 (DR1) is located in the northern portion of the Survey Area and did not exhibit any criteria indicators to suggest the presence of a wetland. The ACOE will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). In this case, DR1 does not appear to support continuous flow but is instead the result of erosion from convergent hillsides. For example, the golf cart path appears to have bisected the convergent hillsides and was constructed without adequate drainage control, which has resulted in severe undercutting of the hillside nearest the downhill side (west) of the pathway. The ephemeral drainage area appears to be isolated, ending in an overland flow with no connection to a TNW. Therefore, the drainage is not likely subject to ACOE jurisdiction but CDFW and RWQCB would likely determine that DR1 constitutes jurisdictional habitat, which would be affected by the proposed project.

In addition, a Los Angeles Department of Public Works debris basin is located west of the Survey Area. The extent of ACOE and RWQCB is limited to the confined channel within the basin. Conversely, the extent of CDFW jurisdiction is limited to the top of bank (i.e., top of the concrete lined basin) and would not extend to include the canopy of the oak tree immediately adjacent to the basin because the tree is not dependent on the drainage and basin and it does not contribute to the ecological function of the basin, which is lined with concrete. The drainage continues north of the basin, west of the Survey Area and ties into the City's storm drain system that drains into the Santa Clara River.

4.4.2 Swale

There is one swale area within the subject property that appears to be a result of faulty irrigation. This feature does not have a significant nexus to TNW as it ceases at the existing concrete golf cart path and no subsurface flows were detected that suggest a connection to the water course to the southwest. This area

is a shallow feature in the landscape that has grass or other low-lying vegetation throughout and conveys nuisance water across upland areas. As such, this feature has been classified as a swale. The ACOE typically does not assert their jurisdiction over swales, especially those that are not tributary to or abutting TNWs or tributaries of TNWs. Furthermore, the condition is likely a result of faulty irrigation as there is no indication of similar conditions in the vicinity of the swale. Nevertheless, because the swale currently supports cattail marsh and a robust herbaceous layer of salt grass, CDFW and the RWQCB will consider it jurisdictional.

4.4.3 Ornamental Pond and Water Feature

One ornamental pond and its associated water feature were found within the Survey Area. The boundary of the feature was mapped based on site-specific topography. The area would meet all three criteria to be considered a wetland under ACOE guidance, however, the pond was dug in uplands and was subsequently lined and filled as an ornamental feature for aesthetic purposes. At the time of the Spring 2019 survey conducted for this report, the pond was full of water and supported cattail thickets. The pond and associated water feature do not constitute jurisdictional waters of the U.S. CDFW and RWQCB would likely consider the pond and water feature to be jurisdictional.

4.4.4 Modified Stream

One modified stream was delineated within the expanded survey area assessed during the Spring 2019 surveys. The boundary of the stream was mapped based upon site-specific topography. At three locations, the stream met all three criteria to be considered a wetland under ACOE guidance. The remainder of the stream channel meets criteria as non-wetland waters of the U.S. Additional details on the wetlands are provided on the Wetland Determination Data Forms in Appendix 4. The stream connects to a Los Angeles Department of Public Works debris basin to the northwest (the same mentioned above), which does have a nexus to the Santa Clara River. The stream is subject to ACOE, CDFW, and RWQCB jurisdiction.

4.5 WILDLIFE SPECIES

4.5.1 Wildlife Observed

A list of vertebrate wildlife species observed during Envicom surveys is located in **Appendix 3**. Nearly all wildlife species observed during surveys of the site were species common or relatively common to the region. Many other non-special-status wildlife species can also be expected to utilize habitats at the site for cover, foraging, and reproduction. Furthermore, in general, the list in Appendix 3 includes species that are more easily detected during daytime surveys. Several species (e.g., reptiles, birds, small mammals) may reproduce in the Survey Area, and a wide range of larger or mobile species can be expected to utilize the site's resources routinely, such as foraging raptors and medium to large-sized mammals (e.g., striped skunk, coyote, and mule deer).

The woodland, scrub/shrubland, and herbaceous habitats provide suitable habitat for a variety of reptile species. No reptiles were observed during the December 5 survey, likely because of the cold, wet, and overcast conditions, although several common reptile species are very likely to be present. During the Spring 2019 surveys, coastal whiptail, a California Species of Special Concern, and western fence lizards were observed within the Survey Area.

The native and non-native habitats at the project site provide cover and forage resources as well as nesting/breeding habitat for several species of birds. Birds were the most diverse vertebrate wildlife

observed, and consisted of year-round, summer, and winter residents, as well as potential migrants. Species observed include acorn woodpecker, American coot, American crow, Anna's hummingbird, ash-throated flycatcher, Bewick's wren, blue-grey gnatcatcher, bushtit, Cassin's kingbird, bushtit, California quail, California scrub-jay, California thrasher, California towhee, Canada goose, cliff swallow, common raven, great horned owl, great-tailed grackle, house finch, house sparrow, killdeer, lesser goldfinch, mallard, mourning dove, Nuttall's woodpecker, oak titmouse, phainopepla, red-shouldered hawk, red-tailed hawk, red-winged blackbird, song sparrow, spotted towhee, turkey vulture, western bluebird, western kingbird, white crowned sparrow, white-throated swift, wrentit, and yellow-rumped warbler. The woodland and scrub communities, with their abundance of small mammals, open habitat, and presence of large trees provides excellent foraging habitat for raptors. Several bird species would nest within the Survey Area in any given year. Nearly all species of birds, while nesting, are protected by Fish and Game Code Section 3503 and 3503.5, and by the federal Migratory Bird Treaty Act.

Mammals observed during the survey included domestic rooster (*Gallus domesticus*), desert cottontail (*Sylvilagus audubonii*), fox squirrel (*Scirurus niger*), and domestic dog (*Canis lupus familiaris*), whereas mammals inferred by sign include Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), big-eared woodrat (*Neotoma macrotis*), raccoon (*Procyon lotor*), and mule deer (*Odocoileus hemionus*)..

4.5.2 Special-Status Wildlife

For the purposes of this assessment, special-status wildlife species are those species that are listed, proposed for listing, or that meet the criteria for listing as endangered, threatened, or rare under the FESA or CESA; and those that are listed on the CDFW Special Animals list with a designation of SSC (California Species of Special Concern) or CFP (California Fully Protected). The status codes for special-status wildlife are described in **Table 5.**

Special-Status Wildlife Species Observed

Both Envicom's and Compliance Biology's surveys observed Cooper's hawk, a CDFW watch list species. The August 2017 survey conducted by Compliance Biology also indicated the presence of San Diego desert woodrat (*Neotoma lepida*), a CDFW Species of Special Concern, although Envicom biologists did not see any nests that conformed to that species in their survey. Also documented by Compliance Biology was the presence of least bittern (*Ixbrychus exilis*), a California Species of Special Concern, and Southern California rufous-crowned sparrow, a CDFW watch-list species. Both Compliance Biology's survey and Envicom's 2019 spring surveys included observations of coastal whiptail (*Aspidoscelis tigris stejnegeri*), a California Species of Special Concern. Locations of observations of the special-status coastal whiptail are shown on Figure 4.

Coastal California gnatcatcher (*Polioptila californica californica*) has been documented in the vicinity of the project area, but not at the project site. Surveys of the project site were conducted for California gnatcatchers by Compliance Biology in accordance with standard protocols in Spring 2017. No coastal California gnatcatchers were observed during the protocol surveys. For additional information on the methods and results of these surveys, see the separate report prepared by Compliance Biology, dated August 7, 2017. Also, the site is not within final USFWS designated Critical Habitat for the California gnatcatcher, which occurs north and east of the site.

Potential for Occurrence Analysis

An analysis of the potential for occurrence of special-status wildlife at the site is presented in Appendix 6, which includes the species' protected status, primary habitat associations, and an assessment of their potential for occurrence (Presumed Absent, No Potential, Low Potential, Moderate Potential, or High Potential). The potential for occurrence was undertaken through research of the CDFW Natural Diversity Database (CDFW 2018) using the Rarefind application for special-status "elements" on the Mint Canyon quadrangle and eight adjacent quadrangles. The CNDDB derived list is provided in **Appendix 5**. The potential for occurrence analysis provides an assessment of the potential for the occurrence at the site of special-status animals on the basis of their known distribution and habitat requirements.

Water features within the project area, as described above, are all either artificial lined features containing stagnant water, or are overland swales with no standing water, and are not suitable habitat for fishes, precluding the possibility that special-status fish species may occur within the project area.

The potential use of the site by special-status vertebrate wildlife species includes several species of reptiles, birds, and mammals. Species that have been observed at the site are confirmed present and are not included on this list of potentially present species. Four (4) special-status reptiles, one (1) amphibian, eight (8) special-status birds, and four (4) special-status mammals have potential to occur at the site, with varying probabilities ranging from moderate to very low, including:

Reptiles

- California glossy snake (*Arizona elegans occidentalis*) [SSC]
- Western pond turtle (*Emys marmorata*) [SSC]
- Coast horned lizard (*Phrynosoma blainvillii*) [SSC]
- Two-striped gartersnake (*Thamnophis hammondii*) [SSC]

Table 5
Status Codes for Special-Status Wildlife

FEDERALLY PROTECTED SPECIES	
FE (Federal Endangered)	A species that is in danger of extinction throughout all or a significant portion of its range.
FT (Federal Threatened)	A species that is likely to become endangered in the foreseeable future.
FC (Federal Candidate)	A species for which USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.
FSC (Federal Species of Concern)	A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "Category-2 Candidate" species.
STATE PROTECTED SPECIES	
CE (California Endangered)	A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

CT (California Threatened)	A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "rare" on or before January 1, 1985, is a "threatened species."
SSC (California Species of Special Concern)	Animals that are not listed under the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.
CFP (California Fully Protected)	This designation originated from the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians, reptiles, and birds. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. California Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.
SA (Special Animal)	"SA" is used herein if the animal is included on the CDFW Special Animals list but does not fall under any of the categories listed above. In general, special protection of these species is not mandatory under CEQA, although CDFW considers these species to be among those of greatest conversation need.

Amphibians

- Western spadefoot (*Spea hammondii*) [SSC]

Birds

- Tricolored blackbird (*Agelaius tricolor*) [CT]
- Grasshopper sparrow (*Ammodramus savannarum*) [SSC]
- Burrowing owl (*Ahene cunicularia*) [SSC]
- Swainson's hawk (*Buteo swainsoni*) [FT, CT]
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)[FT, CT]
- White-tailed kite (*Elanus leucurus*) [CFP]
- Loggerhead shrike (*Lanius ludovicianus*) [SSC]
- Coastal California gnatcatcher (*Polioptila californica californica*) [FT, SSC]

Mammals

- Pallid bat (*Antrozous pallidus*) [SSC]
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) [SSC]
- Southern grasshopper mouse (*Onychomys torridus ramona*) [SSC]
- American badger (*Taxidea taxus neglecta*) [SSC]

4.6 HABITAT LINKAGES AND WILDLIFE MOVEMENT

Wildlife must to be able to access habitat for water, foraging, breeding, and cover. Examples of barriers or impediments to movement, i.e., access, include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. The term wildlife movement corridor is used to describe physical connections that allow wildlife to move between areas of suitable habitat in both undisturbed and fragmented landscapes, such as landscapes fragmented by urban development. Wildlife movement corridors are necessary for dispersal and migration, to ensure the mixing of genes between populations, and so wildlife can respond and adapt to environmental stress, and thus are necessary to maintain healthy ecological and evolutionary processes. Wildlife crossings are generally small, narrow areas allowing wildlife to pass through an obstacle or barrier, such as a roadway to reach another patch of habitat. These can be critical at both the local and regional level. Wildlife crossings include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife movement over highways.

Based on a review of the following documents the project site and the Survey Area are near but not within an area that has been identified as important to wildlife movement, such as a regional-scale habitat linkage or a wildlife movement corridor:

- *California Essential Connectivity Project: A Strategy for Conserving a Connected California* (Spencer et al., February 2010);
- *South Coast Missing Linkages Project: A Linkage Design for the San Gabriel – Castaic Connection* (2006);
- *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica Mountains – Sierra Madre Connection* (2006); and,
- *City of Santa Clarita General Plan: Conservation and Open Space Element (2011).*

Also, the site is not located in an Los Angeles County Sensitive Ecological Area (SEA).

The potential importance of the project site to wildlife movement was also evaluated both in the field and by reviewing recent aerial photographs of the site and the surrounding area. The scrub and woodland communities within the project area provide coverage/foraging areas for local wildlife. A diversity of wildlife species could potentially move through the Survey Area, as it contains vegetative cover and suitable habitat for many species. Although wildlife may potentially move through the Survey Area, the habitats within the Survey Area are not of special or particular importance for wildlife movement at a local or regional scale. For example, the project site is not within an important bottleneck of habitat between larger areas of natural habitat and there are extensive natural habitats in the surrounding area that can be used by wildlife for movement through the surrounding area. For example, to the northeast of the project area is a protected SEA exists that connects the Santa Clara River SEA to the San Gabriel mountains, a corridor that will not be impacted by this project. Also, the project site does not contain an important nursery site or other resources of special or particular importance to wildlife, and development of the project would not impede access to a nursery site or other important resources. Therefore, impacts to wildlife movement are considered to be less than significant.

5.0 PROJECT IMPACTS AND RECOMMENDED MITIGATION

The proposed project would involve construction and operation of a 75-acre hotel and resort, including a hotel, restaurants, affiliated structures, a seven (7) acre park with trails, a 9-hole golf course, and a parking lot containing 508 spaces. A Tentative Tract Map prepared by Hunsaker and Associates dated March 15, 2019 is provided as Appendix 1.

The project includes approximately 39 acres of development with an additional 21 acres of potential impacts related to fuel modification.

The primary vegetation communities impacted by the proposed project include mixed native and non-native grassland, chamise - California buckwheat scrub, California buckwheat - Great Basin sage scrub, California brittlebush scrub, and coast live oak woodland, as well as existing paved and barren areas. Permanent disturbances are assumed to be located within the proposed development footprint and fuel modification areas. The proposed project is shown overlaid on the site' biological resources on Figure 4. Proposed impacts to the plant communities located within the project site are listed below in **Table 6**. This impact analysis relies on the Conceptual Site Plan as well as CAD digital data of the grading footprint provided by the Applicant.

As described in Section 4.3, native trees meeting certain size requirements are protected by the City's tree ordinance. The subject property contains several oak trees that are protected by the City's tree ordinance; an impacts analysis for these trees is provided in a separate oak tree report for this project prepared by K. Greeley, dated September 14, 2018.

Fuel modification impacts are based on the standard Los Angeles County Fire Department (LACFD) distances of 200 feet from structures and 10 feet from roadways.

Table 6
Impacts to Plant Communities and Land Cover

Habitat Class	Plant Community or Land Cover	Existing Acreage	Project Impact (Acres)	
			Development Footprint	Fuel Modification
Woodland	Fremont Cottonwood (*Populus fremontii*) Alliance [61.130.06]*	0.57	0.09	0.04
	Coast Live Oak (*Quercus agrifolia*) Woodland Alliance [71.060.02]	1.78	0.05	1.02
	Individual Coast Live Oak Trees [N/A]	0.26	0	0
Scrub/ Shrubland	Tamarisk (*Tamarix ramosissima*) Semi-Natural Stands [63.810.01]	0.07	0	0.07
	California Sagebrush (*Artemisia californica*) Scrub Alliance [32.010.01]	0.34	0	0.34
	California Brittlebush (*Encelia californica*) Scrub Alliance[33.050.02]*	3.82	2.68	1.14
	Chamise (*Adenostoma fasciculatum*) Chaparral Alliance [37.101.16]	0.89	0	0.51
	Chamise - California Buckwheat (*Adenostoma fasciculatum -Eriogonum fasciculatum*) Chaparral	14.54	6.86	6.76

Habitat Class	Plant Community or Land Cover	Existing Acreage	Project Impact (Acres)	
			Development Footprint	Fuel Modification
	Alliance [37.101.14]			
	Great Basin Sagebrush – California Buckwheat (*Artemisia tridentada – Eriogonum fasciculatum*) Scrub Alliance [35.110.09]	7.68	3.99	2.23
	California Brittlebush – California Sagebrush (*Encelia californica – Artemisia californica)* Scrub Association [32.050.01]*	0.47	0.47	0
	Purple Sage – California Sagebrush (*Salvia leucophylla – Artemisia californica*) Scrub Alliance [32.090.01]	0.18	0.07	0
Herbaceous	Desert Saltgrass (*Distichlis spicata*) Alliance [41.200.09]	0.08	0	0.08
	Native and Non-Native Grassland (Formerly Golf Course Fairways)	26.08	20.91	4.91
	Narrowleaf Cattail Marshes (*Typha domingensis*) Alliance [52.050.03]	0.03	0.004	0.02
	Creeping Ryegrass (*Elymus triticoides*) Herbaceous Alliance [41.080.01]*	0.11	0	0.05
Other/ Developed	Barren / Sparsely Vegetated	1.73	1.27	0
	Paved	2.99	1.35	1.08
	Pond	0.57	0	0
	Developed	1.13	0.002	0.22
	Turf Grass	4.82	0.95	0
	TOTAL ACREAGE	**68.1**	**38.70**	**18.47**
* CDFW Sensitive Plant Community				

5.1 IMPACTS TO SPECIAL-STATUS PLANTS

This evaluation of impacts to special-status plants considers those species that require mandatory special consideration and/or protection pursuant to the Federal Endangered Species Act, the State Endangered Species Act, and/or CEQA. CRPR 4 species are also considered if protected by local policy or if they meet criteria to be locally significant. As discussed in Section 4.2.2 earlier in this document, the eleven (11) federal or state-listed plant species with low potential to occur at the project site were confirmed absent by the floristic surveys conducted in Spring 2019. Furthermore, no CRPR 4 species at the site are protected by City policy or otherwise meet criteria to be considered locally significant. Therefore, impacts to special-status plants would be less than significant.

5.2 IMPACTS TO SENSITIVE PLANT COMMUNITIES

Four (4) CDFW sensitive plant communities exist within the project site and would be impacted by the project. These include:

- Fremont Cottonwood (*Populus fremontii*) Woodland Alliance [G2QS3];
- California Brittlebrush – California Sagebrush (*Encelia californica – Artemisia californica)* Shrubland Association [G3S3];

- California Brittlebush (*Encelia californica*) Shrubland Association [G3S3]; and
- Creeping Wildrye (*Elymus triticoides*) Herbaceous Alliance [G3S3].

Fremont Cottonwood Woodland Alliance – G2QS3 - CDFW Sensitive Community

Project grading would remove a total of 0.09 acres of the Fremont Cottonwood Woodland Alliance, and fuel modification would potentially impact an additional 0.04 acres, depending on site-specific fuel modification requirements, which are subject to approval by LACFD. The project would impact small stands of Fremont cottonwood woodland within the project area, both within the eastern portion of the Survey Area. Project impacts to Fremont cottonwood woodland would be a significant but mitigable impact.

California Brittlebush – California Sagebrush Shrubland Association – G3S3 – CDFW Sensitive Community

Project grading would remove a total of 0.47 acres of the California brittlebush – California sagebrush scrub association, which constitutes all of this community type mapped within the Survey Area. This community was found on two vegetation "islands" within the native and non-native grassland, which is found entirely within the proposed grading limits of the project. Project grading of this sensitive plant community would be a significant but mitigable impact.

California Brittlebush Shrubland Association – G3S3 - CDFW Sensitive Community

Project grading would remove a total of 2.68 acres of California Brittlebush Shrubland Association, and fuel modification activities would potentially impact an additional 1.14 acres, depending on site-specific fuel modification requirements, which are subject to approval by LACFD. The impacted community occurs within the eastern portion of the Survey Area. Grading and fuel modification of the California Brittlebush Shrubland Association would be a significant, but mitigable impact.

Creeping Wildrye Herbaceous Alliance – G3S3 - CDFW Sensitive Community

A total of 0.05 acres of this herbaceous community exist within the potential fuel modification area, depending on site fuel modification requirements, which are subject to approval by LACFD. This community occurs along and adjacent to the modified stream located towards the eastern edge of the western portion of the survey area just north of Robinson Ranch Road. Fuel modification of the Creeping Wildrye Herbaceous Alliance community would be a significant, but mitigable impact.

The following Mitigation Measure (MM) **BIO-1** would reduce impacts to the above CDFW sensitive plant communities to a less than significant level:

MM BIO-1: Sensitive Plant Communities

Grading and fuel modification impacts to the Fremont Cottonwood Woodland Alliance, California Brittlebush – California Sagebrush Shrubland Association, California Brittlebush Shrubland Association, and Creeping Wildrye Herbaceous Alliance plant communities shall be mitigated at a 2:1 ratio in an area to be preserved as permanent open space. Compensatory mitigation shall be accomplished by one or a combination of the following methods and shall be based on the following preference hierarchy:

1) Mitigation bank credits
2) Contribution of an in-lieu fee program

3) On-site restoration of in-kind habitat
4) Off-site restoration of in-kind habitat

The mitigation method(s) shall be approved by the City of Santa Clarita Planning Division and CDFW (if applicable).

Prior to issuance of a grading permit for the project, the limits of fuel modification shall be mapped and a qualified biologist shall determine the final acreage of fuel modification impacts to the Fremont Cottonwood Woodland Alliance, California Brittlebush – California Sagebrush Shrubland Association, California Brittlebush Shrubland Association, and Creeping Wildrye Herbaceous Alliance plant communities.

If impacts to the Fremont Cottonwood Woodland Alliance, California Brittlebush – California Sagebrush Shrubland Association, California Brittlebush Shrubland Association, and Creeping Wildrye Herbaceous Alliance plant communities are to be mitigated by mitigation bank credits or by contribution of an in-lieu fee, the applicant shall provide evidence of purchase of mitigation bank credits or payment of the in-lieu fee prior to issuance of the first grading permit for the project. The in-lieu fee shall be based on the cost per acre to restore or create in-kind habitat and the acreage of the plant community impacted. In-lieu fees shall be used for the restoration of in-kind habitat.

If compensatory mitigation is to be accomplished by on-site or off-site restoration, a Mitigation and Monitoring Plan shall be developed by a qualified biologist, restoration ecologist, or resource specialist, and approved by the City of Santa Clarita Planning Division and CDFW (ifapplicable) prior to issuance of the grading permit for the project. The plan shall at a minimum include:

- Description of the project/impact and mitigation sites
- Specific objectives
- Success criteria
- Plant palettes
- Implementation plan
- Maintenance activities
- Monitoring plan
- Contingency measures

Off-site restoration shall be in the vicinity of the project site or if off-site restoration in the vicinity of the project site is infeasible, off-site restoration shall be conducted within the same watershed. Restoration should be implemented only where suitable conditions exist to support viable in-kind habitats. Disturbed habitats within the Santa Clara River Significant Ecological Area immediately adjacent to the northeastern portion of the subject property may provide a suitable opportunity for off-site restoration that is proximal to the impacted areas and within the same watershed.

The plant palettes shall include dominant species for each community (Fremont cottonwood, California brittlebush, California sagebrush, and Creeping Wildrye) as well

as a diversity of appropriate native species that occur within these plant communities at the site.

Success criteria shall at a minimum be evaluated based on percent cover of planted native species, as well as control of invasive plant species within the restoration area.

The performance standards for the Mitigation and Monitoring Plan shall be at a minimum the following:

- Within five years of the introduction of the native plants to the mitigation site, the acreage of restored plant communities shall be no less than two times the acreage lost to project construction.
- Within five years of the introduction of the native plants to the mitigation site, the absolute cover of native species shall be no less than 80% within the restoration area.
- Non-native species in the treated area shall be less than 15% relative cover by the end of the third year of treatment and less than 5% relative cover by the end of the fifth year of treatment; and,
- Restoration will be considered successful after the success criteria have been met for a period of at least 2 years without any maintenance or remediation activities other than invasive species control.

Prior to issuance of a grading permit, the Applicant shall secure a bond for an amount equal to the cost of the restoration effort. The bond shall be released by the City of Santa Clarita Planning Division upon satisfaction of the approved performance criteria.

The restoration project shall be initiated prior to issuance of the first grading permit for the project, and shall be implemented over a five-year period. The restoration project shall incorporate an iterative process of annual monitoring and evaluation of progress, and allow for adjustments to the restoration plan, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the restoration project shall be submitted to City of Santa Clarita Planning Division and CDFW (if applicable). Five years after project start, a final report shall be submitted to the City of Santa Clarita Planning Division and CDFW (if applicable), which shall at a minimum discuss the implementation, monitoring, and management of the restoration project over the five-year period, and indicate whether the restoration project has been successful based on established success criteria. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. The project shall be extended if success criteria have not been met at the end ofthe five-year period to the satisfaction of the City of Santa Clarita Planning Division and CDFW (if applicable).

If restoration cannot be achieved, compensation for the loss or modification of Fremont Cottonwood Woodland Alliance, California Brittlebush – California Sagebrush Shrubland Association, California Brittlebush Shrubland Association, and Creeping Wildrye Herbaceous Alliance shall be accomplished by on-site preservation of an in-kind habitat at a 3:1 ratio in an area to be preserved as permanent open space, subject to

approval by City of Santa Clarita Planning Division and CDFW (if applicable). To the extent possible, preservation shall be accomplished on-site or if on-site preservation is not feasible at a location within the same watershed.

5.3 IMPACTS TO SPECIAL-STATUS WILDLIFE SPECIES

This assessment of impacts to special-status wildlife considers those species that are listed, proposed for listing, or that meet the criteria for listing as Endangered or Threatened under the FESA or CESA; and those with a designation of SSC (California Species of Special Concern) or CFP (California Fully Protected), as mandatory special consideration and/or protection of these species is required pursuant to the Federal Endangered Species Act, the State Endangered Species Act, and/or CEQA.

The coastal whiptail (*Aspidoscelis tigris stejnegeri*), which is a California Species of Special Concern, was observed within the project grading footprint by Envicom in June 2019. Observations of coastal whiptail made during the Spring 2019 surveys are indicated on Figure 4. An August 2017 survey conducted by Compliance Biology also indicated the presence of San Diego desert woodrat (*Neotoma lepida*), a California Species of Special Concern, though Envicom biologists did not find any nests that conformed to that species in their survey in December 2018 or Spring 2019. Compliance Biology also heard vocalizations of least bittern (*Ixbrychus exilis*), a California Species of Special Concern, at a man-made pond at the site in 2017.

Several other special-status wildlife species are potentially occurring at the site. Most of the special-status wildlife species that may potentially occur at the site are capable of escaping harm during project development, including grading and construction, landscaping, or fuel modification, while others are potentially vulnerable to direct impacts, including injury and mortality. In this case, the special-status species that could be directly impacted include actually and potentially occurring land dwelling animals, including the California glossy snake (*Arizona elegans occidentalis*) [SSC], coastal whiptail (*Aspidoscelis tigris stejnegeri*) [SSC], coast horned lizard (*Phrynosoma blainvillii*) [SSC], western spadefoot (*Spea hammondii*) [SSC], two-striped gartersnake (*Thamnophis hammondii*) [SSC], San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) [SSC], San Diego desert woodrat (*Neotoma lepida*) [SSC], and a few species of special-status bats, which could potentially roost in tree cavities or in tree foliage at the site. Additionally, some potentially occurring special-status bird species could be impacted if nesting at the site (impacts to nesting birds are addressed under Section 5.5, below). Habitat loss associated with the project is not expected to significantly impact a population of a potentially occurring special-status wildlife species, given the amount of habitat that would be lost and the amount of remaining suitable habitat in the surrounding area. Direct loss or injury to a special-status wildlife species would be a potentially significant, but mitigable impact. With implementation of Mitigation Measure (MM) **BIO-2**, potentially significant impacts to special-status wildlife species would be less than significant.

MM BIO-2: Special-Status Wildlife Species

Beginning no more than two (2) weeks prior and ending no more than three (3) days prior to ground disturbing construction at the project site, pre-construction surveys for the California glossy snake, coastal whiptail, coast horned lizard, western spadefoot, two-striped gartersnake, San Diego black-tailed jackrabbit, roosting special-status bats, and San Diego desert woodrat, as well as any other potentially occurring special-status species shall be conducted by a qualified biologist and submitted to the City of Santa Clarita Planning Division prior to commencement of any ground or vegetation disturbance. The pre-

construction surveys shall incorporate appropriate methods and timing to detect the special-status wildlife species that could potentially occur at the site, as well as appropriate methods to identify and relocate potentially occurring San Diego desert woodrats and their nest materials, if this species is determined to be present. If a special-status species is found, avoidance is the preferred mitigation option. If avoidance is not feasible, these species shall be captured, when possible, and transferred to adjacent appropriate habitat and location where they would not be harmed by project activities, preferably within the open space areas either on-site or directly adjacent to the project area. Only a CDFW approved biologist shall perform this. The CDFW and the City of Santa Clarita Planning Division shall be formally notified and consulted regarding the presence of these species on-site. If a federally listed species is found prior to grading of the site, the USFWS shall also be notified. Only a USFWS approved biologist would be allowed to capture and relocate these animals. A letter report summarizing the methods and results of the surveys and relocation efforts, if applicable, shall be submitted to the City of Santa Clarita and CDFW prior to commencement of project activities.

5.4 IMPACTS TO NESTING BIRDS

Ground and vegetation disturbing activities if conducted during the nesting bird season (typically February 1 to August 31) would have the potential to result in removal or disturbance to trees and shrubs that could contain active bird nests. In addition, these activities would also affect herbaceous vegetation that could support and conceal ground-nesting species. Project activities that result in the loss of bird nests, eggs, and young, would be in violation of one or more of California Fish and Game Code sections 3503 (any bird nest), 3503.5 (birds-of-prey), or 3511 (Fully Protected birds). In addition, removal or destruction of one or more active nests of any other birds listed by the federal Migratory Bird Treaty Act of 1918 (MBTA), whether nest damage was due to vegetation removal or to other construction activities, would be considered a violation of the MBTA and California Fish and Game Code Section 3511. The loss of protected bird nests, eggs, or young due to project activities would be a significant, but mitigable impact. The following MM **BIO-3** would reduce impacts to nesting birds to a less than significant level.

MM BIO-3: Nesting Bird Surveys

Project activities, including but not limited to site preparation, construction, or fuel modification activities, with potential to disturb suitable bird-nesting habitat shall be prohibited within the breeding/nesting season for native bird species (typically February 1 through August 31). If the breeding/nesting season cannot be avoided, then no earlier than 7 days prior to ground or vegetation disturbing activities that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically February 1 through August 31), a qualified biologist shall perform two (2) field surveys to determine if active nests of any bird species protected by the state or federal Endangered Species Acts, Migratory Bird Treaty Act, and/or the California Fish and Game Code Sections 3503, 3503.5, or 3511 are present in the disturbance zone or within 300 feet of the disturbance zone for songbirds or within 500 feet of the disturbance zone for raptors and special-status bird species. The second nesting bird survey shall be conducted within three days of the start of ground or vegetation disturbing activities. A letter report summarizing the methods and results of the surveys shall be submitted to the City of Santa Clarita Planning Division and CDFW prior to commencement of project activities. In the event an active nest is found within the survey area, site preparation, construction, and fuel modification activities shall stop until the biologist can establish an appropriate

setback buffer around the nest. Buffer size will be determined on a case-by-case basis by the biologist based on site conditions, the species' life history and disturbance tolerance, the nest's distance to construction activities, and the type of construction ongoing in the vicinity of the nest. Buffers will be clearly delineated (e.g., using rope, flagging, signage), or they may also be defined by natural or manmade features that are deemed sufficient to prohibit access (e.g., tree rows, fences). Project activities within the buffer shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting.

5.5 IMPACTS TO JURISDICTIONAL WATERS AND RIPARIAN HABITAT

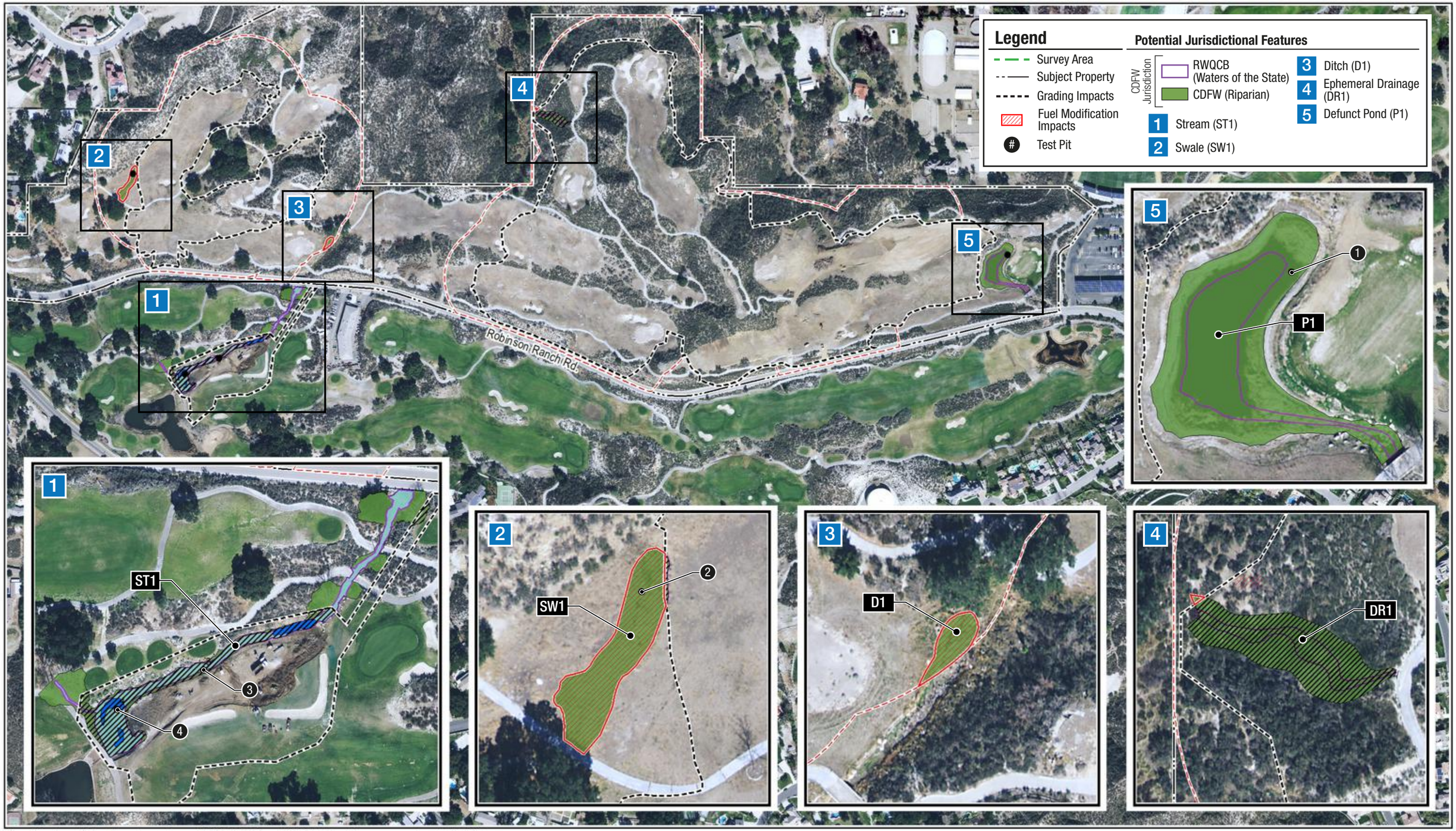
The project site contains Waters of the U.S., Waters of the State, and riparian habitat that would be subject to ACOE, RWQCB, and CDFW jurisdiction under Section 404 and 401 of the Clean Water Act, the Porter-Cologne Water Quality Control Act, and California Fish and Game Code Section 1600. The project limits of disturbance are overlaid on potential jurisdictional areas as illustrated in **Figure 5, Jurisdictional Delineation Impacts Map.** The jurisdictional acreage within the features that would be impacted by the project is provided in **Table 7**.

Table 7
Permanent Impacts to Jurisdictional Areas (Acres/Linear Feet)

Feature	ACOE Wetland Waters of the U.S.	ACOE Non-Wetland Waters of the U.S.	RWQCB Waters of the State	CDFW Streambed & Riparian Habitat (Grading Impacts)	CDFW Streambed & Riparian Habitat (Fuel Modification Impacts)
Drainage 1 (DR1)	--	--	0.03/167	0.10/173	0.0007/8
Ditch 1 (DIT1)	--	--	--	--	0.02/69
Swale 1 (SW1)	--	--	0.002/37	0.002/37	0.09/144
Stream 1 (ST1)	0.03/181	0.20/462	0.20/462	0.28/462	0
TOTAL	**0.03/181**	**0.20/462**	**0.23/666**	**0.38/672**	**0.11/221**

It is anticipated that RWQCB and CDFW would determine these features constitute jurisdictional Waters of the State and jurisdictional riparian habitat. As shown in Table 7, the project would permanently impact a total of 0.23 acres (666 linear feet) of Waters of the State and 0.38 acres (672 linear feet) of jurisdictional riparian habitat within the project footprint, with a further 0.11 acres (221 linear feet) of CDFW riparian habitat impacted by potential fuel modification activities.

A total of 0.10 acres (173 linear feet) under CDFW jurisdiction and 0.03 acres (167 linear feet) under RWQCB jurisdiction would be permanently removed within ephemeral drainage (DR1), with a further 0.0007 acres (8 linear feet) of CDFW habitat being potentially impacted by fuel modification activities, which would be a significant, but mitigable impact. This impact would result from construction of a modified slope in the northwestern portion of the eastern section of the project site.



Source: Valtus Imagery Services: Hexagon Imagery Program (HxIP), 2017. Data Source: NRCS Soils: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

envicom

Jurisdictional Delineation Impacts Map

0 175 350 Feet

FIGURE 5

A total of 0.002 acres (37 linear feet) under CDFW jurisdiction and 0.002 acres (37 linear feet) under RWQCB jurisdiction would be permanently removed within the swale (SW1), with a further 0.09 acres (144 linear feet) of CDFW habitat would be potentially impacted by fuel modification activities, which would be a significant, but mitigable impact. This impact would result from construction of the 7-acre park in the western portion of the western section of the project site.

It is also anticipated that the ACOE would determine the modified stream (ST1) would constitute jurisdictional Waters of the U.S.

A total 0.20 acres (462 linear feet) of non-wetland and 0.03 acres (181 linear feet) of wetland Waters of the U.S. under ACOE jurisdiction, as well as 0.38 acres (672 linear feet) under CDFW jurisdiction and 0.23 acres (666 linear feet) under RWQCB jurisdiction would be permanently removed within the modified stream (ST1), which would be a significant but mitigable impact. The impact would result from construction of the debris basin in the southwestern portion of the Survey Area.

The project's impacts to potential jurisdictional areas would be subject to the review and approval of Trustee Resource Agencies (ACOE, CDFW, and RWQCB). Should the ACOE determine the features are subject to their jurisdiction, the impact acreage provided in Table 7 for RWQCB is equivalent to ACOE jurisdiction.

Activities impacting ACOE, RWQCB, and CDFW jurisdictional features would potentially be subject to permitting requirements under Section 404 and Section 401 of the Clean Water Act as well as California Fish and Game Code section 1600 *et seq*. The permanent significant impacts to jurisdictional RWQCB waters of the State and CDFW riparian habitat identified herein would be reduced to a less than significant impact with implementation of Mitigation Measures BIO-5 and BIO-6, which require the Applicant to consult with and submit permit applications to the ACOE, CDFW, and RWQCB, as required, as well as implementation of a Habitat Mitigation and Monitoring Program.

MM BIO-4: Prior to issuance of the grading permit, the Applicant shall consult with and prepare and submit a "Preliminary Delineation Report for "Waters of the U.S."" to ACOE, a "Preliminary Delineation Report for "Waters of the State," to RWQCB and a Streambed Alteration Notification package to CDFW. If required by ACOE, a Clean Water Act Section 404 permit shall be obtained, and the Applicant shall comply with the permit conditions. If required by CDFW, a Streambed Alteration Agreement shall be entered into with the CDFW under Section 1602 of the California Fish and Game Code, and the Applicant shall comply with the associated conditions. If required by RWQCB, a Clean Water Act Section 401 Water Quality Certification shall be obtained from the RWQCB, and the Applicant shall comply with the certification conditions. The Applicant shall provide evidence to the City of Santa Clarita Planning Division that the required permits have been obtained prior to issuance of a grading permit. Mitigation for unavoidable impacts shall be provided through implementation of a habitat mitigation plan and monitoring program, as required by BIO-5.

MM BIO-5: The applicant shall compensate for the loss of 0.20 acres (462 linear feet) of Non-Wetland Waters of the U.S., 0.03 acres (181 linear feet) of Wetland Waters of the US, 0.49 acres (893 linear feet) of CDFW jurisdictional riparian habitat, and 0.23 acres (666 linear feet) of RWQCB Waters of the State at a 2:1 ratio (compensation area: impact area), or as required by the ACOE, RWQCB and CDFW. The same or similar habitat

shall be restored as close to the impact area as possible. If a location in the general area of the project is not feasible, then the applicant shall restore another appropriate area within the City limits as close to the impacted area as possible. If a location in the City is determined infeasible, mitigation shall occur elsewhere in the watershed but as close to the project site as possible, or an in-lieu fee to compensate for the loss of habitat may be provided to a qualified agency or other entity acceptable to the City and the regulatory agencies, as applicable. The appropriate in-lieu fee would be determined by the applicant and receiving entity/ agency, as approved by the City of Santa Clarita Planning Division.

The mitigation program or in-lieu fee contribution shall be initiated prior to development of the project, and shall be implemented over a five-year period. A mitigation plan and monitoring program shall be prepared and submitted to the City of Santa Clarita Planning Division and other regulatory agencies, as applicable, for acceptance prior to issuance of a Grading Permit or Building Permit, whichever occurs first, or the start of construction of the project, whichever is sooner. The mitigation plan and monitoring program shall outline methods of mitigation; planting sizes, quantities, and receiver sites; performance standards, including maintenance and monitoring (with periodic status reports and documentation). Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, which shall be determined by examining reference sites, as well as eradication and control of invasive species within the mitigation area.

In the case of in-lieu fees, evidence of payment of such fees shall be provided to the City of Santa Clarita Planning Division and other regulatory agencies, as applicable, prior to issuance of a Grading Permit, a Building Permit, or prior to start of construction of the project, whichever occurs first.

6.0 REFERENCES

Ashford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

American Ornithologists' Union (AOU). 1998. Check-list of North American birds. Seventh edition. American Ornithologists' Union, Washington, D.C. [as modified by subsequent supplements and corrections published in The Auk]. Also available online: http://www.aou.org/.

Baldwin, B. G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

Baker, R. J., L. C. Bradley, R. D. Bradley, J. W. Dragoo, M. D. Engstrom, R. S. Hoffman, C. A. Jones, F. Reid, D. W. Rice, and C. Jones. 2003. Revised checklist of North American mammals north of Mexico, 2003. Museum of Texas Tech University Occasional Papers 229:1-23.

Biogeographic Information and Observation System (BIOS), California Department of Fish and Wildlife, data as of December 3, 2018.

Birds of North America Online, Cornell Lab of Ornithology, data as of December 5, 2018. http://bna.birds.cornell.edu/bna

California Natural Diversity Database (CNDDB) Rarefind 5 Element Occurrence Report for Mint Canyon and seven surrounding USGS quadrangles, California Department of Fish and Wildlife, data as of December 3, 2018.

California Department of Fish and Game, Vegetation Classification and Mapping Program, Natural Communities List. October 2018. https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List

California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, 8th ed., California Native Plant Society, data as of December 3, 2018.

Compliance Biology, Focused California Gnatcatcher Survey Report for Sand Canyon Country Club. August 7, 2017

County of Los Angeles General Plan 2035, adopted October 6, 2015.

Crother, B. I. (editor). 2008. Scientific and standard English names of amphibians and reptiles of North America north of Mexico, with comments regarding confidence in our understanding. Sixth edition. Society for the Study of Amphibians and Reptiles Herpetological Circular 37:1-84.

Edith Read, PhD, E Read and Associates, Inc., Vegetation and Special Status Plant Assessment for Proposed Sand Canyon Resort. August 1, 2017

Garrett, K., Dunn, J., and Morse, B. 2006. Birds of the Los Angeles Region. R.W. Morse Company. Olympia, WA.

Google Earth Pro. 2013. Version 7.3.2.5491. Build Date 7/23/2018.

Hall, E.R., and K.R. Kelson. 1959. The mammals of North America. Ronald Press Co., New York.

Jennings, M.R., and M.P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California.

Jepson Online Interchange: California Floristics, U.C. Berkeley, data as of December 6, 2018. http://ucjeps.berkeley.edu/interchange/

List of Special Vascular Plants, Bryophytes, and Lichens, California Department of Fish and Wildlife, March 2019.

Los Angeles County GIS-Net Interactive Map, Los Angeles County Department of Regional Planning, GIS Section, 2018

Reid, Fiona. A Field Guide to Mammals of North America, 4th ed., Houghton Mifflin Company, New York, New York, 2006.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens, A Manual of California Vegetation, 2nd ed., California Native Plant Society Press, Sacramento, California, 2009.

Sibley, D.A., 2016. The Sibley Field Guide to Birds of Western North America, 2nd ed. A.A. Knopf, New York.

Special Animals, California Department of Fish and Wildlife, November 2018.

Stebbins, Robert C. (Robert Cyril). A Field Guide to Western Reptiles and Amphibians, 3rd ed., Houghton Mifflin Company, New York, New York, 2003.

U.S. Fish and Wildlife Service, FWS Critical Habitat Mapper for Threatened and Endangered Species, U.S. Fish and Wildlife Service, data as of December 3, 2018.

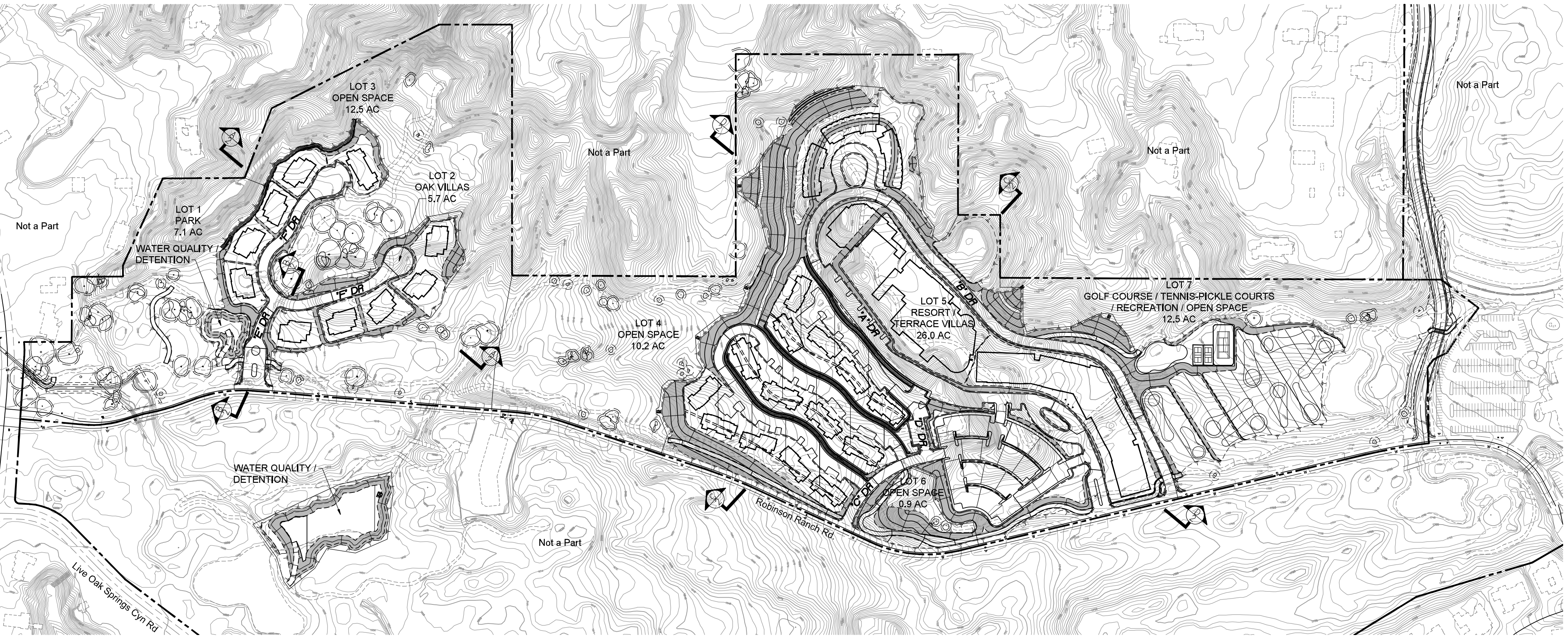
U. S. Fish and Wildlife Service. 2018. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/

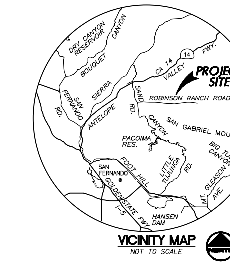
Williams, D.F. 1986 (June). Mammalian Species of Special Concern in California. Calif. Dept. Fish and Game Wildlife Management Division Admin. Rept. 86-1.

Zeiner, D.C, W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988 (May). California's Wildlife. Vol. I Amphibians and Reptiles. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, California.

Zeiner, D.C, W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a (April). California's Wildlife. Vol. III Mammals. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, California.

Appendix 1
Tentative Tract Map, Hunsaker and Associates
March 2019





VICINITY MAP
NOT TO SCALE

LEGEND:

- 100 — LOT NO.
- 5000 SF — LOT AREA (SQUARE FEET)
- PAD=1210.0 — PAD ELEVATION
- O.S. — LOT TYPE
- VTTM 78248 BOUNDARY
- EXISTING PARCEL BOUNDARY
- PROPOSED PRIVATE DRIVE
- 67' PROPOSED LOT LINE
- PROPOSED EASEMENT
- EXISTING EASEMENTS IDENTIFIED BY (3)
- 950 PROPOSED CONTOUR
- DAYLIGHT LINE
- STORM DRAIN CULVERT
- SD STORM DRAIN
- S SANITARY SEWER (SERVICE LOCAL)
- FM SEWER FORCE MAIN
- W WATER
- RW RECYCLED WATER
- W EXISTING WATER LINE
- E EXISTING POWER LINE
- FIRE DEPARTMENT ACCESS GATE
- LOW FLOW DIVERSION
- DEBRIS RISER
- RISER
- CATCH BASIN
- (3) SURVEYOR'S NOTES PER "EXCEPTIONS", PER SHT 2
- "REMOVAL" OAK TREE HERITAGE SIZE LABELED WITH "H"
- TREE PROTECTION ZONE
- "NO ENCROACHMENT" OAK TREE HERITAGE SIZE LABELED WITH "H"
- EXISTING POWER POLE
- PROPOSED DRIVEWAY
- STORM DRAIN / BASIN ACCESS ROAD
- TRAIL, CONC OR DG PER PLAN
- SIGHT DISTANCE LINE (415')

BC	BEGIN CURVE
BVC	BEGIN VERTICAL CURVE
CONC	CONCRETE
DG	DECOMPOSED GRANITE
EC	END CURVE
ESMT	EASEMENT
EVC	END OF VERTICAL CURVE
EX	EXISTING
GB	GRADE BREAK
HP	HIGH POINT
L	LENGTH
LDZ	LANDSCAPE DEVELOPMENT ZONE
LP	LOW POINT
MIN	MINIMUM
O.S.	OPEN SPACE
P.F.	PUBLIC FACILITY
PRC	POINT REVERSE CURVE
PRVC	POINT REVERSE VERTICAL CURVE
PROP	PROPOSED
PVI	POINT OF VERTICAL INTERSECTION
PVT	PRIVATE
R	RADIUS
REC	RECREATION
SF	SQUARE FEET
SD	STORM DRAIN
SS	SANITARY SEWER
SWK	SIDEWALK
WS	WATER SURFACE

GENERAL NOTES:

1. GRADE ELEVATIONS SHOWN ON THE TPM ARE APPROXIMATE. CHANGES IN THE ELEVATIONS DEPICTED ON THE TENTATIVE PARCEL MAP WHICH WILL NOT SUBSTANTIALLY ALTER THE APPROVED GRADING PLAN OR RESULT IN PAD ELEVATION CHANGES OF MORE THAN 10 FEET ARE PERMITTED SUBJECT TO THE SATISFACTION OF THE CITY OF SANTA CLARITA.
2. LOT LINES CAN BE ADJUSTED PROVIDED NO ADDITIONAL LOTS ARE CREATED. THE DEGREE OF ADJUSTMENT SHALL BE CONSISTENT WITH THE INTENT OF THE SUBDIVISION MAP APPROVAL, THE SUBDIVISION MAP ACT AND TO THE SATISFACTION OF CITY OF SANTA CLARITA PLANNING DIVISION.
3. THE RECORDATION OF A "LARGE LOT" PARCEL MAP SHALL BE CONSIDERED THE FILING OF THE FIRST UNIT FOR THE PURPOSE OF TIME EXTENSIONS PURSUANT TO THE SUBDIVISION MAP ACT. HOWEVER, THE RECORDATION OF A "LARGE LOT" PARCEL MAP SHALL NOT REQUIRE FULFILLMENT OF INFRASTRUCTURE REQUIREMENTS—IF CONSISTENT WITH THE COUNTY SUBDIVISION ORDINANCE—NOR THE DEDICATION OF PARKLAND OR IN LIEU PARK FEES.
4. PERMISSION IS REQUESTED TO COMBINE LOTS TO THE SATISFACTION OF CITY OF SANTA CLARITA PLANNING DIVISION.
5. PERMISSION IS REQUESTED FOR UNIT PHASING TO THE SATISFACTION OF CITY OF SANTA CLARITA PLANNING DIVISION.
6. PERMISSION IS REQUESTED TO RECORD ADDITIONAL OPEN SPACE LOTS TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING DIVISION.
7. PERMISSION IS REQUESTED TO RECORD ADDITIONAL UTILITY LOTS PROVIDED MAINTENANCE EASEMENTS ARE GRANTED TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING DIVISION.
8. THE LOCATIONS OF APPURTENANT STRUCTURES (E.G., PASEOS, PEDESTRIAN BRIDGES, TRANSIT SHELTERS, WATER QUALITY BASINS, WATER TANKS, ETC.) MAY BE RELOCATED TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING DIVISION.
9. PERMISSION IS REQUESTED TO RECORD JOINT ACCESS EASEMENTS.
10. REQUEST PERMISSION TO PHASE MASS GRADE.
11. PROPOSED STREET GRADING IS APPROXIMATE ONLY AND SUBJECT TO ADJUSTMENTS PENDING DETERMINATION OF FINAL DEVELOPMENT LAYOUT AND PLANS.
12. PROPERTY LINE RETURN RADII OF 13 FT. AT ALL LOCAL STREET INTERSECTIONS AND 27 FT AT THE INTERSECTION OF LOCAL STREETS WITH PLANNED HIGHWAYS (THOSE ON COUNTY HIGHWAY PLAN) AND WHERE ALL PLANNED HIGHWAYS INTERSECT OR WHERE ONE OF THE ROADS SERVES A COMMERCIAL OR INDUSTRIAL DEVELOPMENT PLUS ADDITIONAL RIGHT OF WAY FOR CORNER CUT-OFF TO MEET CURRENT GUIDELINES OF THE AMERICANS WITH DISABILITIES ACT (ADA) TO THE SATISFACTION OF CITY OF SANTA CLARITA PLANNING DIVISION.
13. MODIFIED STREET CROSS-SECTIONS AS SHOWN ON TENTATIVE PARCEL MAP ARE REQUESTED. HOWEVER, PERMISSION IS SOUGHT TO CONSTRUCT STANDARD STREET CROSS-SECTIONS AT THE DISCRETION OF THE SUBDIVIDER.
14. ALL DIMENSIONS SHOWN ARE APPROXIMATE.
15. TOPOGRAPHY PROVIDED BY: CITY OF SANTA CLARITA
    DATE OF TOPOGRAPHY: 2006
    PHONE: N/A
16. ALL DRAINAGE TO BE PRIVATELY MAINTAINED, UNLESS OTHERWISE NOTED ON PLAN.
17. REQUEST STREET FRONTAGE WAIVER FOR LOTS FRONTING ON PRIVATE STREETS AND PRIVATE DRIVES PER CONDITIONS OF APPROVAL.
18. GRADING OF TTM 78248 MAY BE DONE IN SUB-PHASES OVER TIME BUT SUCH GRADING WILL STILL BE BALANCED WITHIN THE GRADING LIMITS IDENTIFIED ON THE TENTATIVE PARCEL MAP. ALL GRADING OF SLOPES WILL BE PERFORMED AS ENGINEERED GRADING. THE LIMIT OF A GRADING SUB-PHASE WILL BE ESTABLISHED TO ACHIEVE A BALANCED EARTHWORK FOR THAT SUB-PHASE AND MAY BE EXTEND BEYOND THE LIMITS OF A PARTICULAR FINAL UNIT MAP BOUNDARY IN ORDER TO ACHIEVE A PHASED GRADING BALANCE. AN INTERIM HYDROLOGY REPORT WILL BE PREPARED FOR EACH PHASE OF GRADING AREA AND REQUIRED DRAINAGE DEVICES WILL BE PROVIDED TO SUPPORT THE PHASED GRADING. DRAINAGE AND EROSION CONTROL FACILITIES WILL BE PROVIDED TO THE SATISFACTION OF DWP.

SPECIAL NOTES:

1. WATER QUALITY BASINS WILL PROVIDE FOR TREATMENT OF STORM WATER RUN OFF.
2. THE WATER QUALITY BASINS SHALL BE DEDICATED TO THE COUNTY WHEN COMPLETED AND ACCEPTED.
3. PROPOSED RECLAIMED WATER LINES WILL BE LOCATED IN PUBLIC STREETS AND TRAILS.

UTILITY PROVIDERS

PHONE: AT&T
SCHOOLS: SULPHUR SPRING UNION SCHOOL DISTRICT
ELECTRIC: SOUTHERN CALIFORNIA EDISON
SEWER TREATMENT: LA COUNTY SANITATION DISTRICT
GAS: SOUTHERN CALIFORNIA GAS COMPANY
WATER: SANTA CLARITA VALLEY WATER AGENCY (SCVWA)
POLICE PROTECTION: LA COUNTY SHERIFF
FIRE PROTECTION: LA COUNTY FIRE

SURVEY NOTES:

VERTICAL DATUM:

BENCH MARK: B.M. NO. L7143
LA CO BM BR DISK MRK'D 7143, IN E.
CURB SAND CYN RD. @SE COR COMET WAY.
LOS ANGELES CO. ELEV. 1573.398
*DATUM USED FOR FIELD REFERENCE AND VERIFICATION

AERIAL PLANIMETRY:

TOPOGRAPHY PROVIDED BY: CITY OF SANTA CLARITA
DATE OF TOPOGRAPHY: 2006
PHONE: N/A

LEGAL DESCRIPTION:

REAL PROPERTY IN THE CITY OF SANTA CLARITA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

LOT 79 OF AMENDING MAP OF TRACT NO. 52004, IN THE CITY OF SANTA CLARITA, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 1253 PAGES 16 TO 34 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT FROM THAT PORTION OF SAID LAND LYING WITHIN THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS DESCRIBED IN THE DEED REFERRED TO HEREIN AN UNDIVIDED ONE- HALF OF ALL OIL, GAS AND OTHER MINERALS IN AND UNDER SAID LAND, AS GRANTED TO ALFRED J. KOLSCHOWSKY AND MARGARET KOLSCHOWSKY, HUSBAND AND WIFE, BY DEED RECORDED MARCH 1, 1949 AS INSTRUMENT NO. 1109 IN BOOK 29480 PAGE 175, OFFICIAL RECORDS.

EXCEPT FROM THAT PORTION OF SAID LAND LYING WITHIN THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER AND THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS DESCRIBED IN THE DEED REFERRED TO HEREIN ONE-HALF OF ALL OIL, GAS, PETROLEUM, MINERALS AND HYDROCARBON SUBSTANCES IN OR UNDER SAID LAND AS RESERVED BY RUTH LOUISE MILLHITE, A MARRIED WOMAN WHO ACQUIRED TITLE AS RUTH LOUISE DAVIS AND R. LOUISE DAVIS, A SINGLE WOMAN BY DEED RECORDED APRIL 9, 1951 AS INSTRUMENT NO. 818 IN BOOK 35996 PAGE 22 OFFICIAL RECORDS.

EXCEPT FROM THAT PORTION OF SAID LAND LYING WITHIN THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 24 AND LYING WITHIN THAT PORTION OF THAT NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 25, BOTH IN TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS DESCRIBED IN THE DEED REFERRED TO HEREIN ONE-HALF OF ALL MINERAL AND OIL RIGHTS IN SAID LAND, AS RESERVED BY ANTHONY LAWRENCE, IN DEED RECORDED OCTOBER 22, 1953 AS INSTRUMENT NO. 1382 IN BOOK 42985 PAGE 190, OFFICIAL RECORDS.

EXCEPT FROM THAT PORTION OF SAID LAND LYING WITHIN THAT PORTION OF THE WEST 15 ACRES OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER AND LYING WITHIN THAT PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER IN SECTION 24 TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS DESCRIBED IN THE DEEDS REFERRED TO HEREIN SIXTY-TWO AND ONE-HALF PERCENT OF ALL OF THE OIL, GAS, MINERALS AND OTHER HYDROCARBON SUBSTANCES IN, UPON AND UNDER SAID REAL ESTATE, AS RESERVED IN DEEDS FROM FRANK M. FERRELL AND DOROTHY E. FERRELL, HIS WIFE, RECORDED MAY 10, 1956 AS INSTRUMENT NOS. 1585 AND 1586 IN BOOK 51145 PAGES 6 AND 7 RESPECTIVELY OFFICIAL RECORDS.

EXCEPT FROM THAT PORTION OF SAID LAND LYING WITHIN THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS DESCRIBED IN THE DEED REFERRED TO HEREIN 50 PERCENT OF OIL, GAS, MINERAL, ASPHALTUM AND OTHER HYDROCARBON SUBSTANCES SAID PROPERTY OR THAT MAY BE PRODUCED THEREON BUT WITHOUT THE RIGHT OF ENTRY ABOVE THE DEPTH OF 500 FEET BELOW THE SURFACE OF SAID LAND, AS RESERVED BY FRED KOLSCHOWSKY AND MARGUERITE F. KOLSCHOWSKY, HUSBAND AND WIFE, IN DEED RECORDED MARCH 8, 1961 AS INSTRUMENT NO. 932 IN BOOK D-1148 PAGE 403, OFFICIAL RECORDS.

PROJECT SUMMARY:

GROSS AREA – 74.9 AC
TOTAL LOTS – 7 TOTAL D.U. – 392
EXISTING ZONING – OPEN SPACE
PROPOSED ZONING – COMMUNITY COMMERCIAL/REGIONAL COMMERCIAL
GENERAL PLAN LAND USE – VISITOR SERVING / RESORT

ASSESSOR'S PARCEL NUMBER (APN)

2840-022-025

APPROXIMATE EARTHWORK QUANTITIES:

VTTM 78248: (WITHIN TRACT BOUNDARY)

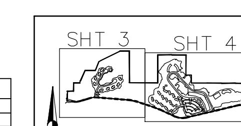
	CUT	FILL	NET
RAW VOLUME=	241,000 CY	201,500 CY	39,500 CY CUT
*TOTAL EXCAVATION=	511,000 CY	510,000 CY	*1000 CY CUT

TOTALS:
*INCLUDES SOILS ENGINEERS FINDINGS AND RECOMENDATIONS FOR SHRINKAGE, BED ROCK, BULKING, SCARIFICATION AND REMEDIAL GRADING.

LOT NUMBERS	TYPE (USE)	DWELLING UNITS OR NON-RESIDENTIAL	DEVELOPED ACRES	OPEN SPACE ACRES	TOTAL ACRES
1	PARK	0	0.0	7.1	7.1
2	1-STORY SINGLE FAMILY	10	5.7	0.0	5.7
3	OAK TREE PRESERVE / OPEN SPACE	000	0.0	12.5	12.5
4	OPEN SPACE	000	0.0	10.2	10.2
5	HOTEL, RESORT SPA, RESTAURANTS & 2-STORY MULTI-FAMILY	382	26.0	0.0	26.0
6	OPEN SPACE	000	0.0	0.9	0.9
7	9 HOLE GOLF COURSE, TENNIS/PICKLE COURTS, RECREATION AREA & OPEN SPACE	000	0.0	12.5	12.5
		392	31.7	43.2	74.9

SHEET INDEX

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	DETAILS AND STREET / ROAD SECTIONS SECTIONS AND EASEMENT DESCRIPTIONS
3 AND 4	SAND CANYON RESORT



KEY MAP
NOT TO SCALE

DESIGNED: JHF, PDO					
DRAFTED: PDO					
CHECKED: JHF	NO.		REVISIONS	DATE	BY

OWNER DEVELOPER:
SAND CANYON COUNTRY CLUB
27734 SAND CANYON ROAD
SANTA CLARITA, CA, 91387
TELEPHONE: (213) 700-6883
OWNER: STEVE KIM

REGISTERED PROFESSIONAL ENGINEER JASON H. FUKUMITSU No. 40695 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
HUNSAKER & ASSOCIATES LOS ANGELES, INC.
PLANNING ▪ ENGINEERING ▪ SURVEYING
26074 Avenue Hall, Ste 23 ▪ Valencia, CA 91355
PH: (661) 294-2211 ▪ FX: (661) 294-9890
JASON H. FUKUMITSU DATE

MAJOR LAND DIVISION
TENTATIVE PARCEL MAP NO. 78248
TITLE SHEET
IN THE UNINCORPORATED AREA OF THE COUNTY OF LOS ANGELES STATE OF CALIFORNIA

SCALE: PER PLAN
DATE: 03/15/2019
JOB No. 0261-001-001
SHEET 1 OF 4 SHEETS

G:\Sand Canyon Resort\Tentative\HSC010-01_TTM Sand Cyn Resort.dwg Plotted on Jun 20, 2019-1:16pm by paulo

Appendix 2
Vascular Plant Species Observed, 2018 and 2019

*indicates a non-native or introduced species

GROUP Family *Scientific Name*	Common Name
CONIFERS	
Pinaceae (Pine Family)	
**Pinus halepensis*	Aleppo pine
Cupressaceae (Cypress Family)	
Juniperus californica	California juniper
FLOWERING PLANTS-DICOTS	
Adoxaceae (Muskroot Family)	
Sambucus nigra ssp. *caerulea*	blue elderberry
Amaranthaceae (Amaranth Family)	
**Amaranthus albus*	tumbleweed
Anacardiaceae (Sumac or Cashew Family)	
Rhus aromatica	skunk bush
Rhus integrifolia	lemonade berry
Rhus ovata	sugarbush
**Schinus molle*	Peruvian peppertree
Asteraceae (Sunflower family)	
Ambrosia acanthicarpa	annual burweed
Artemisia californica	California sagebrush
Artemisia dracunculus	wild tarragon
Artemisia tridentata	Great Basin sage
Baccharis pilularis	coyote brush
Baccharis salicifolia	mule fat
**Carduus pycnocephalus*	Italian thistle
**Centaurea melitensis*	tocalote
Cirsium occidentale	cobwebby thistle
**Cirsium vulgare*	bull thistle
Chaenactis glabriuscula	common yellow pincushion
Corethrogyne filaginifolia	California aster
Encelia californica	California brittlebush
Encelia farinosa	brittlebush
Ericameria nauseosa	rubber rabbitbrush
**Erigeron bonariensis*	flax-leaved horseweed
Erigeron canadensis	horseweed
Eriophyllum confertiflorum	golden yarrow
**Glebionis coronaria*	crown daisy
Gutierrezia sp.	Gutierrezia species
**Hedypnois rhagadioloides*	Crete weed
Helianthus annuus	common wild sunflower
**Helminthotheca echioides*	bristly ox-tongue
Heterotheca grandiflora	telegraph weed
**Hypochaeris glabra*	smooth cat's ear
**Lactuca serriola*	prickly lettuce
Logfia filaginoides	California filago

Malacothrix saxatilis	cliff aster
Matricaria discoidea	pineapple weed
Pseudognaphalium leucocephalum	white rabbit tobacco
**Pseudognaphalium luteoalbum*	Jersey cudweed
Rafinesquia californica	California chicory
**Senecio vulgaris*	common groundsel
**Silybum marianum*	milk thistle
**Sonchus asper*	prickly sow-thistle
Stephanomeria sp.	stephanomeria species
Stephanomeria virgata	tall stephanomeria
Uropappus lindleyi	silverpuffs
Boraginaceae (Borage or Waterleaf Family)	
Amsinckia intermedia	common fiddleneck
Amsinckia menziesii	Menzies' fiddleneck
Cryptantha intermedia	common cryptantha
Cryptantha muricata	prickly muricata
Emmenanthe penduliflora	whispering bells
Eriodictyon crassifolium	thickleaf yerba santa
Eucrypta chrysanthemifolia	common eucrypta
Heliotropium curassavicum	alkali heliotrope
Phacelia distans	common phacelia
Phacelia ramosissima	branching phacelia
Phacelia tanacetifolia	tansy leaf phacelia
Plagiobothrys canescens	valley popcorn flower
Brassicaceae (Mustard Family)	
**Brassica tournefortii*	Saharan mustard
**Capsella bursa-pastoris*	common shepherd's purse
Descurainia sp.	native mustard species
**Hirschfeldia incana*	hoary mustard
**Sisymbrium altissimum*	tumble mustard
**Sisymbrium irio*	London rocket
**Sisymbrium orientale*	Indian hedge mustar
Cactaceae (Cactus Family)	
Opuntia basilaris var. *basilaris*	beavertail cactus
Caryophyllaceae (Pink Family)	
**Spergula arvensis*	com spurry
Chenopodiaceae (Goosefoot Family)	
Atriplex canescens	hoary saltbush
**Atriplex semibaccata*	Australian saltbush
Chenopodium californicum	California goosefoot
**Chenopodium murale*	nettle leaved goosefoot
**Salsola* sp.	Salsola species
Convolvulaceae (Morning-glory Family)	
**Convolvulus arvensis*	field bindweed
Cuscuta sp.	dodder species
Crassulaceae (Stonecrop Family)	
Crassula connata	sand pygmy weed
Cucurbitaceae (Gourd Family)	
Marah macrocarpa	wild cucumber

Ericaceae (Heath Family)	
Arctostaphylos glauca	big-berry manzanita
Euphorbiaceae (Spurge Family)	
Croton californicus	California croton
Croton setigerus	turkey mullein
**Euphorbia maculata*	spotted spurge
**Euphorbia peplus*	petty spurge
**Euphorbia prostrata*	prostrate sand mat
**Ricinus communis*	castor bean
Fabaceae (Legume Family)	
Acmispon glaber	deerweed
Lepidium sp.	Lepidium species
Lupinus hirsutissimus	stinging lupine
Lupinus succulentus	succulent lupine
**Medicago polymorpha*	bur-clover
**Melilotus albus*	white sweetclover
**Melilotus indicus*	annual yellow sweetclover
**Trifolium hirtum*	rose clover
Fagaceae (Oak Family)	
Quercus agrifolia	coast live oak
Quercus berberidifolia	scrub oak
Quercus lobata	valley oak
Geraniaceae (Geranium Family)	
**Erodium cicutarium*	red-stemmed filaree
**Erodium moschatum*	white-stem filaree
Grossulariaceae (Gooseberry Family)	
Ribes aureum	golden currant
Ribes speciosum	fuchsia-flowered gooseberry
Lamiaceae (Mint Family)	
**Marrubium vulgare*	horehound
**Mentha* sp.	mint species
Salvia apiana	white sage
Salvia mellifera	black sage
Salvia leucophylla	purple sage
Trichostema lanatum	wooly bluecurls
Malvaceae (Mallow Family)	
Malacothamnus sp.	mallow species
**Malva parviflora*	small flowered cheeseweed
Onagraceae (Evening-Primrose Family)	
Camissoniopsis intermedia	intermediate evening primrose
Camissoniopsis micrantha	miniature evening primrose
Epilobium ciliatum	ciliate willow herb
Eulobus californicus	California mustard evening primrose
Oenothera elata ssp. *hirsutissima*	Hooker's evening primrose
Phrymaceae (Lopseed Family)	
Diplacus aurantiacus	bush monkeyflower
Plantaginaceae (Plantain Family)	
Penstemon spectabilis	showy penstemon
**Plantago major*	common plantain

**Veronica anagallis-aquatica*	water speedwell
Platanaceae (Sycamore Family)	
Platanus racemosa	western sycamore
Polygonaceae (Buckwheat Family)	
Chorizanthe staticoides	Turkish rugging
Eriogonum fasciculatum	California buckwheat
Persicaria sp.	persicaria species
**Polygonum aviculare*	prostrate knotweed
Pterostegia drymarioides	thread stem
**Rumex conglomeratus*	sharp dock
**Rumex crispus*	curly dock
Rumex salicifolius	willow leaved dock
Portulacaceae (Purslane Family)	
**Portulaca oleracea*	common purslane
Primulaceae (Primrose Family)	
**Lysimachia arvensis*	scarlet pimpernel
Rhamnaceae (Buckthorn Family)	
Ceanothus crassifolius	hoaryleaf ceanothus
Ceanothus cuneatus	buck brush
Rosaceae (Rose Family)	
Adenostoma fasciculatum	chamise
Heteromeles arbutifolia	toyon
Prunus ilicifolia	hollyleaf cherry
Rosa sp.	rose species
Rubiaceae (Madder Family)	
Galium aparine	annual bedstraw
Salicaceae (Willow Family)	
Populus fremontii ssp. *fremontii*	Fremont cottonwood
Salix exigua	narrow-leaf willow
Salix gooddingii	Gooding's black willow
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
Solanaceae (Nightshade family)	
Datura wrightii	jimsonweed
**Nicotiana glauca*	tree tobacco
Nicotiana quadrivalvis	indian tobacco
Solanum americanum	white nightshade
Solanum sp.	solanum species
Tamaricaceae (Tamarisk Family)	
**Tamarix ramosissima*	saltcedar
Urticaceae	
**Urtica urens*	dwarf nettle
Verbenaceae (Vervain Family)	
Verbena lasiostachys	western verbena
FLOWERING PLANTS-MONOCOTS	
Agavaceae (Century Plant Family)	
**Agave* sp.	agave (planted)
Hesperoyucca whipplei	chaparral yucca
Arecaceae (Palm Family)	

**Washingtonia robusta*	Mexican fan palm
Cyperaceae (Sedge Family)	
Bolboschoenus maritimus	alkali bulrush
Cyperus eragrostis	tall umbrella sedge
Eleocharis macrostachya	pale spike rush
Liliaceae (Lily Family)	
Calochortus plummerae	Plummer's mariposa lily
Poaceae (Grass Family)	
**Avena fatua*	common wild oat
**Bromus catharticus*	rescuegrass
**Bromus diandrus*	ripgut brome
**Bromus hordeaceus*	soft chess
**Bromus madritensis* ssp. *rubens*	red brome
**Bromus tectorum*	cheat grass
**Cortaderia selloana*	pampas grass
**Cynodon dactylon*	Bermuda grass
Distichlis spicata	desert salt grass
Elymus condensatus	giant wildrye
Elymus triticoides	creeping wildrye
**Festuca myuros*	rattail fescue
**Festuca perennis*	Italian rye grass
**Hordeum murinum*	foxtail barley
Muhlenbergia rigens	deergrass
**Poa annua*	annual blue grass
**Polypogon monspeliensis*	annual beardgrass
**Polypogon viridis*	water beardgrass
**Schismus barbatus*	common Mediterranean grass
Stipa lepida	foothill needlegrass
**Stipa miliacea*	smilo grass
Stipa pulchra	purple needlegrass
**Stipa tenuissima*	Mexican feathergrass
Juncaceae (Rush Family)	
Juncus xiphoides	iris-leaved rush
Themidaceae (Brodiaea Family)	
Dichelostemma capitatum	blue dicks
Typhaceae (Cattail Family)	
Typha domingensis	cattail

Appendix 3
Vertebrate Wildlife Species Observed, 2018 and 2019

Common Name	*Scientific Name*
REPTILES	
coastal whiptail	*Aspidoscelis tigris stejnegeri*
western fence lizard	*Sceloporus occidentalis*
BIRDS	
acorn woodpecker	*Melanerpes formicivorus*
American coot	*Fulica americana*
American crow	*Corvus brachyrhynchos*
Anna's hummingbird	*Calypte anna*
ash-throated flycatcher	*Myiarchus cinerascens*
Bewick's wren	*Thryomanes bewickii*
blue-gray gnatcatcher	*Polioptila caerulea*
bushtit	*Psaltriparus minimus*
Cassin's kingbird	*Tyrannus vociferans*
California thrasher	*Toxostoma redivivum*
California towhee	*Melozone crissalis*
California quail	*Callipepla californica*
California scrub jay	*Aphelocoma californica*
California thrasher	*Toxostoma redivivum*
California towhee	*Melozone crissalis*
Canada goose	*Branta canadensis*
cliff swallow	*Petrochelidon pyrrhonota*
common raven	*Corvus corax*
Cooper's hawk	*Accipiter cooperii*
great horned owl	*Bubo virginianus*
great-tailed grackle	*Quiscalus mexicanus*
house finch	*Haemorhous mexicanus*
*house sparrow	*Passer domesticus*
killdeer	*Charadrius vociverus*
lesser goldfinch	*Spinus psaltria*
mallard	*Anas platyrhynchos*
mourning dove	*Zenaida macroura*
northern flicker	*Colaptes auratus*
Nuttall's woodpecker	
oak titmouse	*Baeolophus inornatus*
phainopepla	*Phainopepla nitens*
red-shouldered hawk	*Buteo lineatus*
red-tailed hawk	*Buteo jamaicensis*
red-winged blackbird	*Agelaius phoeniceus*
song sparrow	*Melospiza melodia*
spotted towhee	*Pipilo maculatis*
turkey vulture	*Cathartes aura*
western bluebird	*Sialia mexicana*
western kingbird	*Tyrannus verticalis*
western scrub-jay	*Apehelocoma californica*
white-crowned sparrow	*Zonotrichia leucophrys*
white-throated swift	*Aeronautes saxatalis*

Common Name	*Scientific Name*
wrentit	*Chamaea fasciata*
yellow-rumped warbler	*Dendroica coronata*
MAMMALS	
Botta's pocket gopher	*Thomomys bottae*
big-eared woodrat	*Neotoma macrotis*
California ground squirrel	*Spermophilus beecheyi*
coyote	*Canis latrans*
desert cottontail	*Sylvilagus audubonii*
*domestic chicken (rooster)	*Gallus domesticus*
*domestic dog	*Canis lupus familiaris*
*fox squirrel	*Scirurus niger*
mule deer	*Odocoileus hemionus*
raccoon	*Procyon lotor*
woodrat species	*Neotoma* sp.

Appendix 4
Wetland Determination Data Forms

TP2

Wetland ID WW-______

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sand Canyon Resort City/County: Santa Clarita/Los Angeles Sampling Date: 12/5/16
Applicant/Owner: Sand Canyon Country Club, Steve Y. Kim, CEO State: CA Sampling Point: TP2
Investigator(s): Tyler Barns, David West Section, Township, Range: T4N, R15W
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-4%
Subregion (LRR): LRR C Lat: 34.412986 Long: -118.418119 Datum: NAD83
Soil Map Unit Name: Hanford Sandy Loam, 2 to 9 % slopes NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No ✓
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ~~✓~~ (TB)
Hydric Soil Present?	Yes ✓	No ~~✓~~ (TB)
Wetland Hydrology Present?	Yes ✓	No ___
Is the Sampled Area within a Wetland?	Yes ✓	No ~~✓~~ (TB)

Remarks: Water flowing downhill through area, surface saturation at higher point. Test plot saturated @ 4" depth. Historical aerials show no indication of this wetland, therefore likely water source is irrigation.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 15)			
1. N/A			
2.			
3.			
4.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 15)			
1. N/A			
2.			
3.			
4.			
5.			
= Total Cover			
Herb Stratum (Plot size: 10)			
1. Distichlis spicata	90	Y	Fac
2. Typha latifolia	50	Y	Obl
3. Hirschfeldia incana	35	N	N/L
4. Lactuca serriola	30	N	Fac
5.			
6.			
7.			
8.			
= Total Cover	205		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
= Total Cover			

50 = 102; 20 = 41

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: Plants watered by unknown source, no history of natural seep. Likely nuissance water from faulty irrigation.

TPZ

Wetland ID WW-____

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	10YR 4/6	5	C	M	Clay Loam	Roots Present
	~~GLEY 1 5/10Y~~	~~5~~					~~Gravelly~~ (DJ)	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertic (F18)
- __ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ________

Depth (inches): ________

Hydric Soil Present? Yes ✓ No ✓ (DJ)

Remarks: Soil at test plot saturated 4" below surface. Historical imagery shows no indication of this wetland. Water source likely leaking irrigation. Atypical situation where continual irrigation flow has provided aquatic situation. Indicators of hydric soil absent, wetland appears on aerial imagery since 2017 (i.e., not long enough to establish aquatic conditions)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- __ High Water Table (A2)
- ✓ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No __	Depth (inches): __
Water Table Present?	Yes ✓	No __	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ✓	No __	Depth (inches): 4

Wetland Hydrology Present? Yes ✓ No __

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Test plot located in continuous saltgrass patch. Soil saturated below 4" depth with visible flow revealed by digging.

TP1

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sand Canyon Resort City/County: Los Santa Clarita/LA Sampling Date: 12/5/18
Applicant/Owner: Sand Canyon Country Club, Steve Y. Kim, CEO State: CA Sampling Point: TP1
Investigator(s): Tyler Burns, David West Section, Township, Range: T4N R15W
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 8%
Subregion (LRR): LRR C Lat: 34.412225 Long: -118.406851 Datum: NAD83
Soil Map Unit Name: Castaic // Saugus Loam, 30-50% slopes, eroded NWI Classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)
Are Vegetation N, Soil ✓, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ___ No ✓
Are Vegetation N, Soil N or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ___
Hydric Soil Present? Yes ✓ No ___
Wetland Hydrology Present? Yes ✓ No ___
Is the Sampled Area within a Wetland? Yes ✓ No ___

Remarks: Test pit on slope within man made pond. Pond has been drained and is out of use. Pond margins include Typha, Tamarisk, sparse cottonwood.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Typha latifolia	75	Y	OBL
2. Tamarix ramosissima	15	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 10)			
1. ~~N/A~~ Typha latifolia	25	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 98 % Cover of Biotic Crust ___

Dominance Test Worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
✓ Dominance test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:
Typha; 90% dead at time of survey. Tamarisk on all exposed sides of pond.

TP1

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	10YR 4/6	5	C	M	Clay Loam	Roots throughout
	(+LEV 15/10Y	5%	—	—	—	—	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Area was inundated as an ornamental pond for many years. Pond has plastic liner and was continually filled. At time of survey pond had been drained but soils were moist due to rains. Soils met criteria to be depleted matrix.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply):

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ✓ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Test plot located in man-made pond. Saturated conditions prior to visit. Pond was active (i.e. filled) circa 2015-2016. Inundation caused by plastic liner.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sand Canyon Resort City/County: Los Angeles Sampling Date: 6/10/19

Applicant/Owner: Steve Y. Kim, CEO State: CA Sampling Point: TP1

Investigator(s): T. Anderson Section, Township, Range: S23, T4N, R15W

Landform (hill slope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): C Lat: 34.410771 Long: -118.417488 Datum: WGS84

Soil Map Unit Name: Metz loam, 2-5% slopes NWI classification: —

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ____

Hydric Soil Present? Yes ✓ No ____

Wetland Hydrology Present? Yes ✓ No ____

Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks: Modified stream within SAC county area. Evaluated a flooded area before small bridge w/ culvert that is presumably blocked. Most of standing water is algae. Concrete edges to control flows as well as some rocks/boulders.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ~40' x 8')			
1. Salix goodingii	40	Y	FACW
2. Populus fremontii	10	Y	FAC
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: ~40' x 8')			
1. Typha domingensis	5	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Patchy wetland vegetation. Flooded area is mostly free of vegetation. Vegetation maintenance presumably occurs routinely to control growth.

Photos
8090-92

SOIL

Sampling Point: TP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	95	2.5YR 4/6	5	C	M	SiCl	
8-15	Gley 1 2.5/N	100					SiCl	very dark layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ✓ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ✓ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (Riverine)
- ✓ Sediment Deposits (B2) (Riverine)
- ✓ Drift Deposits (B3) (Riverine)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 6

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sand Canyon Resort City/County: Los Angeles Sampling Date: 6/10/19
Applicant/Owner: Steve Y. Kim, CEO State: CA Sampling Point: TP2
Investigator(s): J. Anderson Section, Township, Range: S23, T4N, R15W
Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 2%
Subregion (LRR): C Lat: 34.411066° Long: -118.417003 Datum: WGS84
Soil Map Unit Name: Metz loam, 2-5% slopes NWI classification: ---
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ____
Hydric Soil Present? Yes ✓ No ____
Wetland Hydrology Present? Yes ✓ No ____
Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks: Modified stream w/in golf course area, sample plot evaluated a patch of wetland vegetation along channel.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	= Total Cover	
Sapling/Shrub Stratum (Plot size: 50' x 8')			
1. Populus fremontii	4	N	FAC
2. Salix goodingii	1	Y	FACW
3. Baccharis salicifolia	2	Y	FAC
4. Salix lasiolepis	2	Y	FACW
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 50' x 8')			
1. Polypogon monspeliensis	20	Y	FACW
2. Cyperus eragrostis	20	Y	FACW
3. Typha domingensis	27	Y	OBL
4. Plantago major	2	N	FAC
5. Cynodon dactylon	4	N	FACU
6. Eleocharis macrostachya	2	N	OBL
7. Rumex crispus	4	N	FAC
8. Juncus xiphioides	4	N	OBL
	75	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 3

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of		Multiply by:	
OBL species	____	x 1 =	____
FACW species	____	x 2 =	____
FAC species	____	x 3 =	____
FACU species	____	x 4 =	____
UPL species	____	x 5 =	____
Column Total:	____	(A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Photos
8193 - 8203

SOIL

Sampling Point: TP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 3/1	95	2.5YR 4/6	5	C	M	Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: rocks

Depth (inches): 8"

Hydric Soil Present? Yes ✓ No ___

Remarks:

Rocky restrictive layer at 8",

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ✓ Sediment Deposits (B2) (Riverine)
- ✓ Drift Deposits (B3) (Riverine)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 2"

Water Table Present? Yes ✓ No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water at some locations only within sample plot. Water appears to pool in this area for longer period than upstream/downstream areas of channel.

Appendix 5
CNDDB & CNPS Literature Search Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Warm Springs Mountain (3411855) OR Green Valley (3411854) OR Sleepy Valley (3411853) OR Newhall (3411845) OR Mint Canyon (3411844) OR Agua Dulce (3411843) OR Oat Mountain (3411835) OR San Fernando (3411834) OR Sunland (3411833))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Aimophila ruficeps canescens southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Anaxyrus californicus arroyo toad	AAABB01230	Endangered	None	G2G3	S2S3	SSC
Anniella sp. California legless lizard	ARACC01070	None	None	G3G4	S3S4	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Artemisiospiza belli belli Bell's sage sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
Aspidoscelis tigris stejnegeri coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Berberis nevinii Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
California Walnut Woodland California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
Calochortus clavatus var. gracilis slender mariposa-lily	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
Calochortus palmeri var. palmeri Palmer's mariposa-lily	PMLIL0D122	None	None	G3T2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Calochortus plummerae Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
Calystegia peirsonii Peirson's morning-glory	PDCON040A0	None	None	G4	S4	4.2
Catostomus santaanae Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
Centromadia parryi ssp. australis southern tarplant	PDAST4R0P4	None	None	G3T2	S2	1B.1
Chorizanthe parryi var. fernandina San Fernando Valley spineflower	PDPGN040J1	Proposed Threatened	Endangered	G2T1	S1	1B.1
Chorizanthe parryi var. parryi Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Deinandra minthornii Santa Susana tarplant	PDAST4R0J0	None	Rare	G2	S2	1B.2
Dodecahema leptoceras slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Empidonax traillii extimus southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Euderma maculatum spotted bat	AMACC07010	None	None	G4	S3	SSC
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Euphydryas editha quino quino checkerspot butterfly	IILEPK405L	Endangered	None	G5T1T2	S1S2	
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	AFCPA03011	Endangered	Endangered	G5T1	S1	FP
Gila orcuttii arroyo chub	AFCJB13120	None	None	G2	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Harpagonella palmeri Palmer's grapplinghook	PDBOR0H010	None	None	G4	S3	4.2
Helianthus inexpectatus Newhall sunflower	PDAST4N250	None	None	G1	S1	1B.1
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lepechinia rossii Ross' pitcher sage	PDLAM0V060	None	None	G1	S1	1B.2
Lepidium virginicum var. robinsonii Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
Lepus californicus bennettii San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	SSC
Lupinus paynei Payne's bush lupine	PDFAB2B580	None	None	G1Q	S1	1B.1
Macrotus californicus California leaf-nosed bat	AMACB01010	None	None	G4	S3	SSC
Mainland Cherry Forest Mainland Cherry Forest	CTT81820CA	None	None	G1	S1.1	
Malacothamnus davidsonii Davidson's bush-mallow	PDMAL0Q040	None	None	G2	S2	1B.2
Navarretia fossalis spreading navarretia	PDPLM0C080	Threatened	None	G2	S2	1B.1
Navarretia setiloba Piute Mountains navarretia	PDPLM0C0S0	None	None	G2	S2	1B.1
Neotamias speciosus speciosus lodgepole chipmunk	AMAFB02172	None	None	G4T2T3	S2S3	
Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
Onychomys torridus ramona southern grasshopper mouse	AMAFF06022	None	None	G5T3	S3	SSC
Opuntia basilaris var. brachyclada short-joint beavertail	PDCAC0D053	None	None	G5T3	S3	1B.2
Orcuttia californica California Orcutt grass	PMPOA4G010	Endangered	Endangered	G1	S1	1B.1
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Pseudognaphalium leucocephalum white rabbit-tobacco	PDAST440C0	None	None	G4	S2	2B.2
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rana muscosa southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S1	WL
Rhinichthys osculus ssp. 3 Santa Ana speckled dace	AFCJB3705K	None	None	G5T1	S1	SSC
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Southern California Arroyo Chub/Santa Ana Sucker Stream Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
Southern California Threespine Stickleback Stream Southern California Threespine Stickleback Stream	CARE2320CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
Southern Mixed Riparian Forest Southern Mixed Riparian Forest	CTT61340CA	None	None	G2	S2.1	
Southern Riparian Scrub Southern Riparian Scrub	CTT63300CA	None	None	G3	S3.2	
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
Southern Willow Scrub Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Symphyotrichum greatae Greata's aster	PDASTE80U0	None	None	G2	S2	1B.3
Taricha torosa Coast Range newt	AAAAF02032	None	None	G4	S4	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Valley Oak Woodland Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Vireo bellii pusillus	ABPBW01114	Endangered	Endangered	G5T2	S2	
least Bell's vireo						

Record Count: 81

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

42 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3411855, 3411854, 3411853, 3411845, 3411844, 3411843, 3411835 3411834 and 3411833;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium howellii var. clokeyi	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	1B.3	S2	G4T2
Astragalus brauntonii	Braunton's milk-vetch	Fabaceae	perennial herb	Jan-Aug	1B.1	S2	G2
Berberis nevinii	Nevin's barberry	Berberidaceae	perennial evergreen shrub	(Feb)Mar-Jun	1B.1	S1	G1
Calochortus catalinae	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	(Feb)Mar-Jun	4.2	S3S4	G3G4
Calochortus clavatus var. clavatus	club-haired mariposa lily	Liliaceae	perennial bulbiferous herb	(Mar)May-Jun	4.3	S3	G4T3
Calochortus clavatus var. gracilis	slender mariposa lily	Liliaceae	perennial bulbiferous herb	Mar-Jun(Nov)	1B.2	S2S3	G4T2T3
Calochortus palmeri var. palmeri	Palmer's mariposa lily	Liliaceae	perennial bulbiferous herb	Apr-Jul	1B.2	S2	G3T2
Calochortus plummerae	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	4.2	S4	G4
Calystegia peirsonii	Peirson's morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	4.2	S4	G4
Canbya candida	white pygmy-poppy	Papaveraceae	annual herb	Mar-Jun	4.2	S3S4	G3G4
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	May-Nov	1B.1	S2	G3T2
Cercocarpus betuloides var. blancheae	island mountain-mahogany	Rosaceae	perennial evergreen shrub	Feb-May	4.3	S4	G5T4
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Polygonaceae	annual herb	Apr-Jul	1B.1	S1	G2T1
Chorizanthe parryi var. parryi	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S2	G3T2
Deinandra minthornii	Santa Susana tarplant	Asteraceae	perennial deciduous shrub	Jul-Nov	1B.2	S2	G2
Deinandra paniculata	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov(Dec)	4.2	S4	G4
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Ranunculaceae	perennial herb	May-Jun	4.3	S4	G4T4
Dodecahema leptoceras	slender-horned spineflower	Polygonaceae	annual herb	Apr-Jun	1B.1	S1	G1

Galium grande	San Gabriel bedstraw	Rubiaceae	perennial deciduous shrub	Jan-Jul	1B.2	S1	G1
Harpagonella palmeri	Palmer's grapplinghook	Boraginaceae	annual herb	Mar-May	4.2	S3	G4
Helianthus inexpectatus	Newhall sunflower	Asteraceae	perennial rhizomatous herb	Aug-Oct	1B.1	S1	G1
Heuchera caespitosa	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	May-Aug	4.3	S3	G3
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	Feb-Jul(Sep)	1B.1	S1	G4T1
Hulsea vestita ssp. gabrielensis	San Gabriel Mountains sunflower	Asteraceae	perennial herb	May-Jul	4.3	S3	G5T3
Hulsea vestita ssp. parryi	Parry's sunflower	Asteraceae	perennial herb	Apr-Aug	4.3	S4	G5T4
Juglans californica	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	4.2	S3	G3
Lepechinia fragrans	fragrant pitcher sage	Lamiaceae	perennial shrub	Mar-Oct	4.2	S3	G3
Lepechinia rossii	Ross' pitcher sage	Lamiaceae	perennial shrub	May-Sep	1B.2	S1	G1
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	4.3	S3	G5T3
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	4.2	S4?	G4T4?
Lupinus paynei	Payne's bush lupine	Fabaceae	perennial shrub	Mar-Apr(May-Jul)	1B.1	S1	G1Q
Malacothamnus davidsonii	Davidson's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jan	1B.2	S2	G2
Navarretia fossalis	spreading navarretia	Polemoniaceae	annual herb	Apr-Jun	1B.1	S2	G2
Navarretia setiloba	Piute Mountains navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
Opuntia basilaris var. brachyclada	short-joint beavertail	Cactaceae	perennial stem succulent	Apr-Jun(Aug)	1B.2	S3	G5T3
Orcuttia californica	California Orcutt grass	Poaceae	annual herb	Apr-Aug	1B.1	S1	G1
Phacelia hubbyi	Hubby's phacelia	Hydrophyllaceae	annual herb	Apr-Jul	4.2	S4	G4
Phacelia mohavensis	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	4.3	S4	G4Q
Pseudognaphalium leucocephalum	white rabbit-tobacco	Asteraceae	perennial herb	(Jul)Aug-Nov(Dec)	2B.2	S2	G4
Quercus durata var. gabrielensis	San Gabriel oak	Fagaceae	perennial evergreen shrub	Apr-May	4.2	S3	G4T3
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Symphyotrichum greatae	Greata's aster	Asteraceae	perennial rhizomatous herb	Jun-Oct	1B.3	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 03 December 2018].

Appendix 6
Special-Status Plant and Wildlife Species Potential For Occurrence

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
INSECTS & MOLLUSKS				
Crotch bumble bee (*Bombus crotchii*)	None / None		Coastal California east to the Sierra-Cascade crest and south into Mexico.	**Presumed absent**. No documentation of species in area for over 40 years. Not observed during surveys.
vernal pool fairy shrimp (*Branchinecta lynchi*)	FT / None		Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools.	**No potential**. No suitable habitat within project area.
monarch - California overwintering population (*Danaus plexippus* pop. 1)	None / None		Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	**Presumed absent**. Not a known roosting area. Preferred roosting habitat is absent.
quino checkerspot butterfly (*Euphydryas editha quino*)	FE / None		Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties.	**No potential**. Project area outside of habitat range.
REPTILES & AMPHIBIANS				
arroyo toad *(Anaxyrus californicus*)	FE / None		Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.	**No potential.** No suitable habitat available. Limited observations within the quads surrounding the project area according to CNDDB, however the habitat requirements (rivers with sandy banks, gravelly streams) are not present within the project area.
California legless lizard *(Anniella* sp. / *A. stebbinsi*)	None / None		Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex.	**Presumed absent.** Little to no suitable habitat; where sandy soil is present, moisture level is typically very low.
California glossy snake (*Arizona elegans occidentalis*)	None / None		Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	**Low potential.** Very rarely recorded in the vicinity of the Survey Area.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
coastal whiptail (*Aspidoscelis tigris stejnegeri*)	None / SSC		Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas.	**Present**. Observed on site.
western pond turtle (*Emys marmorata*)	None / SSC		A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft. elevation.	**Presumed absent.** Limited suitable habitat within Survey Area, not observed during surveys.
coast horned lizard (*Phrynosoma blainvillii*)	None / SSC		Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	**Moderate potential**. Suitable habitat is present.
California red-legged frog (*Rana draytonii*)	FT / SSC		Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	**No potential**. No suitable habitat within Survey Area.
southern mountain yellow-legged frog (*Rana muscosa*)	FE / CE		Federal listing refers to populations in the San Gabriel, San Jacinto and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014.	**No potential**. No suitable habitat within Survey Area.
western spadefoot (*Spea hammondii*)	None / SSC		Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	**Moderate potential.** Limited suitable habitat within survey area. Suitable breeding habitat may exist if features such as the pond flood during rain, adjacent grasslands may be suitable for foraging. Has been documented near the project area in the past.
Coast Range newt (*Taricha torosa*)	None / SSC		Coastal drainages from Mendocino County to San Diego County.	**No potential**. No suitable habitat within project area.
two-striped gartersnake (*Thamnophis hammondii*)	None / SSC		Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft. elevation.	**Low potential**. Limited suitable habitat within Survey Area. Not observed during any surveys.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
BIRDS				
Cooper's hawk (*Accipiter cooperii*)	None / SA		Woodland, chiefly of open, interrupted or marginal type.	**Present.** Observed during December 2018 survey.
tricolored blackbird (*Agelaius tricolor*)	None / CT		Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	**Low potential.** No potential for breeding, but low potential to forage in the area.
southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	None / SA		Resident in Southern California coastal sage scrub and sparse mixed chaparral.	**Present.** Observed during Spring 2017 survey (Compliance Biology).
grasshopper sparrow (*Ammodramus savannarum*)	None / SSC		Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
Bell's sage sparrow (*Artemisiospiza belli belli*)	None / SA		Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
burrowing owl (*Athene cunicularia*)	None / SSC		Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
Swainson's hawk (*Buteo swainsoni*)	None / CT		Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FT / CE		Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	**Low potential**. Not observed during any surveys. Limited suitable habitat within Survey Area. May pass through as migrant.
white-tailed kite (*Elanus leucurus*)	None / CFP		Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
southwestern willow flycatcher (*Empidonax traillii extimus*)	FE / CE		Riparian woodlands in Southern California.	**No potential**. No suitable habitat within project area. No recorded observations in Survey Area vicinity.
California horned lark *(Eremophila alpestris actia*)	None / SA		Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
prairie falcon (*Falco mexicanus*)	None / SA		Inhabits dry, open terrain, either level or hilly.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
loggerhead shrike (*Lanius ludovicianus*)	None / SSC		Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes.	**Moderate potential**. Not observed during any surveys, but suitable habitat is present.
coastal California gnatcatcher (*Polioptila californica californica*)	FT / SSC		Obligate, permanent resident of coastal sage scrub below 2500 ft. in Southern California.	**Presumed absent** – Not detected during gnatcatcher focused surveys conducted by Compliance Biology in 2017 for this project.
least Bell's vireo (*Vireo bellii pusillus*)	FE / CE		Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	**No potential**. No suitable habitat within project area.
MAMMALS				
pallid bat (*Antrozous pallidus*)	None / None		Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	**Low potential**. Not observed during any surveys. Limited suitable habitat within Survey Area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	None / None		Throughout California in a wide variety of habitats. Most common in mesic sites.	**No potential**. No suitable habitat within Survey Area.
spotted bat (*Euderma maculatum*)	None / None		Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests.	**No potential**. No suitable habitat within Survey Area.
western mastiff bat (*Eumops perotis californicus*)	None / None		Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	**No potential**. No suitable habitat within Survey Area.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
hoary bat (*Lasiurus cinereus*)	None / None		Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	**Moderate Potential.** Potential to roost temporarily in trees on-site. Have been known to roost in trees in urban areas adjacent to clearings.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	None / None		Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges.	**Moderate potential**. Suitable habitat is present.
California leaf-nosed bat (*Macrotus californicus*)	None / None		Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats.	**No potential**. No suitable habitat within Survey Area.
Lodgepole chipmunk (*Neotamias speciosus speciosus*)	None / None		Summits of isolated Piute, San Bernardino, & San Jacinto mountains. Usually found in open-canopy forests.	**No potential**. No suitable habitat within Survey Area.
San Diego desert woodrat (*Neotoma lepida intermedia*)	None / None		Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	**Present.** Observed in Compliance Biology spring 2017 survey.
southern grasshopper mouse (*Onychomys torridus ramona*)	None / None		Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	**Low potential**. Not observed during any surveys, limited suitable habitat.
American badger (*Taxidea taxus*)	None / None		Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	**Low potential**. Not observed during any surveys, limited suitable habitat.
PLANTS				
Mt. Pinos onion (*Allium howellii var. clokeyi*)	None / None	1B.3	Great Basin scrub, Meadows and seeps (edges), Pinyon and juniper woodland. Perennial bulbiferous herb flowering from April to June.	**No potential**. No suitable habitat within project area.
Braunton's milk-vetch (*Astragalus brauntonii*)	FE / None	1B.1	Chaparral, Coastal scrub, Valley and foothill grassland. Perennial herb flowering from January to August.	**No potential**. Out of range for species.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
Nevin's barberry (*Berberis nevinii*)	FE / CE	1B.1	Chaparral, Cismontane woodland, Coastal scrub, and Riparian scrub. Perennial evergreen shrub flowering from March to June, rarely in February.	**No potential**. Perennial shrub, not observed during surveys.
slender mariposa lily (*Calochortus clavatus var. gracilis*)	None / None	1B.2	Chaparral, Coastal scrub, Valley and foothill grassland. Perennial bulbiferous herb flowering from March to June, rarely in November.	**Absent.** Confirmed absent by spring floristic surveys.
Palmer's mariposa lily (*Calochortus palmeri var. palmeri*)	None / None	1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps. Perennial bulbiferous herb flowering from May to July.	**Absent.** Confirmed absent by spring floristic surveys.
southern tarplant (*Centromadia parryi* ssp. *australis*)	None / None	1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools. Annual herb flowering from May to November	**No potential**. Limited suitable habitat within project area. Out of habitat range for species.
San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*)	FC / CE	1B.1	Coastal scrub (sandy), Valley and foothill grassland. Annual herb flowering from April to July.	**Absent.** Confirmed absent by spring floristic surveys.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	None / None	1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland. Annual herb flowering from April to June.	**Absent.** Confirmed absent by spring floristic surveys.
Santa Susana tarplant (*Deinandra minthornii*)	None / CR	1B.2	Chaparral, and Coastal scrub. Perennial deciduous shrub flowering from July to November.	**No potential**. Species is associated with sandstone outcrops. No suitable habitat on-site.
slender-horned spineflower (*Dodecahema leptoceras*)	FE / CE	1B.1	Chaparral, Cismontane woodland, and Coastal scrub (alluvial fan). Annual herb flowering from April to June.	**Absent.** Confirmed absent by spring floristic surveys.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
San Gabriel bedstraw (*Galium grande*)	None / None	1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, and Lower montane coniferous forest. Perennial deciduous shrub flowering from January to July.	**Absent.** Confirmed absent by spring floristic surveys.
Newhall sunflower (*Helianthus inexpectatus*)	None / None	1B.1	Marshes and swamps, Riparian woodland. Perennial rhizomatus herb flowering from August to October.	**No Potential**. No suitable habitat within project area.
mesa horkelia (*Horkelia cuneata* var. *puberula*)	None / None	1B.1	Chaparral (maritime), Cismontane woodland, and Coastal scrub. Perennial herb flowering from February to July, rarely in September.	**No potential**. Perennial herb not observed during surveys. Suitable habitat within project area. Survey area outside known distribution of the species.
Ross' pitcher sage (*Lepechinia rossii*)	None / None	1B.2	Chaparral. Perennial shrub flowering from May to September.	**Absent.** Confirmed absent by spring floristic surveys.
Payne's bush lupine (*Lupinus paynei*)	None / None	1B.1	Coastal scrub, Riparian scrub, Valley and foothill grassland. Perennial shrub flowering from March to April, rarely from May to July.	**No potential**. Perennial shrub not observed during surveys, no observation records in vicinity of Survey Area. No bush lupines have been observed at the site. All known records are far from the Survey Area.
Davidson's bush-mallow (*Malacothamnus davidsonii*)	None / None	1B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland. Perennial deciduous shrub flowering from Jun to January.	**Absent.** Confirmed absent by spring floristic surveys.
spreading navarretia (*Navarretia fossalis*)	FT / None	1B.1	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, and Vernal pools. Annual herb flowering from April to June.	**No potential**. No suitable habitat within project area.
Piute Mountains navarretia (*Navarretia setiloba*)	None / None	1B.1	Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland. Annual herb flowering from April to June.	**No potential**. No suitable habitat within project area.

Common Name (Scientific Name)	Status (Federal / State)	CNPS Status	Primary Habitat Associations	Status on Site / Potential to Occur
short-joint beavertail (*Opuntia basilaris* var. *brachyclada*)	None / None	1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland. Perennial stem succulent flowering from April to June, rarely in August.	**Absent.** Confirmed absent by spring floristic surveys.
California Orcutt grass (*Orcuttia californica*)	FE / CE	1B.1	Vernal pools. Annual herb flowering from April to August.	**No potential**. No suitable habitat within project area.
white rabbit-tobacco (*Pseudognaphalium leucocephalum*)	None / None	2B.2	Chaparral, Cismontane woodland, Coastal scrub, and Riparian woodland. Perennial herb flowering from August to November, rarely in July and December.	**Absent.** Confirmed absent by spring floristic surveys.
chaparral ragwort (*Senecio aphanactis*)	None / None	2B.2	Chaparral, Cismontane woodland, and Coastal scrub. Annual herb flowering from January to April, rarely in May.	**Absent.** Confirmed absent by spring floristic surveys.
Greata's aster (*Symphyotrichum greatae*)	None / None	1B.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, and Riparian woodland. Perennial rhizomatous herb flowering from June to October.	**Absent.** Confirmed absent by spring floristic surveys.

Oak Tree Report

Site:

Sand Canyon Hotel & Resort
27734 Sand Canyon Road
Santa Clarita, California 91387

Prepared for:

Steve Kim,
Sand Canyon Country Club
27734 Sand Canyon Road
Santa Clarita, California 91387
(213) 700-6883

Prepared by:

Kay J. Greeley
Board Certified Master Arborist WE-1140B
5328 Alhama Drive
Woodland Hills, California 91364
(805) 577-8432

Date:

Revised October 28, 2019

TABLE OF CONTENTS

Oak Tree Report

Sand Canyon Hotel & Resort
27734 Sand Canyon Road
Santa Clarita, California 91387

INTRODUCTION

This Oak Tree Report was prepared at the request of Mr. Steve Kim, owner and general manager of Sand Canyon Country Club located at 27734 Sand Canyon Road, Santa Clarita, California. Mr. Kim proposes to construct a resort on the site to include hotel suites and villa accommodations, three restaurants, a spa, a nine-hole miniature golf course, walking trails, parking, a natural oak garden, and recreational facilities for swimming and tennis and pickleball courts in accordance with Vesting Tentative Tract Map 78248. Currently the 74.9-acre parcel contains the Robinson Ranch Mountain Course that was closed after years of drought.

The site and immediate area contains 140 protected oak trees. These include 125 coast live oaks (*Quercus agrifolia*) and 15 scrub oaks (*Q. berberidifolia*). Thirteen of the coast live oaks are heritage trees. A heritage tree is defined as any oak measuring 108 inches or more in circumference or, in the case of a multiple trunk oak tree, two or more trunks measuring 72 inches each or greater in circumference, measured four and one-half feet above the natural grade surrounding such tree.

This report was prepared in accordance with Section 17.51.040 - Oak Tree Preservation of the City of Santa Clarita Municipal Code, relating to Oak Tree Preservation. Oak trees within the City of Santa Clarita are recognized for their significant historical, aesthetic and environmental value. Unless allowed by an Oak Tree Permit, no person shall cut, prune, remove, relocate, endanger, damage, or encroach into the protected zone of tree of the genus *Quercus* that is at least 6 inches in circumference when measured at a point 4-1/2 feet above natural grade.

The purpose of this Oak Tree Report is to document findings related to a ground-level visual analysis of the subject trees and to provide a project impact analysis, tree photographs and tree location map.

SCOPE OF WORK

The scope of work included a full ground field observation of the cultural and physical conditions of a total of 136 oak trees. Pertinent data was observed and recorded between November 20, 2017 and January 30, 2018 by associate Certified Arborist Ann Burroughs.

In addition, four trees from the adjacent “Mancara” project were included in this report, as a proposed street, denoted as ‘J’ Street, is to be developed under that project and enters the subject site. Data for these four trees were extracted from the “Updated Oak Tree Report – Mancara Project (TTM No. 63022) Oak Springs Canyon Road – City of Santa Clarita”, as prepared by Sb horticulture dated January 5, 2014. No warranty is provided for that information.

All tree inventory data is summarized in Table 1 in Appendix A. Photographs for reference and record purposes are included in Appendix B. A set of Tree Location Maps is included in Appendix C. These maps were prepared using the proposed development plan as prepared by Hunsaker and Associates, revised as of June 4, 2018. In addition, the plan for Mancara is included in Appendix C, as it shows the impacts of the proposed J street.

All information provided by the preparer is certified to be true and correct as of the date of the field observations.

TREE CHARACTERISTICS AND SITE CONDITIONS

A 1-1/4 inch diameter metal tag stamped with the tag number shown on the Tree Location Map in Appendix C was attached to the north side of each of the 136 oak trees located on the site. The tag numbers used include '2336' through '2473', excluding numbers '2337' and '2411'. Due to steep terrain trees #2460 through #2462 were not tagged. The Mancara tree numbers are '365' through ''368'.

Trees #365 through #368 border the easterly side of the site. Trees #2398 through #2401 and trees #2425 through #2459 are in the westernmost portion of the site. Trees #2336, #2338 through #2367, #2472 and #2473 are located within the west-central portion of the site. Trees #2368 through #2383, #2389 through #2397, #2402 through #2410, #2412 through #2418, #2460 through #2469 and #2471 are located within the central one-third of the site. Trees #2384 through #2388, #2419 through #2424 and #2470 are located within the easterly one-third of the site.

The trees range in age from sapling to senescence. The oaks appear to be a mix of self-generated trees and planted nursery stock. A number of the oaks were transplanted within the site when it was originally developed.

The subject property is 74.9 acres in size and is located at the northeast corner of Sand Canyon Road and Robinson Ranch Road, one mile south of State Highway 14. The site is bounded by Sand Canyon Road to the west, Robinson Ranch Road to the south, the Sand Canyon Country Club parking lot to the east and single-family residences and open space to the north. Currently the property contains the 9-hole Robinson Ranch Mountain Course that was closed in 2017 after years of drought.

The topography is relatively flat near the intersection of Sand Canyon Road and Robinson Ranch Road with low rolling terrain. Topography within the northerly portion of the site slopes steeply but is relatively flat at the locations of the abandoned greens and tees. In addition to the oak trees, there are ornamental trees and California native shrubs planted throughout the site.

The subject trees' scientific name, common name, diameter at breast height, average canopy width, overall height, appearance rating, and significant comments are summarized in the Table 1 in Appendix A.

OAK TREE RECOVERY AND MANAGEMENT PLAN

Many of the trees inventoried exhibit signs of stress and decline, as do trees on the active portion of the golf course that were not specifically inventoried or inspected. It is recommended that the owner develop an ongoing maintenance plan based on the information included in the General Recommendations section of this report. In addition

to the maintenance guidelines set forth in the General Recommendations, the plan developed should address specific issues noted as issues of concern in the Tree Health and Defects section below.

TREE HEALTH AND DEFECTS

The trees' health ratings and significant comments are included in the Table 1 in Appendix A.

Issues of particular concern were noted as follows:

- Trees #2368, #2432, #2446, #2457, and #2460 are dead. There is a beehive in the trunk of #2446, as noted in Appendix A.
- Trees #2338, #2367, #2379, #2406, #2409, #2415, #2420, #2431, #2451, #2454, and #2470 appear to be nearly dead, as noted in Appendix A.
- Trees #2339, #2377, #2390, #2393, #2402, #2404 and #2424 are in a moderate to severe state of decline, as noted in Appendix A.
- Tree #2431 has a 33-inch diameter dead trunk.
- Tree #2379 has a 16-inch diameter dead trunk and a 19-inch diameter dead trunk.
- There is a desiccated conk at the root crown of tree #2435. A conk is the fruiting body of a fungus. The conk likely indicates the presence of decay within the tree's roots or lower trunk. The tree should be monitored annually for changes that might indicate that potential failure is imminent, including but not limited to decline, changes in lean or cracks.
- Trees #2388, #2416, #2418, and #2439 still possess tree stakes and ties. Stakes and ties should be removed from trees after one to two years at most. Stakes and ties left on too long can create wounds and damage trees by rubbing against trunks and limbs, as well as limit trunk caliper.
- Trees #2451 and #2459 both exhibit severe decay within their trunks. The trees should be monitored for changes that might indicate that potential failure is imminent, including but not limited to decline, changes in lean or cracks.
- There is fill soil within the protected zones of trees #2383, #2384, #2419, and #2437. Fill soil within a tree's protected root zone can inhibit gas exchange which may eventually stunt root growth and lead to a tree's decline. Symptoms of damage appear as a progressive decline of the crown over a period of months to years, reduced growth, stunted light green to yellow leaves and a sparse canopy.

  The soil beneath these trees should be removed to restore natural grade at the root crowns, which should just be visible. Create positive drainage away from the trunks to prevent standing water at the root crowns. Soil should be removed using hand shovels to ensure that the trees are not inadvertently damaged. The soil should be relatively dry when this work is performed since damp soil is easily compacted.
- There is a dead, hanging branch in the canopy of tree #2442. This branch should be removed to prevent harm to people that may pass beneath the tree's canopy.

- There is a bulge in trunk of tree #2343. This swelling is likely an indicator of the tree attempting to strengthen a weak point such as an internal crack or decay pocket. This tree should be re-assessed annually to include observation of the areas of the bulge to determine whether additional structural changes have occurred since the prior inspection.
- Trees #2336, #2340, #2341, #2342, #2344, #2350, #2354 #2356 through #2360, #2363 through #2366, #2376, #2378, #2385, #2387, #2388, #2389, #2391, #2392, #2394, #2395, #2396, #2400, #2401, #2405, #2407, #2410, #2413, #2417, #2418, #2421, #2422, #2423, #2425, #2426, #2434, #2436, #2439, #2447, #2456, #2463, #2466, #2467, and #2468 exhibit co-dominant trunks and/or scaffold limbs with included bark.

  Co-dominant limbs are defined as two limbs or trunks of approximately the same diameter that arise from the same point. These two limbs lack a normal branch union and therefore form a weak attachment. A bark inclusion occurs between branches or trunks with narrow angles of attachment. As the tree expands radially, ingrown layers of bark form between the two. The embedded bark creates a weak structure and is a potential point of failure.

  These trees should be re-assessed annually to include observation of the areas of included bark to determine whether any structural changes have occurred since the prior inspection.

  The trees should also be reassessed following a significant wind event or an extreme weather event such as sustained rains. The purpose of the inspection would be to observe whether cracks have occurred in the areas of included bark, which are indications that one or more of the co-dominant limbs may be beginning to fail.

  Table 2 in Appendix A provides a summary of the dead and declining trees. These trees are depicted with color orange outlines the Oak Tree Location Maps.

IMPACT ANALYSIS

The owner proposes to construct a resort hotel on the subject property. The resort would include a three-story main hotel, a two-story wedding hotel, 25 individual villa accommodations, a spa, and associated parking. Recreational amenities would include a nine-hole miniature golf course, a walking trail, a natural oak garden, two swimming pools, a tennis court, and six pickleball courts.

One-hundred-fifteen of the subject trees would experience no direct impacts under the project as proposed. No trees would experience encroachment within their protected zones. Twenty-one of the subject trees would require removal if the proposed work is implemented as designed. The disposition, general location and reason for the proposed removals are summarized in the Table 3 in Appendix B. The impacts are summarized below.

No Direct Impact:

Trees #2336, #2338 through #2354, #2357, #2359 through #2381, #2385, #2386, #2387, #2389, #2392 through #2405, #2417 through #2469, #2471, and #2472 would not experience direct impacts. These trees are depicted with green outlines on the Oak Tree Location Maps.

Recommendation - The employment of careful construction protocols, as described in the General Recommendations section of this report will ensure that the trees do not suffer from long-term adverse impacts.

The contractor should install a hood or diverter to vent exhaust from heat-producing heavy equipment away from tree canopies of all trees to remain in order to prevent heat and burn damage to tree limbs and foliage during the work.

Encroachment:

No trees would be encroached upon within their protected zones to construct the project as proposed.

Removal:

Trees #358 through #368, #2355, #2356, #2358, #2382, #2383, #2384, #2388, #2390, #2391, #2406 through #2410, #2412 through #2416, #2470, and #2473 would require removal to implement the project as designed. No heritage trees would require removal to construct the project as proposed. A list containing these trees is included in Table 3 in Appendix A. These trees are depicted with red outlines on the Oak Tree Location Maps.

Tree #365 through #368 – These four planted trees will require removal to construct 'J' Street as shown on the Mancara project drawing.

Tree #2355: This semi-mature coast live oak tree is located within the area of grading for proposed 'E' Drive. It would require removal to implement the project as proposed.

Tree #2356: This mature coast live oak is located within the footprint of proposed 'E' Drive. It would require removal to implement the project as proposed.

Tree #2358: This young coast live oak tree is located within the footprint of the proposed 'E' Drive. It would require removal to implement the project as proposed.

Trees #2382 and #2383: This mature scrub oak and mature coast live oak, respectively, are located within the area of grading for the slope between the proposed parking lot and the sidewalk adjacent to Robinson Ranch Road. They would require removal to implement the project as proposed.

Tree #2384: This mature coast live oak is located within the footprint of the proposed main parking lot. It would require removal to implement the project as proposed.

Tree #2388: This semi-mature coast live oak tree is within the footprint of the Main Hotel building. It would require removal to implement the project as proposed.

Trees #2390 and #2391: These two young coast live oak trees would experience encroachment within their protected zones due to grading for the building pad for the villas adjacent to proposed 'C' Drive. The encroachments would occur within 23 percent and 31 percent of their respective protected zones. The encroachment would occur at 5.5 feet and 4 feet from their trunks, respectively.

Root removal can damage both the health and structural integrity of a tree. The most recent edition of the International Society of Arboriculture (ISA) Best Management Practices (BMP) for Managing Trees during Construction includes guidelines for determining a Tree Protection Zone (TPZ). The TPZ is based on a tree species' tolerance for construction damage and the relative age of the tree. Taking these two

factors into consideration, a TPZ can be established using multiples of a tree's trunk diameter measurement.

Coast live oak trees are known to exhibit good tolerance to construction impacts. Although work would occur outside the minimum recommended distance based on the TPZs established using the BMPs, both trees would experience encroachment within a significant portion of their protected zones. The trees are in poor and fair condition respectively, and would likely respond poorly to the impacts. In addition, their poor condition and small size do not warrant exceptional measures to attempt their preservation.

Tree #2406: This mature coast live oak tree is located within the area of grading for the slope northeast of the building pad for the villas just south of the main hotel buildings. It would require removal to implement the project as proposed.

Tree #2407 and #2408: These two mature coast live oaks are located within the footprint of the building pad for the villas located just south of the main hotel buildings. They would require removal to implement the project as proposed.

Tree #2409: This young coast live oak tree is located within the drive aisle adjacent to the parking spaces for the center grouping of villas. It would require removal to implement the project as proposed.

Tree #2410: This mature coast live oak tree is located within the area of grading between the main parking lot and proposed 'A' Drive. It would require removal to implement the project as proposed.

Trees #2412: This mature scrub oak is located within the footprint of the proposed main parking lot. It would require removal to implement the project as proposed.

Trees #2413: This mature scrub oak is located within the footprint of proposed 'A' Drive. It would require removal to implement the project as proposed.

Tree #2414: This semi-mature coast live oak is located within the area of grading immediately east of the northerly loop of 'A' Drive. It would require removal to implement the project as proposed.

Trees #2415 and #2416: This mature scrub oak and mature coast live oak tree, respectively, are located within the graded slope east of the proposed Wedding Garden Resort. They would require removal to implement the project as proposed.

Tree #2470: This young coast live oak tree is located within the footprint of the proposed sidewalk between Robinson Ranch Road and the main parking lot. It would require removal to implement the project as proposed.

Tree #2473: This young coast live oak tree is located within the footprint of proposed 'D' Drive. It would require removal to implement the project as proposed.

OAK TREE TRANSPLANT STUDY

The 25 protected trees proposed for removal were evaluated for the possibility of boxing and transplanting them on site. Seven of these trees are potential candidates for transplantation. The remaining 18 trees, because of health, vigor or structural issues were not considered to be appropriate candidates for transplanting. If suitable locations can be found on the site, it is possible trees #366, #367, #368, #2355, #2356, #2407, and #2414 might be successfully transplanted. When transplanting a tree the new

location should match the original location as closely as possible in slope, aspect, altitude, soil and sun or shade.

OAK TREE VALUATION AND MITIGATION PLAN

An appraisal of the trees to be removed was prepared using the "Guide for Plant Appraisal, 9th Edition". The Replacement Cost Method was used for trees that could be purchased and installed in the same size as the tree to be removed. For larger trees, the Trunk Formula Method was used to extrapolate the cost to determine a value for trees larger than 60-inch box size. The calculations are provided in Tables 4A through 4C in Appendix A.

The sum of the value of the trees to be removed is $47,840. Specification of replacement tree sizes and planting locations is outside the scope of this report. The project Landscape Architect will need to include replacement trees in the proposed landscape plan that have the same installed cost as the value of the trees to be removed. The City encourages that the planting plan provide a variety of specimen box replacements. The replacement trees will need to be planted in a sustainable location with a permanent water source. The planting plan will be subject to approval by the City of Santa Clarita.

GENERAL RECOMMENDATIONS

The following general recommendations are provided for educational purposes and should be followed to establish and maintain a healthy cultural environment for native trees. These recommendations apply to native trees in general; specific questions should always be referred to the project arborist or the City of Santa Clarita. The recommendations also apply to the care of most ornamental trees.

WORK WITHIN THE PROTECTED ZONE

The protected zone is an area surrounding a tree, defined within the City of Santa Clarita Oak Tree Ordinance. It includes all area within the dripline of the tree, plus 5 feet beyond the dripline. This distance must be no less than 15 feet from the trunk. Given the high sensitivity of native trees, great care must be taken when work is conducted within the protected zone. Specifically:
Observation -- All work conducted within the protected zone of a protected oak should be performed within the presence of a qualified arborist. This work may also require a permit from the City of Santa Clarita. This will help to insure that work is performed in a manner that will not harm the tree.

Notice – A minimum of 48 hours' notice should be provided to the project arborist prior to the planned start of work. This notification must also be provided to the City of Santa Clarita. The notice will insure that the project receives the highest possible scheduling priority and avoid delays.

Hand Tools -- All work should be accomplished with the use of hand tools only. Except under special circumstances, tractors, backhoes and other vehicles cannot be operated in a manner that will preserve major tree roots, minimize soil compaction, and insure the safety of both the vehicle operator and the tree.

Certification -- All work conducted within the protected zone should be certified by the project arborist. For work performed under a permit, this may be a requirement of the City of Santa Clarita.

WORK OUTSIDE OF THE PROTECTED ZONE

To protect trees within the vicinity of major construction, trees should be temporarily fenced at the edge of the protected zone prior to the beginning of construction operations on a site. The fence should be constructed of chain link material, a minimum of 5 feet in height. The project arborist should be contacted to develop a fencing plan, generally required by the City of Santa Clarita. The fence may be removed at the completion of the construction upon approval by the City.

PLANTING WITHIN THE PROTECTED ZONE

Planting within the protected zone of native trees is generally discouraged. Ideally, the natural leaf litter should be allowed to collect beneath the tree, creating a natural mulch and fertilizer. If planting is necessary or the natural leaf litter is removed, the following should be considered:

Plant Material -- Only compatible plantings should be utilized. A good reference planting under oak trees is Compatible Plantings Under and Around Oaks by the California Oak Foundation.

Irrigation -- No spray-type irrigation systems should be used within the protected zone. It is important that sprinkler systems do not throw water against the trunk of a native tree. A continuously wet soil condition near the root crown (the area where the tree trunk meets the ground) favors the growth of predatory disease organisms. The two most prominent organisms in southern California are avocado root rot (*Phytophthora cinnamomi*) and oak root fungus (*Armillaria mellea*). At a minimum, all spray irrigation should be kept at least 15 feet from the trunk to prevent drift onto the root crown.

Resistant Varieties -- Avoid plants that are susceptible to either avocado root rot or oak root fungus. Oak trees are particularly susceptible to these diseases in developed areas. Avoiding other plants susceptible to these diseases will also help to keep the diseases in a dormant state. Consult publications by the University of California Cooperative Extension for plant lists.

Mulch -- Place a 4-inch thick layer of organic mulch throughout the protected zone of each tree. Aesthetically pleasing options include crushed walnut hulls and shredded bark. These mulches are beneficial when the natural leaf litter is not available, minimizing evaporation, moderating temperature and providing weed control.

TREE MAINTENANCE AND PRUNING OPERATIONS

Most native trees require very little pruning, with the exception of periodic deadwooding. However, if a tree has a major defect, the employment of proper pruning practices may be more desirable than the uncontrolled damage that could otherwise occur. Always consult qualified professionals for advice.

Ornamental or Aesthetic Pruning -- Removal of live tissue for the purpose of altering the appearance of a protected oak tree is not desirable and is generally not allowed by the City of Santa Clarita. Activities such as thinning out, heading up, or other similar practices contribute to the onset of insect and disease attacks.

Deadwooding -- Removal of dead tissue, regardless of size, may usually be performed without a permit. All pruning should follow standards endorsed by the International Society of Arboriculture.

Other Pruning Operations -- Branches that are considered to be unsafe due to decay, cavities, cracks, physical imbalance, fire damage, disease, or insects should be referred to a qualified arborist for inspection, especially if the branches exceed 6 inches in circumference at the location of the cut. A permit is generally required by the City of Santa Clarita to remove such branches. A brief written report will be prepared by the project arborist to provide the basis for the request.

Cavities and Hollows -- Cavities and hollows should be kept free of loose debris. Some contain decayed wood; these should generally be referred to a qualified arborist for treatment. Concrete or other materials should not be used to seal or fill in cavities or hollows. These materials create a haven for diseases and insects over time. Openings may be covered with screening to prevent debris build-up and habitation by bees.

Wound Seal -- Pruning wounds should generally not be sealed with any type of compound. Over time, these materials crack and create entry points for disease and insects. A proper pruning cut will heal naturally over a short period of time.

WATERING AND FERTILIZATION

Winter rains should be sufficient to provide the water needed for oak trees in natural areas. Oak trees in landscaped areas will usually receive enough water from adjacent plantings. If you suspect that a tree is in need of supplemental water, contact the project arborist for advice.

Watering -- If supplemental water is required, use a water probe, such as a "Ross Root Feeder" to apply the water. Alternatively, a low volume soaker hose could be utilized. Apply the water at various locations, just outside the dripline of the tree. A total of 15 to 20 hours of low-volume application should suffice. Repeat this watering cycle every one to two months as needed. Water should generally not be applied to oak trees in the summer, as they are effectively dormant and cannot accept the water.

Fertilization -- Fertilizer can be applied along with the water. A total of 0.75 pound of actual nitrogen per inch of trunk diameter per year is a basic rule-of-thumb. However, ask your local certified nurseryman for a specific recommendation and follow the manufacturer's directions carefully. Over-fertilization can be deadly and is generally not required for native trees.

Aeration -- Ventilation of the root system can be very beneficial in areas where soil has been compacted. Hand dig holes six inches in diameter to a depth of two feet. Do not cut any roots in excess of 1-inch in diameter. Dig the holes 2 feet on center, in concentric circles around the trunk, throughout the dripline. If possible, add holes outside of the dripline. Fill the holes with an organic matter. If oak leaf litter is not available, organic mulch will be beneficial. This organic matter will be decomposed, producing a year-round source of fertilizer for the tree. Note that the City of Santa Clarita may require a permit to complete such work under a protected oak tree.

DISEASES AND INSECTS

Effective pest control starts with regular observation by the property owner. Issues such as abnormal leaf drop, oozing sap, and discolored or dying leaves indicate that something has changed and expert inspection is required. Property owners should be

very careful when using pesticides around trees. Herbicides should never be utilized within one hundred feet of a protected oak tree, unless applied by a certified pesticide applicator. Misuse of these compounds can lead to the death of beneficial organisms or even to the death of the tree.

GRADE CHANGES

Any change to the grade at the root crown of a tree can have a negative impact. As little as 6 inches can lead to the death of the tree. Drainage patterns should be maintained to prevent water from flowing and ponding at the base of a tree. If excess material builds up at the root crown, use a small shovel to remove the excess soil and debris. The flare at the root crown should just be visible.

INSPECTION

Trees should be inspected on a periodic basis by a qualified arborist. The inspection basis should be determined by the relative hazard value of the tree. For example, trees surrounding a high-use business should be inspected on a quarterly basis, whereas trees located within a low-use open space might only require bi-annual inspection. It is the responsibility of the property owner to establish and implement an appropriate inspection schedule upon the recommendation provided by the qualified arborist.

WARRANTY

The trees discussed herein were generally reviewed for physical, biological, functional, and aesthetic conditions. This examination was conducted in accordance with presently accepted industry procedures: an at-grade, macro-visual observation only. No extensive microbiological, soil/root excavation, upper crown examination, nor internal tree investigation was conducted and therefore, the reportings herein reflect the overall visual appearance of the trees on the date reviewed. No warranty is implied as to the potential failure, health or demise of any part or the whole of any tree described in this report.

Clients are advised that should physical or biological concerns be evidenced for any specimen within this report, prudent further investigation, detailed analysis or remedial action may be required.

As living organisms, plants continually exhibit growth and response to environmental changes that influence the development, health and vigor of the specimen. These influences may not be externally visible and may be present or develop over various time periods depending on the site conditions.

It is recommended that due to the general nature of plant development and continued environmental and physical influences on vegetation at a specific site, regular monitoring by a qualified arborist is scheduled.

Locations of property lines or exact tree locations, site amenities, structures or easements are assumed to be as illustrated on any enclosed maps. They are a composite of information provided by the client, records of fact and/or on-site field review. No investigation was made to verify these conditions.

This report represents the independent opinion of the preparer and was conducted per the client’s scope of request. The report is therefore limited to the extent described herein.

APPENDIX A – TABLES

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
365	*Quercus agrifolia*	4	4, 3, 3, 3	14	5 -10	no	no	C-	D	sparse canopy; planted tree			X	new 'J' Street construction
366	*Quercus agrifolia*	2	6, 4.5	14	5 -10	no	no	B-	C	planted tree			X	new 'J' Street construction
367	*Quercus agrifolia*	1	6	14	10 -15	no	no	B	C	planted tree			X	new 'J' Street construction
368	*Quercus agrifolia*	2	7.5, 5	18	10 -15	no	no	B	B	planted tree			X	new 'J' Street construction
2336	*Quercus agrifolia*	2	11, 7	30	32	no	no	A	A	severe co-dominant trunks with included bark	X			no impact anticipated
2338	*Quercus berberidifolia*	6	6@2.0', 5@4.0', 5, 4, 4, 3	9	18	no	no	D	D	nearly dead; six of 11 trunks dead; most foliage epicormic sprouts	X			no impact anticipated
2339	*Quercus agrifolia*	2	7, 1	16	21	no	no	C-	D+	suppressed	X			no impact anticipated
2340	*Quercus agrifolia*	1	47	75	60	yes	no	A	A	co-dominant scaffolds with included bark	X			no impact anticipated
2341	*Quercus agrifolia*	1	28	50	65	no	no	C	C	co-dominant scaffolds with included bark	X			no impact anticipated
2342	*Quercus agrifolia*	1	33	54	58	no	no	B	B	nest in tree; co-dominant scaffolds with included bark	X			no impact anticipated
2343	*Quercus agrifolia*	1	30	34	50	no	no	B-	C	suppressed; likely internal crack in trunk	X			no impact anticipated
2344	*Quercus agrifolia*	1	32	48	55	no	no	B	B	co-dominant trunks with included bark	X			no impact anticipated
2345	*Quercus agrifolia*	1	58 @ 2.5'	63	60	yes	no	A	A	moderate to severe sycamore twig borer infestation	X			no impact anticipated
2346	*Quercus agrifolia*	4	30, 26, 10, 9	55	60	yes	no	A	A		X			no impact anticipated
2347	*Quercus agrifolia*	1	14	19	25	no	no	C	C-	suppressed	X			no impact anticipated
2348	*Quercus agrifolia*	1	23	28	60	no	no	B-	B-	suppressed	X			no impact anticipated
2349	*Quercus agrifolia*	1	32	39	58	no	no	C-	C-	minor dieback	X			no impact anticipated
2350	*Quercus agrifolia*	2	36, 32	76	63	yes	no	A	A	co-dominant trunks with included bark	X			no impact anticipated
2351	*Quercus agrifolia*	2	19, 6	19	39	no	no	C-	C-	suppressed; severe decay in 6-inch trunk	X			no impact anticipated
2352	*Quercus agrifolia*	1	14	28	36	no	no	C-	C-	partially suppressed	X			no impact anticipated
2353	*Quercus agrifolia*	1	16	21	35	no	no	C+	C+	partially suppressed; small cavity at root crown	X			no impact anticipated
2354	*Quercus agrifolia*	4	27, 25, 18, 2 @ 3.0'	54	50	yes	no	A	A	co-dominant trunks with included bark	X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2355	*Quercus agrifolia*	1	8 @ 4.0'	16	18	no	no	A	A				X	within grading for proposed 'E' Drive
2356	*Quercus agrifolia*	1	12	26	19	no	no	A	A	co-dominant scaffolds with included bark			X	within proposed 'E' Drive
2357	*Quercus agrifolia*	1	7 @ 3.0'	18	11	no	no	C-	C-	co-dominant scaffolds with included bark	X			no impact anticipated
2358	*Quercus agrifolia*	1	7 @ 3.0'	14	14	no	no	B-	B-	co-dominant scaffolds with included bark			X	within proposed 'E' Drive
2359	*Quercus agrifolia*	1	8	23	17	no	no	C+	C+	co-dominant trunks with included bark	X			no impact anticipated
2360	*Quercus agrifolia*	1	11	19	22	no	no	B-	B-	co-dominant trunks with included bark	X			no impact anticipated
2361	*Quercus agrifolia*	1	11 @ 4.3'	21	24	no	no	B	B		X			no impact anticipated
2362	*Quercus agrifolia*	1	28	53	55	no	no	B+	A		X			no impact anticipated
2363	*Quercus agrifolia*	5	19, 19, 19, 18, 15	60	60	no	no	B-	B-	co-dominant trunks with included bark	X			no impact anticipated
2364	*Quercus agrifolia*	1	24	36	35	no	no	A	A	co-dominant scaffolds with included bark	X			no impact anticipated
2365	*Quercus agrifolia*	1	7 @ 2.9'	16	14	no	no	B-	B-	co-dominant trunks with included bark	X			no impact anticipated
2366	*Quercus agrifolia*	10	19, 16, 16, 16, 15, 14, 14, 13, 12, 9	56	40	no	no	C	C	co-dominant trunks with included bark; minor twig dieback	X			no impact anticipated
2367	*Quercus agrifolia*	2	21, 11	12	26	no	no	D-	D-	nearly dead; very little foliage	X			no impact anticipated
2368	*Quercus agrifolia*	1	22 (est.)	N/A	N/A	no	yes	F	F	dead and fallen	X			no impact anticipated
2369	*Quercus berberidifolia*	22	6, 5, 5, 5, 5, 5, 5, 5, 5, 4, 4, 4, 4, 4, 3, 3, 3, 3, 3, 3, 2, 2	20	22	no	no	C	C	minor dieback	X			no impact anticipated
2370	*Quercus berberidifolia*	10	5, 4, 4, 4, 3, 3, 3, 2, 2	14	20	no	no	C-	C-	dieback; moderate to severe dieback	X			no impact anticipated
2371	*Quercus berberidifolia*	12	5, 5, 4, 4, 4, 3, 3, 3, 2, 2, 2, 2	22	22	no	no	C-	C-	dieback; moderate to severe dieback	X			no impact anticipated
2372	*Quercus berberidifolia*	3	6, 5, 4	11	8	no	no	C+	C+	suppressed; moderate deadwood	X			no impact anticipated
2373	*Quercus berberidifolia*	5	7, 6, 5, 5, 4	23	25	no	no	C	C	minor dieback; moderate deadwood	X			no impact anticipated
2374	*Quercus berberidifolia*	5	5, 5, 5, 4, 3	14	23	no	no	C-	C-	minor dieback; moderate deadwood; suppressed	X			no impact anticipated
2375	*Quercus agrifolia*	1	6	14	20	no	no	C	C	dieback; severe trunk wound; severe borers	X			no impact anticipated
2376	*Quercus agrifolia*	1	5	15	18	no	no	B	B	co-dominant scaffolds with included bark	X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2377	*Quercus agrifolia*	1	24	30	50	no	yes	D+	D+	moderate to severe dieback, epicormic sprouts	X			no impact anticipated
2378	*Quercus agrifolia*	4	20, 14, 9, 7	33	48	no	yes	C-	C-	seven-inch trunk dead; moderate dieback; co-dominant scaffolds with included bark	X			no impact anticipated
2379	*Quercus agrifolia*	4	19 @ 3.5', 16, 16, 14	11	50	no	yes	D-	D-	one 16-inch and 19-inch trunk dead; transplanted; nearly dead	X			no impact anticipated
2380	*Quercus berberidifolia*	16	4, 4, 4, 4, 4, 3, 3, 3, 3, 3, 3, 3, 2, 2, 1	18	16	no	no	C	C	minor dieback	X			no impact anticipated
2381	*Quercus berberidifolia*	5	5, 3, 3, 2, 2	17	12	no	no	C-	C-	minor dieback	X			no impact anticipated
2382	*Quercus berberidifolia*	13	4, 4, 3, 3, 3, 3, 3, 3, 3, 2, 2, 2, 1	15	15	no	no	C-	C-	minor dieback			X	grading at southeasterly corner of main parking lot
2383	*Quercus agrifolia*	5	13, 9, 8, 6, 4	26	25	no	yes	C-	C-	severe dieback; one trunk nearly dead; transplanted tree; remove fill from protected zone			X	grading at southeasterly corner of main parking lot
2384	*Quercus agrifolia*	2	16, 14	32	38	no	yes	C-	C-	severe dieback; transplanted tree; remove fill from protected zone			X	within footprint of proposed parking lot
2385	*Quercus agrifolia*	3	3, 2, 1	11	8	no	no	B	B	co-dominant trunks with included bark	X			no impact anticipated
2386	*Quercus agrifolia*	1	4	12	9	no	no	C	C	sparse; minor dieback	X			no impact anticipated
2387	*Quercus agrifolia*	2	3, 3	16	15	no	no	C	C	minor dieback; co-dominant trunks with included bark	X			no impact anticipated
2388	*Quercus agrifolia*	1	6 @ 3.5'	15	12	no	no	C-	C-	minor dieback; co-dominant scaffolds with included bark; remove stakes and ties			X	within footprint of hotel Building A
2389	*Quercus agrifolia*	1	5	12	19	no	no	C-	C-	sparse; minor dieback; co-dominant scaffolds with included bark	X			no impact anticipated
2390	*Quercus agrifolia*	2	3, 1	7	18	no	no	D+	D+	dieback; trunk used as scratching post			X	grading for villa building pad adjacent to 'C' Drive
2391	*Quercus agrifolia*	1	4	10	8	no	no	C-	C-	dieback; trunk used as scratching post; co-dominant scaffolds with included bark			X	grading for villa building pad adjacent to 'C' Drive
2392	*Quercus agrifolia*	1	6	14	18	no	no	C	C	minor dieback; co-dominant scaffolds with included bark	X			no impact anticipated
2393	*Quercus agrifolia*	2	3, 1	9	15	no	no	D+	D+	moderate to severe dieback, necrotic foliage	X			no impact anticipated
2394	*Quercus agrifolia*	2	8, 6	17	21	no	no	C	C-	co-dominant trunks with included bark	X			no impact anticipated
2395	*Quercus agrifolia*	1	9 @ 4.0'	21	20	no	no	B	B	co-dominant scaffolds with included bark	X			no impact anticipated
2396	*Quercus agrifolia*	1	10 @ 4.0'	22	25	no	no	C	C	co-dominant scaffolds with included bark; slightly sparse	X			no impact anticipated
2397	*Quercus agrifolia*	2	17, 13	35	30	no	yes	B-	B-	slightly sparse; transplanted tree	X			no impact anticipated
2398	*Quercus agrifolia*	3	27, 21, 19	53	48	no	no	B	B	minor necrotic foliage	X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2399	*Quercus agrifolia*	2	19, 18	32	30	no	no	B-	B-	bird box on trunk	X			no impact anticipated
2400	*Quercus agrifolia*	1	31	51	50	no	no	B-	B-	co-dominant scaffolds with included bark	X			no impact anticipated
2401	*Quercus agrifolia*	4	12, 7, 7, 5	30	33	no	no	A	A-	co-dominant trunks with included bark	X			no impact anticipated
2402	*Quercus agrifolia*	2	6 @ 4.0', 3 @ 2.5'	14	18	no	no	D	D	twig dieback; extremely sparse	X			no impact anticipated
2403	*Quercus agrifolia*	1	9 @ 2.7'	19	20	no	no	C-	C-	dieback; sparse	X			no impact anticipated
2404	*Quercus agrifolia*	1	7 @ 4.0'	15	15	no	no	D+	D+	dieback; sparse	X			no impact anticipated
2405	*Quercus agrifolia*	1	12 @ 4.0'	26	25	no	no	B	B	co-dominant scaffolds with included bark	X			no impact anticipated
2406	*Quercus agrifolia*	1	7	18	18	no	no	D	D	dieback; sparse; severe trunk wound possibly due to fire damage			X	within grading for building pad
2407	*Quercus agrifolia*	1	10 @ 4.0'	22	24	no	no	B	B	co-dominant trunks with included bark; bark damage			X	within grading for building pad
2408	*Quercus agrifolia*	1	9 @ 4.0'	20	23	no	no	B-	B-	minor dieback; bark damage			X	within grading for building pad
2409	*Quercus agrifolia*	1	2	10	10	no	no	D	D	twig dieback; extremely sparse			X	within grading for building pad
2410	*Quercus agrifolia*	3	16 @ 4.0', 15, 13 @ 4.0',	38	35	no	yes	B+	B+	co-dominant trunks with included bark			X	grading for 'A' Drive and main parking lot
2412	*Quercus berberidifolia*	6	5, 5, 4, 4, 4, 3	30	28	no	no	C	C	minor dieback; slightly sparse			X	within main parking lot
2413	*Quercus berberidifolia*	4	5 @ 4.0', 4, 4, 3	23	24	no	no	C-	C-	minor dieback; sparse; co-dominant trunks with included bark			X	within 'A' Drive
2414	*Quercus agrifolia*	1	5 @ 4.0'	15	14	no	no	B	B	bark damage			X	within grading for 'A' Drive
2415	*Quercus berberidifolia*	4	5, 4, 3, 3	7	20	no	no	D-	D-	nearly dead			X	within grading for building pad adjacent to 'A' Drive
2416	*Quercus agrifolia*	1	6 @ 3.7' (est.)	12	15	no	no	C-	C-	minor dieback; sparse; bark damage; remove stakes and ties			X	within grading for building pad adjacent to 'A' Drive
2417	*Quercus agrifolia*	1	6	16	18	no	no	C-	C-	sparse; co-dominant scaffolds with included bark; remove stakes and ties	X			no impact anticipated
2418	*Quercus agrifolia*	2	5 @ 3.5', 5 @ 3.5'	15	17	no	no	C-	C-	minor dieback; sparse; bark damage; remove stakes and ties; co-dominant trunks with included bark	X			no impact anticipated
2419	*Quercus agrifolia*	6	13, 11, 10, 10, 8, 7	39	35	no	yes	C-	C-	sparse; dieback; remove fill from protected zone; transplanted tree	X			no impact anticipated
2420	*Quercus berberidifolia*	2	3, 2	5	12	no	no	D-	D-	nearly dead	X			no impact anticipated
2421	*Quercus agrifolia*	2	7, 3	20	26	no	no	C+	C+	minor dieback; co-dominant trunks with included bark	X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2422	*Quercus agrifolia*	1	11	15	33	no	yes	C-	C-	dieback; sparse; transplanted; co-dominant scaffolds with included bark	X			no impact anticipated
2423	*Quercus agrifolia*	3	15, 14, 7	17	27	no	yes	C-	C-	dieback; sparse; transplanted; co-dominant trunks with included bark	X			no impact anticipated
2424	*Quercus agrifolia*	1	17	19	26	no	yes	D+	D+	dieback; sparse; transplanted; severe trunk wound	X			no impact anticipated
2425	*Quercus agrifolia*	3	25 @ 4.0', 22, 21	49	60	no	no	B-	B-	minor dieback; co-dominant trunks with included bark	X			no impact anticipated
2426	*Quercus agrifolia*	1	56 @ 3.9'	63	75	yes	no	B+	B+	co-dominant trunks with included bark	X			no impact anticipated
2427	*Quercus agrifolia*	1	3	11	15	no	no	C+	C+	slightly sparse	X			no impact anticipated
2428	*Quercus agrifolia*	2	19, 15	35	40	no	no	C-	C-	sparse; dieback; may have been root-pruned when cart path built; co-dominant trunks with included bark	X			no impact anticipated
2429	*Quercus agrifolia*	1	45 @ 3.4'	59	66	yes	no	C	C	minor dieback; may have been root-pruned when cart path built; crown-raised	X			no impact anticipated
2430	*Quercus agrifolia*	1	25	23	45	no	no	C-	C-	dieback; sparse	X			no impact anticipated
2431	*Quercus agrifolia*	3	33, 24, 22	27	40	yes	no	D	D	dieback; extremely sparse; 33-inch trunk dead	X			no impact anticipated
2432	*Quercus agrifolia*	2	45 @ 4.0', 23	N/A	N/A	yes	no	F	F	dead	X			no impact anticipated
2433	*Quercus agrifolia*	1	26	38	43	no	no	B	B		X			no impact anticipated
2434	*Quercus agrifolia*	2	26, 12 @ 4.0'	49	47	no	no	B	B	co-dominant trunks with included bark	X			no impact anticipated
2435	*Quercus agrifolia*	3	47, 2, 2	74	60	yes	no	C+	C+	dieback; sparse; dried-up conk at root crown	X			no impact anticipated
2436	*Quercus agrifolia*	2	28, 24	57	54	yes	no	C-	C-	sparse; co-dominant scaffolds with included bark	X			no impact anticipated
2437	*Quercus agrifolia*	1	26	46	40	no	no	C	C	slightly sparse; restore natural grade at root crown	X			no impact anticipated
2438	*Quercus agrifolia*	1	39	59	55	yes	no	C+	C-	slightly sparse	X			no impact anticipated
2439	*Quercus agrifolia*	5	22, 20, 19, 18, 12	60	65	no	no	C	C	minor dieback; slightly sparse; co-dominant trunks with included bark; possible internal crack with response wood	X			no impact anticipated
2440	*Quercus berberidifolia*	1	2	12	17	no	no	C-	C-	extremely sparse	X			no impact anticipated
2441	*Quercus agrifolia*	2	25, 19	34	55	no	no	B-	B-	bow in trunk	X			no impact anticipated
2442	*Quercus agrifolia*	1	41	61	65	yes	no	C	C	slightly sparse; remove hanger in canopy	X			no impact anticipated
2443	*Quercus agrifolia*	1	21	25	48	no	no	B-	B-		X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2444	*Quercus agrifolia*	1	5	11	30	no	no	C-	C-	suppressed; sparse	X			no impact anticipated
2445	*Quercus agrifolia*	1	22	27	55	no	no	C	C	somewhat sparse	X			no impact anticipated
2446	*Quercus agrifolia*	4	18, 14, 13, 11 (est.)	N/A	N/A	no	no	F	F	dead; bee hive in trunk	X			no impact anticipated
2447	*Quercus agrifolia*	3	19, 18, 15	52	55	no	no	B-	B-	slightly sparse; co-dominant trunks with included bark	X			no impact anticipated
2448	*Quercus agrifolia*	3	14, 10, 7	37	48	no	no	C-	C-	dieback; sparse	X			no impact anticipated
2449	*Quercus agrifolia*	2	14, 13	26	40	no	no	C	C	somewhat sparse	X			no impact anticipated
2450	*Quercus agrifolia*	1	6	12	16	no	no	C	C	suppressed; somewhat sparse; severe bow in trunk	X			no impact anticipated
2451	*Quercus agrifolia*	3	12, 12, 9	19	20	no	no	D	D	sparse; severe dieback; severe decay in trunk	X			no impact anticipated
2452	*Quercus agrifolia*	3	15, 13, 13	31	35	no	no	B-	B-	additional trunk topped at 3.5 feet	X			no impact anticipated
2453	*Quercus agrifolia*	2	17, 16	40	45	no	no	B-	B-		X			no impact anticipated
2454	*Quercus agrifolia*	3	12, 12, 12	17	37	no	no	D	D	dieback; nearly dead	X			no impact anticipated
2455	*Quercus agrifolia*	3	20, 16, 12	45	48	no	no	B	B		X			no impact anticipated
2456	*Quercus agrifolia*	3	20, 20, 18	48	55	no	no	B-	B-	co-dominant trunks with included bark	X			no impact anticipated
2457	*Quercus agrifolia*	1	16	N/A	N/A	no	no	F	F	dead	X			no impact anticipated
2458	*Quercus agrifolia*	2	28, 22	37	65	no	no	B	B		X			no impact anticipated
2459	*Quercus agrifolia*	1	10	17	27	no	no	C	C	severe cavity with decay in trunk	X			no impact anticipated
2460	*Quercus agrifolia*	1	4 (est.)	N/A	N/A	no	no	F	F	dead; inaccessible - not tagged	X			no impact anticipated
2461	*Quercus agrifolia*	2	2, 2 (est.)	8	18	no	no	B	B	sparse; inaccessible - not tagged	X			no impact anticipated
2462	*Quercus agrifolia*	2	2 (est.)	6	17	no	no	B	B	sparse; inaccessible - not tagged	X			no impact anticipated
2463	*Quercus agrifolia*	2	22, 21	45	50	no	no	B	B	minor dieback; co-dominant trunks with included bark	X			no impact anticipated
2464	*Quercus agrifolia*	2	17 @ 2.0', 9	25	38	no	no	B-	B-	sparse	X			no impact anticipated
2465	*Quercus agrifolia*	2	11, 6	17	50	no	no	B-	B-	six-inch trunk dead; sparse	X			no impact anticipated

TABLE 1 - OAK TREE INVENTORY

Tree #	Species	Trunks	Trunk Diameter (dbh)	Canopy Spread (feet)	Height (feet)	Heritage	Previous Transplant	Ratings		Comments	Impact			Impact Description
								Health	Vigor		None	Encroach	Remove	
2466	*Quercus agrifolia*	4	19, 17, 17 @ 3.5', 12	30	50	no	no	B-	B-	slightly sparse; co-dominant trunks with included bark; trunk seam	X			no impact anticipated
2467	*Quercus agrifolia*	4	16, 16, 16, 15 @ 1.5'	29	55	no	no	B-	B-	slightly sparse; co-dominant trunks with included bark	X			no impact anticipated
2468	*Quercus agrifolia*	1	25	37	65	no	no	B	B	co-dominant scaffolds with included bark	X			no impact anticipated
2469	*Quercus agrifolia*	3	31, 21, 14	65	50	no	no	B	B		X			no impact anticipated
2470	*Quercus agrifolia*	5	2, 1.5, 1, 1, 1	13	10	no	no	D	C-	sparse; most foliage necrotic			X	within sidewalk adjacent to Robinson Ranch Road
2471	*Quercus agrifolia*	1	3	12	16	no	no	A	A		X			no impact anticipated
2472	*Quercus agrifolia*	3	1, 1, 1	10	12	no	no	A	A		X			no impact anticipated
2473	*Quercus agrifolia*	1	4	13	16	no	no	C+	C+	slightly sparse; some marginal necrosis			X	within proposed 'D' Drive
											115	**0**	**25**	

TABLE 2 - DEAD AND DECLINING TREE SUMMARY

Tree #	Species	Trunks	Diameter (dbh)	Heritage	Previous Transplant	Ratings		Comments
						Health	Vigor	
2338	*Quercus berberidifolia*	6	6 @ 2.0', 5 @ 4.0', 5, 4, 4, 3	no	no	D	D	nearly dead; six of 11 trunks dead; most foliage epicormic sprouts
2339	*Quercus agrifolia*	2	7, 1	no	no	C-	D+	suppressed
2367	*Quercus agrifolia*	2	21, 11	no	no	D-	D-	nearly dead; very little foliage
2368	*Quercus agrifolia*	1	22 (est.)	no	yes	F	F	dead and fallen
2377	*Quercus agrifolia*	1	24	no	yes	D+	D+	moderate to severe dieback, epicormic sprouts
2379	*Quercus agrifolia*	4	19 @ 3.5', 16, 16, 14	no	yes	D-	D-	19-inch and one 16-inch trunk dead; transplanted tree; nearly dead
2390	*Quercus agrifolia*	2	3, 1	no	no	D+	D+	dieback; trunk used as scratching post
2393	*Quercus agrifolia*	2	3, 1	no	no	D+	D+	moderate to severe dieback, necrotic foliage
2402	*Quercus agrifolia*	2	6 @ 4.0', 3 @ 2.5'	no	no	D	D	twig dieback; extremely sparse
2404	*Quercus agrifolia*	1	7 @ 4.0'	no	no	D+	D+	dieback; sparse
2406	*Quercus agrifolia*	1	7	no	no	D	D	dieback; sparse; severe trunk wound possibly due to fire damage
2409	*Quercus agrifolia*	1	2	no	no	D	D	twig dieback; extremely sparse
2415	*Quercus berberidifolia*	4	5, 4, 3, 3	no	no	D-	D-	nearly dead
2420	*Quercus berberidifolia*	2	3, 2	no	no	D-	D-	nearly dead

TABLE 2 - DEAD AND DECLINING TREE SUMMARY

Tree #	Species	Trunks	Diameter (dbh)	Heritage	Previous Transplant	Ratings		Comments
						Health	Vigor	
2424	*Quercus agrifolia*	17	17	no	yes	D+	D+	dieback; sparse; transplanted; severe trunk wound
2431	*Quercus agrifolia*	3	24, 22, 33	yes	no	D	D	dieback; extremely sparse; 33-inch trunk dead
2432	*Quercus agrifolia*	2	45 @ 4.0', 23	yes	no	F	F	dead
2446	*Quercus agrifolia*	4	18, 14, 13, 11 (est.)	no	no	F	F	dead; bee hive in trunk
2451	*Quercus agrifolia*	3	12, 12, 9	no	no	D	D	sparse; severe dieback; severe decay in trunk
2454	*Quercus agrifolia*	3	12, 12, 12	no	no	D	D	dieback; tree nearly dead
2457	*Quercus agrifolia*	1	16	no	no	F	F	dead
2460	*Quercus agrifolia*	1	4 (est.)	no	yes	F	F	dead; inaccessible - not tagged
2470	*Quercus agrifolia*	5	2, 1.5, 1, 1, 1	no	no	D	C-	sparse; most foliage necrotic

TABLE 3 - OAK TREE REMOVALS

Tree #	Species	Number of Trunks	Diameter (dbh)	Heritage	Ratings		Impacts	Transplant Potential	
					Health	Vigor			
365	*Quercus agrifolia*	4	4, 3, 3, 3	no	C-	D	within grading for proposed 'J' Drive	no	poor vigor
366	*Quercus agrifolia*	2	6, 4.5	no	B-	C	within grading for proposed 'J' Drive	yes	
367	*Quercus agrifolia*	1	6	no	B	C	within grading for proposed 'J' Drive	yes	
368	*Quercus agrifolia*	2	7.5, 5	no	B	B	within grading for proposed 'J' Drive	yes	
2355	*Quercus agrifolia*	1	8 @ 4.0'	no	A	A	within grading for proposed 'E' Drive	yes	
2356	*Quercus agrifolia*	1	12	no	A	A	within proposed 'E' Drive	yes	
2358	*Quercus agrifolia*	1	7 @ 3.0'	no	B-	B-	within proposed 'E' Drive	no	vigor only fair
2382	*Quercus berberidifolia*	13	4, 4, 3, 3, 3, 3, 3, 3, 3, 2, 2, 2, 1	no	C-	C-	grading at southeasterly corner of main parking lot	no	slightly sparse, fair vigor, dieback
2383	*Quercus agrifolia*	5	13, 9, 8, 6, 4	no	C-	C-	grading at southeasterly corner of main parking lot	no	one trunk dead; fair to poor vigor; dieback; previous transplant
2384	*Quercus agrifolia*	2	16, 14	no	C-	C-	within footprint of proposed parking lot	no	sparse; fair to poor vigor; dieback; previous transplant
2388	*Quercus agrifolia*	1	6 @ 3.5'	no	C-	C-	within footprint of hotel Building A	no	sparse; fair to poor vigor; minor dieback
2390	*Quercus agrifolia*	2	3, 1	no	D+	D+	grading for villa building pad adjacent to 'C' Drive	no	sparse; fair to poor vigor; dieback
2391	*Quercus agrifolia*	1	4	no	C-	C-	grading for villa building pad adjacent to 'C' Drive	no	sparse; small leaves; fair to poor vigor; dieback
2406	*Quercus agrifolia*	1	7	no	D	D	within grading for building pad	no	sparse; small leaves; poor vigor; dieback
2407	*Quercus agrifolia*	1	10 @ 4.0'	no	B	B	within grading for building pad	yes	
2408	*Quercus agrifolia*	1	9 @ 4.0'	no	B-	B-	within grading for building pad	no	slightly sparse, minor dieback; fair vigor
2409	*Quercus agrifolia*	2	2	no	D	D	within grading for building pad	no	sparse, poor vigor, minor dieback
2410	*Quercus agrifolia*	3	16 @ 4.0', 15, 13 @ 4.0',	no	B+	B+	grading for 'A' Drive and main parking lot	no	previous transplant
2412	*Quercus berberidifolia*	6	5, 5, 4, 4, 4, 3	no	C	C	within main parking lot	no	sparse, fair vigor, minor dieback

TABLE 3 - OAK TREE REMOVALS

2413	*Quercus berberidifolia*	4	5 @ 4.0', 4, 4, 3	no	C-	C-	within 'A' Drive	no	sparse, fair to poor vigor, dieback
2414	*Quercus agrifolia*	1	5 @ 4.0'	no	B	B	within grading for 'A' Drive	yes	
2415	*Quercus berberidifolia*	4	5, 4, 3, 3	no	D-	D-	within grading for building pad adjacent to 'A' Drive	no	sparse, poor vigor, dieback
2416	*Quercus agrifolia*	1	6 @ 3.7' (est.)	no	C-	C-	within grading for building pad adjacent to 'A' Drive	no	sparse, fair to poor vigor, minor dieback
2470	*Quercus agrifolia*	5	2, 1.5, 1, 1, 1	no	D	C-	within sidewalk adjacent to Robinson Ranch Road	no	mostly necrotic foliage; sparse, poor vigor, minor dieback
2473	*Quercus agrifolia*	1	4	no	C+	C+	within proposed 'D' Drive	no	slightly sparse; marginal necrosis

TABLE 4A - APPRAISAL, SPECIES AND LOCATION EVALUATION

Location: Inland

Tree Number	Species	Class Rating	Species Rating	Adjustment (+ or - 10%)	Final Rating	Group Number	Repl. Trunk Area	Basic Price	Site Rating	Contribution Rating	Placement Rating	Location Rating
365	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
366	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
367	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
368	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2355	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2356	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2358	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2382	*Quercus berberidifolia*	2	70%	0%	70%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2383	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2384	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2388	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2390	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2391	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2406	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2407	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2408	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2409	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2410	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2412	*Quercus berberidifolia*	2	70%	0%	70%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2413	*Quercus berberidifolia*	2	70%	0%	70%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2414	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2415	*Quercus berberidifolia*	2	70%	0%	70%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2416	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	$103.49	75%	10%	10%	32%
2470	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%
2473	*Quercus agrifolia*	1	90%	0%	90%	3	23.76 sq. in.	N/A	75%	10%	10%	32%

TABLE 4B - APPRAISAL, CONDITION EVALUATION

CONDITION RATING

No apparent problems	4
Minor problems	3
Major problems	2
Extreme problems	1

Tree Number	Roots		Trunk		Scaffold Branches		Small Branches and Twigs	Foliage and/or Buds	Points	Condition
	Structure	Health	Structure	Health	Structure	Health				
365	Taken from Sb horticulture report								0	50%
366	Taken from Sb horticulture report								0	78%
367	Taken from Sb horticulture report								0	80%
368	Taken from Sb horticulture report								0	80%
2355	4	4	4	4	3	4	4	4	31	97%
2356	4	4	4	4	3	4	4	4	31	97%
2358	4	4	4	4	3	4	2	2	27	84%
2382	4	4	4	4	4	2	1	1	24	75%
2383	4	4	4	4	3	2	1	1	23	72%
2384	4	4	4	1	4	2	1	1	21	66%
2388	4	4	3	4	2	4	1	1	23	72%
2390	4	4	4	3	3	2	1	1	22	69%
2391	4	4	4	3	3	3	1	1	23	72%
2406	2	4	2	4	3	2	1	1	19	59%
2407	4	4	2	4	4	4	4	4	30	94%
2408	4	4	3	4	4	4	3	3	29	91%

TABLE 4B - APPRAISAL, CONDITION EVALUATION

Tree Number	Roots		Trunk		Scaffold Branches		Small Branches and Twigs	Foliage and/or Buds	Points	Condition
	Structure	Health	Structure	Health	Structure	Health				
2409	4	4	4	4	2	1	1	1	21	66%
2410	4	4	3	4	3	3	3	3	27	84%
2412	4	4	2	4	4	3	1	1	23	72%
2413	4	4	2	4	4	3	1	1	23	72%
2414	4	4	3	4	4	3	3	3	28	88%
2415	4	4	1	1	1	1	1	1	14	44%
2416	4	4	4	3	3	4	1	1	24	75%
2470	4	4	3	4	3	1	1	1	21	66%
2473	4	4	4	4	3	1	1	1	22	69%

TABLE 4 - APPRAISAL, VALUATION

Tree Number	Species	Condition Rating	Equivalent d_A (in.)	Location Rating	Species Rating	TA_R (sq. in.)	Replacement Tree Cost	Installation Cost	Installed Tree Cost	Unit Tree Cost (/sq. in.)	TA_A or ATA_A (sq. in.)	TA_{INCR} (sq. in.)	Basic Tree Cost	Appraised Value	Final Appraised Value
365	*Quercus agrifolia*	50%	6.6	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	33.76	10.00	$5,993.56	$854	$850
366	*Quercus agrifolia*	78%	7.5	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	44.16	20.40	$7,069.98	$1,572	$1,570
367	*Quercus agrifolia*	80%	6.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	28.26	4.50	$5,424.88	$1,237	$1,240
368	*Quercus agrifolia*	80%	9.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	63.78	40.02	$9,100.98	$2,075	$2,080
2355	*Quercus agrifolia*	97%	8.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	50.24	26.48	$7,699.59	$2,126	$2,130
2356	*Quercus agrifolia*	97%	12.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	113.04	89.28	$14,198.76	$3,920	$3,920
2358	*Quercus agrifolia*	84%	7.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	38.47	14.71	$6,481.00	$1,558	$1,560
2382	*Quercus berberidifolia*	75%	10.4	32%	70%	0.79	$1,000.00	$1,000.00	$2,000.00	N/A	N/A	N/A	$2,000.00	$333	$330
2383	*Quercus agrifolia*	72%	19.1	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	287.31	263.55	$32,233.97	$6,603	$6,600
2384	*Quercus agrifolia*	66%	21.3	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	354.82	331.06	$39,220.58	$7,335	$7,300
2388	*Quercus agrifolia*	72%	6.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	28.26	4.50	$5,424.88	$1,111	$1,110
2390	*Quercus agrifolia*	69%	3.2	32%	90%	23.76	$570.00	$570.00	$1,140.00	N/A	N/A	N/A	$1,140.00	$223	$220
2391	*Quercus agrifolia*	72%	4.0	32%	90%	23.76	$1,399.00	$1,850.00	$3,249.00	N/A	N/A	N/A	$3,249.00	$666	$670
2406	*Quercus agrifolia*	59%	7.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	38.47	14.71	$6,481.00	$1,097	$1,100
2407	*Quercus agrifolia*	94%	10.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	78.50	54.74	$10,624.22	$2,839	$2,840
2408	*Quercus agrifolia*	91%	9.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	63.59	39.83	$9,080.67	$2,345	$2,350
2409	*Quercus agrifolia*	66%	2.0	32%	90%	23.76	$215.00	$215.00	$430.00	N/A	N/A	N/A	$430.00	$80	$80
2410	*Quercus agrifolia*	84%	25.5	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	510.25	486.49	$55,306.03	$13,299	$13,300
2412	*Quercus berberidifolia*	72%	10.3	32%	70%	23.76	$1,000.00	$1,000.00	$2,000.00	N/A	N/A	N/A	$2,000.00	$319	$320
2413	*Quercus berberidifolia*	72%	8.1	32%	70%	23.76	$800.00	$800.00	$1,600.00	N/A	N/A	N/A	$1,600.00	$255	$250
2414	*Quercus agrifolia*	88%	5.0	32%	90%	23.76	$1,399.00	$1,850.00	$3,249.00	N/A	N/A	N/A	$3,249.00	$810	$810
2415	*Quercus berberidifolia*	44%	7.7	32%	70%	23.76	$800.00	$800.00	$1,600.00	N/A	N/A	N/A	$1,600.00	$155	$160
2416	*Quercus agrifolia*	75%	6.0	32%	90%	23.76	$2,459.00	$2,500.00	$4,959.00	$103.49	28.26	4.50	$5,424.88	$1,160	$1,160
2470	*Quercus agrifolia*	66%	3.0	32%	90%	23.76	$1,800.00	$3,500.00	$5,300.00	N/A	N/A	N/A	$5,300.00	$991	$990
2473	*Quercus agrifolia*	69%	4.0	32%	90%	23.76	$1,399.00	$1,850.00	$3,249.00	N/A	N/A	N/A	$3,249.00	$637	$640
															$47,840

APPENDIX B – PHOTOGRAPHS

Tree #365

Tree #366

Tree #367

Tree #368

Tree #2336

Tree #2338

Tree #2339

Tree #2340

Tree #2341

Tree #2342

Tree #2343

Tree #2344

Tree #2345

Tree #2346

Tree #2347

Tree #2348

Tree #2349

Tree #2350

Tree #2351

Tree #2352

Tree #2353

Tree #2354

Tree #2355

Tree #2356

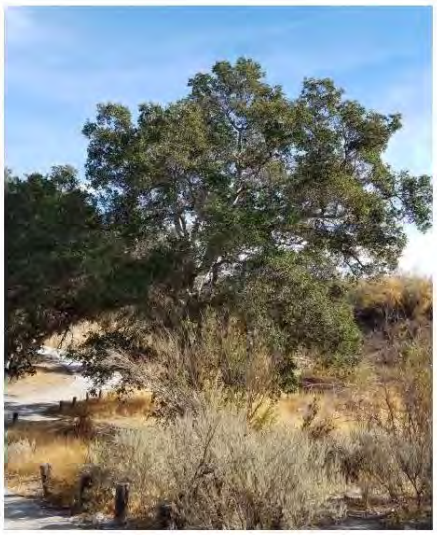
Tree #2357

Tree #2358

Tree #2359

Tree #2360

Tree #2361



Tree #2362

Tree #2363

Tree #2364

Tree #2365

Tree #2366

Tree #2367

Tree #2368

Tree #2369

Tree #2370

Tree #2371

Tree #2372

Tree #2373

Tree #2374

Tree #2375

Tree #2376

Tree #2377

Tree #2378

Tree #2379

Tree #2380

Tree #2381

Tree #2382

Tree #2383

Tree #2384

Tree #2385

Tree #2386

Tree #2387

Tree #2388

	
Tree #2389	Tree #2390
	
Tree #2391	Tree #2392

	
Tree #2393	Tree #2394
	
Tree #2395	Tree #2396

Tree #2397

Tree #2398

Tree #2399

Tree #2400

	
Tree #2401	Tree #2402
	
Tree #2403	Tree #2404

Tree #2405

Tree #2406

Tree #2407

Tree #2408

Tree #2409

Tree #2410

Tree #2412

Tree #2413

Tree #2414

Tree #2415

Tree #2416

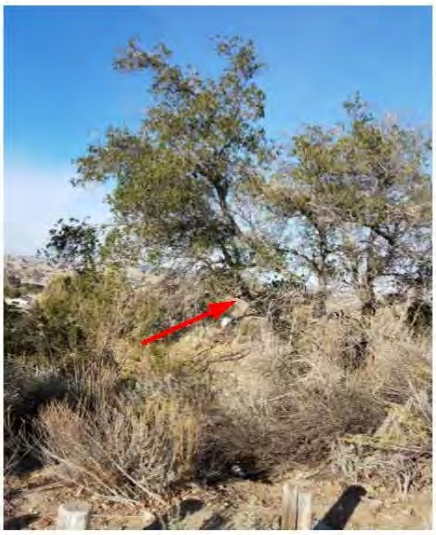
Tree #2417

Tree #2418

Tree #2419

Tree #2420

Tree #2421



Tree #2422

Tree #2423

Tree #2424

Tree #2425

Tree #2426

Tree #2427

Tree #2428

Tree #2429

Tree #2430

Tree #2431

Tree #2432

Tree #2433

Tree #2434

Tree #2435

Tree #2436

Tree #2437

Tree #2438

Tree #2439

Tree #2440

Tree #2441

Tree #2442

Tree #2443

Tree #2444

Tree #2445

Tree #2446

Tree #2447

Tree #2448

Tree #2449

Tree #2450

Tree #2451

Tree #2452

Tree #2453

	
Tree #2454	Tree #2455
	
Tree #2456	Tree #2457

Tree #2458

Tree #2459

Tree #2460

Tree #2461

Tree #2462

Tree #2463

Tree #2464

Tree #2465

Tree #2466

Tree #2467

Tree #2468

Tree #2469

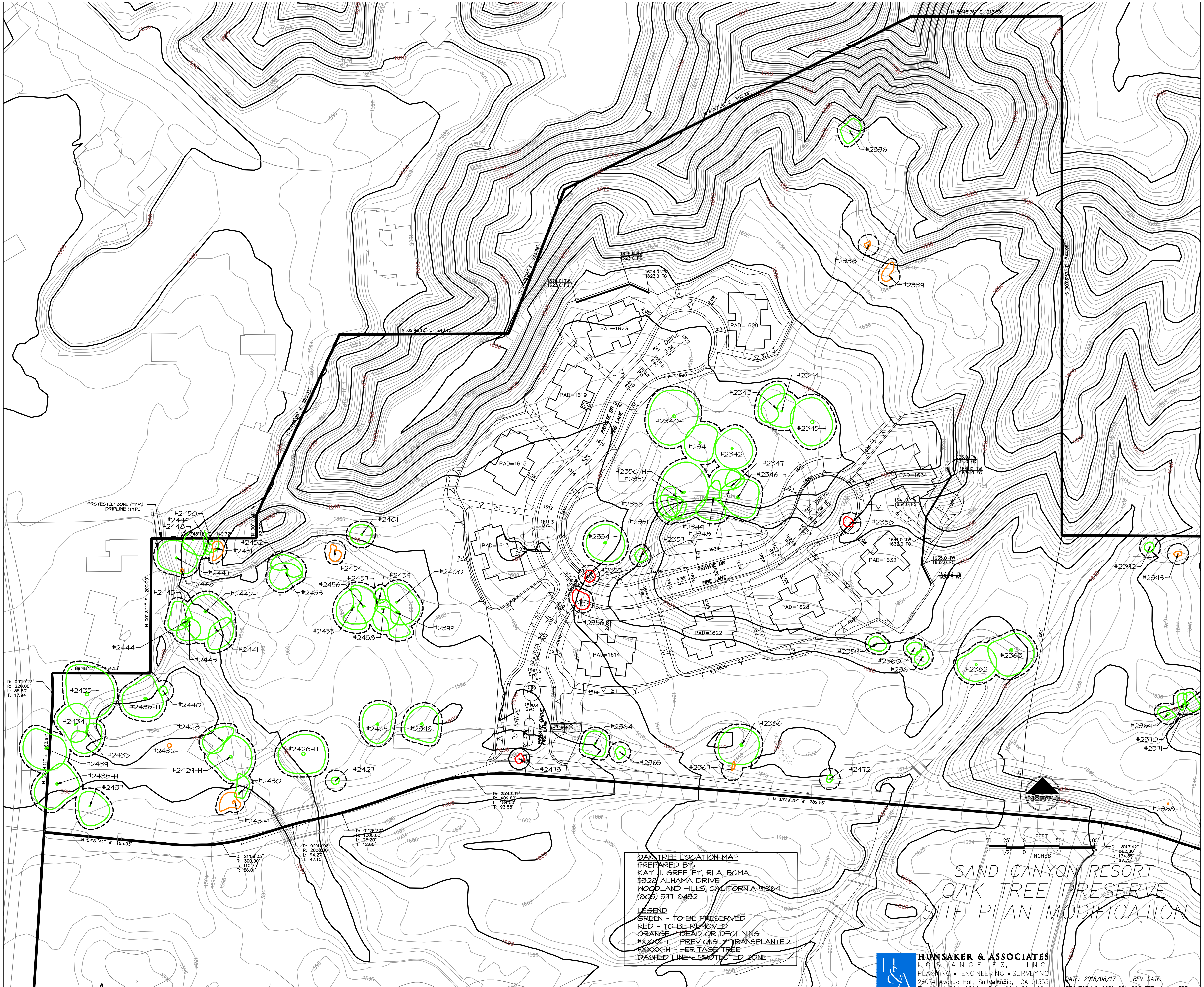
Tree #2470

Tree #2471

Tree #2472

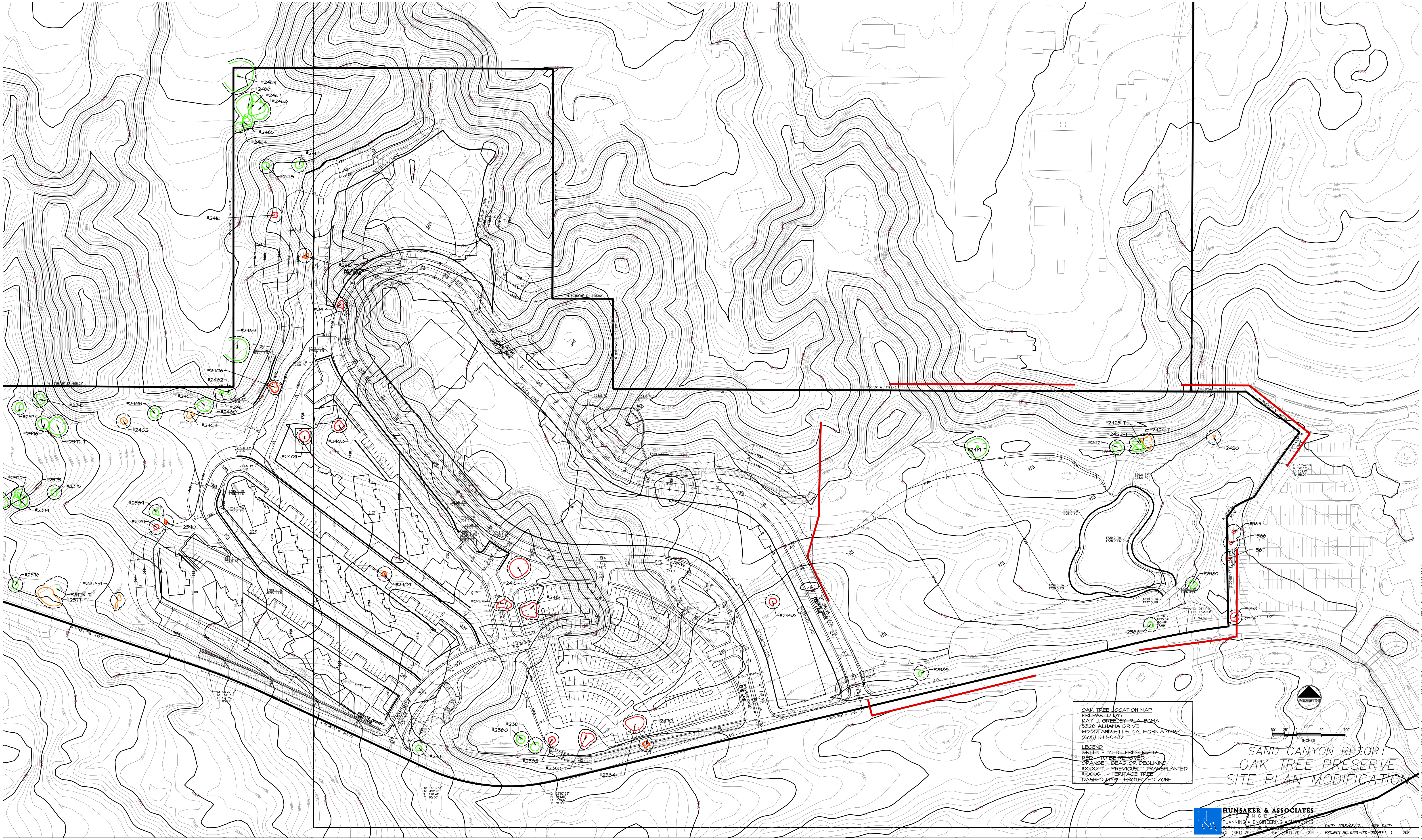
Tree #2473

APPENDIX C – OAK TREE LOCATION MAPS



C:\Users\kaygr\Documents\Private\Robinson Ranch Golf Course\2018-08-27 – Drawings with maps\2019-01-28 Tree Location Map_with City Comment UF2.dwg Plotted on Oct 29, 2019 by kaygr

RGBASE-HSC.DWG

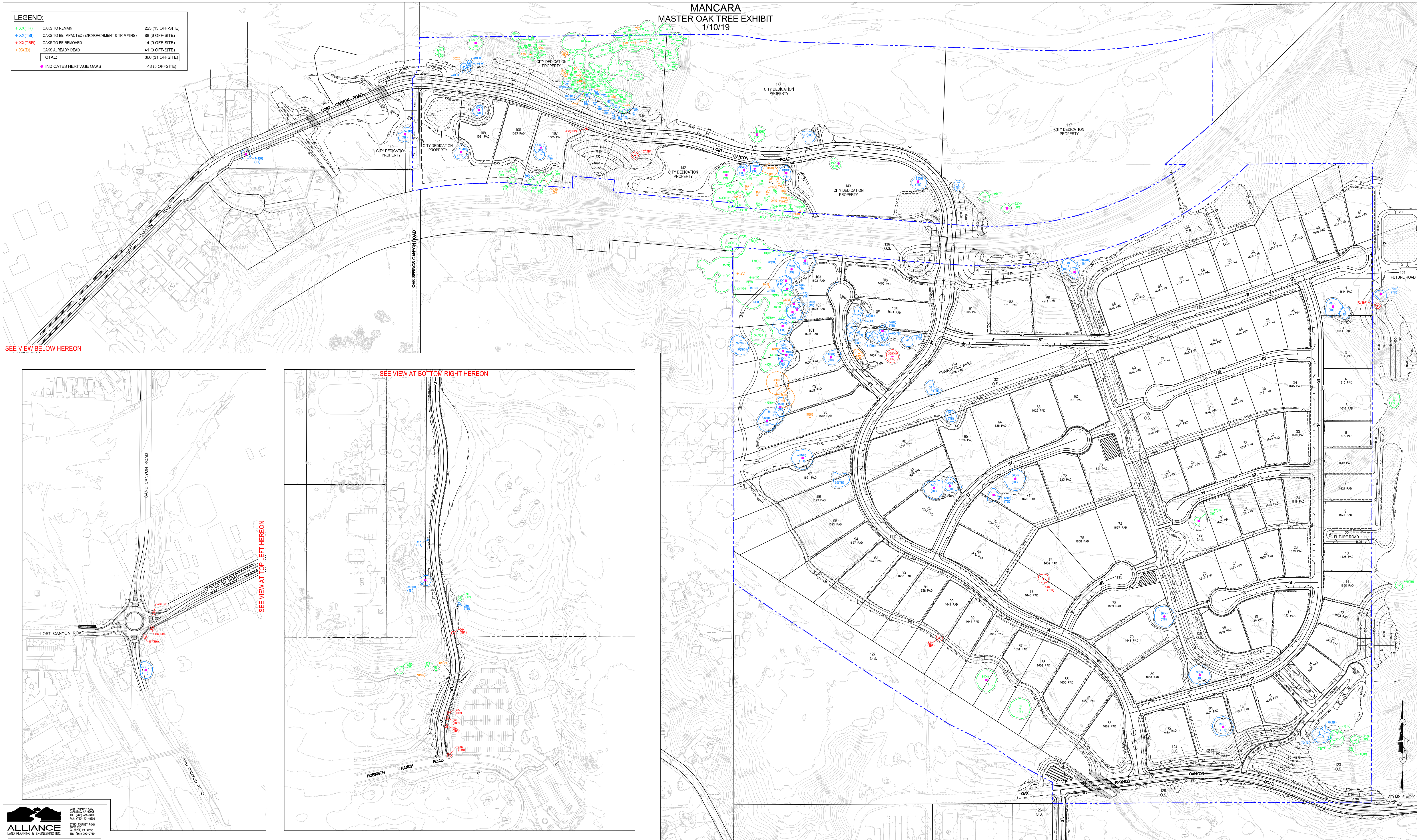


RGBASE-HSC.DWG

MANCARA
MASTER OAK TREE EXHIBIT
1/10/19

LEGEND:

+ XX(TR)	OAKS TO REMAIN	223 (13 OFF-SITE)
+ XX(TBI)	OAKS TO BE IMPACTED (ENCROACHMENT & TRIMMING)	88 (6 OFF-SITE)
+ XX(TBR)	OAKS TO BE REMOVED	14 (9 OFF-SITE)
+ XX(D)	OAKS ALREADY DEAD	41 (9 OFF-SITE)
	TOTAL:	366 (31 OFFSITE)
●	INDICATES HERITAGE OAKS	48 (5 OFFSITE)



ALLIANCE
LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431-9896
FAX: (760) 431-8802
27413 TOURNEY ROAD
SUITE 120
VALENCIA, CA 91355
TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

I:\CAD\1420\EXHIBITS\1420_OAK_TREE_EXHIBIT_100SC.dwg

Vegetation and Special Status Plant Assessment

Proposed Sand Canyon Resort

Santa Clarita, California

August 1, 2017

Prepared For: Compliance Biology Inc.
Camarillo, CA

Prepared By: Edith Read, PhD
E Read and Associates, Inc.
Orange, CA (714) 366-8857

TABLE OF CONTENTS

1 INTRODUCTION

Development is proposed for about 62 acres on part of a large golf course that is no longer used, located adjacent to Robinson Ranch Road in the City of Santa Clarita (Figure 1). Elevations on the site are in the range of about 1600 to 1800 feet above mean sea level. South-facing drainages with ephemeral hydrology (i.e. flows during and immediately after storms) are present above the former golf course in the watershed of Sand Canyon wash, which is a tributary to the Santa Clara River. Los Angeles County records indicate that the southeast part of the project area burned in 1980, and a section in the northwest burned in 1984.

2 METHODS

Reviews of the California Natural Diversity Database (CNDDB) and California Native Plant Society Inventory of Rare and Endangered Plants ("CNPS") were conducted prior to field surveys. Field surveys were conducted by E. Read on June 1, 2017. A reference site in lower Bee Canyon for an Endangered rare plant, slender-horned spineflower (*Dodecahema leptoceras*), was visited as part of the survey to assess growth status and detectability. Bee Canyon is a tributary to the Santa Clara River and located upstream of the project site. In the spring and early summer of 2017 following a relatively wet winter, the reference plants were found not to be detectable after mid-June. Therefore given this phenology plus the fuel-modified condition of much of the vegetation, no additional surveys were conducted after June 1.

Surveys documented all plant species observed following protocols of the California Native Plant Society and California Department of Fish and Wildlife. The taxonomic reference for all species was the current Jepson Manual (Baldwin et al., 2012). Vegetation types were mapped and classified using the current classification system for California (Sawyer et al., 2009) where appropriate.

3 RESULTS

3.1 Vegetation

Figure 2 shows vegetation types and other features observed during the surveys. Table 1 lists acreages of vegetation types and Table 2 lists the plant species observed. The following sections describe each vegetation type. Most native plant communities on the site are on low-gradient slopes and small hills between old golf course greens. Dominance of certain species appears to be the result of selective fuel modification and other disturbance rather than the undisturbed conditions assumed by the Sawyer et al. (2009) classification system.

Herbaceous-Dominated Vegetation

Cattail Marsh (Typha Herbaceous Alliance)

This vegetation is confined to a small artificial water feature in the southeast part of the project site. The species of cattail could not be determined at the time of the survey due to lack of flowering material.

Shrub-Dominated Vegetation

Acton Brittlebush Scrub (*Encelia actoni* Shrubland Alliance

This alliance is not yet recognized by Sawyer et al. (2009), but Acton brittlebush (also called Acton encelia) commonly dominates highly disturbed areas in this region. Other species in this alliance on site include those more abundant in other alliances, such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasiculatum*), and chaparral yucca (*Hesperoyucca whipplei*).

California Buckwheat Scrub (*Eriogonum fasciculatum* Shrubland Alliance)

California buckwheat scrub is a highly diverse community across low hills and along cart paths on the site. Shrub cover and abundance of herbaceous understory vary with location and past fuel modification practices. Native shrub species include big sagebrush (*Artemisia tridentata)*, California sagebrush, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), chamise (*Adenostoma fasciculatum*), Acton brittlebush, black sage (*Salvia mellifera*), white sage (*Salvia apiana*), purple sage (*Salvia leucophylla*), and coyote brush (*Baccharis pilularis*). Areas where shrub cover has been reduced have a greater abundance of non-native annuals such as Russian thistle (*Salsola tragus*), tocalote (*Centaurea melitensis*), and red brome (*Bromus madritensis* ssp. *rubens*).

Chamise Chaparral (*Adenostoma fasciculatum* Shrubland Alliance)

Chamise Chaparral occupies relatively undisturbed slopes above the former golf course and some small hills between golf cart paths. In addition to chamise, species in this community include chaparral yucca, elderberry (*Sambucus nigra* ssp. *caerulea*), beavertail cactus (*Opuntia basilaris*), big sagebrush, and hoary-leaf ceanothus (*Ceanothus crassifolius*). The vegetation has recovered from past fires, with shrub cover in the range of 80 to 100 percent.

Tree-Dominated Vegetation

Fremont Cottonwood Forest (*Populus fremontii* Forest Alliance)

This small community occupies a narrow gully that extends onto the project site from a residential area north of the property. Additional species include Gooding's willow (*Salix goodingii*) and invasive non-native salt cedar (*Tamarix* sp.).

California Live Oak (*Quercus agrifolia*) and Fremont Cottonwood (*Populus fremontii*)

These native trees occur in scattered stands across the site. Most of the oaks are mature and concentrated in upland areas on the western part of the site. The Fremont cottonwoods occur where there is a water feature and in areas near turf where there still appears to be some irrigation.

3.2 Special Status Plants

Table 3 lists all plant species evaluated based on data searches of the project quadrangle (Mint Canyon) and nine surrounding quadrangles.

No special status plant species have been reported to occur on the project site and none were observed during surveys. In general, with fragmented habitat and fuel modification in many areas, habitat quality for slender-horned spineflower and other rare plants is poor.

4 IMPACT ANALYSIS AND RECOMMENDATIONS

No impacts to special status plants are expected from the proposed project. However, we recommend that a protection plan for the oaks be prepared consistent with guidelines established by the City of Santa Clarita.

5 REFERENCES CITED

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens, 2009. A Manual of California Vegetation. Second Edition. California Native Plant Society and California Department of Fish and Game, Sacramento, California.

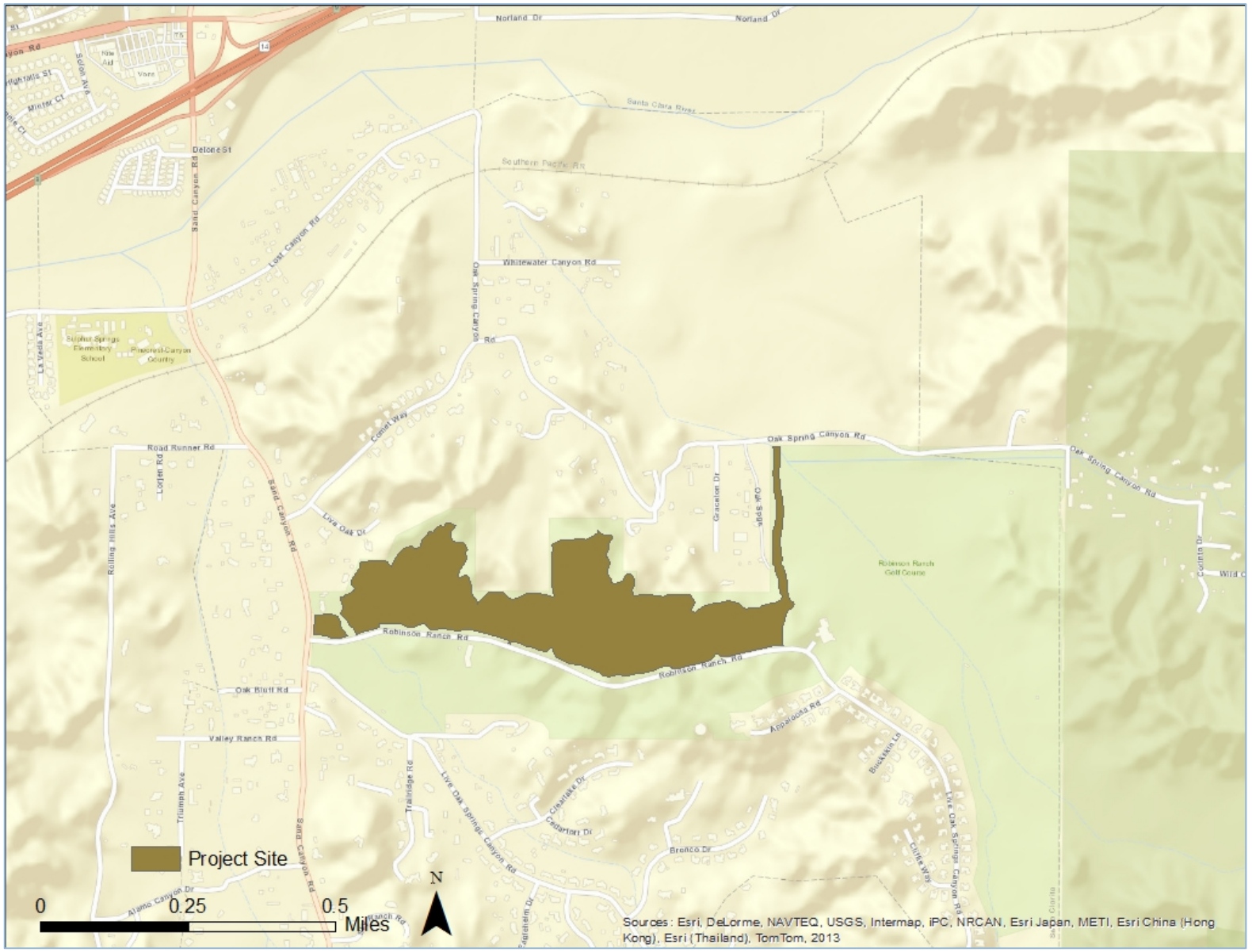


Figure 1. Project Location

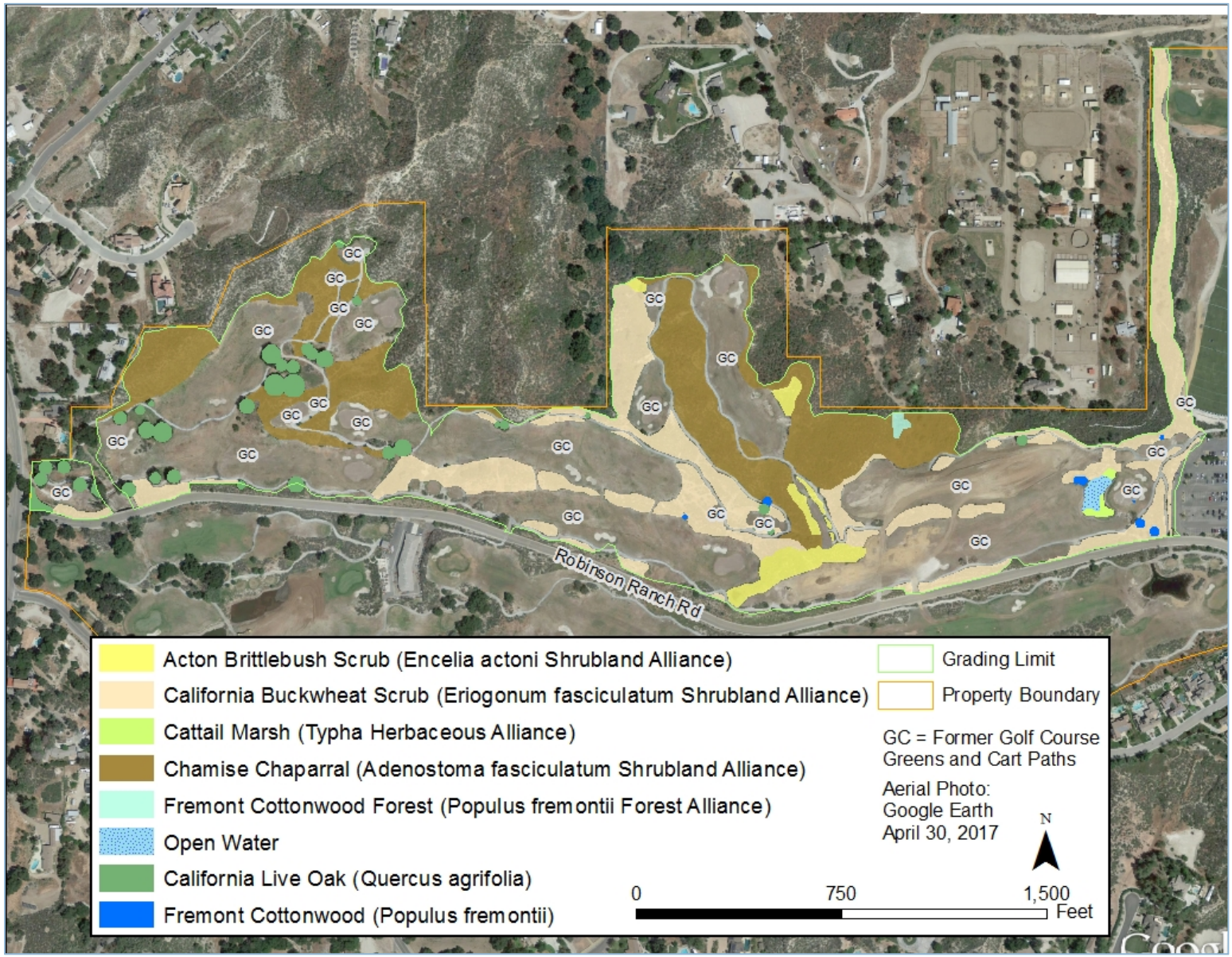


Figure 2. Vegetation Types and Site Features

Table 1. Vegetation Acres

Category	Acres
Herbaceous-Dominated Vegetation	
Cattail Marsh (part of golf course water feature)	0.11
Subtotal	*0.11*
Shrub-Dominated Vegetation	
Acton Brittlebush Scrub	1.36
California Buckwheat Scrub	10.80
Chamise Chaparral	11.57
Subtotal	*23.73*
Tree-Dominated Vegetation	
California Live Oak (scattered trees)	1.73
Fremont Cottonwood (scattered trees)	0.09
Fremont Cottonwood Forest	0.09
Subtotal	*1.91*
Miscellaneous Features	
Open Water (golf course water feature)	0.19
Former Golf Course (cleared)	36.06
Subtotal	*36.25*
Total	62.00

Table 2. Plant Species Observed

Asterisk (*) indicates species not native to California.

Eudicots	Flowering Plants
Adoxaceae	**Muskroot Family**
Sambucus nigra L.subsp. *caerulea* (Raf.) Bolli	blue elderberry
Anacardiaceae	**Sumac Family**
Rhus ovata S. Watson	sugar bush
Asteraceae	**Sunflower Family**
Artemisia californica Less.	California sagebrush
*Artemisia tridentata*Nutt.	big sagebrush
Baccharis pilularis DC.	coyote brush
Baccharis salicifolia (Ruiz Lopez & Pavon) Pers.	mule fat
Centaurea melitensis L.*	Maltese star thistle
Encelia actoni Elmer	Acton encelia
Ericameria nauseosa (Pall. ex Pursh) G.L. Nesom & Baird	rubber rabbitbrush
Boraginaceae	**Borage Family**
Cryptantha intermedia (A.Gray) E. Greene	common cryptantha
Brassicaceae	**Mustard Family**
Hirschfeldia incana (L.) Lagr.-Fossat*	wild mustard, shortpod mustard
Cactaceae	**Cactus Family**
Opuntia basilaris Engelm. & J.M. Bigelow var. *basilaris*	beavertail cactus
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens (Pursh) Nutt.	four-wing saltbush
Salsola tragus L.*	Russian thistle, tumbleweed
Cucurbitaceae	**Cucumber Family**
Marah macrocarpa (Greene) Greene	chilicothe
Ericaceae	**Heath Family**
Arctostaphylos glauca Lindley	bigberry manzanita
Fabaceae	**Legume Family**
Melilotus albus Medik.*	white sweetclover
Fagaceae	**Oak Family**
Quercus agrifolia Nee	California live oak
Quercus berberidifolia Liebm.	scrub oak
Lamiaceae	**Mint Family**
*Salvia apiana*Jepson	white sage
Salvia leucophylla Greene	purple sage
Salvia mellifera E. Greene	black sage
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum Benth.	California buckwheat
Rhamnaceae	**Buckthorn Family**
Ceanothus crassifolius Torrey	hoary-leaf ceanothus
Rosaceae	**Rose Family**

Adenostoma fasciculatum Hook. & Arn.	chamise
Heteromeles arbutifolia (Lindley) Roemer	toyon
Salicaceae	**Willow Family**
*Populus fremontii*S. Watson	Fremont cottonwood
*Salix goodingii*C. Ball	Gooding's willow
Tamaricaceae	**Tamarix Family**
Tamarix sp.*	saltcedar
Monocots	**Grasses and Allies**
Agavaceae	**Century Plant Family**
Hesperoyucca whipplei (Torr.) Trel.	chaparral yucca
Poaceae	**Grass Family**
Avena fatua L.*	common wild oats
Bromus madritensis L. ssp. *rubens* (L.) Husnot*	red brome
Typhaceae	**Cattail Family**
Typha sp.	cattail

Table 3. Special Status Plant Evaluation

See Notes at end of table for codes and rationale for determination of potential occurrence.

Common Name *Latin Name*	Status			Habitat Requirements	Elevation Range, Life Form, and Flowering Period	Potential Occurrence[i]
	Federal	State	CNPS			
Mt. Pinos onion *Allium howellii var. clokeyi*	--	--	1B.3	Great Basin scrub, Pinyon and juniper woodland	1300-1850m PH(b) April-June	Not Expected, Not Observed. No suitable habitat present on-site.
Braunton's milk-vetch *Astragalus brauntonii*	FE	--	1B.1	Recent burns or disturbed areas, usually sandstone with carbonite layers. Chaparral, coastal scrub and Valley and foothill grassland.	4-640 PH Jan-Aug.	Low Potential, Not Observed. No *Astragalus* species observed, no reports of occurrences in the project region.
Nevin's barberry *Berberis [Mahonia] nevinii*	FE	CE	1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub/ sandy or gravelly	274-825m S (e) March-June	Low Potential, Not Observed. Poor quality habitat on site, no reports for the region.
Slender mariposa lily *Calochortus clavatus* var. *gracilis*	--	--	1B.2	Chaparral, coastal scrub, valley and foothill grassland	320-1000m PH(b) March-June	Low Potential, Not Observed. In the Santa Clarita area this species is most often found on undisturbed, mesic north-facing slopes with significant grass cover. This type of habitat is not present on the site.
Southern tarplant *Centromadia [Hemizonia] parryi* ssp. *australis*	--	--	1B.1	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools.	0-480m AH May-November	Not Expected, Not Observed. No suitable mesic habitat is present on-site.
San Fernando Valley spineflower *Chorizanthe parryi* ssp. *fernandina*	FC	CE	1B.1	Coastal scrub (sandy), valley and foothill grassland.	150-1220m AH April-July	Moderate Potential, Not Observed: Some suitable habitat is present on the property but the species was not observed.

Common Name *Latin Name*	Status			Habitat Requirements	Elevation Range, Life Form, and Flowering Period	Potential Occurrence[i]
	Federal	State	CNPS			
Parry's spineflower *Chorizanthe parryi* ssp. *parryi*	--	--	1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ sandy or rocky, openings.	275-1220m AH April-June	Moderate Potential, Not Observed: Suitable habitat is present on the property but the species was not observed.
White-bracted spineflower *Chorizanthe xanti var. leucotheca*	--	--	1B.2	Sandy or gravelly coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland.	300-1200m AH April-June	Not Expected, Not Observed. No suitable habitats are present on-site.
Santa Susana tarplant *Deinandra minthornii*	--	CR	1B.2	Chaparral, coastal scrub/ rocky.	280-760m. S (d) July-November	Not Expected, Not Observed. Suitable substrates are not present on-site. The closest report is in the Santa Susana Mountains.
Slender-horned spineflower *Dodecahema leptoceras*	FE	CE	1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan)/ sandy	200-760m AH April-June	Low Potential, Not Observed. Habitat is of poor quality for this species.
San Gabriel bedstraw *Galium grande*	--	--	1B.2	Broadleaved, upland forest, chaparral, cismontane woodland, lower montane coniferous forest	425–1220 m PH May-July	Moderate Potential, Not Observed. Suitable habitat is present on-site but species was not observed.
Round-leaved filaree *Erodium macrophyllum*	--	--	1B1	Cismontane woodland, valley and foothill grassland/ clay	15-1200m AH March-May	Not Expected, Not Observed. No suitable habitat is present on-site.
Newhall sunflower *Helianthus inexpectatus*	--	--	1B.1	Marsh and swamp, meadow and seep, wetland	0-300m PH Aug-Oct	Not Expected, Not Observed. No suitable wetland habitat is present on-site.
Ross' pitcher sage *Lepechinia rossii*	--	--	1B.2	Chaparral	470–1200 m PH May-September	Low Potential, Not Observed: Some apparently suitable chaparral habitat is present but this species was not observed on-site. The site may be too xeric for this species.

Common Name *Latin Name*	Status			Habitat Requirements	Elevation Range, Life Form, and Flowering Period	Potential Occurrence[i]
	Federal	State	CNPS			
Davidson's bush mallow *Malacothamnus davidsonii*	--	--	1B.1	Coastal bluff scrub, coastal scrub.	10-300m S (d) June	Not Expected, Not Observed. No suitable habitat is present on-site.
Spreading navarretia *Navarretia fossalis*	FT	--	1B.1	Marshes and swamps (assorted shallow freshwater), playas, vernal pools.	30-655m AH April-June	Not Expected, Not Observed: No vernal pool habitat is present on-site.
Piute Mountains navarretia *Navarretia setiloba*	--	--	1B.1	Cismontane woodland, Pinon and juniper woodland, valley and foothill grassland.	500–2100 m AH April-July	Not Expected, Not Observed: No suitable habitat is present on-site.
Short-joint beavertail *Opuntia basilaris* var. *brachyclada*	--	--	1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland.	425-1800 C April-August	Low Potential, Not Observed. This variety has not been reported from the project region. Species on site is the common beavertail cactus.
California Orcutt grass *Orcuttia californica*	FE	CE	1B.1	Vernal pools.	15-660m AH April-August	Not Expected, Not Observed. No vernal pool habitat is present on-site.
Chaparral ragwort *Senecio aphanactis*	--	--	2B.2	Chaparral, cismontane woodland, coastal scrub/ alkaline	15-800m AH January-April	Not Expected, Not Observed. No suitable alkaline soils are present on-site.
Mason's neststraw *Stylocline masonii*	--	--	1B.1	Chenopod scrub, pinyon-juniper woodland.	100-1200m AH March-May	Not Expected, Not Observed. No suitable habitat present.
Greata's aster *Symphyotrichum greatae*	--	--	1B.3	Broad-leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland/ mesic	300-2010m PH(r) June-October	Low Potential, Not Observed. Poor quality habitat present.

LIFE FORM KEY:

AH:	Annual Herb	(b):	bulb
AG:	Annual Grass	(d):	deciduous
PG:	Perennial Grass	(e):	evergreen
PH:	Perennial Herb	(p):	parasitic
C:	Cactus	(r):	rhizomatous
S:	Shrub	(s):	stoloniferous
Ss:	Subshrub		

Status abbreviations
Federal
FE: federally listed as Endangered
FT: federally listed as Threatened
FC: federal Candidate for listing as Endangered or Threatened
State
SE: state listed as Endangered
ST: state listed as Threatened
California Native Plant Society (CNPS)
1B: rare, threatened, or endangered in California and elsewhere
2: rare, threatened, or endangered in California but more common elsewhere
3: more information needed to determine rarity

CNPS threat ranks:
0.1: seriously threatened in California
0.2: moderately threatened in California
0.3: not very threatened in California

[i] Not Expected: There is no suitable habitat present on the property (i.e., habitats on the property are clearly unsuitable for the species requirements [e.g., substrate, elevation, hydrology, plant community, disturbance regime, etc.]). The species has an extremely low probability of being found on the property.
Low Potential: Either significantly limited quantity and/or quality of suitable habitat is present on the property (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat on the property is unsuitable or of very low quality). And, there are no or few recent known records of occurrence in the near vicinity of the property. The species has a low probability of being found on the property.

able habitat is present on the property (i.e., some of the habitat components meeting the species requirements
ty of habitat on the property is marginal). Additionally, there are known records of occurrences in the region of
ily in the immediate vicinity. The species has a moderate probability of being found on the property.

August 7, 2017

Mr. Steve Kim
3530 Wilshire Boulevard
Suite 380
Los Angeles, California 90010

SUBJECT: Results of Focused California Gnatcatcher Surveys; Sand Canyon Country Club, Santa Clarita, CA.

Dear Mr. Kim,

This letter report summarizes the methodology and findings of surveys for the federally-listed Threatened California gnatcatcher (*Polioptila californica*)(CAGN) conducted by Compliance Biology, Inc. on the Sand Canyon Resort project site in Santa Clarita, California (**Figure 1**). The surveys were conducted for the purpose of determining the presence or absence of CAGN and other special-status bird species within the study area.

U.S. Fish and Wildlife Service, Ventura Field office was appropriately notified of intent to initiate surveys and was provided approval from Mr. Chris Kofron via email on May 19, 2017.

Survey Site

The approximately 62-acre project site is in the Sand Canyon area of the City of Santa Clarita, south of the Antelope Valley Freeway (State Route 14), on the north side of Robinson Ranch Road. The proposed development area is within an existing country club, and mostly within a portion of abandoned golf course. Rural development is present to the northeast of the project area, active golf course to the south, country club infrastructure and driving range to the east, and rural residential development to the east and southeast. Specifically, the site is found on the Mint Canyon US Geological Survey (USGS) 7.5 minute quadrangle, Section 24, Township 4N, Range 15W (**Figure 2**).

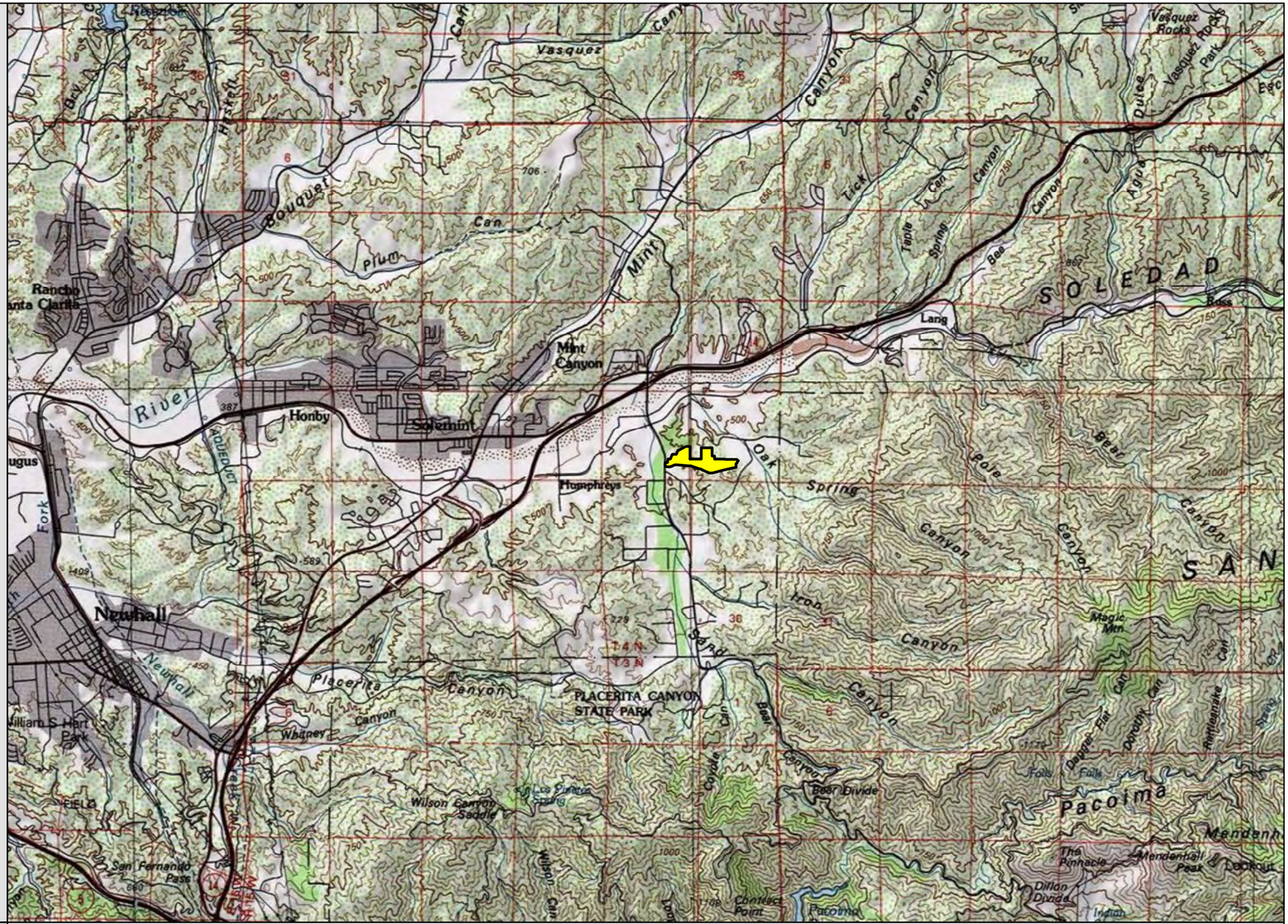
Source: ESRI 2017

compliance·biology

Project Location

FIGURE 1
Sand Canyon Resort

Project Boundary



1 inch = 6,000 feet

0 3,000 6,000 9,000 12,000 Feet

Source: USGS 2017

compliance·biology

Topographic Location

FIGURE 2
Sand Canyon Resort

Site Description

The site is characterized as an abandoned golf course bordered by patches of native vegetation. Elevations vary from approximately 1640 feet up to 1800 feet above mean sea level. The property owner's representative stated that much of the native vegetation on site was planted as mitigation for the approval of the original golf course. The primary vegetation associations present on site include Acton Brittlebush Scrub (*Encelia actoni* Shrubland Alliance), California buckwheat scrub (*Eriogonum fasciculatum* Shrubland Alliance), and Chamise Chaparral (A*denostoma fasciculatum Shrubland Alliance*). There are also several California live oaks (*Quercus agrifolia*), Freemont cottonwoods (*Populus fremontii*), and a man-made water feature that supports cattail marsh habitat. **Figure 3** provides the vegetation map for the property. This site occurs north and east of the final designated Critical Habitat for CAGN (**Figure 4**).

Coastal sage scrub dominated by California sagebrush (*Artemisia californica*) is the preferred habitat of California gnatcatcher, though they may also use adjacent chaparral, grassland, riparian or even disturbed habitats along the margins (ecotones) of the favored coastal sage scrub plant community. Coastal sage scrub is characterized by the prevalence of California sagebrush as dominant, with perennial sages such as black or purple sage (*Salvia mellifera; S. leucophylla*) and California buckwheat (*Eriogonum fasiculata*).

There are contiguous stands of buckwheat scrub on the site that include big sagebrush (*Artemisia tridentata)*, California sagebrush, toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), chamise (*Adenostoma fasciculatum*), Acton brittlebush, black sage (*Salvia mellifera*), white sage (*Salvia apiana*), purple sage (*Salvia leucophylla*), and coyote brush (*Baccharis pilularis*). Areas where shrub cover has been reduced have a greater abundance of non-native annuals such as Russian thistle (*Salsola tragus*), tocalote (*Centaurea melitensis*), and red brome (*Bromus madritensis* ssp. *rubens*).

Methodology

The US Fish and Wildlife Service guidelines for California gnatcatcher stipulate that a minimum of six surveys shall be conducted at least one week apart, between March 15 and June 30, *or* if surveying from July 1 through March 14, a minimum of nine surveys shall be conducted at least two weeks apart.[1] The guidelines also recommend that surveys be completed between 6:00 AM and 12 PM; that they shall avoid periods of inclement weather or excessive heat, rain, wind, and fog; and the area covered should be no more than 100 acres per day per permitted biologist.

---

1 United States Fish and Wildlife Service (USFWS). 1997. Coastal California gnatcatcher (*Polioptila californica californica*) presence/absence protocol survey guidelines. USFWS field Office, Carlsbad, California.

Property Boundary

Grading Limit

Vegetation Communities

- Acton Brittlebrush Scrub (ABS): 1.56 ac
- California Buckwheat Scrub (CBS): 12.09 ac
- Chamise Chaparral (CC): 12.27 ac
- Coast Live Oak (CLO): 1.53 ac
- Cattail Marsh (CM): 0.13 ac
- Fremont Cottonwood (FC): 0.17 ac
- Golf Course (GC): 34.31 ac
- Open Water (OW): 0.30 ac

1 inch = 400 feet

0 200 400 600 800 Feet

Source: E. Read & Associates, Rare Plant Report

compliance•biology

Vegetation Map

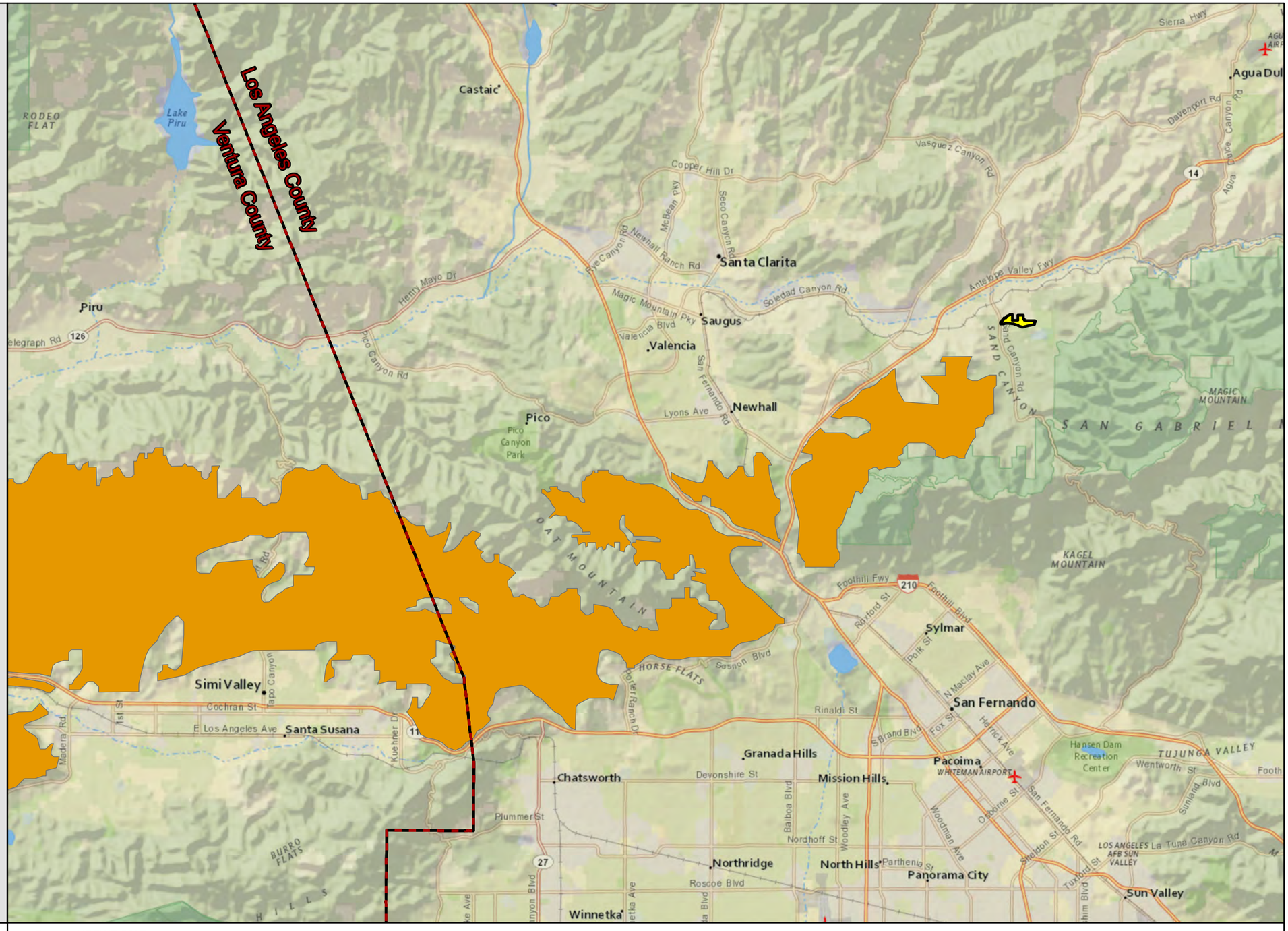
FIGURE 3

Sand Canyon Resort

Project Boundary

County Boundary

CAGN Critical Habitat (USFWS)



1 inch = 12,500 feet

0 6,000 12,000 18,000 24,000 Feet

compliance·biology

Source: USFWS 2017

Critical Habitat

FIGURE 4

Sand Canyon Resort

Six gnatcatcher surveys were conducted in accordance with these guidelines. Surveys were focused within and adjacent to potentially suitable sage scrub and in adjacent buffer habitats. All field surveys were performed by Dave Crawford under the authority of his individual Endangered Species Recovery Permit. The survey area totaled less than 25 acres.

Surveys were conducted on May 26, June 2, 9, 16, 23 and 30, 2017. The survey area was systematically surveyed on foot by walking slowly and methodically along random transect routes. The location of transects and survey points along each transect were based on the vegetation and topographic conditions (size, location, and shape of habitat) of the survey area to ensure complete coverage. A combination of taped vocalizations (played at 30-60 second increments) and/or "pishing" sounds were used at each calling point.

Weather conditions during the surveys were generally conducive to a high level of bird activity. All surveys were conducted between the hours of about 6:00 AM and approximately 12:00 PM. Temperatures varied from approximately 62 degrees Fahrenheit (˚F) to a maximum of 84 ˚F. Wind speed ranged from 0 to 15 mph during the surveys, typically averaging less than 5 mph. Cloud cover varied from overcast (morning haze) to completely clear. All birds identified during the surveys were noted and are listed on **Attachment A**.

Results

No California gnatcatchers were recorded during the protocol surveys. A total of 52 avian species was observed or detected on the subject property. A complete list of all vertebrate species observed during the survey efforts is included as **Attachment A**. Five bird species included on the July 2017 California Department of Fish and Wildlife "Special Animals List" were observed or detected during the survey effort; no federal special-status birds were found.

Costa's hummingbird (*Calypte costae*) - *California special animal when nesting.* Costa's hummingbirds normally inhabit desert and semi-desert arid habitats, with breeding occurring in February through April in desert habitats. This species was observed only twice during these surveys. CDFW is primarily interested in tracking nest locations of this species and Costa's hummingbird is not anticipated to be nesting in the vicinity of the project site.

Least Bittern (*Ixbrychus exilis*) – *California Species of Special Concern.* This small member of the heron family occupies freshwater and brackish marshes with tall emergent vegetation. During one of the surveys on site, a call was heard from within the cattail marsh in the man-made pond that was most attributable to least bittern. It seemed somewhat more prolonged than the typical call, but based on its origin and the lack of any other species to attribute it to, this biologist made the determination that it was a least bittern. Despite a concerted effort, the bird did not show itself and it was not picked up during any of the subsequent surveys. Therefore, even with the assumption it was present, it was not likely nesting in that location.

Cooper's hawk (*Accipiter cooperii*) – *Watch List, nesting*. Cooper's hawks typically hunt other bird species on the wing. A Cooper's hawk was observed on the site twice, during the series of six surveys. There are several oak and cottonwood trees on site suitable for nesting, but there was no indication of nests or nesting behavior.

Southern California rufous-crowned sparrow (***Aimophila ruficeps canescens***) **– *CDFW Watch List*.** Four subspecies of rufous-crowned sparrows are recognized in California. The Southern California subspecies, *canescens*, is on the CDFW Watch List as populations have been declining as a result of development and agriculture.[2] Southern California rufous-crowned sparrow was observed during five of the protocol surveys. Therefore, it is anticipated this species nested on or near the project site this year. This sparrow nests on the ground, typically under shrubs or on overhanging rocks.

Oak titmouse (*Baeolophus inornatus*) – *California special animal when nesting*. As its name implies, this species is most commonly associated with oak trees and oak woodlands. Oak titmice were observed or otherwise detected during all six site surveys in and near the oak trees on site. As such, it is likely this species is nesting on site.

Conclusions

No CAGN were observed or detected during the series of six protocol surveys and are, therefore, considered to be absent from the project site at this time. The scrub habitat on site is potentially suitable to support CAGN. However, due to surrounding development and activities associated with the current country club, the disturbances on site may dissuade CAGN from utilizing the site.

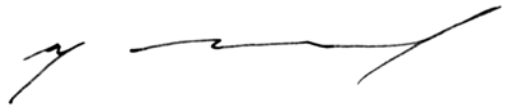
Five bird species, considered 'special animals' by CDFW, were observed during the protocol surveys. Assuming development on site is timed to avoid the nesting season, and because birds can leave the area during site preparation, direct impacts are not anticipated. Although most of the individual birds observed are not afforded any protection under state or federal laws, most avian species present on site are protected under the California Fish and Game Code and the Federal Migratory Bird Species Treaty Act while actively nesting. As such, grading and/or any other activity resulting in the removal of vegetation should be conducted outside the typical nesting season (February 1 through September 15). Should such activities be required during this period of time, it is recommended that nesting bird surveys be conducted consistent with Service and CDFW guidelines.

---

2 Thorngate, N. and M. Parsons. 2005. Rufous-crowned Sparrow (*Aimophila ruficeps*). *In* The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/scrub.html

Please feel free to contact me if you have any questions regarding the information provided in this report.

Sincerely,



Dave Crawford
President/Principal Biologist
Compliance Biology, Inc.

Permit No. TE-821229-7

Cc: US Fish and Wildlife Service, Ventura Field Office

Attachment A

Vertebrate Species Observed or Detected on the Sand Canyon Country Club Project Site
Spring 2017

Scientific Name[i]	Common Name	Listing Status[ii]	Notes
BIRDS			
Branta canadensis	Canada goose		
Anas platyrhynchos	Mallard		
Callipepla californica	California quail		
Columba livia	Rock pigeon*		
Streptopelia decaocto	Eurasian collard-dove*		
Zenaida macroura	Mourning dove		
Aeronautes saxatalis	White-throated swift		
Calypte anna	Anna's hummingbird		
Calypte costae	Costa's hummingbird	sa (nesting)	
Selasphorus sasin	Allen's hummingbird		
Fulica americana	American coot		
Ixbrychus exilis	Least bittern	SSC (nesting)	
Cathartes aura	Turkey vulture		
Accipiter cooperii	Cooper's hawk	WL (nesting)	
Buteo jamaicensis	Red-tailed hawk		
Bubo virginianus	Great horned owl		
Melanerpes formicivorus	Acorn woodpecker		
Picoides nuttallii	Nuttall's woodpecker		
Falco sparverius	American kestrel		
Sayornis nigricans	Black phoebe		
Sayornis saya	Say's phoebe		
Myiarchus cinerascens	Ash-throated flycatcher		
Tyrannus verticalis	Western kingbird		
Aphelocoma californica	California scrub-jay		
Corvus brachyrhynchos	American crow		
Corvus corax	Common raven		
Stelgidopteryx serripennis	Northern rough-winged swallow		
Petrochelidon pyrrhonota	Cliff swallow		
Baeolophus inornatus	Oak titmouse	sa (nesting)	
Psaltriparus minimus	Bushtit		
Thryomanes bewickii	Bewick's wren		
Poliptila caerulea	Blue-gray gnatcatcher		
Chamaea fasciata	Wrentit		
Sialia mexicana	Western bluebird		
Toxostoma redivivum	California thrasher		
Mimus polyglottos	Northern mockingbird		
*Sturnus vulgaris**	European starling		
Phainopepla nitens	Phainopepla		
Haemorhous mexicanus	House finch		
Spinus psaltria	Lesser goldfinch		
Spinus tristis	American goldfinch		

Attachment A

Vertebrate Species Observed or Detected on the Sand Canyon Country Club Project Site
Spring 2017

Scientific Name	Common Name	Listing Status	Notes
Pipilo maculatus	Spotted towhee		
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	WL	
Melozone crissalis	California towhee		
Melospiza melodia	Song sparrow		
Pheucticus melanocephalus	Black-headed grosbeak		
Agelaius phoeniceus	Red-winged blackbird		
Euphagus cyanocephalus	Brewer's blackbird		
Quiscalus mexicanus	Great-tailed grackle		
Molothrus ater	Brown-headed cowbird		
Icterus cucullatus	Hooded oriole		
Icterus bullockii	Bullock's oriole		

Scientific Name	Common Name	Listing Status	Notes
AMPHIBIANS and REPTILES			
Lithobates catesbeianus	American bullfrog*		
Xenopus laevis	African clawed frog*		
Sceloporus occidentalis bocourtii	Coast Range fence lizard		
Uta stansburiana elegans	Western side-blotched lizard		
Aspidocelis tigris stejnegeri	San Diegan tiger whiptail	SSC	
MAMMALS			
Sylvilsgus audubonii	Desert cottontail		
Neotoma lepida intermedia	San Diego desert woodrat	SSC	
Neotoma macrotis	Big-eared woodrat		
Thomomys bottae	Botta's pocket gopher		
Dipodomys agilis	Agile kangaroo rat		
Otospermophilus beecheyi	California ground squirrel		
Canis latrans	Coyote		
Procyon lotor	Raccoon		

Attachment A
Vertebrate Species Observed or Detected on the Sand Canyon Country Club Project Site
Spring 2017

[i] Scientific and common names are from California Herps for amphibians & reptiles (http://www.californiaherps.com/index.html), American Ornithologist's Union (http://naturalhistory.si.edu/mna/) for birds and Smithsonian Museum of Natural History for mammals (http://naturalhistory.si.edu/mna/).

[ii] Listing Status, based on the most recent "Special Animals List", available here: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf

Listing Status

California Department of Fish and Wildlife

SSC: California Species of Special Concern
WL: CDFW Watch List species

sa: "Special Animals" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species". The Department of Fish and Wildlife considers the taxa on this list to be those of greatest conservation need.

(nesting) =For most taxa the CNDDB is interested in sightings for the presence of resident populations. For some species (primarily birds), the CNDDB only tracks certain parts of the species range or life history (e.g., nesting locations). The area or life stage of interest is indicated in parenthesis after the common name.

***** Non-native or introduced species

Results from combined general wildlife surveys and focused California gnatcatcher protocol surveys:
May 26, June 2, 9, 16, 23, and 30, 2017