

Appendix B

Biological Resources Assessment



December 18, 2023

GREAT SCOTT TREE CARE – SOUTH ORANGE COUNTY

10761 Court Ave.
Stanton, CA 90680

SUBJECT: Biological Due Diligence Investigation for the Proposed Great Scott Landscape Facility Located in Lake Forest, Orange County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) biological due diligence investigation for the proposed Great Scott Landscape Facility located in the City of Lake Forest, Orange County, California. The field investigation was conducted by biologist Travis J. McGill on November 20, 2023, to document baseline conditions and assess the potential for special-status¹ plant and wildlife species to occur within the project site that could pose a constraint to implementation of the proposed project. Special attention was given to the suitability of the project site to support special-status plant and wildlife species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other electronic databases as potentially occurring in the general vicinity of the project. Additionally, the report also addresses resources protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC), federal Clean Water Act (CWA) regulated by the United States Army Corps of Engineers (Corps) and Regional Water Quality Control Board (Regional Board) respectively, and Section 1602 of the FGC administered by CDFW.

Project Location

The project site is generally located south and west of State Route 241 and north and east of Interstate 5 in the City of Lake Forest, Orange County, California. The site is depicted on the El Toro quadrangle of the United States Geological Survey's (USGS) 7.5-minute map series. Specifically, the site is located at 20751 Linear Lane, Lake Forest, California. Refer to Exhibits 1-2 in Attachment A.

Methodology

Prior to conducting the field investigation, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the California Departments (CDFW's) QuickView Tool in the Biogeographic Information and Observation System (BIOS), California Natural Diversity Database (CNDDB) Rarefind 5, and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and

¹ As used in this report, "special-status" refers to plant and wildlife species that are federally and State listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

Endangered Vascular Plants of California.

All literature detailing the biological resources previously observed on or within the vicinity of the project site were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred on the project site that would otherwise limit the distribution of special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1985-2023);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey²;
- United States Fish and Wildlife Service (USFWS) Critical Habitat designations for Threatened and Endangered Species; and
- USFWS National Wetlands Inventory.

Following the literature review, biologist Travis J. McGill inventoried and evaluated the condition of the habitat within the project site on November 20, 2023. Plant communities and land cover types identified on aerial photographs during the literature review were verified by walking meandering transects throughout the project site. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities and land cover types, and presence of potential jurisdictional drainage and/or wetland features were noted.

Topography and Soils

The project site is relatively flat and occurs at an elevation of approximately 630 to 650 feet above mean sea level. Based on the NRCS USDA Web Soil Survey, the project site is underlain by riverwash and Sorrento loam with 2 to 9 percent slopes (warm). Soils on-site have been significantly disturbed and compacted following decades of on-site and surrounding development and associated anthropogenic disturbances.

Existing Site Conditions

The project site lies in an area dominated by commercial developments with recreational, institutional, and residential developments intermixed. The site is bounded to the north by Serrano Creek and commercial development beyond; to the east by commercial development; to the west and south by commercial development; and to the east by Linear Lane and commercial development beyond. The site itself supports residential development that was previously a citrus orchard until about 1980.

Due to existing land uses, no natural plant communities occur on-site. The site supports two land cover types that would be classified as developed and disturbed. Refer to Attachment C, *Site Photographs*, for representative photographs of the project site.

The site supports developed land in the form of existing structures, paved recreation areas, and parking lot. Outside of these developed areas, the site supports disturbed land that primarily supports ornamental

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

landscaping and lawns with some non-native weedy/early successional species.

The northeastern portion of the Project site occurs along Linear Lane and includes a relatively flat, disturbed upland area that appears to be regularly maintained with mowing and vegetation removal. A few herbaceous species appeared to be reemerging following a recent mow such as white horehound (*Marrubium vulgare*), blue witch nightshade (*Solanum umbelliferum*), and castor bean (*Ricinus communis*). This area is scattered with a few trees such as coast live oak (*Quercus agrifolia*) and a stand of blue-gum eucalyptus (*Eucalyptus globulus*). Vegetation coverage increases with proximity to Serrano Creek and includes plants such as blue elderberry (*Sambucus mexicana*), western sycamore (*Platanus racemosa*), and Goodding's black willow (*Salix gooddingii*).

The central portion of the Project site includes several structures. A dirt road bisects the middle of the site from the disturbed ruderal habitat and structures to the southeast and Serrano Creek to the northwest. A lone coast redwood (*Sequoia sempervirens*) occurs near one of the structures. A large stand of giant reed covers a large area on the downslope area adjacent to Serrano Creek. The western corner of the Project site occurs immediately east of several large commercial buildings and consists of a large, relatively flat expanse of disturbed habitat. The majority of this area is covered with bark mulch and aside from a few lone trees - including avocado (*Persea americana*) and Canary Island date palm (*Phoenix canariensis*) - is generally devoid of vegetation.

Vegetation within an along the margin of Serrano Creek includes species such as Goodding's black willow, coast live oak, tree tobacco (*Nicotiana glauca*), pampas grass (*Cortaderia selloana*), and Mexican fan palm (*Washingtonia robusta*). The segment of Serrano Creek along this segment of the Project areas supports dense thickets of the non-native giant reed with blue-gum eucalyptus.

Survey Results

The project site and surrounding area have the potential to provide habitat for wildlife adapted to a high degree of anthropogenic disturbance. The only avian species observed during the field investigation include house sparrow (*Passer domesticus*), Nuttall's Woodpecker (*Dryobates nuttallii*), California Towhee (*Melospiza crissalis*), California Scrub-Jay (*Aphelocoma californica*), and Lesser Goldfinch (*Spinus psaltria*). No fish, amphibian, reptilian, or mammalian species were observed.

Nesting Birds

The trees and other landscaping supported on-site provide suitable nesting habitat for avian species adapted to urban environments. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). As a condition of approval, if construction occurs during the nesting season (generally February 1st and August 31st), a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

Migratory Corridors and Linkages

The project site has not been identified as supporting a wildlife migratory corridor or linkage. It should be noted that Serrano Creek, along the northern boundary of the project site, has the potential to provide

localized wildlife movement opportunities from Bake Parkway to the foothills of the Santa Ana Mountains (near Whiting Regional Park). However, project activities will be limited to existing disturbed/developed areas. As such, implementation of the proposed project is not expected to have a significant impact to wildlife movement opportunities or prevent local wildlife movement through the area.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

A single drainage feature, Serrano Creek, extends along the northern boundary of the project site. As previously mentioned, this segment of Serrano Creek supports Goodding’s black willow, coast live oak, western sycamore, elderberry tree tobacco, pampas grass, and Mexican fan palm, giant reed with blue-gum eucalyptus in various densities. The project has been designed to avoid impacts to Serrano Creek and its associated riparian vegetation.

Based on the proposed site plan and limits of disturbance, project activities will not result in impacts to Corps, Regional Board, or CDFW jurisdictional areas and regulatory approvals will not be required.

Special-Status Biological Resources

The CNDDDB Rarefind 5 and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California were queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the EL Toro USGS 7.5-minute quadrangle. This quadrangle was used due to the proximity of the project site to quadrangle boundaries and regional topography. The field investigation evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified seventeen (17) special-status plant species, fifty-eight (58) special-status wildlife species, and four (4) special-status plant communities as having potential to occur within the EL Toro USGS 7.5-minute quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability, and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the project site are presented in the table, *Potentially Occurring Special-Status Biological Resources*, provided in Attachment D.

Special-Status Plants

According to the CNDDDB and CNPS, seventeen (17) special-status plant species have been recorded in the El Toro quadrangle (refer to Attachment D). No special-status plant species were observed onsite during the habitat assessment. The project site has been completely developed/heavily disturbed eliminating the suitability of the habitat onsite to support special-status plant species known to occur in the general vicinity

of the project site. Based on habitat requirements for specific special-status plant species and the availability and lack of suitable habitat needed by each species, it was determined that the project site does not provide suitable habitat for any of the special-status plant species known to occur in the area and are presumed to be absent from the project site. No focused surveys are recommended. Implementation of the proposed project will not result in any impacts to special-status plant species.

Special-Status Wildlife

According to the CNDDDB, fifty-eight (58) special-status wildlife species have been reported in the El Toro quadrangle (refer to Attachment D). Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the proposed project site has a moderate potential to support Cooper's hawk (*Accipiter cooperii*); and a low potential to support foraging habitat for great egret (*Ardea alba*), great blue heron (*Ardea herodias*), California horned lark (*Eremophila alpestris actia*), western mastiff bat (*Eumops perotis californicus*), yellow warbler (*Setophaga petechia*), and least Bell's vireo (*Vireo bellii pusillus*). All remaining special-status wildlife species are presumed to be absent from the project site due to lack of suitable habitat. No focused surveys are recommended.

Serrano Creek, along the northern boundary of the project site has the potential to support suitable habitat for both yellow warbler, a California species of special concern, and least Bell's vireo, a federal and California-listed endangered species. Yellow warbler and least Bell's vireo were not detected during the site visits, however, focused surveys were not conducted. Project implementation is expected to avoid all impacts to Serrano Creek. However, indirect impacts associated with project implementation, such as construction-related noise, could have the potential to affect nesting success of species such as least Bell's vireo if they are nesting in riparian habitat in proximity to construction.

Within the exception of least Bell's vireo, none of these aforementioned species are listed as endangered or threatened. In order to ensure impacts to these species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey, as discussed in the recommendations section below, shall be conducted prior to removal of any onsite vegetation.

Special-Status Plant Communities

According to the CNDDDB, four (4) special-status plant communities have been reported in the El Toro USGS 7.5-minute quadrangle: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, and Southern Sycamore Alder Riparian Woodland. The project site is completely developed and there are no special-status plant communities on or adjacent to the project site. Implementation of the proposed project will not result in any impacts to special-status plant communities.

Critical Habitat

The project site is not located within any federally designated Critical Habitat. The nearest federally designated Critical Habitat is located approximately 1.2 miles to the northwest for coastal California gnatcatcher (*Poliophtila californica californica*). Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed project and consultation with the USFWS will not be required for impacts to Critical Habitat.

Orange County Natural Community Conservation Plan/Habitat Conservation Plan

Orange County's NCCP/HCP was approved in 1996 under the State of California's NCCP program. It encompasses a total area of 208,000 acres, with 37,380 acres within its Reserve System, split into Coastal and Central subregions. The reserves additionally contain special linkages, existing use areas, and other open space areas. The primary goal of the NCCP/HCP is to protect and preserve coastal sage scrub (CSS) in the Reserve System, as well as associated habitats and species. This includes three (3) "Target Species," an additional thirty-six (36) "Identified Species," and four (4) habitat types. The NCCP/HCP specifies that the populations of the Target Species shall be subject to long-term monitoring and that these taxa shall be treated as if they were listed under the California Endangered Species Act (CESA) and federal Endangered Species Act (ESA).

The project site is located within the boundaries of the Central Subregion NCCP/HCP; however, it is not located within the Reserve System or any identified special linkages. The closest portion of the Reserve System is located approximately 1 mile northwest of the project site and is separated from the project site by existing development. Since the proposed project will be limited to existing developed areas and will not impact any native plant communities (i.e., coastal sage scrub, riparian plant communities) implementation of the proposed project will be consistent with the rules and regulations of the NCCP/HCP.

Conclusion

Based on the proposed project footprint and existing site conditions discussed in this report, none of the special-status plant or wildlife species known to occur in the general vicinity of the project site are expected to be directly impacted from implementation of the proposed project. With completion of the recommendations provided below, no impacts to year-round, seasonal, or special-status avian residents will occur from implementation of the proposed project. Therefore, it was determined that implementation of the project will have "no effect" on federally or State listed species known to occur in the general vicinity of the project site. Additionally, the development of the project is not expected to impact jurisdictional drainage features, and will not impact designated Critical Habitats or regional wildlife movement corridors/linkages.

Recommendations

Migratory Bird Treaty Act and Fish and Game Code (Pre-Construction Nesting Bird Clearance Survey)

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any vegetation removal activities that may disrupt the birds during the nesting season.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic

disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Bat Clearance Survey

In order to avoid impacts to bats roosting on-site, it is recommended a qualified biologist conduct bat clearance survey within potentially suitable bat colony/roost habitat onsite, including trees, cavities, and abandoned buildings prior to any work being conducted onsite. Potential roosting habitat would be evaluated during the daytime to evaluate areas for bat sign (e.g. guano, urine staining, daytime roosts). It is recommended that a nighttime emergence (exit) survey be conducted at dusk to identify potential maternity roosts during the bat maternity season. A total of three (3) site visits during the maternity season (March 1 to September 30) would be needed to determine if maternity roosts are present. The surveys shall be conducted at dusk and after nightfall by a qualified biologist.

If special-status bats are detected, then removal of roosting habitat shall be delayed for the remainder of the maternity season until the young are sufficiently mature to leave the maternity roost, as determined by the biologist.

Least Bell's Vireo Survey

It is recommended that focused surveys for least Bell's vireo are conducted prior to impacting any areas of Southern Mixed Riparian Forest, or commencing construction activities (noise disturbance) adjacent to Serrano Creek. Impacts to occupied habitat would require coordination with CDFW and USFWS.

No impacts are expected to occur to Serrano Creek or its associated vegetation. If construction activities will commence outside of the avian nesting (generally September 1st to January 31st), focused surveys for least Bell's vireo will likely not be required.

However, if construction activities will commence during the avian nesting season (generally February 1st to August 31st), particularly between April 10th and July 31st during the active period for least Bell's vireo, focused surveys will likely be required to ensure no direct or indirect impacts to least Bell's vireo will occur. Focused surveys for the least Bell's vireo would be conducted in accordance with the 2001 USFWS survey guidelines and would encompass all areas of suitable habitat to be impacted within the project site, as well as suitable habitat within 500 feet of the Project site. Survey guidelines stipulate that eight surveys should be conducted between April 10 and July 31, with a minimum of ten days separating each survey visit. If no least Bell's vireo are detected during focused surveys, then no avoidance or mitigation measures will be warranted. If least Bell's vireo are detected during focused surveys, then coordination with CDFW and USFWS will be required prior to indirectly impacting occupied habitat.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director



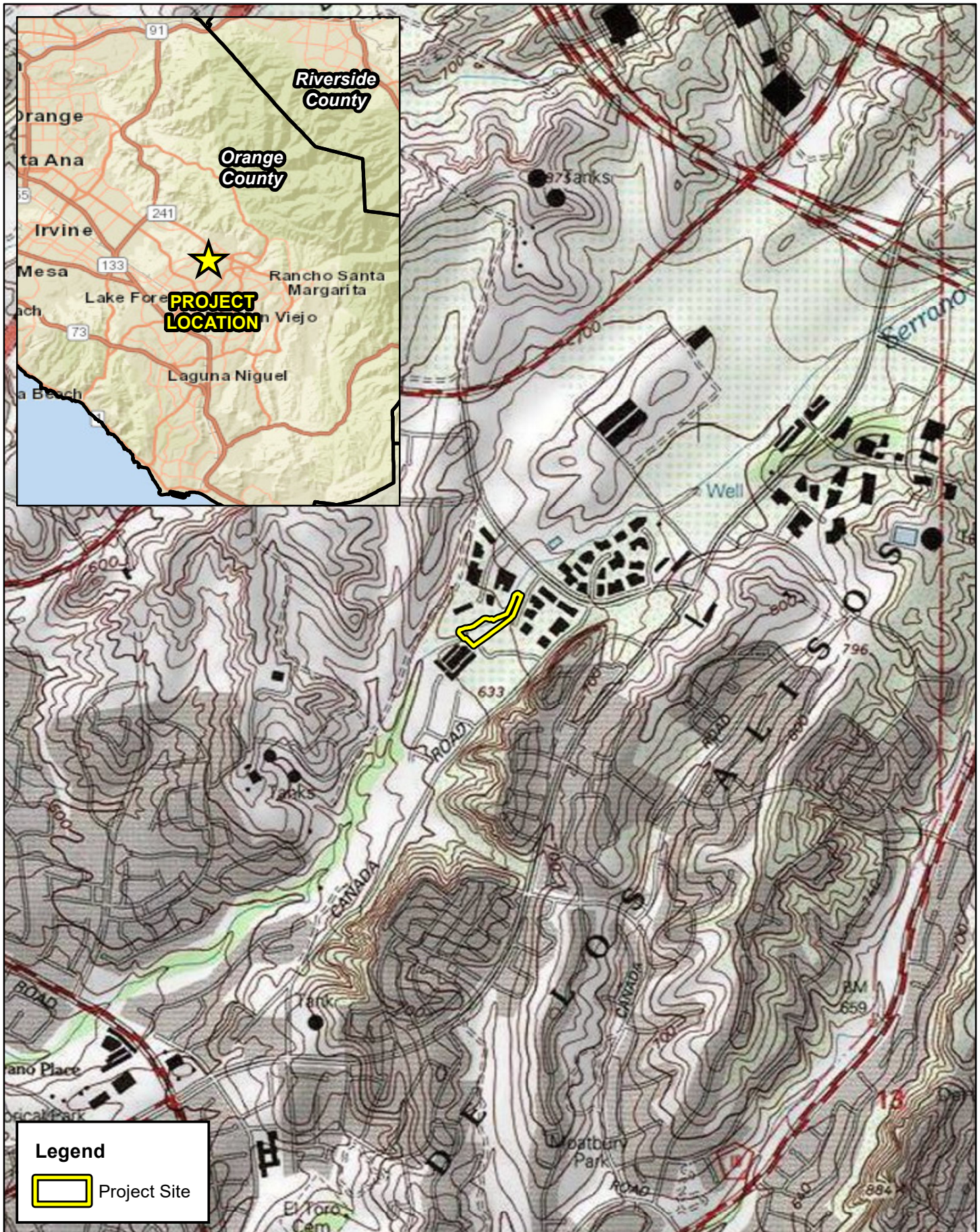
Travis J. McGill
Director

Attachments:

- A. *Project Exhibits*
- B. *Site Plan*
- C. *Site Photographs*
- D. *Potentially Occurring Special-Status Biological Resources*
- E. *Regulations*


Attachment A

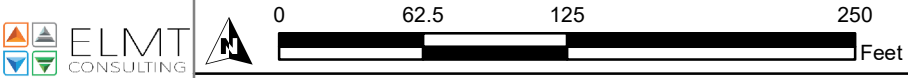
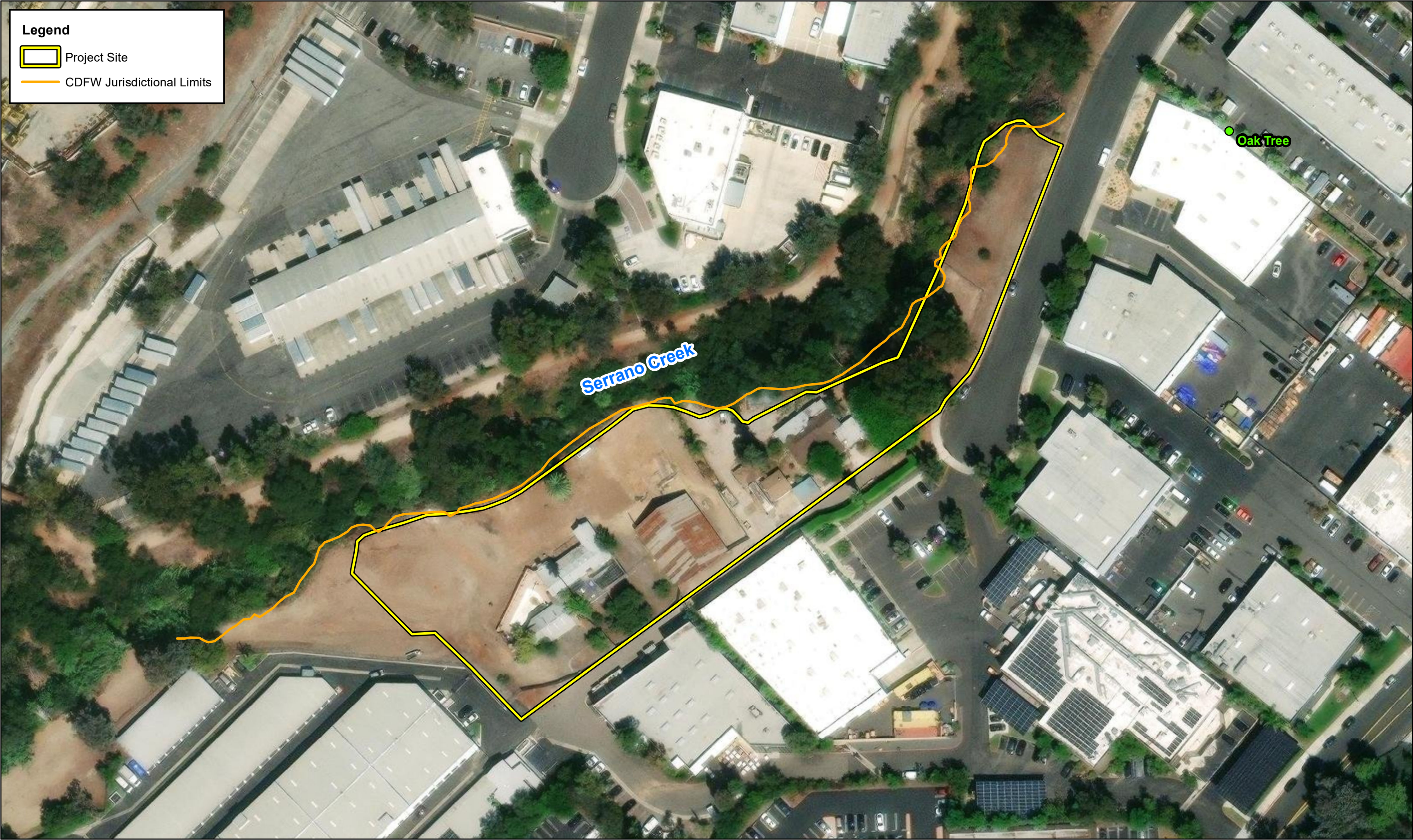
Project Exhibits





Legend

 Project Site



Source: ESRI Aerial Imagery, Orange County

Attachment B

Site Plan

Attachment C

Site Photographs



Photograph 1: From the northeast corner of the project site looking south at the northern portion of the site.



Photograph 2: View of the southern end of the northern portion of the site.



Photograph 3: Rock separating the bank of Serrano Creek from the project site.



Photograph 4: Looking at the giant reed associated with Serrano Creek along the middle portion of the project site.



Photograph 5: Looking south at the border between Serrano Creek (left) and the project site (right).



Photograph 6: From the southeast corner of the project site looking north.



Photograph 7: Disturbed area on the southern portion of the site.



Photograph 8: Existing building in the middle portion of the site.



Photograph 9: Existing building in the middle portion of the site.

Attachment D

Potentially Occurring Special-Status Biological Resources

Scientific Name	Common Name	Federal Status	State Status	CDFW Listing	CNPS Rare Plant Rank	Potential to Occur
Special-Status Wildlife Species						
<i>Accipiter cooperii</i>	Coopers hawk	None	None	WL	-	Moderate
<i>Accipiter striatus</i>	sharp-shinned hawk	None	None	WL	-	Presume Absent
<i>Agelaius tricolor</i>	tricolored blackbird	None	Threatened	SSC	-	Presume Absent
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	None	None	WL	-	Presume Absent
<i>Ammodramus savannarum</i>	grasshopper sparrow	None	None	SSC	-	Presume Absent
<i>Anaxyrus californicus</i>	arroyo toad	Endangered	None	SSC	-	Presume Absent
<i>Anniella stebbinsi</i>	Southern California legless lizard	None	None	SSC	-	Presume Absent
<i>Ardea alba</i>	great egret	None	None	-	-	Low - marginal foraging habitat onsite
<i>Ardea herodias</i>	great blue heron	None	None	-	-	Low - marginal foraging habitat onsite
<i>Arizona elegans occidentalis</i>	California glossy snake	None	None	SSC	-	Presume Absent
<i>Artemisiospiza belli belli</i>	Bells sparrow	None	None	WL	-	Presume Absent
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None	None	WL	-	Presume Absent
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None	None	SSC	-	Presume Absent
<i>Athene cunicularia</i>	burrowing owl	None	None	SSC	-	Presume Absent
<i>Bombus crotchii</i>	Crotch bumble bee	None	Candidate Endangered	-	-	Presume Absent
<i>Bombus pensylvanicus</i>	American bumble bee	None	None	-	-	Presume Absent
<i>Botaurus lentiginosus</i>	American bittern	None	None	-	-	Presume Absent
<i>Buteo regalis</i>	ferruginous hawk	None	None	WL	-	Presume Absent
<i>Calypte costae</i>	Costas hummingbird	None	None	-	-	Presume Absent
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren	None	None	SSC	-	Presume Absent
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None	None	-	-	Presume Absent
<i>Chaetura vauxi</i>	Vauxs swift	None	None	SSC	-	Presume Absent
<i>Charadrius montanus</i>	mountain plover	None	None	SSC	-	Presume Absent
<i>Circus hudsonius</i>	northern harrier	None	None	SSC	-	Presume Absent
<i>Contopus cooperi</i>	olive-sided flycatcher	None	None	SSC	-	Presume Absent
<i>Crotalus ruber</i>	red-diamond rattlesnake	None	None	SSC	-	Presume Absent
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	None	None	-	-	Presume Absent
<i>Egretta thula</i>	snowy egret	None	None	-	-	Presume Absent
<i>Elanus leucurus</i>	white-tailed kite	None	None	FP	-	Presume Absent
<i>Empidonax traillii</i>	willow flycatcher	None	Endangered	-	-	Presume Absent
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	Endangered	Endangered	-	-	Presume Absent
<i>Emys marmorata</i>	western pond turtle	Proposed Threatened	None	SSC	-	Presume Absent
<i>Eremophila alpestris actia</i>	California horned lark	None	None	WL	-	Low - marginal foraging and roosting habitat onsite
<i>Eumops perotis californicus</i>	western mastiff bat	None	None	SSC	-	Low - marginal foraging and roosting habitat onsite
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	-	-	Presume Absent
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted	Endangered	FP	-	Presume Absent
<i>Icteria virens</i>	yellow-breasted chat	None	None	SSC	-	Presume Absent
<i>Lanius ludovicianus</i>	loggerhead shrike	None	None	SSC	-	Presume Absent

<i>Larus californicus</i>	California gull	None	None	WL	-	Presume Absent
<i>Lasiurus cinereus</i>	hoary bat	None	None	-	-	Presume Absent
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None	None	-	-	Presume Absent
<i>Myotis yumanensis</i>	Yuma myotis	None	None	-	-	Presume Absent
<i>Nannopterum auritum</i>	double-crested cormorant	None	None	WL	-	Presume Absent
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None	None	SSC	-	Presume Absent
<i>Nycticorax nycticorax</i>	black-crowned night heron	None	None	-	-	Presume Absent
<i>Oncorhynchus mykiss irideus</i> pop. 10	steelhead - southern California DPS	Endangered	Candidate Endangered	-	-	Presume Absent
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None	None	SSC	-	Presume Absent
<i>Phrynosoma blainvillii</i>	coast horned lizard	None	None	SSC	-	Presume Absent
<i>Polioptila californica californica</i>	coastal California gnatcatcher	Threatened	None	SSC	-	Presume Absent
<i>Rhinichthys osculus</i> ssp. 8	Santa Ana speckled dace	None	None	SSC	-	Presume Absent
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None	None	SSC	-	Presume Absent
Low -						
<i>Setophaga petechia</i>	yellow warbler	None	None	SSC	-	Suitable habitat within Serrano Creek on northern boudnary of site
<i>Spea hammondi</i>	western spadefoot	None	None	SSC	-	Presume Absent
<i>Spinus lawrencei</i>	Lawrences goldfinch	None	None	-	-	Presume Absent
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	Endangered	None	-	-	Presume Absent
<i>Taricha torosa</i>	Coast Range newt	None	None	SSC	-	Presume Absent
<i>Thamnophis hammondi</i>	two-striped gartersnake	None	None	SSC	-	Presume Absent
<i>Toxostoma crissale</i>	Crissal thrasher	None	None	SSC	-	Presume Absent
Low -						
<i>Vireo bellii pusillus</i>	least Bells vireo	Endangered	Endangered	-	-	Suitable habitat within Serrano Creek on northern boudnary of site
Special-Status Plant Species						
<i>Deinandra paniculata</i>	paniculate tarplant	None	None	-	4.2	Presume Absent
<i>Pentachaeta aurea</i> ssp. allenii	Allens pentachaeta	None	None	-	1B.1	Presume Absent
<i>Senecio aphanactis</i>	chaparral ragwort	None	None	-	2B.2	Presume Absent
<i>Viguiera laciniata</i>	San Diego County viguiera	None	None	-	4.3	Presume Absent
<i>Lepidium virginicum</i> var. robinsonii	Robinsons pepper-grass	None	None	-	4.3	Presume Absent
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None	None	-	1B.2	Presume Absent
<i>Astragalus brauntonii</i>	Brauntons milk-vetch	Endangered	None	-	1B.1	Presume Absent
<i>Phacelia hubbyi</i>	Hubbys phacelia	None	None	-	4.2	Presume Absent
<i>Juglans californica</i>	southern California black walnut	None	None	-	4.2	Presume Absent
<i>Monardella hypoleuca</i> ssp. intermedia	intermediate monardella	None	None	-	1B.3	Presume Absent
<i>Calochortus catalinae</i>	Catalina mariposa-lily	None	None	-	4.2	Presume Absent
<i>Calochortus plummerae</i>	Plummers mariposa-lily	None	None	-	4.2	Presume Absent
<i>Calochortus weedii</i> var. intermedius	intermediate mariposa-lily	None	None	-	1B.2	Presume Absent
<i>Nama stenocarpa</i>	mud nama	None	None	-	2B.2	Presume Absent
<i>Romneya coulteri</i>	Coulters matilija poppy	None	None	-	4.2	Presume Absent
<i>Diplacus clevelandii</i>	Clevelands bush monkeyflower	None	None	-	4.2	Presume Absent
<i>Nolina cismontana</i>	chaparral nolina	None	None	-	1B.2	Presume Absent
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	Threatened	Endangered	-	1B.1	Presume Absent
Special-Status Communities						
Southern Coastal Salt Marsh	-	-	-	-	-	Absent
Southern Cottonwood Willow Riparian Forest	-	-	-	-	-	Absent

Southern Dune Scrub	-	-	-	-	-	Absent
Southern Foredunes	-	-	-	-	-	Absent

**U.S. Fish and Wildlife Service (Fed) -
Federal**

END- Federal END
THR- Federal THR
DL- DL

**California Department of Fish and Wildlife
(CA) -**

California

END- California END
THR- California THR
CE- Candidate for listing under the California
END Species Act CTHR- Candidate
THR
FP- California Fully Protected
SSC- Species of Special Concern
WL- Watch List

**California Native Plant Society (CNPS)
*California Rare Plant Rank***

1B Plants Rare, THR, or END in California and
Elsewhere
2B Plants Rare, THR, or END in California, But
More Common Elsewhere
3 Plants About Which More Information is
Needed – A Review List
4 Plants of Limited Distribution – A Watch List
CBR- Considered But Rejected for ranking

CNPS Threat Ranks

0.1- Seriously THR in
California
0.2- Moderately THR
in California
0.3- Not very THR in
California

Attachment E

Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits “take” of threatened or endangered species. “Take” under the ESA is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered “take.” This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines “endangered” and “rare” species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, “endangered” species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while “rare” species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in “take” of individuals (defined in CESA as; “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”) are regulated by CDFW. Habitat degradation or modification is not included in the definition of “take” under CESA. Nonetheless, CDFW has interpreted “take” to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

- 2A- Plants Presumed Extirpated in California, But More Common Elsewhere
- 2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- 3- Plants about Which More Information is Needed - A Review List
- 4- Plants of Limited Distribution - A Watch List

Threat Ranks

- .1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of “Waters of the United States”; Conforming (September 8, 2023), “waters of the United States” are defined as follows:

(a) *Waters of the United States* means:

(1) Waters which are:

- (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (ii) The territorial seas; or
- (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under [paragraph \(a\)\(5\)](#) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

- (i) Waters identified in [paragraph \(a\)\(1\)](#) of this section; or
- (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not “waters of the United States” even where they otherwise meet the terms of [paragraphs \(a\)\(2\)](#) through [\(5\)](#) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) *Wetlands* means 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 include swamps, marshes, bogs, and similar areas.

(2) *Adjacent* means having a continuous surface connection

(3) *High tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) *Ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) *Tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

- (1) substantially obstruct or divert the natural flow of a river, stream, or lake;
- (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake;
- or
- (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state’s authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although “waste” is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 12960001CANA

TO: Steve Guzowski

FROM: Tony Bomkamp

DATE: April 28, 2021

SUBJECT: Updated Review of Jurisdictional Limits for California Department of Fish and Wildlife and U.S. Army Corps of Engineers and Biological Resources for Serrano Creek Southern/Eastern Bank for Great Scott Landscape Facility

On June 21 and July 10, 2017, GLA conducted site visits to identify the limits of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Wildlife (CDFW) jurisdictional boundaries for the edge of Serrano Creek within the Project site, which depending on the specific segment of Serrano Creek represents the southern or eastern bank of the stream. GLA conducted a site visit on April 16, 2020 to confirm that the limits of agency jurisdiction had not changed since the 2017 site visits. Since conducting the 2017 jurisdictional delineation (JD), GLA obtained files showing the 100-year flood plain as mapped by the project civil engineer¹, which generally is very close to the 2017 JD for CDFW jurisdiction. While the limits for CDFW jurisdiction varies based on specific site conditions, CDFW typically considers the 100-year flood limit as the maximum extent of their jurisdiction. Therefore, where the mapped 100-year flood plain was located closer to the proposed development, GLA used the 100-year flood plain as the maximum extent of jurisdiction. For areas where CDFW jurisdiction exceeded the 100-year flood plain due to the presence of riparian habitat, GLA used the edge of riparian habitat for the limits of CDFW jurisdiction. As such, in all areas, GLA used the most expansive limits of potential CDFW jurisdiction. This was then provided to the project planners for final modifications to the project to ensure avoidance of CDFW jurisdiction, which also resulted in full avoidance of Corps jurisdiction.

GLA also evaluated the site to determine whether any sensitive species and/or communities are likely to occur onsite, and this assessment was also updated during the April 16, 2020 site visit. [Exhibit 1 – Regional Map, Exhibit 2 – Vicinity Map]. Exhibits 3 depicts the limits of Corps and CDFW jurisdiction. Exhibit 4 shows the previous site plan with the various project areas depicted to accompany the descriptions in Section 2 below under “2017 Site Descriptions”. Sheets A1.1 and A1.2 depict the current site plan, showing full avoidance of Corps and CDFW

¹ Huitt Zollars. December 9, 2019. *Preliminary Drainage Report: In Support of Great Scott Tree Service Improvements, 20865 Canada Road, Lake Forest, CA 92630 APN: 610-301-20, 610-301-07*. The December 9, 2019 Report was used to support this Technical Memorandum and has been updated as of December 16, 2020.

jurisdiction. The 2017 Plan is superseded by the current plan which shows expansion of the development, which was addressed during the April 16, 2020 site visit.

I. METHODOLOGY

A. Corps and CDFW Jurisdiction

Prior to beginning the initial field delineation, GLA conducted a reconnaissance visit on June 21, 2017 to review the site and determine the most appropriate methodology for mapping the limits of jurisdiction. During the reconnaissance visit, it became apparent that CDFW jurisdiction exceeded Corps jurisdiction and thus, it was determined that mapping of CDFW jurisdiction would be prioritized for purposes of site planning and avoidance to eliminate the need for Section 1602 and Section 404 Authorizations. Specifically, Section 404 jurisdiction is defined by the presence of an Ordinary High Water Mark (OHWM), which is typically located on the lower terraces of streams; whereas CDFW typically takes jurisdiction to the top of bank or outer limit of riparian habitat (whichever is greater). As such, CDFW always exceeds Corps jurisdiction with the only exception being the presence of adjacent wetlands, which do not occur in areas adjacent to Serrano Creek. During the July 10, 2017 site visit, GLA mapped the extent of CDFW jurisdiction using either the top of bank or riparian habitat that extends beyond the top of bank (e.g., native trees such as willow and non-native vegetation such as giant reed). Corps jurisdiction was also mapped for the areas between the western project limits and Dimension Drive. As noted, and depicted on Exhibit 3, CDFW jurisdiction exceeds Corps jurisdiction in all areas of Serrano Creek. As discussed below, the delineation effort began at the western limits of the site and worked upstream. Descriptions for specific segments of Serrano between the downstream limits and Dimension Drive follow the nomenclature provided on Exhibit 4. During the April 16, 2020 site visit, the limits of 2017 CDFW jurisdiction and 100-year flood plain limits were uploaded to a Trimble GPS device with submeter accuracy to verify the previous mapping and to also verify that the CDFW jurisdiction, which is often defined by the limits of the 100-year flood plain or the extent of the riparian canopy has not changed or where changes were observed, the updated limits were mapped. The Soil Conservation Service (SCS)² has mapped the following soil types as occurring in the general vicinity of the project site:

B. Special-Status Biological Resources

In addition to the jurisdictional limits for Corps and CDFW jurisdiction associated with Serrano Creek, which were identified for purposes of designing the project in a manner that would avoid the need for authorizations from the Corps or CDFW, GLA also evaluated the potential for the site to support special-status species or vegetation alliances. As described in detail in Section II

² SCS is now known as the National Resource Conservation Service or NRCS.

below, all of the areas proposed for development have been subject to previous disturbance and/or development with equestrian facilities, stables, vegetable gardens, and storage yards. The segment of Serrano Creek that is located adjacent to the site is also highly disturbed and supports a predominance of non-native eucalyptus (*Eucalyptus globulus*), giant reed (*Arundo donax*), and other non-native vegetation such as castor bean (*Ricinus communis*) as addressed below. While there are a few native coast live oak trees (*Quercus agrifolia*) and western sycamore (*Platanus racemosa*) the site does not support any native vegetation alliances.

1. Special-Status Plants

During the On June 21 and July 10, 2017 site surveys and April 16, 2020 site survey, GLA Senior Botanist walked the entire development area and recorded all plant species present. As described in Section II below, the areas that exhibit open ground (in contrast with the stables and other developed areas which are unvegetated) support a predominance of non-native annual grasses and forbs and contain no native habitat capable of supporting special-status plants. The level of survey effort was consistent with the CDFW requirements. Specifically, surveys were conducted by following meandering transects searching for areas of potentially suitable rare plant habitat. All plant species encountered during the field surveys were identified and recorded following the above-referenced guidelines, CNPS (2010) and CDFW by Nelson (1984).

2. Special-Status Animal Species Reviewed

A literature search was conducted to obtain a list of special-status wildlife species with the potential to occur within the Project site. Species were evaluated based on two factors: 1) species identified by the CNDDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs on the Project site.

3. Soils

The following soils are mapped on the site; however, due to long-term equestrian disturbance, farming, and development, the upper surface profile is disturbed in many areas and does not exhibit typical characteristics.

Cieneba Sandy Loam, 15 to 30 Percent Slopes

The Cieneba series consists of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 9 to 75 percent. Typically, the surface layer is light brownish gray and pale brown sandy loam 7 inches thick. The underlying material is weathered granodiorite.

Myford Sandy Loam, 15 to 30 Percent Slopes

The Myford series consists of moderately well drained soils on marine terraces. These soils formed in sandy sediments. Slopes are 0 to 30 percent. In a typical profile, the surface layer is pale brown and pinkish gray, medium acid sandy loam 4 inches thick. The upper 6 inches of the subsoil is brown, medium acid sandy clay; the next 17 inches is brown, neutral, and moderately alkaline sandy clay loam; and the lower 36 inches is light brown, calcerous sandy clay loam and sandy loam. The substratum is very pale brown slightly acid sandy loam to a depth of 79 inches or more.

Riverwash

Riverwash consists of areas of unconsolidated alluvium, generally stratified and varying widely in texture, recently deposited by intermittent streams, and subject to frequent changes through stream overflow. These are sandy, gravelly, cobbly, and boulder deposits that support little or no vegetation. Runoff is generally rapid, and the erosion hazard is high. Deposition and removal of fresh alluvium are common.

Sorrento Loam, 2 to 9 Percent Slopes

The Sorrento series consists of well drained soils on alluvial fans and flood plains. These soils formed in alluvium derived from sedimentary rocks. Slopes are 0 to 9 percent. In a typical profile, the surface layer is grayish brown loam, 12 inches thick. The underlying material is grayish brown, light brownish gray, and pale brown silty clay loam to a depth of 62 inches and light brownish gray sandy loam to a depth of 72 inches or more.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States³, except for Riverwash, which may include hydric inclusions. Nevertheless, to the extent that the hydric inclusion may be present, as discussed, the project fully avoids Serrano Creek and there would be no impacts on hydric soils if they should be present.

³ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

II. EXISTING CONDITIONS (INCLUDES 2017 AND 2020 SURVEYS)

A. Area Below the Bridge at Dimension Drive

As depicted on Exhibit 4, the area downstream of Dimension was composed of five segments associated with the Areas I – V on Exhibit 4. Following the site visits in 2017, the site plan has been modified and this memo addresses the current conditions within the areas proposed for development. This memo includes a discussion of the conditions in 2017.

Overall, conditions have not changed within the areas evaluated in 2017. For this report, the project site has been separated into three distinct areas more-or-less defined by the three Water Quality Bioswales (“Bioswale”). The project site is depicted on Sheets A1.1 and A1.2 of the attached project plans, which are included in the current site plan and each of three areas defined as “Northeast Area”, which is the portion of the site nearest Dimension Drive, the “Central Area” and the “Southwest Area” which is the southwest quarter of the site.

Northeast Area

The Northeast Area corresponds to Areas I and V as evaluated in 2017. The Northeast Area include a tree canopy with a scattering of coast live oak trees (*Quercus agrifolia*), a few western sycamores (*Platanus racemosa*) and black willow (*Salix goodingii*) and a small patch of blue elderberry (*Sambucus nigra cecaeruela*) as well as non-natives species including aloe (*Aloe arborescens*), castor bean (*Ricinus communis*), eucalyptus (*Eucalyptus globulus*), giant reed (*Arundo donax*), bluewitch nightshade (*Solanum umbelliferum*) Mexican fan palm (*Washingtonia robusta*), pampas grass (*Cortaderia selloana*), smilo grass (*Stipa miliacea*), and tree tobacco (*Nicotiana glauca*), and native understory plants including, mugwort (*Artemisia douglasiana*), mulefat (*Baccharis salicifolia*), black mustard (*Brassica nigra*), and summer *Hirschfeldia incana*). The westernmost portion of this area, which corresponds to Area V in the previous report and is entirely disturbed, consisting of several larch mulch piles and a stand of eucalyptus. The Area immediately to the west of the Northeast Area is under separate ownership and is not part of the project.

Central Area

The Central Area generally corresponds to Areas II, III and IV as evaluated in 2017. The eastern half of the Central Area includes developed areas such as horse stables, corrals, and storage sheds along with larger buildings. Open areas are highly disturbed and are covered by non-native herbaceous weed such as black mustard, tocolote (*Centaurea melitensis*), white horehound (*Marrubium vulgare*), red-stemmed filaree (*Erodium cicutarium*), and wayside peppergrass. The western portion of the Central Area includes a riding ring that is now covered by black mustard and other non-native weeds.

Southwest Area

The southwest area is dominated by non-native herbaceous weeds including black mustard, tocolote (*Centaurea melitensis*), white horehound, red-stemmed filaree (*Erodium cicutarium*), castor bean, milk thistle (*Sulymbum marianum*), bull thistle (*Cirsium vulgare*), smilo grass, ripgut (*Bromus diandrus*), and little nettle (*Urtica urens*). The segment of Serrano Creek along this segment of the project areas supports dense thickets of the non-native giant reed with blue gum eucalyptus.

2017 Site Descriptions

Area IV

Area IV consists of disturbed ground and is occupied by an equestrian riding ring. The edge of Serrano Creek adjacent to Area IV is highly disturbed and is predominantly vegetated with non-native species including Brazilian pepper (*Schinus terebinthifolius*), castor bean (*Ricinus communis*), blue-gum eucalyptus (*Eucalyptus globulus*), English ivy (*Hedera helix*), giant reed (*Arundo donax*), Mexican fan palm (*Washingtonia robusta*), pampas grass (*Cortaderia selloana*), black mustard (*Brassica nigra*), summer mustard (*Hirschfeldia incana*), tree tobacco (*Nicotiana glauca*), and white horehound (*Marrubium vulgare*), as well as a small amount of native species including black willow (*Salix gooddingii*), coast live oak (*Quercus agrifolia*), and poison oak (*Toxicodendron diversilobum*).

Area III

Area III is entirely disturbed, occupied largely by stables and sheds and disturbed ground. The edge of Serrano Creek in Area III is highly disturbed and is predominantly vegetated with the non-native species observed in Area IV including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed, Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak and poison oak.

Area II

Area II consists of disturbed ground and is occupied by nursery plants. The end of Serrano Creek in Area II is highly disturbed and is predominantly vegetated with non-native species including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed,

Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak, and poison oak.

Area V

Area V is entirely disturbed, consisting of several larch mulch piles and a stand of eucalyptus. The edge of Serrano Creek in Area V is highly disturbed and is predominantly vegetated with non-native species including Brazilian pepper tree, castor bean, blue-gum eucalyptus, English ivy, giant reed, Mexican fan palm, pampas grass, summer mustard, tree tobacco, and white horehound, as well as a small amount of native species including black willow, coast live oak, and poison oak.

Area I

Area I is vegetated with a predominance of coast live oak trees as well as non-natives species including aloe (*Aloe arborescens*), castor bean, eucalyptus, giant reed, Mexican fan palm, pampas grass, smilo grass (*Stipa miliacea*), and tree tobacco, and native plants including occasional black willow, mugwort (*Artemisia douglasiana*), mulefat (*Baccharis salicifolia*), and bluewitch nightshade (*Solanum umbelliferum*).

B. Area Upstream of Dimension Drive

The area above the Dimension Drive Bridge is vegetated with a predominance of coast live oak with occasional blue elderberry (*Sambucus nigra* ssp. *caerulea*) and California sycamore (*Platanus racemose*). Understory species form a mosaic with non-native species including aloe, bigleaf periwinkle (*Vinca major*), castor bean, eucalyptus, Italian thistle (*Carduus pycnocephalus*), pampas grass, smilo grass, summer mustard, tree of heaven (*Ailanthus altissima*), and tree tobacco, and native species including California sage brush (*Artemisia californica*), jimson weed (*Datura stramonium*), horseweed (*Erigeron canadensis*), mugwort, mulefat, and poison oak. The Serrano Creek Bike and Equestrian Trail parallels Serrano Creek for this entire segment of Serrano Creek and is set back only a few feet from the southern edge of Serrano Creek and associated coast live oak riparian habitat.

III. JURISDICTIONAL DELINEATION RESULTS

A. CDFW Jurisdiction

The limits of CDFW jurisdiction are depicted on Exhibit 3 and extends to one of three areas including the top of the Serrano Creek bank, the 100-year flood plain or to edge of the canopy of associated riparian vegetation that is rooted at the top of bank or below top of bank. The riparian

habitat typically consists of native trees such as willows and western sycamores but also includes on patch of giant reed.

B. Corps Jurisdiction

The limits of Corps jurisdiction are determined by the Ordinary High Water Mark (OHWM) which in all areas of Serrano Creek evaluated is below the top of bank as depicted on Exhibit 4. As such, avoidance of CDFW jurisdiction would ensure that all areas of Corps jurisdiction are also fully avoided.

IV. SPECIAL STATUS SPECIES

During the 2017 and 2020 site visits, GLA conducted a habitat assessment and floristic surveys for special status plants and habitat assessment for special-status animals, along with a search for special-status vegetation alliances as addressed below.

A. Special-Status Plants

Areas I – V in 2017 and/or the Northeast Area, Central Area and Southwest Area in 2020 were evaluated for the presence of special-status plants and/or habitat for special-status plants. Each of the areas, as observed during both the 2017 and 2020 surveys exhibit land uses (e.g., equestrian uses and agricultural uses) which are not suitable for special-status plants and where areas support vegetation, they contain non-native species which are indicators for high levels of disturbance as indicted by the diversity of non-native grasses and forbs reported in the descriptions for Areas I – V provided above.. Because of the high level of disturbance exhibited by these areas, they do not support habitat, such as coastal sage scrub, chaparral, or native grasslands capable of supporting special-status plants and as such exhibit no potential for the presence of special-status plants. The area also lacks soil types (e.g., clay soils or lenses, alkaline soils, rock or sandstone outcrops, etc.). Similarly, Serrano Creek, including the banks and bottom within the Study Area does not contain suitable habitat for special-status plants. As noted, much of the tree canopy associated with Serrano Creek adjacent to the proposed project area support blue-gum eucalyptus which exhibits phytochemicals that limit understory plant growth, further rendering the area unsuitable for special-status plants. As such, there is no potential for impacts to special-status plants associated with the project. Appendix A, Table 1 includes all special-status plant species recorded for the California Natural Diversity Database (CNDDB) for the El Toro 7.5 Minute Quadrangle Map and the surrounding Quadrangles: Orange, Black Star Canyon, Corona South, Tustin, Santiago Peak, Laguna Beach, San Juan Capistrano, and Canada Gobernadora.

B. Special -Status Animals

As for special-status plants, Appendix A, Table 2 includes all special-status animal species recorded for the California Natural Diversity Database (CNDDB) for the El Toro 7.5 Minute Quadrangle Map and the surrounding Quadrangles: Orange, Black Star Canyon, Corona South, Tustin, Santiago Peak, Laguna Beach, San Juan Capistrano, and Canada Gobernadora.

Areas I – V in 2017 or the Northeast Area, Central Area and Southwest Area in 2020 were evaluated for the presence of special-status animals and/or habitat for special-status animals. Because of the high level of disturbance exhibited by these areas, they do not support habitat for special-status animals and as such exhibit no potential for the presence of special-status animals. Serrano Creek within the Study Area does not contain suitable habitat for special-status avifauna, with exception of yellow warbler, a California species of special concern. Yellow warbler was not detected during the site visits; however, even if it would occur, the project would not impact any potential habitat.

Portions of Serrano Creek downstream of Dimension Drive exhibit flowing and/or standing water and could support the western pond turtle, a California species of special concern. Western pond turtles were not detected during the site visits; however, the site visits did not include focused surveys for this species. Nevertheless, the project would fully avoid impacts to Serrano Creek including areas of potential habitat for the western pond turtle and the project has no potential for impacts to this species. It is also important to note that banks of Serrano Creek adjacent to the project area are steep and there are generally no suitable basking sites for western pond turtles further limiting the potential for this species.

As noted in Appendix A, Table 2, a number of special-status fish species have been recorded from the above-referenced Quadrangle Maps including: Arroyo chub (*Gila orcutti*), Santa Ana speckled dace (*Rhinichthys osculus*), Santa Ana sucker *Catostomus santaanae*, Southern steelhead – southern California [DPS] (*Oncorhynchus mykiss irideus*), and Tidewater goby (*Eucyclogobius newberryi*). The onsite segment of Serrano Creek is intermittent, highly disturbed with a canopy of mostly non-native eucalyptus trees and does not contain suitable perennial flow for any of these special-status fish. Areas upstream and downstream are variable with channelized segments and segments within underground culverts or boxes and suitable habitat for special-status fish is lacking upstream and downstream of the site. In addition, the project fully avoids areas of CDFW jurisdiction which has been mapped at or above the 100-year flood limit and has no potential for impacts to fish of any kind.

There are no other special-status species with potential to occur within Areas I – V as determined in 2017 or the Northeast Area, Central Area and Southwest Area in 2020 that could occupy Serrano Creek that could be impacted by the project.

C. Special-Status Vegetation Alliances

The following special-status vegetation alliances are reported from one or more of the Quadrangle Maps referenced above.

- California walnut woodland – Does not occur onsite.
- Canyon live oak ravine forest – Does not occur onsite.
- Riversidian alluvial fan sage scrub – Does not occur onsite.
- Southern California arroyo chub/Santa Ana sucker stream – Does not occur onsite.
- Southern coast live oak riparian forest – Occurs downstream of Dimension Drive.
- Southern coastal salt marsh – Does not occur onsite.
- Southern cottonwood willow riparian forest – Does not occur onsite.
- Southern interior cypress forest – Does not occur onsite.
- Southern mixed riparian forest – Does not occur onsite.
- Southern riparian forest – Does not occur onsite.
- Southern riparian scrub – Does not occur onsite.
- Southern sycamore alder riparian woodland – Does not occur onsite.
- Southern willow scrub – Does not occur onsite.
- Valley needlegrass grassland – Does not occur onsite.

As described above, the entire project footprint supports developed areas, such as vegetable gardens and stables, or areas that exhibit weedy, disturbed vegetation cover. There are no special-status vegetation alliances within the project footprint and thus, the project exhibits no potential for impact to special-status vegetation alliances. As noted above in Section IV(A) offsite areas downstream of Dimension Drive support coast live oak woodland and some areas may meet the definition for coast live oak riparian forest; however, the project exhibits no potential impacts to this vegetation alliance.

V. WILDLIFE CORRIDORS

Serrano Creek originates to the north of the site traversing portions of Whiting Ranch Regional Park and ultimately flowing beneath Portola Parkway before entering a concrete channel that carries flows beneath SR-241 and the intersection of Lake Forest Drive and Rancho Parkway. The Serrano Creek Park/Trail originates below the Lake Forest Drive and Rancho Parkway intersection and extends for just over three miles to the Bake Parkway where the water is carried through a series of concrete boxes and channels to the Great Park at the intersection of Alton Parkway and Barranca Parkway before flowing under the location where the I-405 and I-5 Freeways join.

The entire three-mile segment of Serrano Creek Park is fully urbanized on both sides including dense residential development, commercial and industrial development and other uses such as former nursery and equestrian areas. As noted, the entire segment is a park with paved and maintained trails. In some area such as to the north of the project site, the park is very narrow, with widths ranging from 75 to 100 feet. Widths within the project site range from approximately 100 to 150 feet and downstream of the site the park varies from approximately 100 to 300 feet before terminating at Bake Parkway within an area of dense commercial and industrial uses.

Given these conditions, the Serrano Creek Park/Trail does not represent a regionally important wildlife movement corridor. The downstream segment of Serrano Creek on the Great Park Property, which is approximately 1.5 mile to the south and fully developed between Bake Parkway and the Alton Parkway and Barranca Parkway intersection is part of the Irvine Wildlife Corridor; however, this corridor connects to areas of open space to the south through the Great Park and there is no connection between the Serrano Creek Trail/Park and the Irvine Wildlife Corridor.

Thus, the project site is not located within a regional wildlife movement corridor and implementation of the project exhibits no potential for significant impacts to wildlife movement. It is important to note that the project only proposes to disturb areas that were previously developed with equestrian uses, existing building including stables and barns, and areas used for agriculture and similar uses. The project would not substantially change uses and as noted would not develop within areas below the 100-year flood line of Serrano Creek.

VI. RECOMMENDATIONS

GLA recommends two measures to further reduce the potential for impacts to special-status species and to nesting avifauna

A. Western Pond Turtle

While it is unlikely that western pond turtle would occupy the segment of Serrano Creek adjacent to the site, in order to ensure that no direct or indirect impacts to this species occur, pre-construction surveys by a biologist familiar with the western pond turtle and its habitat requirements will conduct three survey passes within a 14-day period prior to the start of construction. Following the surveys, the biologist will prepare a report for submittal to the City of Lake Forest documenting the results of the surveys. If the surveys are negative, no further action will be needed.

If western pond turtles are detected adjacent to the project development area, the biologist will prepare an avoidance plan that would be submitted to CDFW for review and approval to ensure that no direct or indirect impacts to western pond turtle occur. The plan would include the following:

- Survey results including a map showing western pond turtle locations
- Qualifications of the biological monitor
- Methods for monitoring of the western pond turtle during construction
- Methods for preventing western pond turtles from entering the development area such as silt fence or other devices
- Reporting requirements

B. Nesting Birds

The following requirements under the MBTA and California Fish and Game Code Sections 3503.5, 3503, and 3513 are to be implemented to ensure that nesting birds are not harmed during project construction. It should be noted that raptor species are not expected to nest within the Development Area due to a lack of suitable habitat:

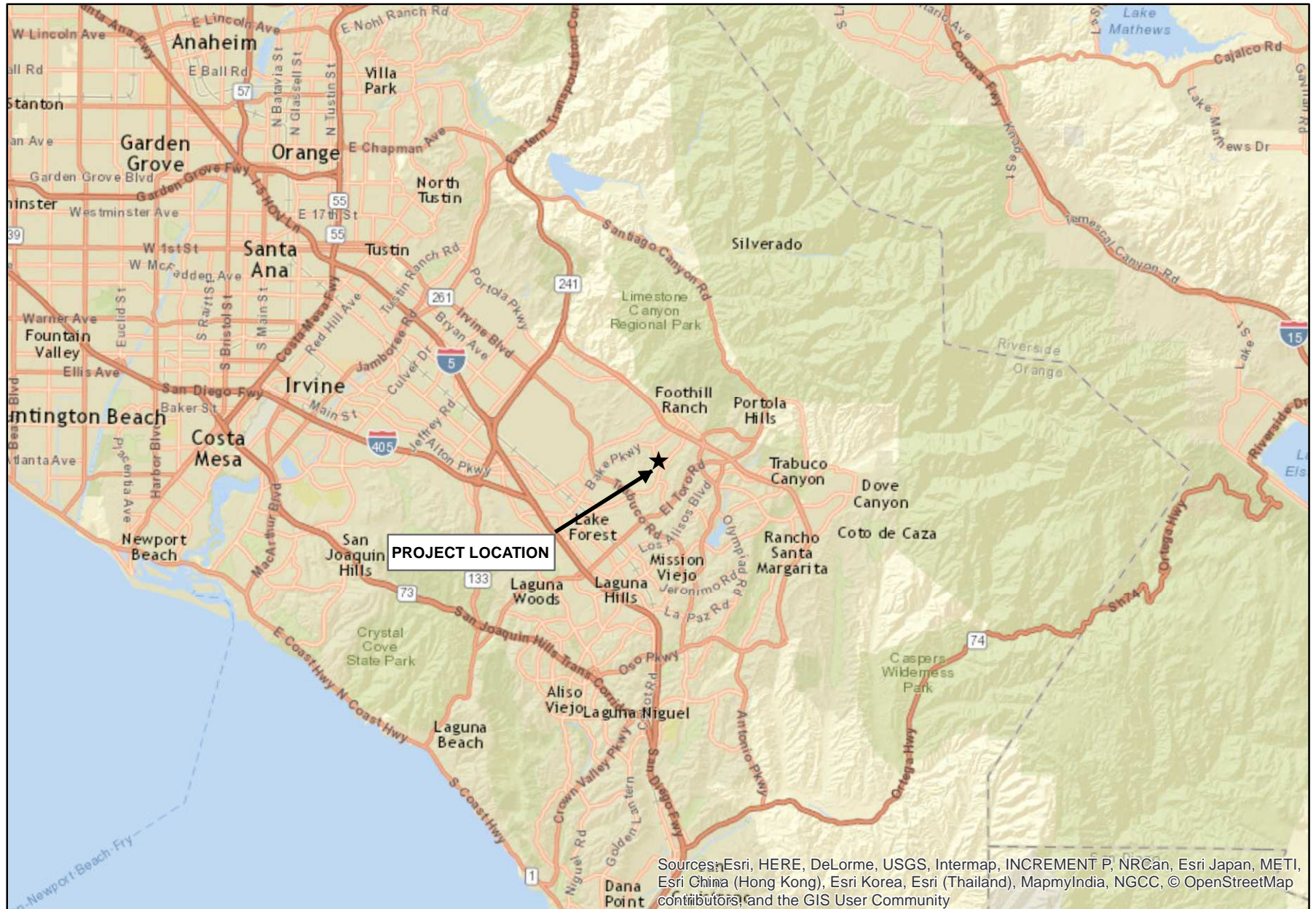
If feasible, the removal of vegetation should occur outside of the nesting season, generally recognized as March 15 to August 31 (potentially earlier for raptors). If vegetation removal must occur during the nesting season, then a qualified biologist shall conduct a nesting bird survey prior to any vegetation removal. If active nests are identified, the biologist shall flag vegetation containing active nests. The biologist shall establish appropriate buffers around active nests to be avoided until the nests are no longer active and the young have fledged. Buffers will be based on the species identified, but generally will consist of 50 feet for non-raptors and 300 feet for raptors.

If for some reason it is not possible to remove all vegetation during the non-nesting season, then vegetation to be removed during the nesting season must be surveyed by a qualified biologist no more than three days prior to removal. If no nesting birds are found, the vegetation can be removed. If nesting birds are detected, then removal must be postponed until the fledglings have vacated the nest or the biologist has determined that the nest has failed. Furthermore, the biologist shall establish an appropriate buffer zone where construction activity may not occur until the fledglings have vacated the nest or the biologist has determined that the nest has failed.

Source: ESRI World Street Map



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8
Miles



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

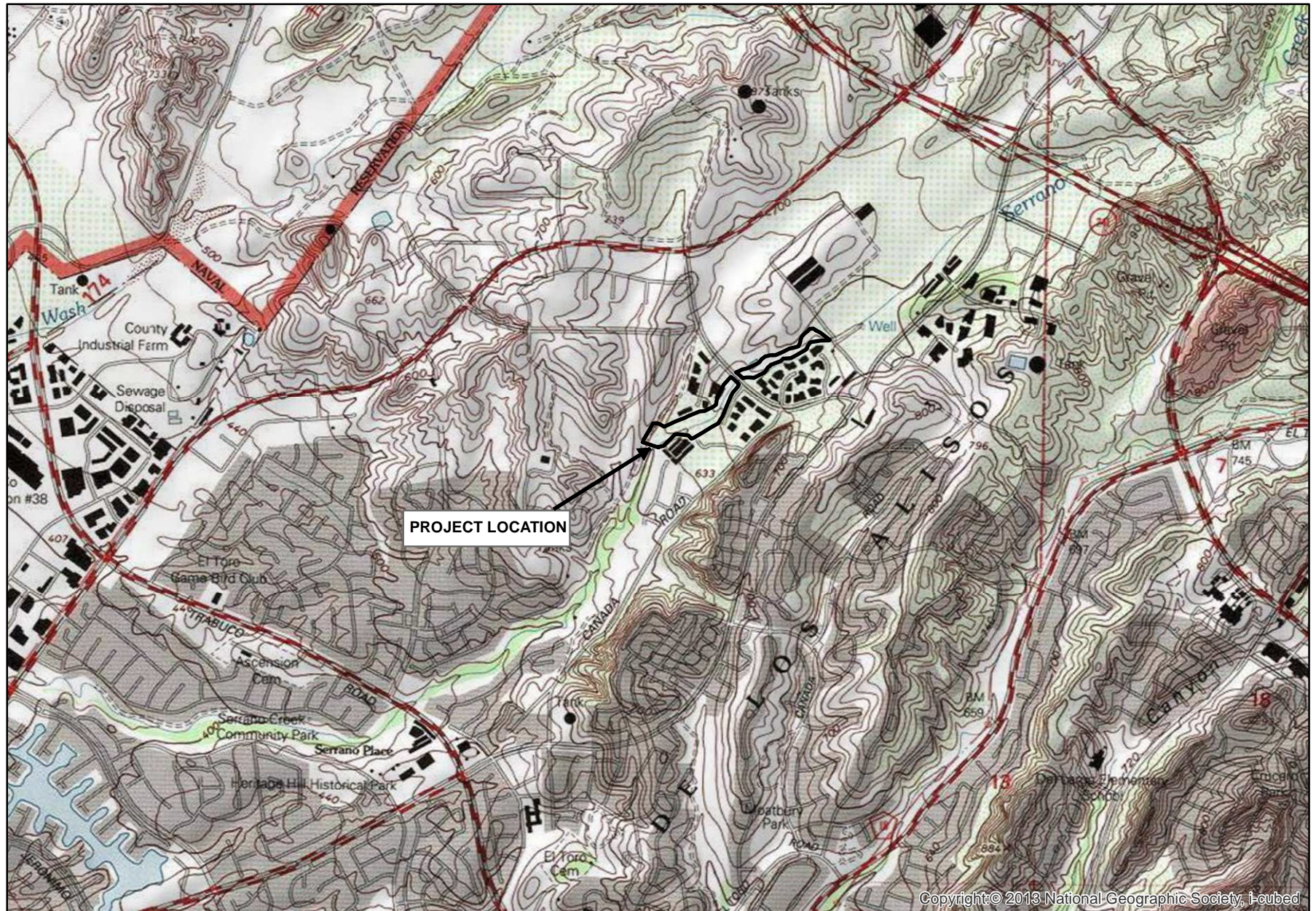
SERRANO CREEK

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1








Vicinity Map

Exhibit 2





-  Approximate Study Area
-  Limits of Corps Jurisdiction
-  Limits of CDFW Jurisdiction



1 inch = 250 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: August 4, 2017

SERRANO CREEK

Limits of Jurisdiction Map

GLENN LUKOS ASSOCIATES

Exhibit 3 Key Map



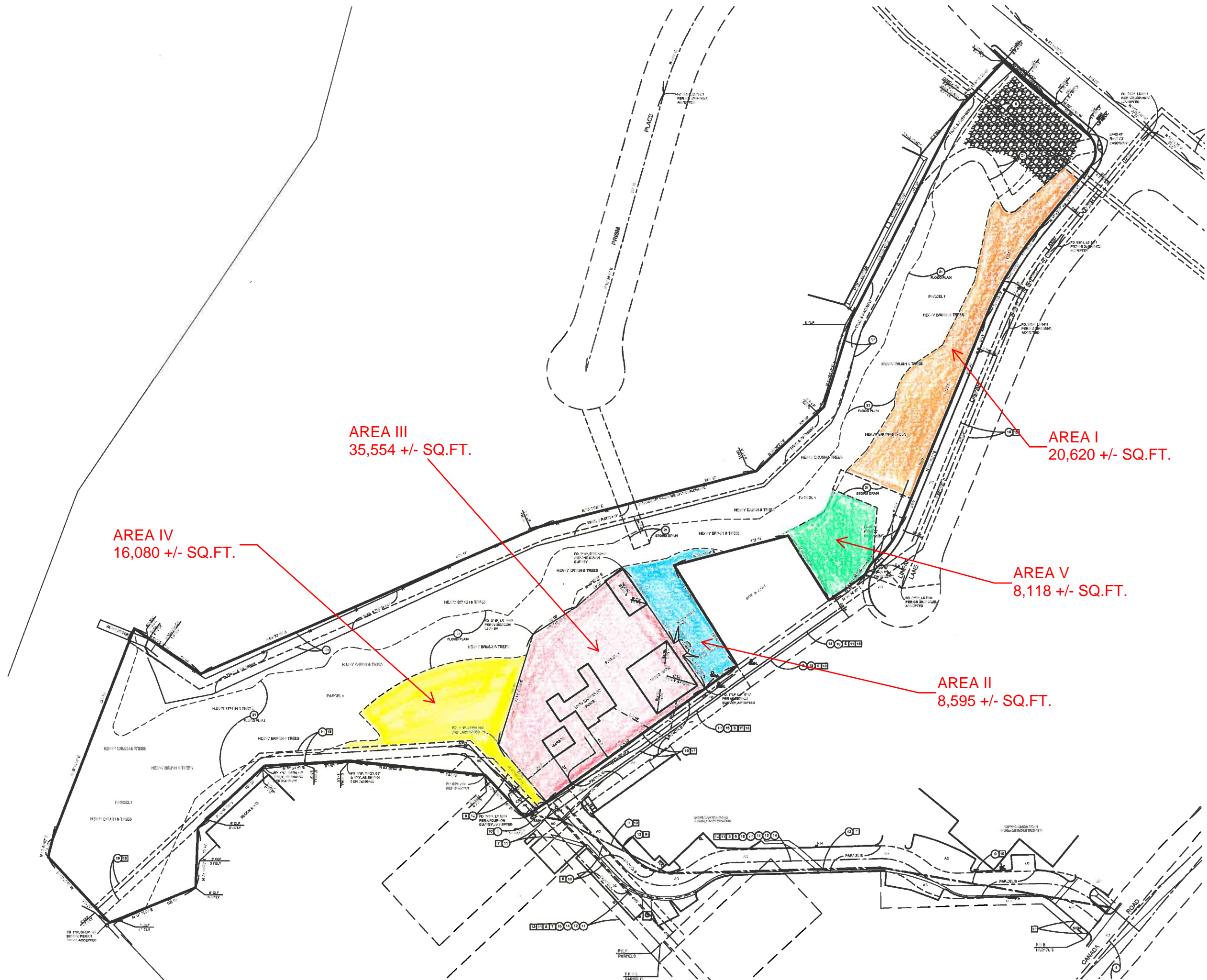
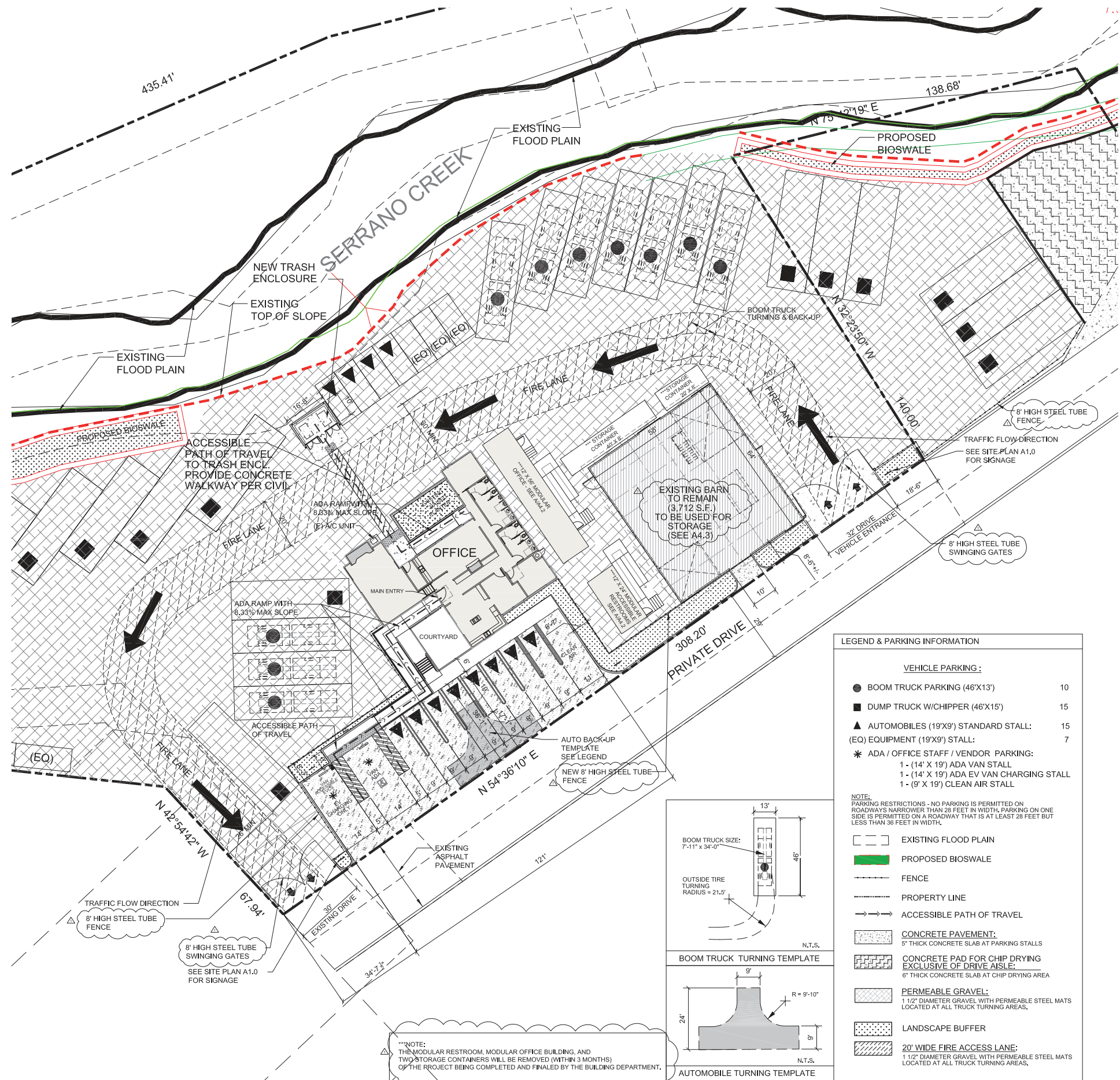


Exhibit 4



1 PROPOSED ENLARGED SITE PLAN
SCALE: 1/16" = 1'-0"

GREAT SCOTT
TREE SERVICE

20865 CANADA ROAD
LAKE FOREST, CA

CLIENT

GREAT SCOTT
TREE SERVICE INC.

10761 COURT AVENUE
STANTON, CA 90680

PROJECT TEAM
GENERAL CONTRACTOR
T.B.D.

CIVIL
HUITT - ZOLLARS INC.
PROJECT MANAGEMENT
P D SOLUTIONS INC.

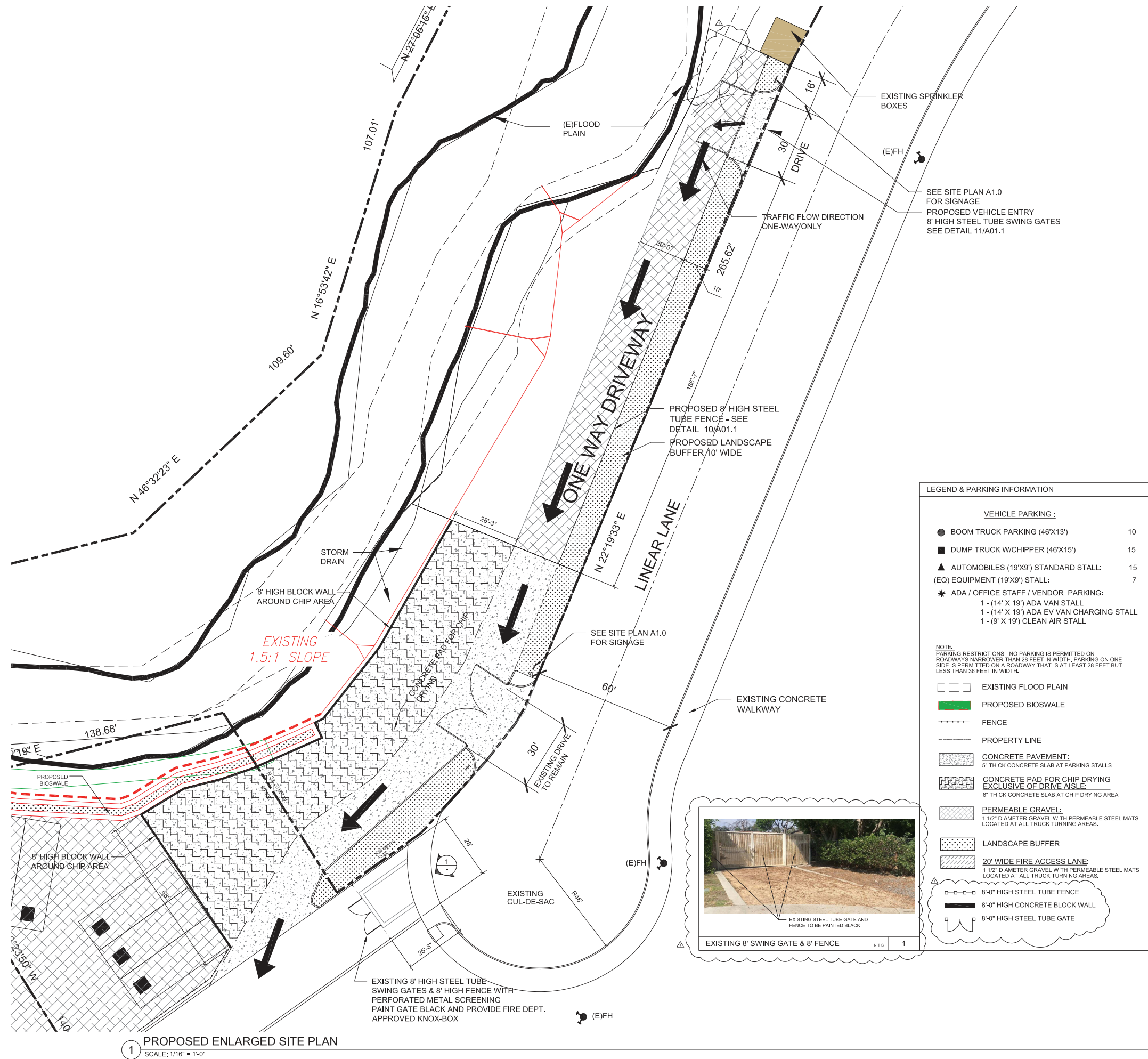
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DRAWN	JVS
H-A&D JOB	A17-2088
ISSUE	-
DRAWING SCALE	AS SHOWN



A1.2

PROPOSED ENLARGED SITE PLAN



Appendix A: Table 1, Special Status Plant Species Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Occurrence
Allen's pentachaeta <i>Pentachaeta aurea</i> ssp. <i>allenii</i>	Federal: None State: None CNPS: Rank 1B.1	Openings in coastal sage scrub, and valley and foothill grasslands.	Does not occur. No suitable sage scrub or grassland habitat.
Aphanisma <i>Aphanisma blitoides</i>	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in coastal bluff scrub, coastal dunes, and coastal scrub.	Does not occur. No suitable coastal bluff, scrub or dune habitat.
Big-leaved crownbeard <i>Verbesina dissita</i>	Federal: FT State: ST CNPS: Rank 1B.1	Southern maritime chaparral, coastal sage scrub	Does not occur. No suitable habitat. Outside of known range.
Braunton's milk-vetch <i>Astragalus brauntonii</i>	Federal: FE State: None CNPS: Rank 1B.1	Closed-cone coniferous forest, chaparral, coastal sage scrub, valley and foothill grassland. Usually carbonate soils. Recent burn or disturbed areas.	Does not occur. No carbonate soils and no suitable chaparral or scrub habitat.
Brewer's calandrinia <i>Calandrinia breweri</i>	Federal: None State: None CNPS: Rank 4.2	Sandy or loamy soils in disturbed sites and burns. Chaparral, coastal scrub.	Does not occur. No suitable chaparral or scrub habitat.
California beardtongue <i>Penstemon californicus</i>	Federal: None State: None CNPS: Rank 1B.2	Sandy soils in chaparral, lower montane coniferous forest, and pinyon and juniper woodland.	Does not occur. No suitable chaparral or woodland habitat.
California box-thorn <i>Lycium californicum</i>	Federal: None State: None CNPS: Rank 4.2	Coastal bluff scrub, coastal scrub.	Does not occur. No suitable coastal bluff scrub habitat.
California satintail <i>Imperata brevifolia</i>	Federal: None State: None CNPS: Rank 2B.1	Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub.	Does not occur. No suitable alkali meadow or seep habitat.
Catalina mariposa lily <i>Calochortus catalinae</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	Does not occur. No suitable sage scrub or grassland habitat.
Chaparral nolina <i>Nolina cismontana</i>	Federal: None State: None CNPS: Rank 1B.2	Chaparral, coastal sage scrub. Occurring on sandstone or gabbro substrates.	Does not occur. No suitable sage scrub or grassland habitat.
Chaparral ragwort <i>Senecio aphanactis</i>	Federal: None State: None CNPS: Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Sometimes associated with alkaline soils.	Does not occur. No suitable sage scrub or grassland habitat or alkali soils.
Chaparral rein orchid <i>Piperia cooperi</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland.	Does not occur. No suitable woodland or grassland habitat.
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CNPS: Rank 1B.1	Sandy soils in chaparral, coastal sage scrub.	Does not occur. No suitable sandy soils within sage scrub or chaparral habitat.

Species Name	Status	Habitat Requirements	Occurrence
Cleveland's bush monkeyflower <i>Mimulus clevelandii</i>	Federal: None State: None CNPS: Rank 4.2	Gabbroic soils, often in disturbed areas, openings, rocky. Chaparral, cismontane woodland, lower montane coniferous forest.	Does not occur. No suitable chaparral or woodland habitat.
Cliff malacothrix <i>Malacothrix saxatilis</i> var. <i>saxatilis</i>	Federal: None State: None CNPS: Rank 4.2	Coastal bluff scrub, coastal scrub.	Does not occur. No suitable coastal bluff scrub habitat.
Cliff spurge <i>Euphorbia misera</i>	Federal: None State: None CNPS: Rank 2B.2	Coastal bluff scrub and coastal sage scrub. Occurring on rocky soils.	Does not occur. No suitable coastal bluff scrub habitat.
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: Rank 1B.1	Playas, vernal pools, marshes and swamps (coastal salt).	Does not occur. No suitable vernal pool or marsh habitat.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: Rank 4.2	Often in burns in chaparral and coastal scrub.	Does not occur. No suitable habitat. Large perennial easily detected.
Coulter's saltbush <i>Atriplex coulteri</i>	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, valley and foothill grassland. Occurring on alkaline or clay soils.	Does not occur. No suitable alkaline or clay soils and associated grassland habitat.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	Federal: None State: None CNPS: Rank 1B.2	Alkaline soils in coastal sage scrub, coastal bluff scrub.	Does not occur. No suitable alkaline or clay soils and associated grassland habitat.
Decumbent goldenbush <i>Isocoma menziesii</i> var. <i>decumbens</i>	Federal: None State: None CNPS: Rank 1B.2	Chaparral, coastal scrub (sandy, often in disturbed areas)	Does not occur. No suitable coastal scrub habitat.
Estuary seablite <i>Suaeda esteroa</i>	Federal: None State: None CNPS: Rank 1B.2	Coastal salt marsh and swamps. Occurring in sandy soils	Does not occur. No suitable coastal salt marsh habitat.
Felt-leaved monardella <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Federal: None State: None CNPS: Rank 1B.2	Chaparral and cismontane woodland	Does not occur. No suitable chaparral or woodland habitat.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishae</i>	Federal: None State: None CNPS: Rank 4.3	Chaparral, cismontane woodland, riparian woodland.	Does not occur. No suitable chaparral or woodland habitat.
Gambel's water cress <i>Nasturtium gambelii</i>	Federal: FE State: ST CNPS: Rank 1B.1	Marshes and swamps (freshwater or brackish).	Does not occur. No suitable wetland habitat.
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	Federal: None State: None CNPS: Rank 1B.3	Occurs on dry slopes and ridges within openings in broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grassland.	Does not occur. No suitable woodland habitat.

Species Name	Status	Habitat Requirements	Occurrence
Heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	Federal: None State: None CNPS: Rank 1B.2	Closed-cone coniferous forest, chaparral, and cismontane woodland.	Does not occur. No suitable chaparral or woodland habitat.
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: Rank 1B.2	Rocky and sandstone soils in chaparral, coastal sage scrub, valley and foothill grassland.	Does not occur. No suitable soils or coastal sage scrub habitat.
Intermediate monardella <i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	Federal: None State: None CNPS: Rank 1B.3	Usually in the understory of chaparral, cismontane woodland, and lower montane coniferous forest (sometimes)	Does not occur. No suitable chaparral or woodland habitat.
Laguna Beach dudleya <i>Dudleya stolonifera</i>	Federal: FT State: ST CNPS: Rank 1B.1	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland. Occurring on rocky soils.	Does not occur. No suitable habitat. Out of known range which is limited to portions of Laguna Beach.
Lewis' evening-primrose <i>Camissoniopsis lewisii</i>	Federal: None State: None CNPS: Rank 3	Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland.	Does not occur. No suitable coastal scrub or coastal dune habitat.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: Rank 1B.2	Clay soils in chaparral, coastal sage scrub, meadows and seeps, and valley and foothill grasslands	Does not occur. No suitable clay soils with scrub, grassland or other mesic habitat.
Los Angeles sunflower <i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Federal: None State: None CNPS: Rank 1A	Marshes and swamps (coastal salt and freshwater).	Does not occur. No suitable wetland habitat. Presumed extinct
Malibu baccharis <i>Baccharis malibuensis</i>	Federal: None State: None CNPS: Rank 1B.1	Chaparral, cismontane woodland, coastal sage scrub.	Does not occur. No suitable woodland or sage scrub habitat.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: Rank 1B.2	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	Does not occur. No suitable soils within grassland or open coastal sage scrub habitat.
Mesa horkelia <i>Horkelia 3ymose3</i> var. <i>puberula</i>	Federal: None State: None CNPS: Rank 1B.1	Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub.	Does not occur. No suitable sandy soils within chaparral habitat.
Mud nama <i>Nama stenocarpa</i>	Federal: None State: None CNPS: Rank 2B.2	Marshes, vernal pools, and swamps	Does not occur. No suitable vernal pools or marsh habitat.
Munz's onion <i>Allium munzii</i>	Federal: FE State: ST CNPS: Rank 1B.1	Clay soils in chaparral, coastal sage scrub, and valley and foothill grasslands	Does not occur. No suitable clay soils within scrub habitat.
Narrow-petaled rein orchid <i>Piperia leptopetala</i>	Federal: None State: None CNPS: Rank 4.3	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest.	Does not occur. No suitable woodland or forest habitat.

Species Name	Status	Habitat Requirements	Occurrence
Nuttall's scrub oak <i>Quercus dumosa</i>	Federal: None State: None CNPS: Rank 1B.1	Closed-cone coniferous forest, chaparral, and coastal sage scrub. Occurring on sandy, clay loam soils.	Does not occur. No suitable habitat. Outside of range which is close to coast.
Ocellated humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, riparian woodland. Occurring in openings.	Does not occur. No suitable woodland or riparian habitat.
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Federal: None State: None CNPS: Rank 1B.1	Coastal bluff scrub (sandy soils) and coastal dunes.	Does not occur. No suitable sandy soils or dune habitat.
Palmer's grapplehook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils.	Does not occur. No suitable soils within grassland or open coastal sage scrub habitat.
Palomar monkeyflower <i>Mimulus diffusus</i>	Federal: None State: None CNPS: Rank 4.3	Sandy or gravelly soils in chaparral, lower montane coniferous forest.	Does not occur. No suitable habitat. Outside known range.
Paniculate tarplant <i>Deinandra paniculata</i>	Federal: None State: None CNPS: Rank 4.2	Usually in vernal mesic, sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pools.	Does not occur. No suitable grasslands or open scrub habitat.
Parish's brittlescale <i>Atriplex parishii</i>	Federal: None State: None CNPS: Rank 1B.1	Chenopod scrub, playas, vernal pools.	Does not occur. No suitable vernal pool, or alkali playa habitat.
Parry's tetracoccus <i>Tetracoccus dioicus</i>	Federal: None State: None CNPS: Rank 1B.2	Chaparral and coastal sage scrub.	Does not occur. No suitable coastal sage scrub or chaparral habitat.
Payson's jewelflower <i>Caulanthus simulans</i>	Federal: None State: None CNPS: Rank 4.2	Sandy or granitic soils in chaparral and coastal scrub.	Does not occur. No suitable soils within chaparral or coastal sage scrub habitat.
Peninsular spineflower <i>Chorizanthe leptotheca</i>	Federal: None State: None CNPS: Rank 4.2	Alluvial fan, granitic. Chaparral, coastal scrub, lower montane coniferous forest.	Does not occur. No suitable alluvial fan habitat.
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None CNPS: Rank 4.2	Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland.	Does not occur. No suitable granitic soils within scrub habitat.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Federal: None State: None CNPS: Rank 1B.1	Coastal sage scrub, valley and foothill grassland (alkaline), vernal pools. Occurring in mesic soils.	Does not occur. No suitable vernal pool habitat.
Robinson's pepper grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: Rank 4.3	Chaparral, coastal sage scrub	Does not occur. No suitable clay soils within scrub habitat.

Species Name	Status	Habitat Requirements	Occurrence
Salt Spring checkerbloom <i>Sidalcea neomexicana</i>	Federal: None State: None CNPS: Rank 2B.2	Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	Does not occur. No suitable wetland seep habitat.
San Bernardino aster <i>Symphotrichum defoliatum</i>	Federal: None State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	Does not occur. No suitable vernally mesic or seep habitat.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	Federal: Candidate State: SE CNPS: Rank 1B.1	Coastal sage scrub, occurring on sandy soils.	Does not occur. No suitable habitat. Outside current range which is northern Los Angeles County
San Miguel savory <i>Clinopodium chandleri</i>	Federal: None State: None CNPS: Rank 1B.2	Rocky, gabbroic, or 5ymose5canics soils in chaparral, cismontane woodland, coastal sage scrub, riparian woodland, valley and foothill grassland.	Does not occur. No suitable habitat. Occurs in Santa Ana Mountains, outside known range.
Santa Ana River woolly star <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE CNPS: Rank 1B.1	Alluvial fan sage scrub, chaparral. Occurring on sandy or rocky soils.	Does not occur. No suitable habitat. Historically extirpated from Orange County.
Santa Monica dudleya <i>Dudleya Cymose</i> ssp. <i>ovatifolia</i>	Federal: FT State: None CNPS: Rank 1B.1	Chaparral, coastal sage scrub. Occurring on volcanic soils.	Does not occur. No suitable habitat. Historically extirpated from Orange County.
Santiago Peak phacelia <i>Phacelia keckii</i>	Federal: None State: None CNPS: Rank 1B.3	Closed-cone coniferous forest, chaparral	Does not occur. No suitable habitat. Outside known range.
Seaside cistanthe <i>Cistanthe maritima</i>	Federal: None State: None CNPS: Rank 4.2	Sandy soils in coastal bluff scrub, coastal scrub, and valley and foothill grassland.	Does not occur. No suitable coastal bluff scrub habitat.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: Rank 1B.1	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur. No suitable alluvial scrub habitat.
Small-flowered morning-glory <i>Convolvulus simulans</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral (openings), coastal sage scrub, valley and foothill grassland. Occurring on clay soils and serpentinite seeps.	Does not occur. No suitable clay alkaline soils and associated grassland habitat.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: Rank 1B.1	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	Does not occur. No suitable alkaline soils and associated grassland habitat.
South coast branching phacelia <i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	Federal: None State: None CNPS: Rank 3.2	Sandy, sometimes rocky soils in chaparral, coastal dunes, coastal scrub, and marshes and swamps (coastal salt)	Does not occur. No suitable sandy or dune habitat or salt marsh habitat.

Species Name	Status	Habitat Requirements	Occurrence
South coast saltscale <i>Atriplex pacifica</i>	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, playas.	Does not occur. No suitable clay soils within scrub habitat.
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	Federal: None State: None CNPS: Rank 1B.1	Disturbed habitats, margins of marshes and swamps, vernal mesic valley and foothill grassland, vernal pools.	Does not occur. No suitable alkaline soils and associated grassland habitat.
Sticky dudleya <i>Dudleya viscida</i>	Federal: None State: None CNPS: Rank 1B.2	Coastal bluff scrub, chaparral, coastal sage scrub. Occurring on rocky soils.	Does not occur. No suitable rocky cliffs within chaparral or coastal scrub habitat.
Summer holly <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Federal: None State: None CNPS: Rank 1B.2	Maritime Chaparral.	Does not occur. No suitable maritime habitat. Prominent shrub not observed.
Tecate cypress <i>Hesperocyparis forbesii</i>	Federal: None State: None CNPS: Rank 1B.1	Closed-cone coniferous forest, chaparral.	Does not occur. No suitable woodland habitat. Outside range.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: Rank 1B.1	Clay soils in chaparral (openings), cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools.	Does not occur. No suitable clay soils in grassland habitat.
Vernal barley <i>Hordeum intercedens</i>	Federal: None State: None CNPS: Rank 3.2	Coastal dunes, coastal sage scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	Does not occur. No suitable vernal pools or alkaline clay habitat.
Western dichondra <i>Dichondra occidentalis</i>	Federal: None State: None CNPS: Rank 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	Does not occur. No suitable sage scrub or grassland habitat.
Western spleenwort <i>Asplenium vespertinum</i>	Federal: None State: None CNPS: Rank 4.2	Rocky soils in chaparral, cismontane woodland, and coastal scrub.	Does not occur. No suitable rocky soils within scrub habitat.
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CNPS: Rank 2B.2	Sandy or gravelly alluvial soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland.	Does not occur. No suitable alluvial soils with scrub habitat.
White-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Federal: None State: None CNPS: Rank 1B.2	Sandy or gravelly soils in Mojavean desert scrub and pinyon and juniper woodland.	Does not occur. No suitable desert scrub habitat. Out of range.
Woolly chaparral-pea <i>Pickeringia montana</i> var. <i>tomentosa</i>	Federal: None State: None CNPS: Rank 4.3	Gabbroic, granitic, and clay soils in chaparral.	Does not occur. No suitable granitic soils or chaparral habitat.

STATUS

Federal

FE – Federally Endangered

FT – Federally Threatened

State

SE – State Endangered

ST – State Threatened

CNPS

Rank 1A – Plants presumed extirpated in California and either rare or extinct elsewhere.

Rank 1B – Plants rare, threatened, or endangered in California and elsewhere.

Rank 2A – Plants presumed extirpated in California, but common elsewhere.

Rank 2B – Plants rare, threatened, or endangered in California, but more common elsewhere.

Rank 3 – Plants about which more information is needed (a review list).

Rank 4 – Plants of limited distribution (a watch list).

CNPS Threat Code extension

.1 – Seriously endangered in California (over 80% occurrences threatened)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys

Appendix A: Table 2, Special Status Wildlife Species Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: None	Relatively warm and dry sites, including the inner Coast Range of California and margins of the Mojave Desert.	Does not occur. No suitable scrub habitat with suitable host plants.
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	Federal: FE State: None	Larval and adult phases each have distinct habitat requirements tied to host plant species and topography. Larval host plants include <i>Plantago erecta</i> and <i>Castilleja exserta</i> . Adults occur on sparsely vegetated rounded hilltops and ridgelines and are known to disperse through disturbed habitats to reach suitable nectar plants.	Does not occur. No suitable habitat. Out of range which is limited to western Riverside and San Diego counties
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	Federal: FE State: None	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds.	Does not occur. No suitable habitat.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	Federal: FE State: None	Seasonal vernal pools	Does not occur. No suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Fish			
Arroyo chub <i>Gila orcutti</i>	Federal: None State: SSC	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur. No suitable habitat within Serrano Creek due to intermittent flow.
Santa Ana speckled dace <i>Rhinichthys osculus ssp. 3</i>	Federal: None State: SSC	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Does not occur. No suitable habitat within Serrano Creek due to intermittent flow.
Santa Ana sucker <i>Catostomus santaanae</i>	Federal: FT State: None	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.	Does not occur. No suitable habitat within Serrano Creek due to intermittent flow.
Southern steelhead – southern California DPS <i>Oncorhynchus mykiss irideus</i>	Federal: FE State: SSC	Clear, swift moving streams with gravel for spawning. Federal listing refers to populations from Santa Maria river south to southern extent of range (San Mateo Creek in San Diego county.)	Does not occur. No suitable habitat within Serrano Creek due to intermittent flow.
Tidewater goby <i>Eucyclogobius newberryi</i>	Federal: FE State: SSC	Occurs in shallow lagoons and lower stream reaches along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River.	Does not occur. No suitable lagoon or tidally influenced habitat.
Amphibians			
Arroyo toad <i>Anaxyrus californicus</i>	Federal: FE State: SSC	Breed, forage, and/or aestivate in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravelly terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Does not occur. No suitable stream habitat with sand and gravel banks needed for burrowing and aestivating.
Coast Range newt <i>Taricha torosa</i>	Federal: None State: SSC	Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	Does not occur. No suitable habitat. Serrano Creek is highly degraded and not suitable due to water quality and lack of intermittent and perennial pools.

Species Name	Status	Habitat Requirements	Occurrence
Western spadefoot <i>Spea hammondi</i>	Federal: None State: SSC	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur. No suitable vernal pool or seasonal pool habitat.
Reptiles			
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Does not occur. No suitable arid scrub, rocky washes, chaparral habitat.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i> (<i>multiscutatus</i>)	Federal: None State: SSC	Open, often rocky areas with little vegetation, or sunny microhabitats within shrub or grassland associations.	Does not occur. No suitable sunny microhabitats within shrub or grassland associations habitat.
Coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Does not occur. No suitable sandy soils within scrub and grassland habitat.
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	Federal: None State: SSC	Occurs in coastal chaparral, desert scrub, washes, sandy flats, and rocky areas.	Does not occur. No suitable washes, sandy flats, and rocky areas in scrub habitat.
Red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: SSC	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Does not occur. No suitable rocky habitat in scrub or chaparral.
Southern California legless lizard <i>Anniella stebbinsi</i>	Federal: None State: SSC	Broadleaved upland forest, chaparral, coastal dunes, coastal scrub; found in a broader range of habitats than any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans .	Does not occur. No suitable habitat dune habitat or oak woodland with substantial duff.
Two-striped garter snake <i>Thamnophis hammondi</i>	Federal: None State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur. No suitable habitat as Serrano Creek is highly disturbed.
Western pond turtle <i>Emys marmorata</i>	Federal: None State: SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur. No suitable habitat. Limited potential habitat downstream of site; however, there are no recent records for this species in Serrano Creek.
Birds			
American peregrine falcon (nesting) <i>Falco peregrinus anatum</i>	Federal: Delisted State: Delisted, FP	Breeding habitat consists of high cliffs, tall buildings, and bridges along the coast and inland. Foraging habitat primarily includes open areas near wetlands, marshes, and adjacent urban landscapes.	Does not occur. No suitable habitat for nesting or foraging.

Species Name	Status	Habitat Requirements	Occurrence
Bald eagle (nesting & wintering) <i>Haliaeetus leucocephalus</i>	Federal: Delisted State: SE, FP	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Does not occur. No suitable habitat for nesting or foraging.
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	Federal: None State: SE	Coastal marshes.	Does not occur. No suitable salt marsh habitat. Out of range.
Burrowing owl (burrow sites & some wintering sites) <i>Athene cunicularia</i>	Federal: None State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Does not occur. No suitable grassland or open habitat.
California black rail <i>Laterallus jamaicensis coturniculus</i>	Federal: None State: ST, FP	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Does not occur. No suitable marsh or wetland habitat.
California least tern (nesting colony) <i>Sterna antillarum browni</i>	Federal: FE State: SE, FP	Flat, vegetated substrates near the coast. Occurs near estuaries, bays, or harbors where fish is abundant.	Does not occur. No suitable coastal flats habitat.
Coastal cactus wren (San Diego & Orange County only) <i>Campylorhynchus brunneicapillus sandiegensis</i>	Federal: BCC State: SSC	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Does not occur. No suitable cactus habitat.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	Federal: FT State: SSC	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur. No suitable coastal sage scrub habitat.
Golden eagle (nesting & wintering) <i>Aquila chrysaetos</i>	Federal: None State: FP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not occur. No suitable habitat for nesting or foraging.
Grasshopper sparrow (nesting) <i>Ammodramus savannarum</i>	Federal: None State: SSC	Open grassland and prairies with patches of bare ground.	Does not occur. No suitable grassland habitat.
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	Federal: FE State: SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Does not occur. No suitable riparian habitat.
Light-footed Ridgway rail <i>Rallus longirostris levipes</i>	Federal: FE State: SE, FP	Marsh vegetation of coastal salt marshes and freshwater wetlands, especially cordgrass habitats.	Does not occur. No suitable coastal saltmarsh habitat.
Long-eared owl (nesting) <i>Asio otus</i>	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Does not occur. No suitable riparian habitat.
Northern harrier (nesting) <i>Circus cyaneus</i>	Federal: None State: SSC	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Does not occur. No suitable foraging or nesting habitat.

Species Name	Status	Habitat Requirements	Occurrence
Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i>	Federal: FE State: SE	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur. No suitable willow riparian habitat.
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	Federal: None State: CE	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not occur. No suitable emergent marsh habitat.
Western yellow-billed cuckoo (nesting) <i>Coccyzus americanus occidentalis</i>	Federal: FT, BCC State: SE	Dense, wide riparian woodlands with well-developed understories.	Does not occur. No suitable riparian habitat.
White-tailed kite (nesting) <i>Elanus leucurus</i>	Federal: None State: FP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Does not occur. No suitable foraging or nesting habitat.
Yellow rail <i>Coturnicops noveboracensis</i>	Federal: BCC State: SSC	Shallow marshes, and wet meadows; in winter, drier freshwater and brackish marshes, as well as dense, deep grass, and rice fields.	Does not occur. No suitable wetland or marsh habitat.
Yellow-breasted chat (nesting) <i>Icteria virens</i>	Federal: None State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Does not occur. No suitable willow riparian habitat.
Yellow warbler (nesting) <i>Setophaga petechia</i>	Federal: None State: SSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.	Not observed during surveys; however, this species uses non-native trees such as eucalyptus and could occur adjacent to the site.
Mammals			
American badger <i>Taxidea taxus</i>	Federal: None State: SSC	Most abundant in drier open stages of most scrub, forest, and herbaceous habitats, with friable soils.	Does not occur. No suitable friable soils with open forest habitat.
Big free-tailed bat <i>Nyctinomops macrotis</i>	Federal: None State: SSC WBWG: MH	Roost mainly in crevices and rocks in cliff situations; also utilize buildings, caves, and tree cavities.	Does not occur. No suitable cliffs or caves.
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	Federal: None State: SSC	Variety of habitats ranging from desert, montane, riparian, to pinyon-juniper habitats. Found roosting in desert canyons, deep caves, mines, or rock crevices. Can use abandoned buildings.	Does not occur. No suitable habitat deep caves, mines, or rock crevices.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: SSC	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Does not occur. No sandy soils within scrub suitable habitat.
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	Federal: FE State: SSC	Fine, alluvial soils along the coastal plain. Scarcely in rocky soils of scrub habitats.	Does not occur. No suitable sandy soils within scrub habitat.

Species Name	Status	Habitat Requirements	Occurrence
Pallid bat <i>Antrozous pallidus</i>	Federal: None State: SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Does not occur. No suitable rocky areas or woodland habitat.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: SSC WBWG: M	Rocky areas with high cliffs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Does not occur. No suitable rocky cliff habitat.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: SSC	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Does not occur. No suitable rock outcrops with dense undergrowth types of habitat.
Southern California saltmarsh shrew <i>Sorex ornatus salicoricus</i>	Federal: None State: SSC	Coastal marshes. Requires dense vegetation and woody debris for cover.	Does not occur. No suitable coastal saltmarsh habitat.
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	Federal: None State: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Does not occur. No suitable friable soils within scrub habitat.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Does not occur. No suitable habitat. Out of range which is western Riverside County.
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Does not occur. No suitable cliff faces, high buildings, trees, and tunnels as roosting habitat.
Western red bat <i>Lasiurus blossevillii</i>	Federal: None State: SSC	Prefers riparian areas dominated by walnuts, oaks, willows, cottonwoods, and sycamores where they roost in broad-leafed trees.	Does not occur. No suitable riparian habitat.
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Does not occur. No suitable willow riparian habitat or palm oasis.

STATUS

Federal

FE – Federally Endangered
FT – Federally Threatened
FPT – Federally Proposed Threatened
FC – Federal Candidate
BCC – Bird of Conservation Concern

State

SE – State Endangered
ST – State Threatened
SCE – State Candidate for listing as Endangered
CFP – California Fully-Protected Species
SSC – Species of Special Concern

Western Bat Working Group (WBWG)

H – High Priority

LM – Low-Medium Priority

M – Medium Priority

MH – Medium-High Priority

OCCURRENCE

- Does not occur – The site does not contain habitat for the species and/or the site does not occur within the geographic range of the species.
- Confirmed absent – The site contains suitable habitat for the species, but the species has been confirmed absent through focused surveys.
- Not expected to occur – The species is not expected to occur onsite due to low habitat quality, however absence cannot be ruled out.
- Potential to occur – The species has a potential to occur based on suitable habitat, however its presence/absence has not been confirmed.
- Confirmed present – The species was detected onsite incidentally or through focused surveys