

Appendix B

Biological Resources Assessment

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

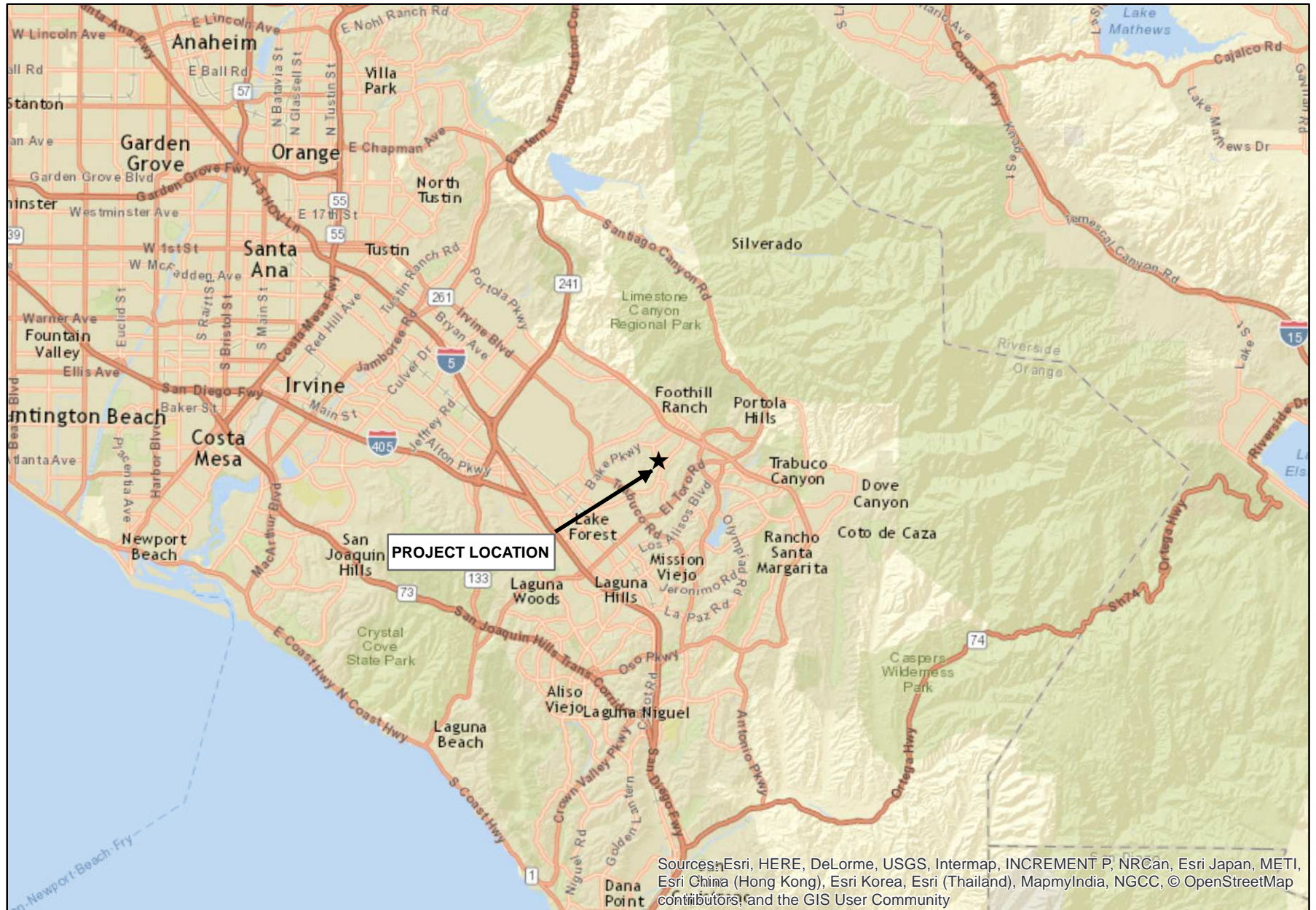
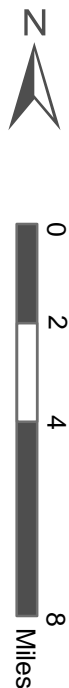
B. Nesting Birds

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



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

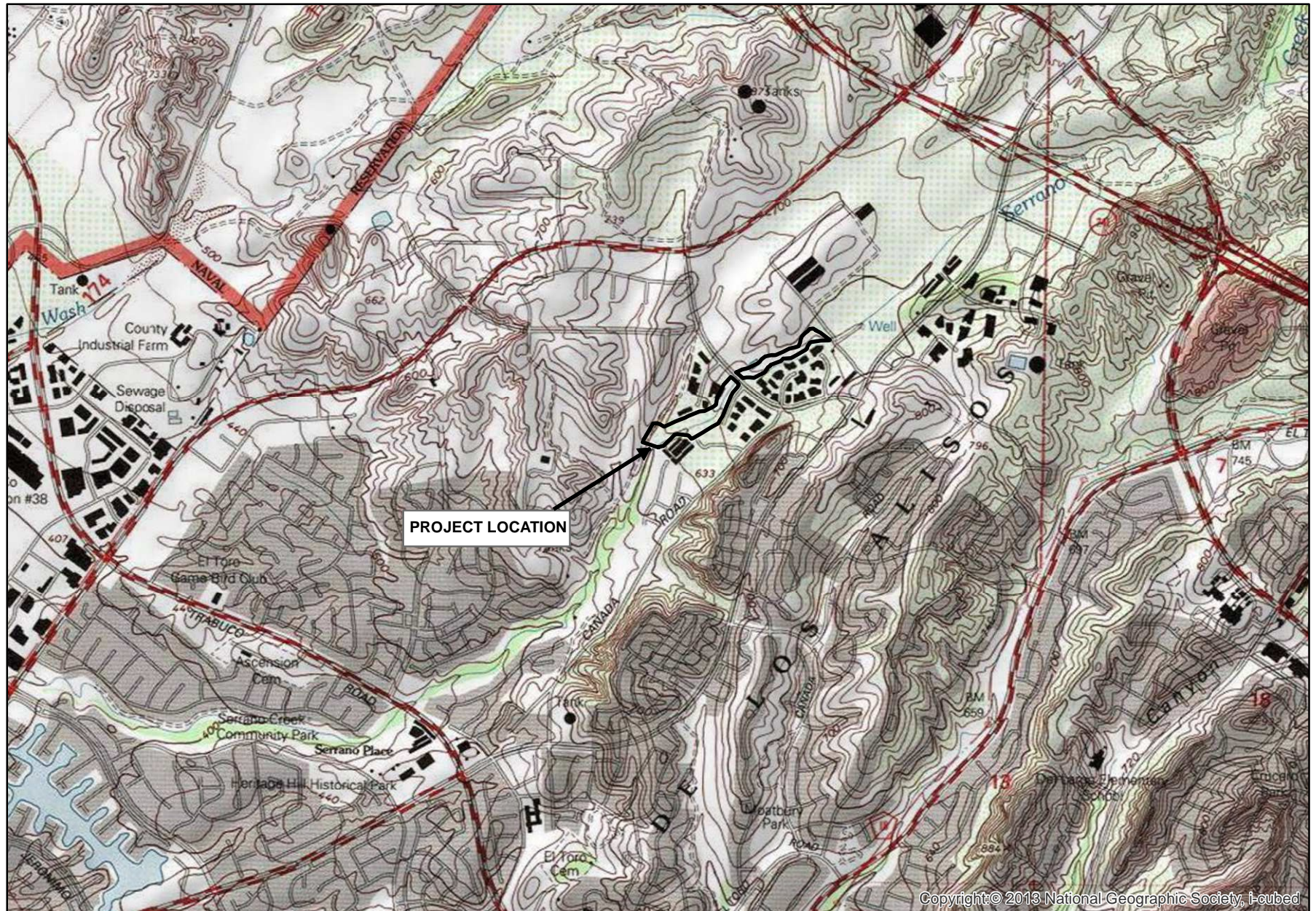
SERRANO CREEK

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1








Vicinity Map

Exhibit 2





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



0 100 200 400
Feet

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



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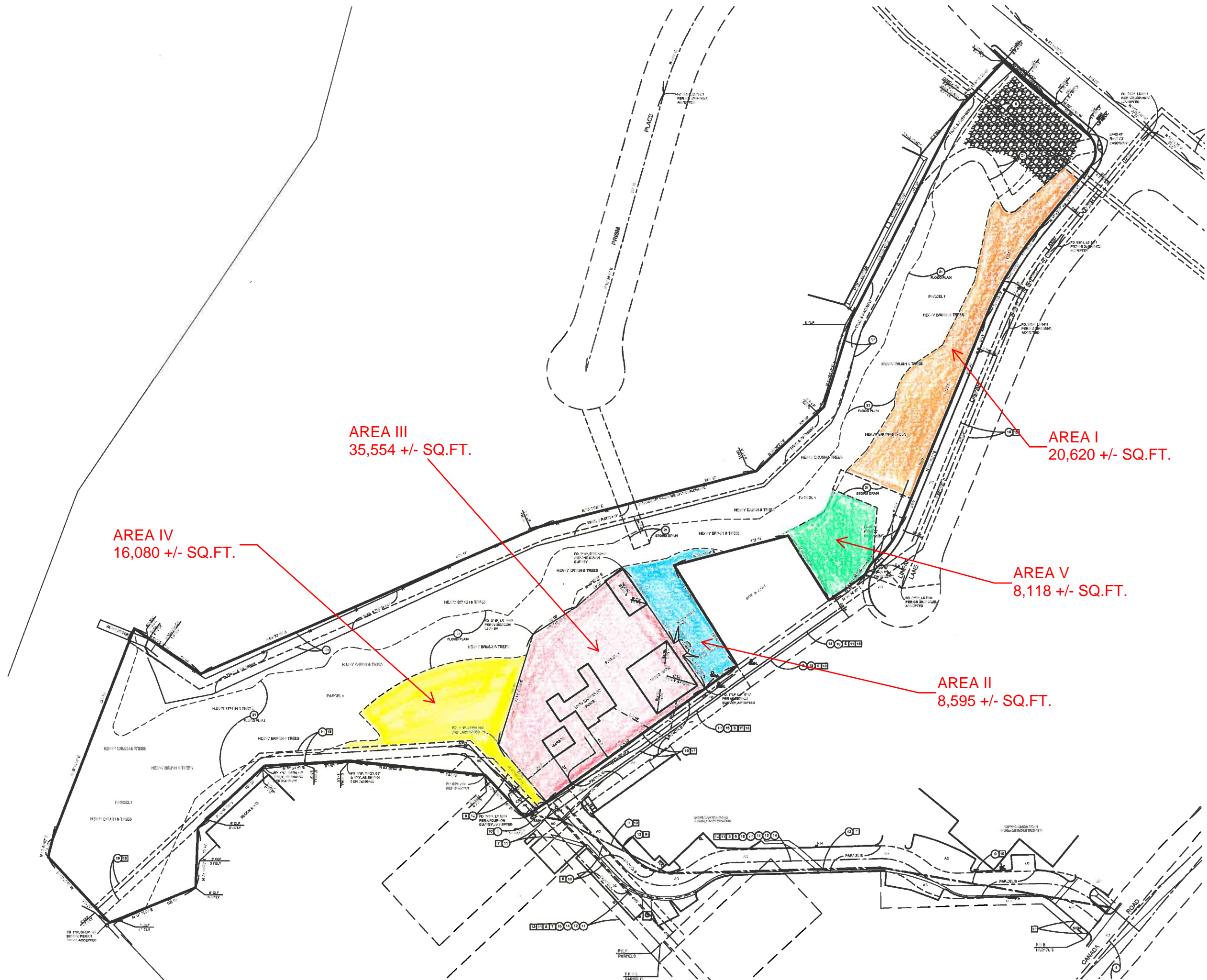
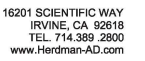


Exhibit 4



PROJECT

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.

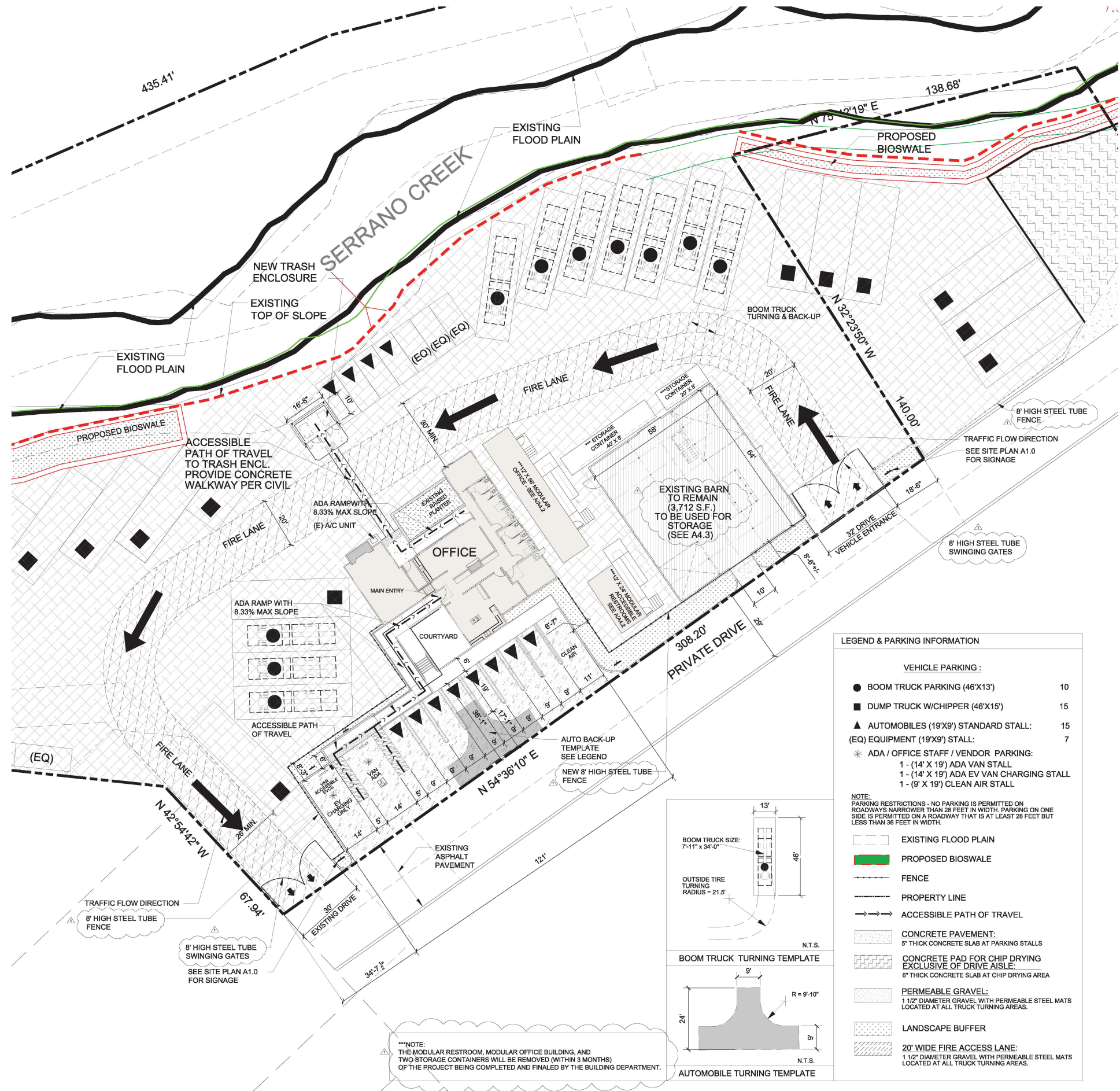
CIVIL
HUITT-ZOLLARS INC.

**PROJECT MANAGEMENT
E P D SOLUTIONS INC.**

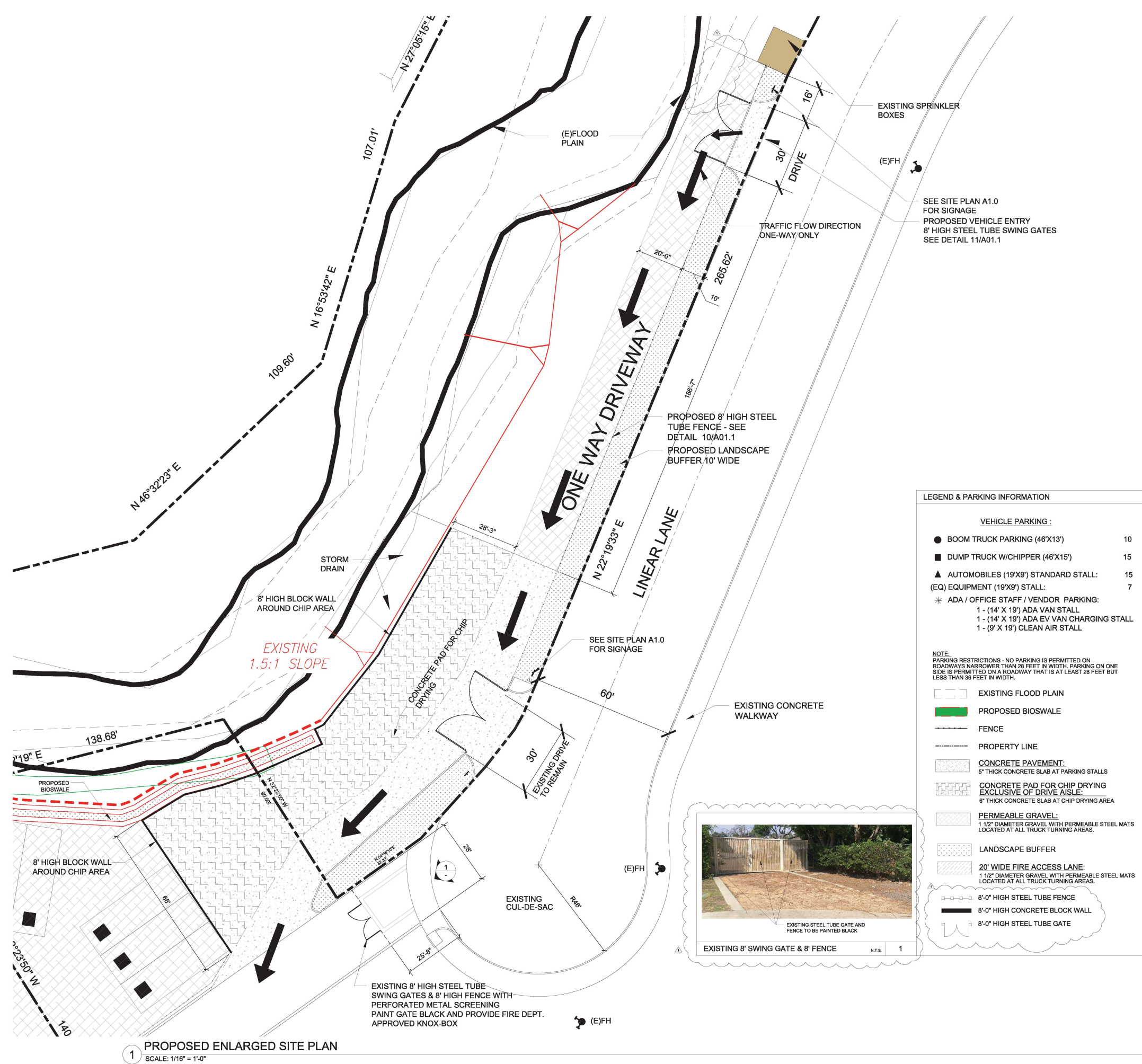
CASE NO. : 03-16-3143/ZC 03-16-3133, UF 03-16-3140



A1.1

PROPOSED
ENLARGED
SITE PLAN

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



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

LEGEND & PARKING INFORMATION

VEHICLE PARKING :

- BOOM TRUCK PARKING (46'X13') 10
- DUMP TRUCK W/CHIPPER (46'X15') 15
- ▲ AUTOMOBILES (19'X9') STANDARD STALL: 15
- (EQ) EQUIPMENT (19'X9') STALL: 7
- * ADA / OFFICE STAFF / VENDOR PARKING:
 - 1 - (14' X 19') ADA VAN STALL
 - 1 - (14' X 19') ADA EV VAN CHARGING STALL
 - 1 - (9' X 19') CLEAN AIR STALL

NOTE:
PARKING RESTRICTIONS - NO PARKING IS PERMITTED ON ROADWAYS NARROWER THAN 28 FEET IN WIDTH. PARKING ON ONE SIDE IS PERMITTED ON A ROADWAY THAT IS AT LEAST 28 FEET BUT LESS THAN 36 FEET IN WIDTH.

LEGEND:

- EXISTING FLOOD PLAIN
- PROPOSED BIOSWALE
- FENCE
- PROPERTY LINE
- CONCRETE PAVEMENT:
 - 5" THICK CONCRETE SLAB AT PARKING STALLS
 - CONCRETE PAD FOR CHIP DRYING EXCLUSIVE OF DRIVE AISLE:
 - 6" THICK CONCRETE SLAB AT CHIP DRYING AREA
 - PERMEABLE GRAVEL:
 - 1 1/2" DIAMETER GRAVEL WITH PERMEABLE STEEL MATS LOCATED AT ALL TRUCK TURNING AREAS.
 - LANDSCAPE BUFFER
 - 20' WIDE FIRE ACCESS LANE:
 - 1 1/2" DIAMETER GRAVEL WITH PERMEABLE STEEL MATS LOCATED AT ALL TRUCK TURNING AREAS.
- 8'-0" HIGH STEEL TUBE FENCE
- 8'-0" HIGH CONCRETE BLOCK WALL
- 8'-0" HIGH STEEL TUBE GATE

EXISTING 8' SWING GATE & 8' FENCE N.T.S. 1

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C-32810
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PROJECT

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PROJECT TEAM
GENERAL CONTRACTOR
T.B.D.

CIVIL
HUITT - ZOLLARS INC.

PROJECT MANAGEMENT
E P D SOLUTIONS INC.

DRAWING INFO

ID	DATE	DESCRIPTION
1	08/03/2020	PLANNING CORRECTIONS

Case No. : 03-18-5145/ZC 03-16-5133 UP 03-18-5146

DRAWN
H-ADD JOB
ISSUE
DRAWING SCALE

JVS
A17-2088
AS SHOWN

NORTH

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 vernal 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 syenitic 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