

BIOLOGICAL RESOURCE ASSESSMENT

Blackjack
Mt. Blackjack-Santa Catalina
Avalon, Los Angeles County, CA 90704

EBI Project No. 6116002993

Site Report Date: July 25, 2016



Prepared by:



TABLE OF CONTENTS

TABLE OF CONTENTS	3
EXECUTIVE SUMMARY	i
1.0 INTRODUCTION	1
2.0 REGULATORY BACKGROUND	1
2.1 Special Status Species.....	1
2.2 Sensitive Biological Communities.....	2
3.0 METHODS.....	3
3.1 Biological Communities	3
3.2 Special Status Species.....	4
4.0 RESULTS.....	5
4.1 Biological Communities	5
4.2 Special Status Species.....	6
5.0 SUMMARY AND RECOMMENDATIONS.....	8
5.1 Biological Communities	8
5.1.1 Special status Plant Species.....	8
5.1.2 Special status Wildlife Species	8
5.1.3 Wetlands	9
5.1.4 Special status communities	9
6.0 Conclusion	9
7.0 REFERENCES	10
APPENDIX A - PHOTOGRAPHS	
APPENDIX B - FIGURES & DRAWINGS	
APPENDIX C - SUPPORTING DOCUMENTATION	
APPENDIX D - PROFESSIONAL QUALIFICATIONS	

EXECUTIVE SUMMARY

EBI Consulting (EBI), on behalf of *Cellco Partnership and its controlled affiliates doing business as Verizon Wireless (Verizon Wireless)*, has prepared this Biological Assessment (BA) for the proposed telecommunications facility at Mt. Blackjack, Avalon, Los Angeles County, CA (herein, the Subject Property). The purpose of the assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA).

Verizon Wireless proposes to construct a new 65-foot monopole communication tower immediately north of an existing carrier building along the north eastern side of the Subject Property. The tower facility will include associated outdoor support equipment placed immediately under the tower. The tower facility will be accessed via an existing and proposed 12-foot wide non-exclusive asphalt access road. Proposed overhead utilities will follow the existing overhead antennas. Please see the attached drawings for complete details.

The Mt. Blackjack Site consist of an existing communication facility enclosed within an existing 6-foot chain link fence. The entire fenced in area has been previously disturbed via grading, construction, and asphalt surfaces with no undisturbed natural communities present.

On July 21, 2016, EBI Consulting (EBI) conducted a biological resources assessment at the Subject Property. EBI observed no sensitive biological community, no sensitive plant species, and no sensitive wildlife species. In addition, no special status wildlife species and no special status plant species were observed on-site.

1.0 INTRODUCTION

On July 21, 2016, EBI performed an assessment of biological resources at the Subject Property located on Blackjack mountain, Avalon, CA. The Project Area is located approximately 5.1 mile northwest of the town of Avalon. The purpose of the assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA). This report describes the results of the site visit, which assessed the Project Area for (1) the potential to support special status species; and (2) the presence of other sensitive biological resources protected by local, state, and federal laws and regulations.

A biological resources assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Special Status Species

Special status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Game (CDFG) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFG special status invertebrates are all considered special status species. Although CDFG Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

The California Rare Plant Ranking System (CRPR) (Formerly CNPS) Lists 1 and 2 as considered special status plant species and must be considered under CEQA. CRPR List 3 plants lack necessary information for ranking but must still be considered under CEQA. CRPR List 4 plants have little or no protection under CEQA.

Critical Habitat

Critical habitat is a term defined and used in the Federal ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species under the ESA "jeopardy standard." However, areas that are currently unoccupied by the species but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

2.2 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, and riparian habitat. These habitats are protected under federal regulations (such as the Clean Water Act), state regulations (such as the Porter-Cologne Act, the CDFG Streambed Alteration Program, and CEQA), or local ordinances or policies (City or County Tree Ordinances, Special Habitat Management Areas, and General Plan Elements).

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates “Waters of the United States” under Section 404 of the Clean Water Act. “Waters of the U.S.” are defined broadly as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands stated in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as “other waters” and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into “Waters of the U.S.” (including wetlands) generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

Waters of the State

The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters. These water bodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. The RWQCB’s jurisdiction includes “isolated” wetlands and waters that may not be regulated by the Corps under Section 404. “Waters of the State” are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact “Waters of the State,” are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to “Waters of the State,” the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFG under Sections 1600-1616 of California Fish and Game Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as, “on, or pertaining to, the banks of a stream;” therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a

stream and is dependent on, and occurs because of, the stream itself” (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFG. CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its Natural Diversity Database (CNDDDB; CDFG 2013). Sensitive plant communities are also identified by CDFG (2003, 2007) and, more recently, the *List of Vegetation Alliances*, 28 December, 2009 (CDFG 2009). CNDDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFG or USFWS must be considered and evaluated under CEQA (California Code of Regulations: Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in City or County General Plans or ordinances.

3.0 METHODS

On July 21, 2016, EBI traversed the Project Area on foot to determine (1) the plant communities present within the Project Area, and (2) if existing conditions provided suitable habitat for any special status plant or wildlife species, and (3) if sensitive habitats are present. All plant and wildlife species encountered were recorded, and are summarized in Section 4.0.

3.1 Biological Communities

Prior to the site visit, EBI reviewed the Web Soil Survey (WSS) and aerial photographs to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Project Area. Biological communities present in the Project Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special status plant or wildlife species and are identified or described in Section 4.0 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Waters

The Project Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFG were present. The assessment was based primarily on the presence of wetland plant indicators, but may also include any observed indicators of wetland hydrology or wetland soils. Any potential wetland areas were identified as areas dominated by plant species with a wetland

indicator status¹ of OBL, FACW, or FAC as given on the U.S. Fish and Wildlife Service List of Plant Species that Occur in Wetlands (Reed 1988). Evidence of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, algal mats, and oxidized root channels, or indirect (secondary) indicators, such as a water table within two feet of the soil surface during the dry season. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, and soils that contain redoximorphic features as defined by the Corps Manual (Environmental Laboratory 1987) and Field Indicators of Hydric Soils in the United States (NRCS 2010).

Other Sensitive Biological Communities

The Project Area was evaluated for the presence of other sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFG.

Prior to the site visit, aerial photographs, local soil maps, the *List of Vegetation Alliances* (CDFG 2010), and *A Manual of California Vegetation* (Sawyer et al. 2009) were reviewed to assess the potential for sensitive biological communities to occur in the Project Area. All alliances within the Project Area with a ranking of 1 through 3 were considered sensitive biological communities and, if present, mapped.

3.2 Special Status Species

3.2.1 Literature Review

The potential occurrence of special status species in the Project Area was evaluated by first determining which special status species occur in the vicinity of the Project Area through a literature and database search. Database searches for known occurrences of special status species centered on USGS 24K Quad: Tehachapi North, CA 1986. The following sources were reviewed to determine which special status plant and wildlife species have been documented to occur in the vicinity of the Project Area:

- California Natural Diversity Database (CNDDDB) records (CDFG 2013)
- USFWS IPaC (USFWS 2016)
- CNPS Electronic Inventory records (CNPS 2013)

3.2.2 Site Assessment

EBI biologist assessed the habitat conditions of the Project Area to determine the potential presence of special status species. The potential for each special status species to occur in the Project Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

¹ OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

The site assessment is intended to identify the potential for special status species to occur in the Project Area. The site visit does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, if a special status species is observed during the site visit, its presence was recorded and would be discussed.

If a special status species was observed during the site visit, its presence is recorded and discussed below in Section 4.2. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special status species surveys may be necessary. Special status species for which further protocol-level surveys may be necessary are described below in Section 5.0.

4.0 RESULTS

The Project Area consists of an approximately 0.4 acre fenced-in communication facility compound primarily consisting of previously disturbed (i.e. grading, asphalt surfaces, building, communication tower) lands with limited ruderal herbaceous vegetation and shrubs. Surrounding lands, outside the fenced area, consists of a relatively undisturbed chaparral community intermixed with both native and non-native grasses. On-site soil consists of Luff-Haploxerepts-Haploxerafls complex, 15 to 35% slopes.

4.1 Biological Communities

Table I summarizes the area of each biological community observed in the Project Area. Non-sensitive biological communities in the Project Area include non-native grasslands and two dirt dump sites that support ruderal scrub vegetation. No sensitive biological communities are found in the Project Area. Descriptions for each biological community are contained in the following sections.

Table I: Biological Communities within the Project Area.

Community Type	Area
Disturbed (Existing Fenced Communication Facility)	Approximately 0.4 acres
Total Project Area Size	Approximate 0.4 acres

4.1.1 Non-sensitive biological communities

Disturbed lands (ruderal herbaceous)

This disturbed community supports an existing communication facility, asphalt surfaces, and a building all enclosed within a 6-foot cyclone fence. Ruderal herbaceous vegetation observed within the fenced area includes and currently still experiences annual disturbance during mowing. Plant species observed within the property included cudweed (*Gnaphalium palustre*), slender oat (*Avena barbata*), purple need grass (*Stipa pulchra*) and fennel (*Foeniculum vulgare*). In addition, the area surrounding the proposed utility point of connection supports lemonade berry (*Rhus integrifolia*), coyote brush (*Bacharis pilularis*), and laurel sumac (*Malosma laurina*), bush monkeyflower (*Mimulus aurantiacus*), Italian thistle (*Carduus pycnocephalus*) as well

as the oat grass and cudweed. No other plant species were observed within the fenced area or other area of potential or proposed ground disturbance.

Wildlife species observed included common raven (*Corvus corax*) and western fence lizard (*Sceloporus occidentalis*). No indication of other wildlife use (e.g. scat, tracks, burrows) were observed.

Chaparral

This community occurs on lands outside the existing fenced in communication facility. It has developed on lands previously disturbed during the construction of the existing access road and communication facility. Dominant plants observed within this community include lemonade berry, coyote brush, and laurel sumac, and slender oat.

Table 2. Species observed at the Project Site.

Common Name	Scientific Name
Plants	
<i>Gnaphalium palustre</i>	cudweed
<i>Avena barbata</i>	slender oat
<i>Stipa pulchra</i>	purple need grass
<i>Rhus integrifolia</i>	lemonade berry
<i>Bacharis pilularis</i>	coyote brush
<i>Malosma laurina</i>	laurel sumac
<i>Mimulus aurantiacus</i>	bush monkeyflower
<i>Bromus madritensis</i>	Foxtail chess
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Erodium brachycarpum</i>	Short fruited filaree
<i>Erodium botrys</i>	Broad leaf filaree
<i>Marrubium vulgare</i>	Common horehound
<i>Croton setiger</i>	Turkey-mullein
Mammals	
None	
Birds	
<i>Corvus corax</i>	Common raven
Reptiles	
<i>Sceloporus occidentalis</i>	Western fence lizard
Insects	
None	

4.2 Special Status Species

According to the USFWS, five federally protected species and federal candidate species are known to occur within the vicinity of the Site. The CDFW species review (<https://map.dfg.ca.gov/rarefind/>) shows six state protected and one candidate species within a USGS four quad search centered on Santa Catalina North, CA 1986. The CNPS shows two state and federal endangered species within the same four quads. And the CDFW CNDDDB BIOS (<https://map.dfg.ca.gov/bios>) shows four occurrence records for special status species. Table 2 summarizes species known to occur in the Project Area. No special status wildlife or plant species were observed in the Project Area during the site assessment. All special status species have no potential to occur within the proposed work area as it would not provide suitable habitat and is enclosed within a 6' cyclone fence.

Table 3. Special status species known to occur within the vicinity of the Project Site.

Scientific Name	Common Name	Status	Potential to occur on-site
Plants			
<i>Aphanisma blitoides</i>	aphanisma	IB.2	No Potential
<i>Arctostaphylos catalinae</i>	Santa Catalina Island manzanita	IB.2	No Potential
<i>Atriplex coulteri</i>	Coulter's saltbush	IB.2	No Potential
<i>Atriplex pacifica</i>	South Coast saltscale	IB.2	No Potential
<i>Atriplex serenana</i> var. <i>dauidsonii</i>	Davidson's saltscale	IB.2	No Potential
<i>California macrophylla</i>	Round-leaved filaree	IB.2	No Potential
<i>Centromadia parryi</i> ssp. <i>australis</i>	Southern tarplant	IB.1	No Potential
<i>Cercocarpus traskiae</i>	Catalina Island mountain-mahogany	IB.1 FE/SE	No Potential
<i>Constancea nevinii</i>	Nevin's woolly sunflower	IB.3	No Potential
<i>Crocanthemum greenei</i>	Island rush-rose	IB.2 FT	No Potential
<i>Crossosoma californicum</i>	Catalina crossosoma	IB.2	No Potential
<i>Cryptantha wigginsii</i>	Wiggins' cryptantha	IB.2	No Potential
<i>Dissanthelium californicum</i>	California dissanthelium	IB.2	No Potential
<i>Dithyrea maritima</i>	beach spectaclepod	IB.1	No Potential
<i>Dudleya virens</i> ssp. <i>hassei</i>	Catalina Island dudleya	IB.2	No Potential
<i>Dudleya virens</i> ssp. <i>insularis</i>	Island green dudleya	IB.2	No Potential
<i>Galium catalinense</i> ssp. <i>catalinense</i>	Santa Catalina Island bedstraw	IB.3	No Potential Not Present
<i>Gambelia speciosa</i>	Showy island snapdragon	IB.2	No Potential
<i>Isocoma menziesii</i> var. <i>decumbens</i>	Decumbent goldenbush	IB.2	No Potential
<i>Lavatera assurgentiflora</i> ssp. <i>glabra</i>	Southern island mallow	IB.1	No Potential
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara honeysuckle	IB.2	No Potential
<i>Lyonothamnus floribundus</i> ssp. <i>floribundus</i>	Santa Catalina Island ironwood	IB.2	No Potential
<i>Mimulus traskiae</i>	Santa Catalina Island monkeyflower	IA	No Potential
<i>Nemacaulis denudata</i> var. <i>denudata</i>	Coast woolly-heads	IB.2	No Potential
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	IB.1 FE/SE	No Potential
<i>Ribes viburnifolium</i>	Santa Catalina Island currant	IB.2	No Potential
<i>Scrophularia villosa</i>	Santa Catalina figwort	IB.2	No Potential
<i>Sibara filifolia</i>	Santa Cruz Island winged-rockcress	IB.1 FE	No Potential
<i>Solanum wallacei</i>	Wallace's nightshade	IB.1	No Potential

Scientific Name	Common Name	Status	Potential to occur on-site
<i>Tortula californica</i>	California screw-moss	IB.2	No Potential
Mammals			
<i>Urocyon littoralis catalinae</i>	Santa Catalina Island Fox	FE	No Potential
Birds			
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	FT	No Potential
<i>Charadrius alexandrius nivosus</i>	Western snowy plover	FT	No Potential
<i>Synthliboramphus hypoleucus</i>	Xantus's murrelet	FC	No Potential
FE = Federally Endangered; FT= Federally threatened SE = State Endangered; ST = State Threatened; SR = State Rare; SSC=California Department of Fish & Wildlife Special Concern Species of Special Concern; FP= California Department of Fish & Wildlife Fully Protected species; WL= California Department of Fish & Wildlife Watch List species California Native Plant Society System: IB = Rare or Endangered in California and elsewhere 2B = Rare, Endangered or Threatened in California, but more common elsewhere 3 = Plants about which more information is needed. A Review List .1 = Seriously endangered in California (over 80% of occurrences threatened) .2 = Moderately threatened in California (20-80% occurrences threatened) .3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)			

5.0 SUMMARY AND RECOMMENDATIONS

The Project Area primarily consists of a previously disturbed area that consists of asphalt surfaces, cleared and graded lands, existing communication tower and associated building, and minimal herbaceous and shrub vegetation. No special status plant species were observed during EBI's survey and, due to the disturbed nature of Site, the property has no potential to support special status plants. In addition, no special status wildlife species were observed during EBI's survey. The following sections present recommendations for future studies and/or measures to avoid or reduce impacts to these species and sensitive habitats.

5.1 Biological Communities

5.1.1 Special status Plant Species

Of the 32 special status plant species known to occur in the vicinity of the Project Area, none were determined to have the potential to occur in the Project Area. No additional survey is necessary to determine the presence of these special status species.

5.1.2 Special status Wildlife Species

Of the eight total special status wildlife species known to occur in the vicinity of the Project Area, all have no potential to occur within the Project Area. Most of the species found in the review of background literature occur in habitats not found in the Project Area. The Site has been previously disturbed via grading, building, and consists of asphalt surfaces within a 6-foot chain linked fence.

Please note the Site may still provide reduced but still viable nesting habitat for migratory birds. Therefore, to comply with California Fish and Game Code Sections 3503, 3503.5, and 3800, and the Migratory Bird

Treaty Act of 1918 (16 USC 703–711), grubbing, grading and other ground-disturbing activities associated with Project implementation should occur outside of the nesting bird season (February-August). If ground disturbance occurs during the nesting season, a qualified biologist should perform a nesting bird survey to ensure that no impacts to nesting birds occur as a result of the project.

5.1.3 Wetlands

EBI did not observe any readily-identifiable wetlands or wetland characteristics (e.g. standing water, hydrophytic vegetation, soil saturation and inundation, drainage patterns and sediment deposition, watermarks and drift lines on trees and vegetation, or water stained leaves) at the Site. A review of the USFWS National Wetlands Inventory (NWI) map (see attached) shows no wetlands within the vicinity of the Project Site.

5.1.4 Special status communities

The Site does not support any special status natural communities or USFWS Critical Habitat.

6.0 CONCLUSION

The proposed communication facility would have no effect on special status plants or natural communities. The Site currently consists of an existing communication facility enclosed within 6-foot chain link fence. In addition, the construction of the Site would not result in new ground disturbance as an existing POC is already onsite and all utilities will run overhead. Lastly, the proposed access and parking already consists of previously disturbed lands currently covered in an asphalt surface.

7.0 REFERENCES

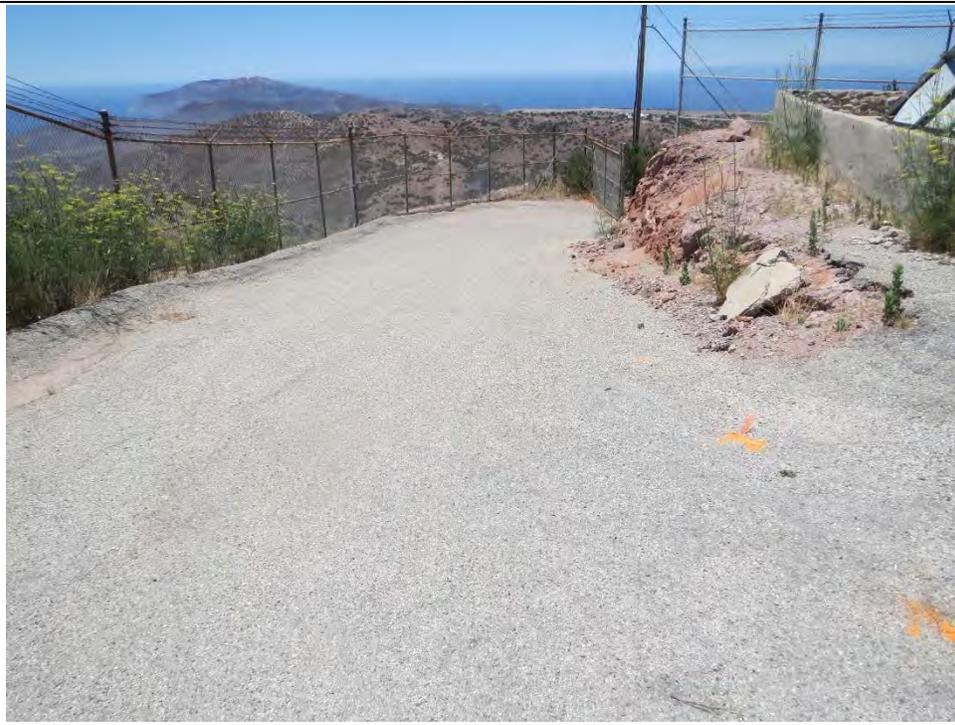
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APPENDIX A
PHOTOGRAPHS



1. Looking west toward access gate.



2. Looking northwest along existing access road.



3. Looking northeast toward proposed tower Site.



4. Looking east toward proposed tower Site.



5. Looking eastward toward existing building and tower location.



6. Looking east toward existing building.

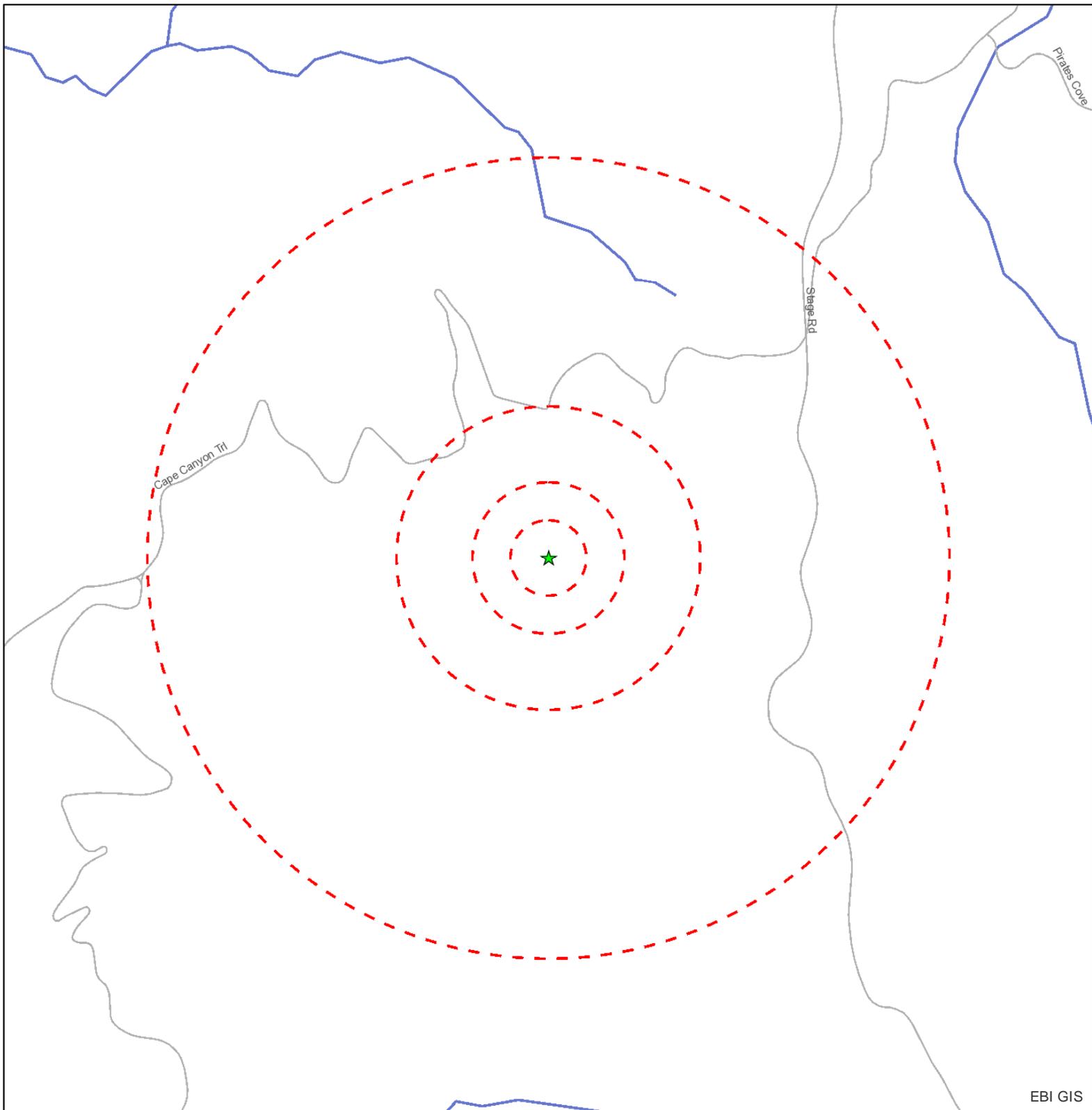


7. Looking eastward toward existing power line.



8. Looking eastward toward existing POC.

APENDIX B
FIGURES & DRAWINGS



EBI GIS

Source: Selected data from ESRI, EBI & USGS

Legend

- ★ Project Site
- Site Radius at 250', 500', 1000' and 1/2 mile

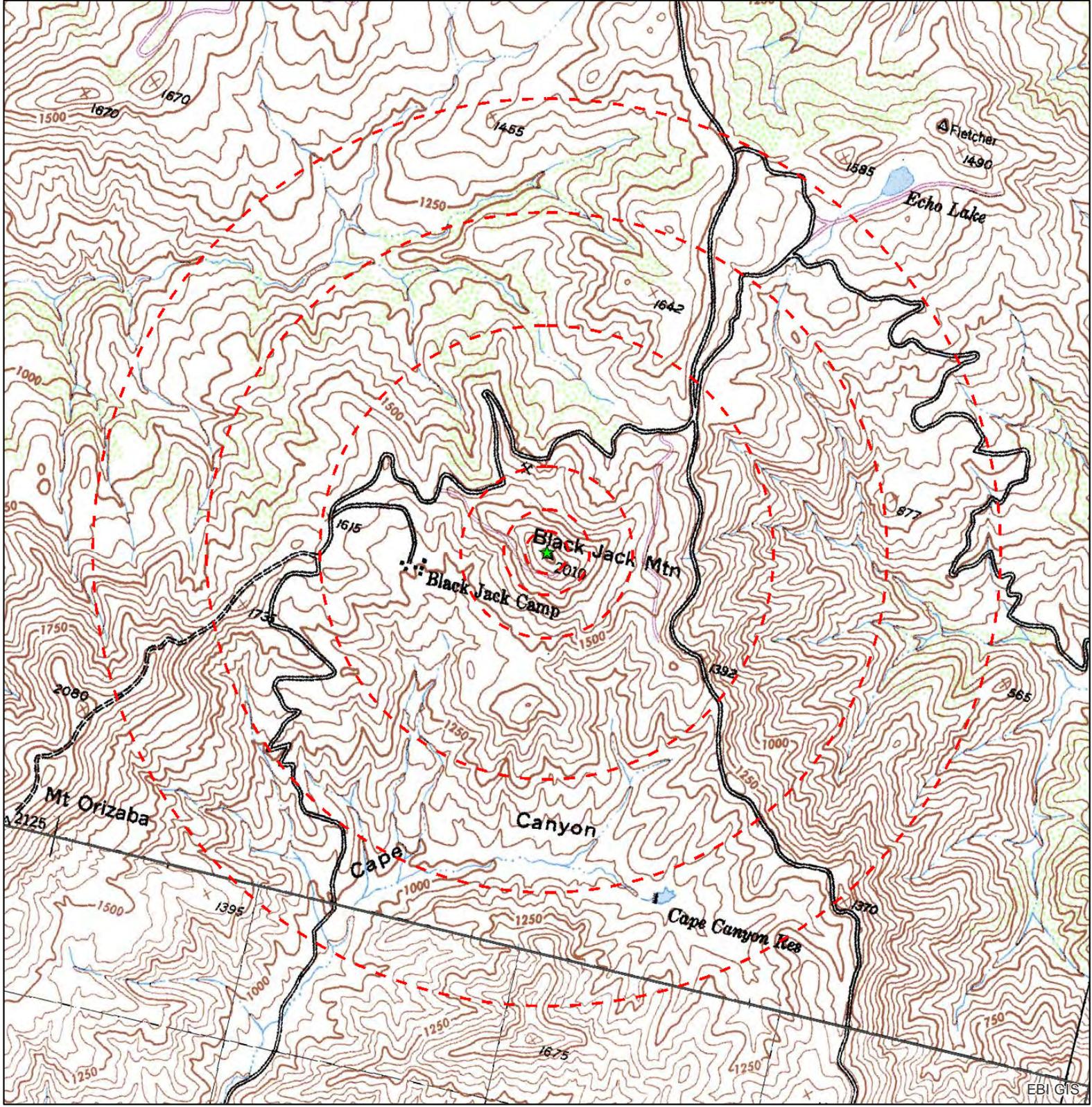


Date: 7/25/2016

Figure 1: Site Location Map



**BLACKJACK
MT. BLACKJACK-SANTA CATALINA
AVALON, CA 90704**



EBI GIS

Source: Selected data from ESRI, EBI & USGS

Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', 1/2, 3/4 & 1 mile



Date: 7/25/2016

USGS 24K Quad: Santa Catalina North, CA 1986

Figure 2 - Topographic Map



**BLACKJACK
MT. BLACKJACK-SANTA CATALINA
AVALON, CA 90704**

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	06/25/15	90% ZONING	EC
A	06/07/16	REVISED 90% ZD	ESQ
A	06/14/16	100% ZONING	CRC

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 Brea, CA 92821
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 www.core.us.com

PROPRIETARY INFORMATION
 THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY & CONFIDENTIAL TO VERIZON WIRELESS
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 IRVINE, CALIFORNIA 92618
 949.286.7000

BLACKJACK
 MT. BLACKJACK - SANTA
 CATALINA
 AVALON, CA 90704
 LOS ANGELES COUNTY

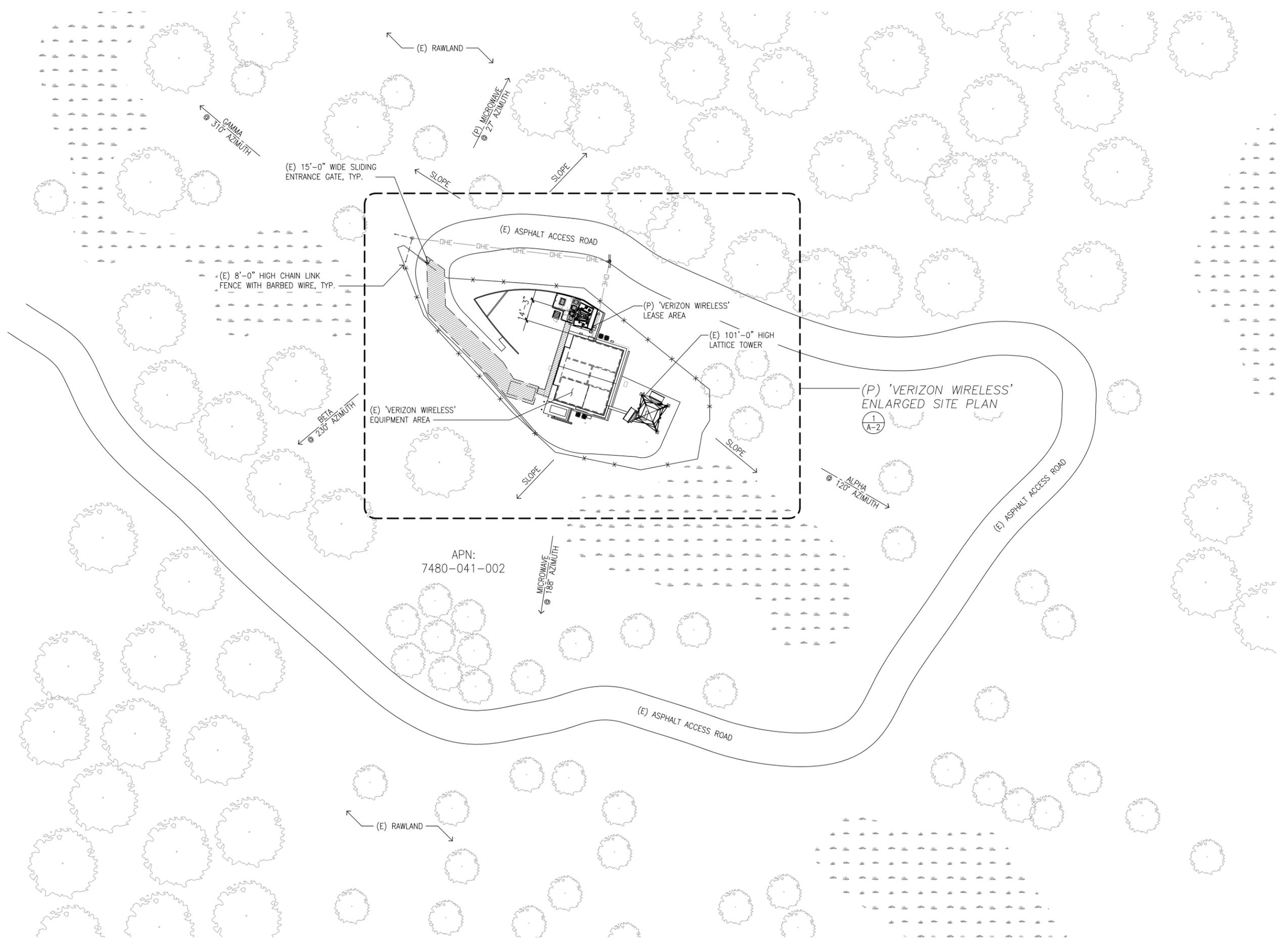
SHEET TITLE:
SITE PLAN

A-1

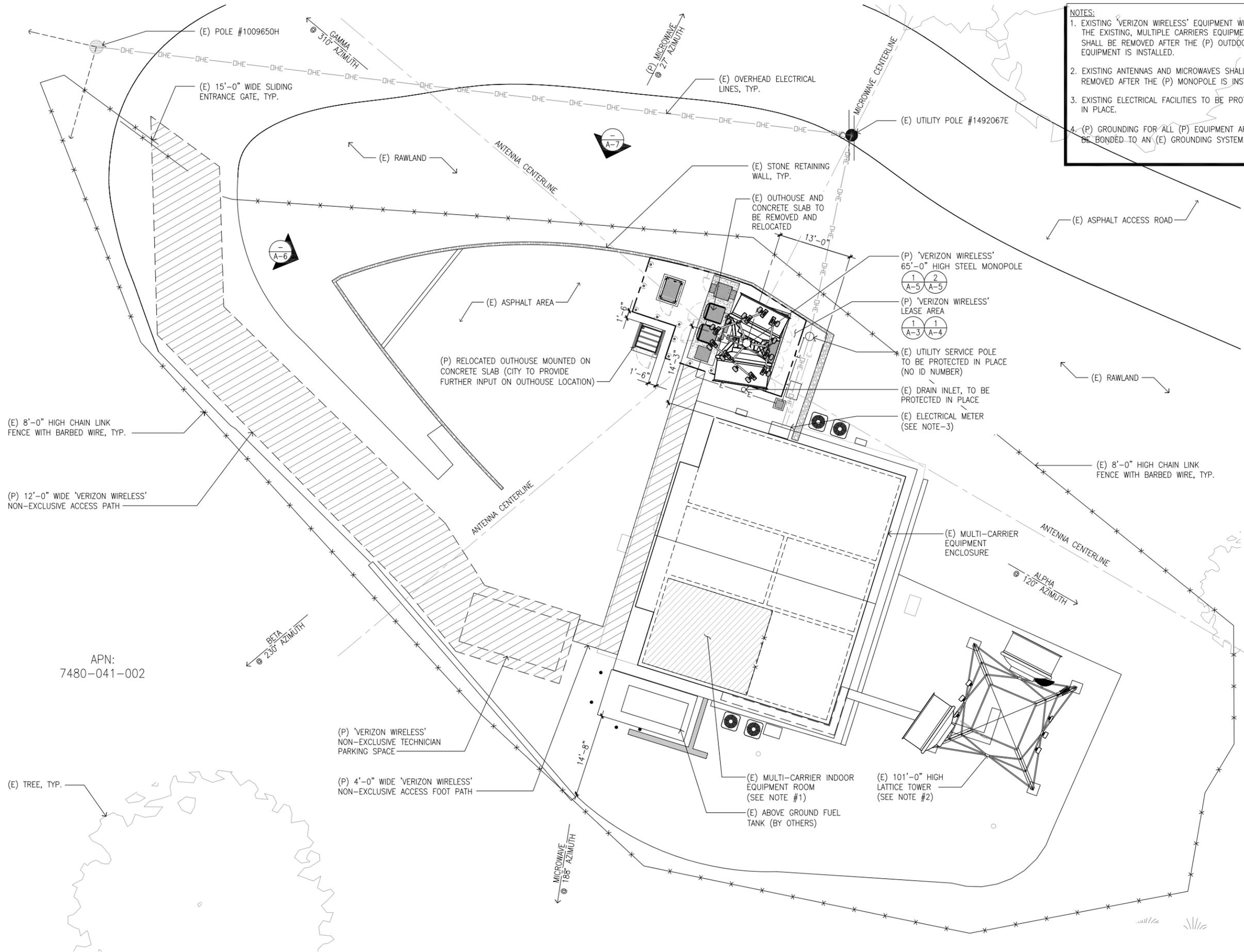
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

SITE PLAN

SCALE
 1"=30'-0"
 0 15' 30' 60'



NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES



- NOTES:**
- EXISTING 'VERIZON WIRELESS' EQUIPMENT WITHIN THE EXISTING, MULTIPLE CARRIERS EQUIPMENT ROOM SHALL BE REMOVED AFTER THE (P) OUTDOOR EQUIPMENT IS INSTALLED.
 - EXISTING ANTENNAS AND MICROWAVES SHALL BE REMOVED AFTER THE (P) MONOPOLE IS INSTALLED.
 - EXISTING ELECTRICAL FACILITIES TO BE PROTECTED IN PLACE.
 - (P) GROUNDING FOR ALL (P) EQUIPMENT ARE TO BE BONDED TO AN (E) GROUNDING SYSTEM.

ISSUE STATUS			
REV.	DATE	DESCRIPTION	BY
A	06/25/15	90% ZONING	EC
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A	06/14/16	100% ZONING	CRC

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 CATALINA
 AVALON, CA 90704
 LOS ANGELES COUNTY

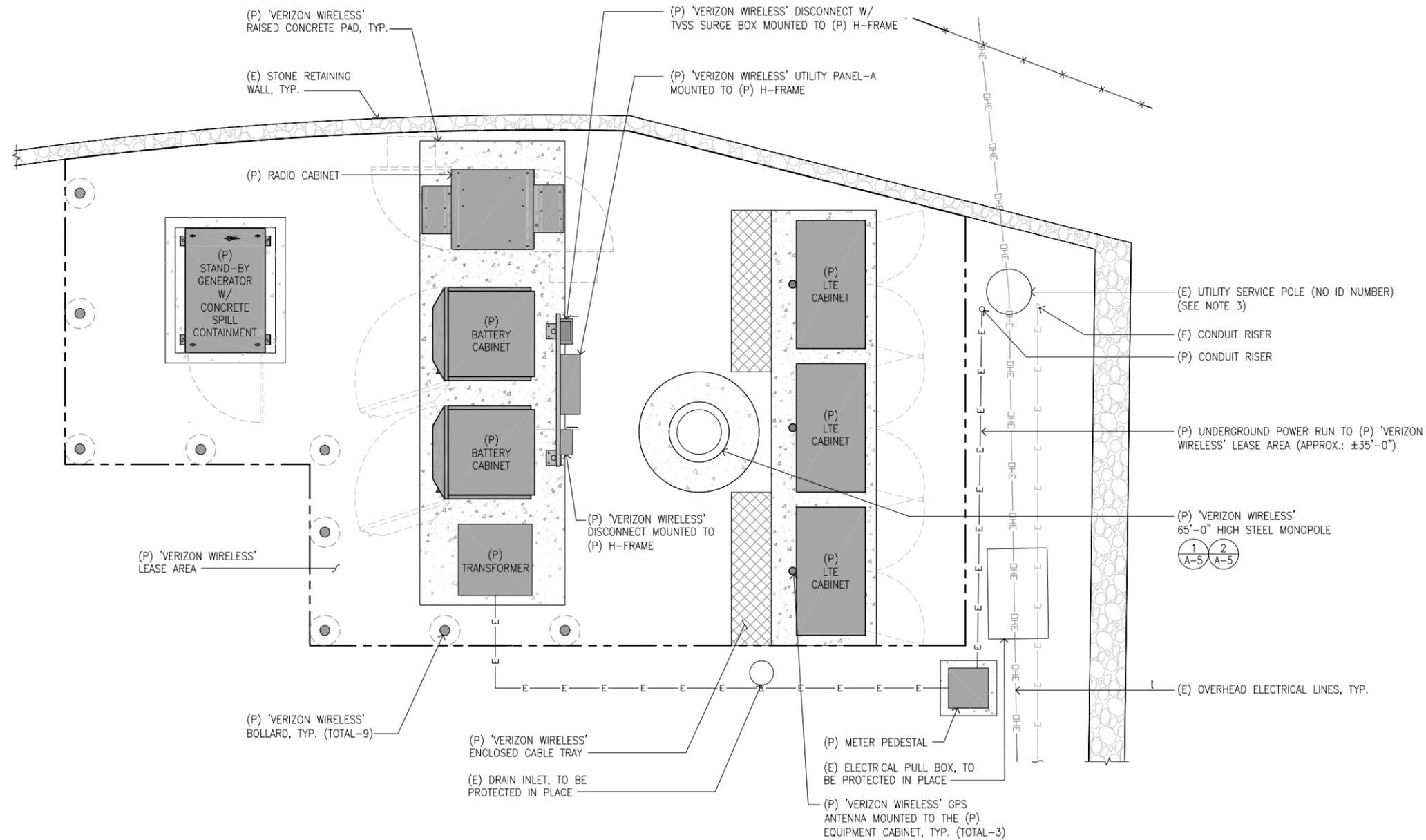
SHEET TITLE:
ENLARGED SITE PLAN

A-2

APN:
 7480-041-002

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

EQUIPMENT PLAN



- NOTE:**
- (P) 'VERIZON WIRELESS' ANTENNAS AND EQUIPMENT ON (P) MONOPOLE NOT SHOWN FOR CLARITY.
 - GENERATOR TO HAVE ADEQUATE SPILL CONTAINMENT IN COMPLIANCE WITH CALIFORNIA HEALTH AND SAFETY CODE.
 - EXISTING ELECTRICAL FACILITIES TO BE PROTECTED IN PLACE.
 - (P) GROUNDING FOR ALL (P) EQUIPMENT ARE TO BE BONDED TO AN (E) GROUNDING SYSTEM.

ISSUE STATUS			
REV.	DATE	DESCRIPTION	BY
A	06/25/15	90% ZONING	EC
A	06/07/16	REVISED 90% ZD	ESQ
A	06/14/16	100% ZONING	CRC

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BLACKJACK

MT. BLACKJACK-SANTA
CATALINA
AVALON, CA 90704

LOS ANGELES COUNTY

SHEET TITLE:
EQUIPMENT PLAN

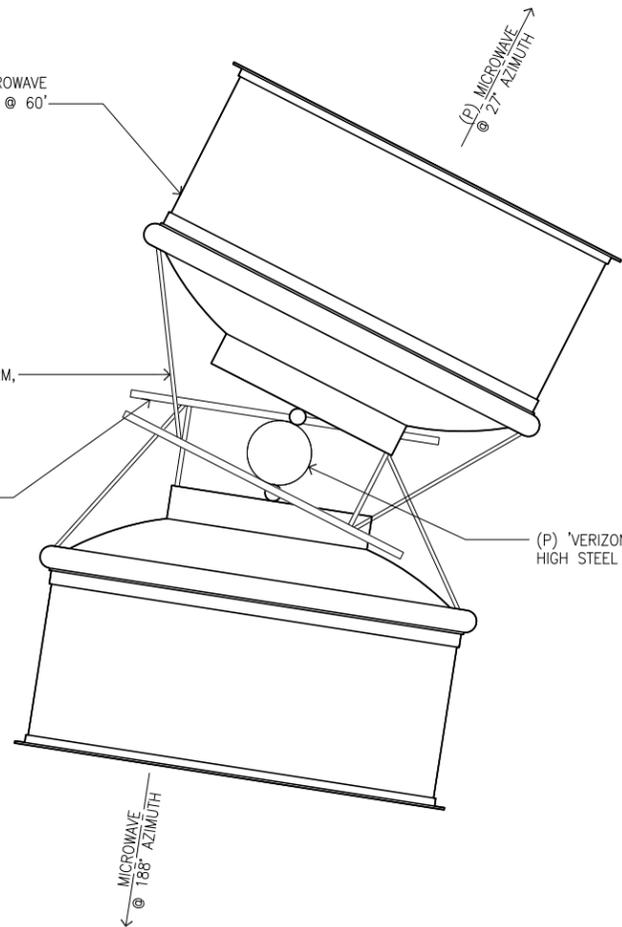
A-3

(P) 'VERIZON WIRELESS' 10'Ø MICROWAVE DISH MOUNTED TO (P) MONOPOLE @ 60' RAD, TYP. (TOTAL-2)

(P) MICROWAVE STABILIZING ARM, TYP. (TOTAL-2, PER M/W)

(P) BRACE FOR MICROWAVE STABILIZING ARM (TOTAL-2, PER M/W)

(P) 'VERIZON WIRELESS' 65'-0" HIGH STEEL MONOPOLE



(P) MICROWAVE @ 27° AZIMUTH

MICROWAVE @ 188° AZIMUTH

NOTES:
 1. THE (P) MONOPOLE AND EQUIPMENT SHALL BE PAINTED A LIGHT BLUE COLOR WITH A WHITE MIX TO CREATE A SKY CAMOUFLAGE.
 2. (P) 'VERIZON WIRELESS' PANEL ANTENNAS AND EQUIPMENT NOT SHOWN FOR CLARITY.

10' MICROWAVE PLAN

SCALE 1/2"=1'-0" 0 1' 2' 4'

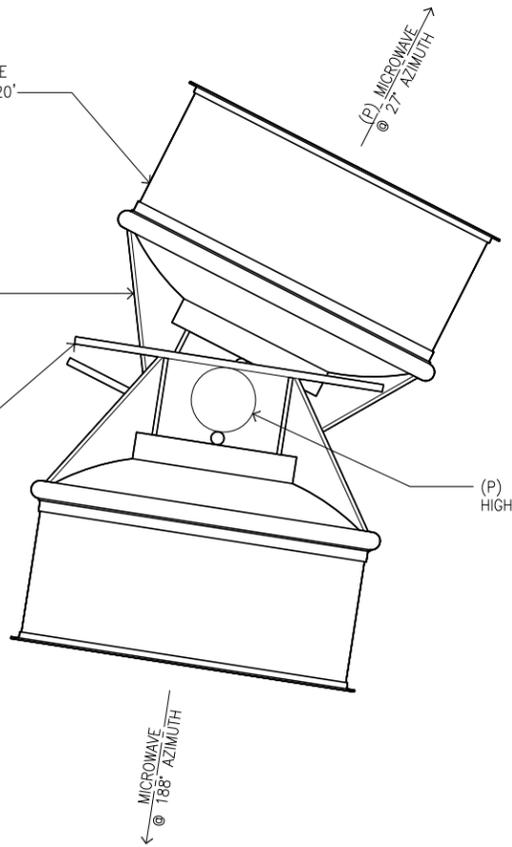
2

(P) 'VERIZON WIRELESS' 8'Ø MICROWAVE DISH MOUNTED TO (P) MONOPOLE @ 20' AND 25' RAD, TYP. (TOTAL-2)

(P) MICROWAVE STABILIZING ARM, TYP. (TOTAL-2, PER M/W)

(P) BRACE FOR MICROWAVE STABILIZING ARM (TOTAL-2, PER M/W)

(P) 'VERIZON WIRELESS' 65'-0" HIGH STEEL MONOPOLE



(P) MICROWAVE @ 27° AZIMUTH

MICROWAVE @ 188° AZIMUTH

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

8' MICROWAVE PLAN

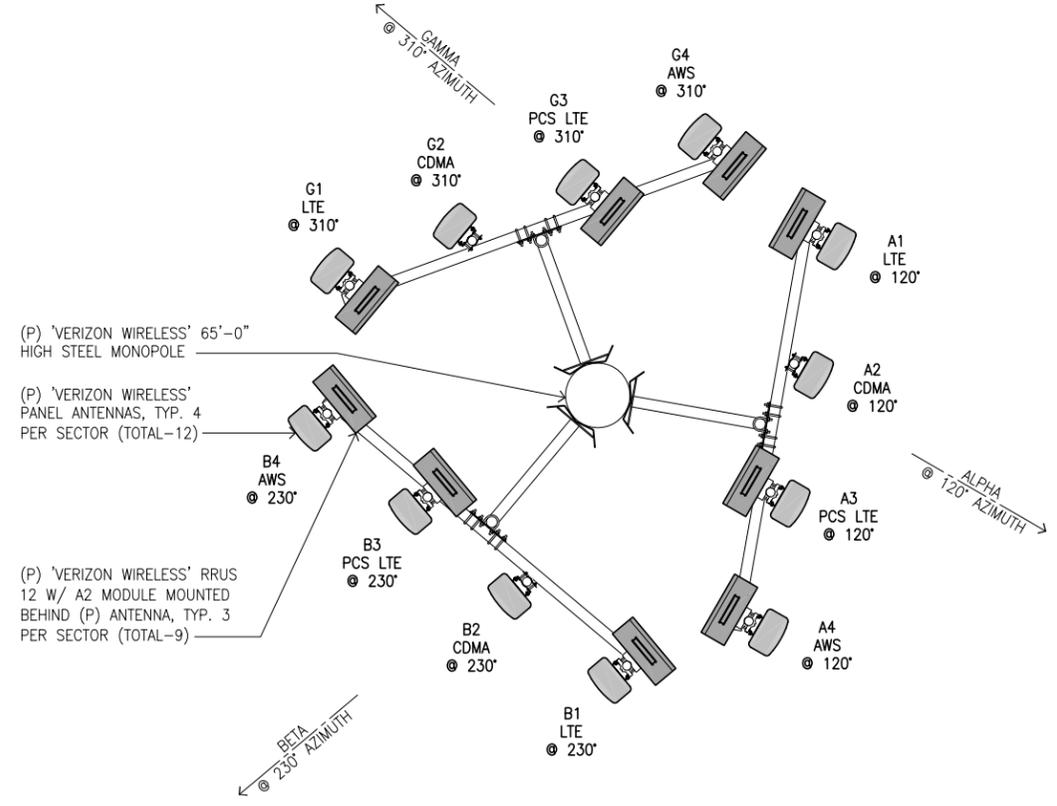
4

ANTENNA PLAN

NEW ANTENNA AND RRU CONFIGURATION											
POS	TECHNOLOGY	AZIMUTH	RAD CENTER	ANTENNA MAKE	ANTENNA MODEL	PORT	# OF RRU	RRU MODEL	ELECT. TILT	MECH. TILT	
ALPHA	A1	LTE	120'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	4'	0'
	A2	CDMA	120'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	-	-	4'	0'
	A3	PCS LTE	120'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'
	A4	AWS	120'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'
BETA	B1	LTE	230'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	4'	0'
	B2	CDMA	230'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	-	-	4'	0'
	B3	PCS LTE	230'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'
	B4	AWS	230'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'
GAMMA	G1	LTE	310'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	4'	0'
	G2	CDMA	310'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	-	-	4'	0'
	G3	PCS LTE	310'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'
	G4	AWS	310'	40'-0"	COMMSCOPE	SBNH-1D6565C	QUAD	1	RRUS 12	2'	0'

TRANSMISSION LINES		
	QUANTITY	LENGTH
(P) COAX	6	±65'-0"
(P) HYBRIFLEX	2	±55'-0"

NOTES:
 1. THE (P) MONOPOLE AND EQUIPMENT SHALL BE PAINTED A LIGHT BLUE COLOR WITH A WHITE MIX TO CREATE A SKY CAMOUFLAGE.
 2. (P) 'VERIZON WIRELESS' MICROWAVES NOT SHOWN FOR CLARITY.



(P) 'VERIZON WIRELESS' 65'-0" HIGH STEEL MONOPOLE

(P) 'VERIZON WIRELESS' PANEL ANTENNAS, TYP. 4 PER SECTOR (TOTAL-12)

(P) 'VERIZON WIRELESS' RRU 12 W/ A2 MODULE MOUNTED BEHIND (P) ANTENNA, TYP. 3 PER SECTOR (TOTAL-9)

ISSUE STATUS			
REV.	DATE	DESCRIPTION	BY
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A	06/07/16	REVISED 90% ZD	ESQ
A	06/14/16	100% ZONING	CRC

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 AVALON, CA 90704
 LOS ANGELES COUNTY

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 AVALON, CA 90704
 LOS ANGELES COUNTY

SHEET TITLE:
ANTENNA PLAN & MICROWAVE PLAN

A-5

SCALE 1/2"=1'-0" 0 1' 2' 4'

1

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	06/25/15	90% ZONING	EC
A	06/07/16	REVISED 90% ZD	ESQ
A	06/14/16	100% ZONING	CRC

NOTE:
 1. THE (P) MONOPOLE AND EQUIPMENT SHALL BE PAINTED A LIGHT BLUE COLOR WITH A WHITE MIX TO CREATE A SKY CAMOUFLAGE.
 2. [XXX.XX] NUMBERS ARE DERIVED FROM SURVEY

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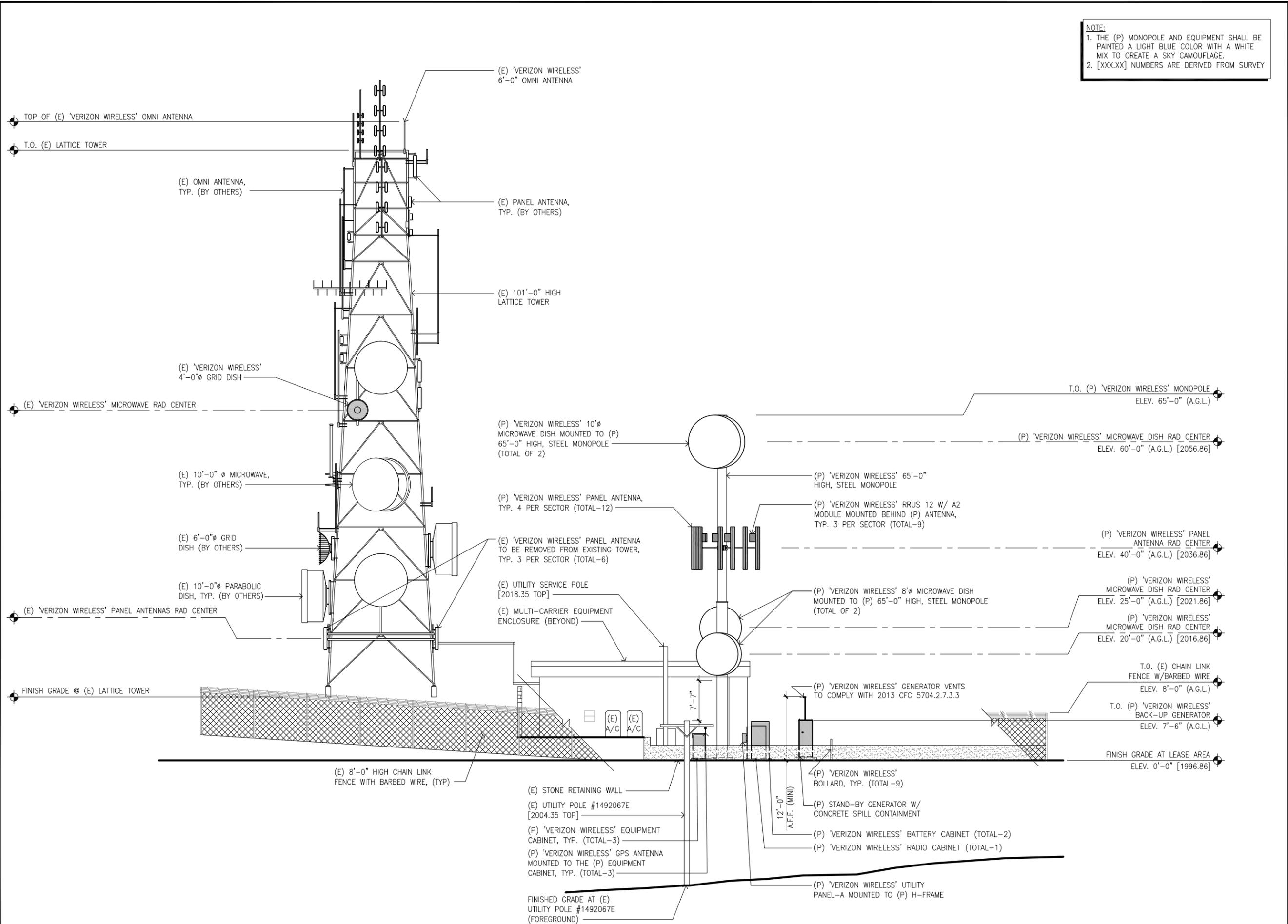
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 AVALON, CA 90704
 LOS ANGELES COUNTY

SHEET TITLE:
NORTHEAST ELEVATION

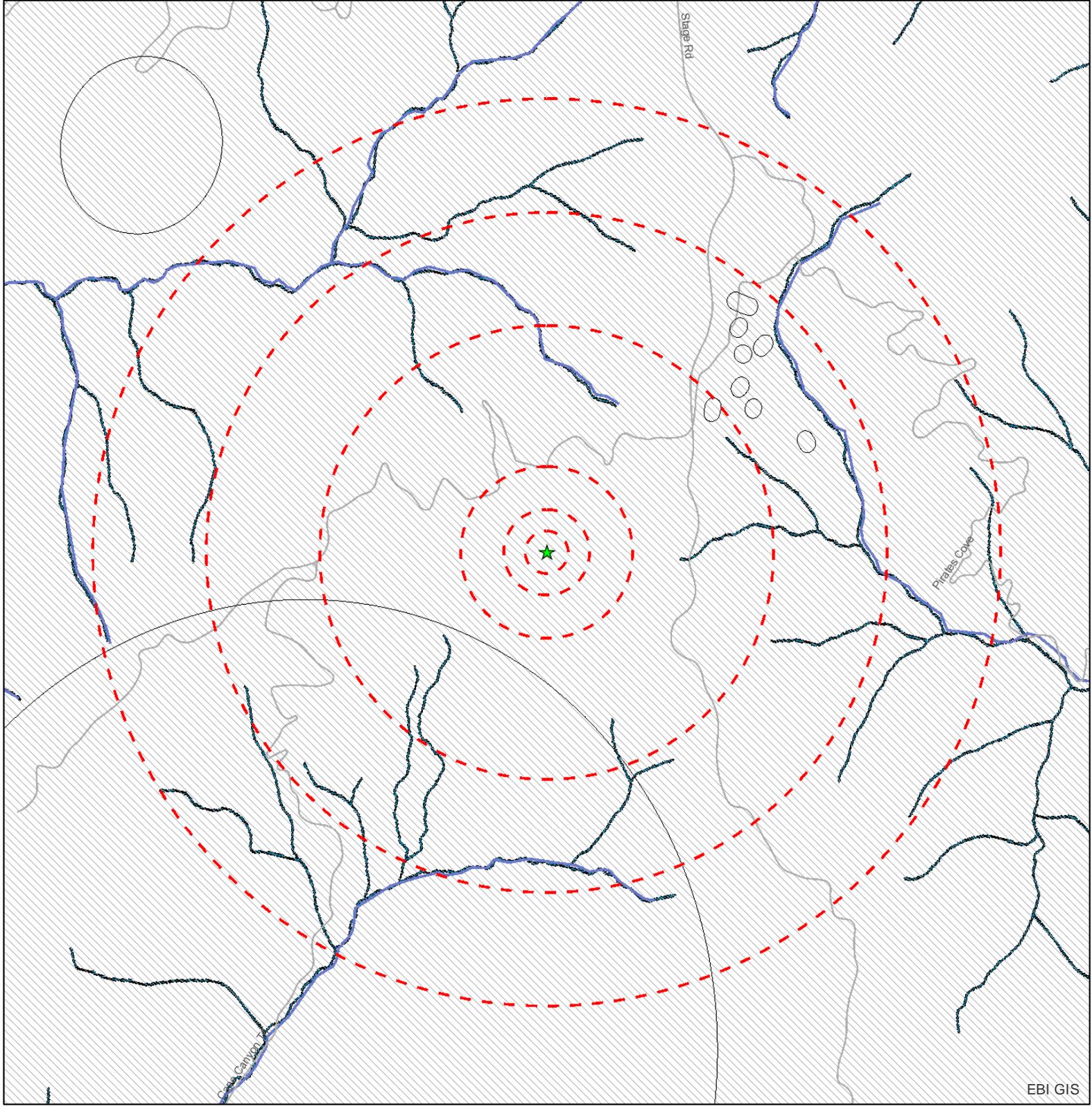
A-7

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES



NORTHEAST ELEVATION

SCALE
 1/8"=1'-0"
 0 2' 4' 8' 16'



EBI GIS

Source: Selected data from ESRI & EBI.
See associated map legend for more details

Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', 1/2, 3/4 & 1 mile

*See associated legend for additional map symbology



Date: 7/20/2016



Land Resources Map

BLACKJACK
MT. BLACKJACK-SANTA CATALINA
AVALON, CA 90704

PN: 6116002993



Land Resources Legend

Scenic Parkways, Rivers & Trails

-  National Scenic Parkway
-  National Park Service Trail / Appalachian Trail
- AZ - BLM Historic Trail
- CT - DEP Trail
- MT- Lewis & Clark Trail
- NY - Trails

-  NY - Scenic Landmark Area
-  NY - Statewide Area of Scenic Significance
-  National Wild, Scenic River
-  State Wild, Scenic, Protected River
-  PA - Scenic River

Sources: National Park Service http://www.nps.gov/gis/data_info/; Bureau of land management <http://www.blm.gov/wo/st/en.html>; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20; NY GIS Clearinghouse <http://gis.ny.gov/>; National W & S Rivers <http://www.rivers.gov/rivers/mapping-gis.php>; Montana GIS <http://nris.mt.gov/gis>; State rivers data from state government and protection agencies.

State Conservation, Lands & Wildlife Areas

-  CT - DEP Property
- CO - Public Access Wildlife Area
- FL - Wildlife Management Area
- MT - National Wildlife Refuge
- NH - WMNF Management Area
- ME - Conservation Land
- TN - Wildlife Resource Land
- TX - State Park or Wildlife Mgt Area
-  TX - Audubon Sanctuary
-  CT - DEP Municipal and Open Space
- NH - Conservation Land
- NY - DEC State Lands
-  NY - Agricultural District

Sources: CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20; CO Wildlife Space http://ndis.nrel.colostate.edu/ftp/ftp_response.asp; Florida Fish and Wildlife www.MyFWC.com; Montana GIS <http://nris.mt.gov/gis>; NH GRANIT <http://www.granit.unh.edu/data/downloadfreedata>; ME GIS <http://megis.maine.gov/catalog>; TN GIS <http://www.state.tn.us/environment/parks/gis/data/>; TX GIS <http://www.glo.state.tx.us/nri/data/index.html>; NY GIS Clearinghouse <http://gis.ny.gov/>

- US FWS NWI Wetland Type**
-  Estuarine and Marine Deepwater
 -  Estuarine and Marine Wetland
 -  Freshwater Emergent Wetland
 -  Freshwater Forested/Shrub Wetland
 -  Freshwater Pond
 -  Lake
 -  Other
 -  Riverine

State Endangered Threatened & Protected Species

-  AZ - Areas of Environmental Concern
-  CA - Spotted Owl Territory
-  CA - NDDDB T & E Species
- CT - NDDDB Area Feature
-  CT - DEP Critical Habitat
- MA - NHESP Estimated Habitats of Rare Wildlife
- TX - Protected Species
-  MA - NHESP Priority Habitats of Rare Species
-  FL - Conservation Species
- MA - NHESP Certified Vernal Pool
-  NY - Important Bird Area
-  TX - Ecologically Unique Rivers Streams

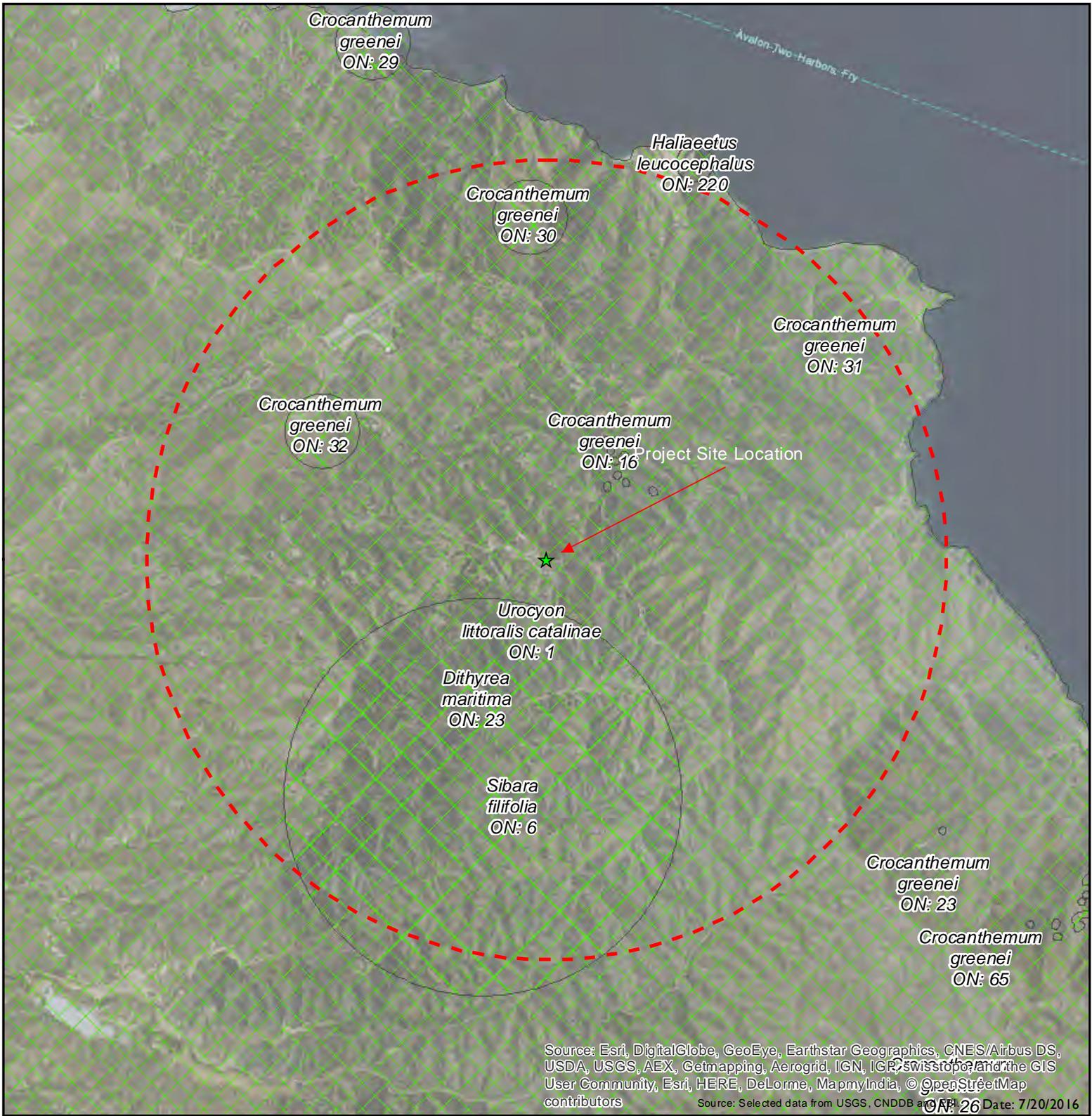
Sources: AZ BLM Page http://www.blm.gov/az/st/en/prog/maps/gis_files.html; CNDDDB <http://www.dfg.ca.gov/biogeodata/cnddb/>; CT DEP http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707%20; MAGIS <http://www.mass.gov/mgis/laylist.htm>; TX GIS <http://www.glo.state.tx.us/nri/data/index.html>; Florida Fish and Wildlife www.MyFWC.com; NY GIS Clearinghouse <http://gis.ny.gov/>

Federal & National Coverage Data Layers

-  USFWS Critical Habitat
-  USFWS Critical Habitat Area
-  National Park Service Land
-  National Wildlife Area or Refuge
-  Federally Owned Land
-  National Wilderness Areas
-  National Park Service Site
- FEMA Q3 Flood Zone 2006
-  500-year inundation area.
-  100-year inundation area.
-  100-year inundation area with velocity hazard.
-  Undetermined but possible flood hazard area.
-  Floodway area, including watercourse extent.
- No Flood Data No Flood Data Available

Sources: National Park Service http://www.nps.gov/gis/data_info/; USFWS <http://crithab.fws.gov/>; National Park Service <http://science.nature.nps.gov/nrdata/index.cfm>; The National Map <http://nationalmap.gov/>; USFW Wildlife Refuge System <http://www.fws.gov/refuges/>; Wilderness.net <http://www.wilderness.net/>; FEMA - Q3 Flood Data <https://msc.fema.gov>

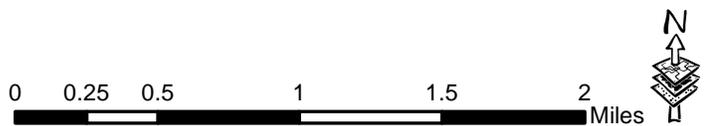
APPENDIX C
SUPPORTING DOCUMENTATION



Legend	CNDDDB Area Feature	Spotted Owl Observation	
	Selected Project Site	Positive Observation	Not Valid Activity Center
	10 Mile Radius	Negative Observation	Abandoned
		Activity Center	Central Valley Vernal Pools

USGS 24K Quad: Santa Catalina North, CA
Not part of Public Land Survey System

CNDDDB Species Occurrence Map
BLACKJACK
MT. BLACKJACK-SANTA CATALINA
LOS ANGELES COUNTY
AVALON, CA 90704



Blackjack

Los Angeles County, California

OVERVIEW

RESOURCES

DESIGN



SAVE

SHARE

IMPACT ANALYSIS

REGULATORY DOCUMENTS

This project potentially impacts **21 resources** managed or regulated by the U.S. Fish & Wildlife Service.

EXPORT TRUST RESOURCE REPORT

6



Endangered species

15



Migratory birds



Refuges & Hatcheries



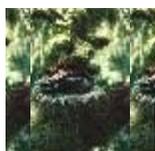
Wetlands

Endangered species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

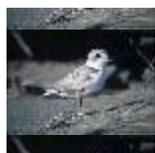
The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds



Marbled Murrelet *Brachyramphus marmoratus*

Threatened



Western Snowy Plover *Charadrius alexandrinus nivosus*

Threatened



Xantus's murrelet *Synthliboramphus hypoleucus*

Candidate

Flowering Plants



Lyon's Pentachaeta *Pentachaeta lyonii*

Endangered

Santa Cruz Island Rockcress *Sibara filifolia*



Endangered

Mammals



Santa Catalina Island Fox *Urocyon littoralis catalinae*

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS IN THIS LOCATION

Migratory birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.^[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

RELATED LINKS

[Birds of Conservation Concern](#)

[Measures for avoiding and minimizing impacts to birds](#)

[Nationwide conservation measures for birds](#)

[Year-round bird occurrence data](#)

The following species of migratory birds could potentially be affected by activities in this location:



Season: Breeding
Ashy Storm-petrel *Oceanodroma homochroa*



Season: Wintering
Bald Eagle *Haliaeetus leucocephalus*



Season: Year-round
Black Oystercatcher *Haematopus bachmani*



Season: Year-round
Black Skimmer *Rynchops niger*



Season: Year-round
Burrowing Owl *Athene cunicularia*



Season: Year-round
Cassin's Auklet *Ptychoramphus aleuticus*



Season: Wintering
Fox Sparrow *Passerella iliaca*



Season: Breeding
Least Bittern *Ixobrychus exilis*



Season: Year-round
Peregrine Falcon *Falco peregrinus*



Season: Year-round
Scripp's Murrelet *Synthliboramphus hypoleucus scrippsi*



Season: Wintering
Short-eared Owl *Asio flammeus*



Season: Year-round
Spotted Towhee *Pipilo maculatus clementae*



Season: Wintering
Western Grebe *aechmophorus occidentalis*



Season: Wintering
Whimbrel *Numenius phaeopus*



Season: Wintering
Xantus's murrelet *Synthliboramphus hypoleucus*

Wildlife refuges and fish hatcheries

THERE ARE NO REFUGES OR FISH HATCHERIES IN THIS LOCATION

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

DATA EXCLUSIONS

DATA PRECAUTIONS

THERE ARE NO WETLANDS IN THIS LOCATION

ECOS

- [ECOS Home](#)
- [About ECOS](#)
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Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Santa Catalina East (3311833) OR Santa Catalina North (3311844) OR Santa Catalina South (3311834) OR Santa Catalina West (3311845))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
aphanisma <i>Aphanisma blitoides</i>	PDCHE02010	None	None	G3G4	S2	1B.2
Baja rock lichen <i>Graphis saxorum</i>	NLTES29470	None	None	G2?	S1	3
bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
beach spectaclepod <i>Dithyrea maritima</i>	PDBRA10020	None	Threatened	G1	S1	1B.1
California dissanthelium <i>Dissanthelium californicum</i>	PMPOA29010	None	None	G2	S1	1B.2
California screw moss <i>Tortula californica</i>	NBMUS7L090	None	None	G2G3	S2S3	1B.2
Catalina crossosoma <i>Crossosoma californicum</i>	PDCRO02020	None	None	G3	S3	1B.2
Catalina Island dudleya <i>Dudleya virens ssp. hassei</i>	PDCRA040S1	None	None	G3?T2?	S2?	1B.2
Catalina Island mountain-mahogany <i>Cercocarpus traskiae</i>	PDROS08030	Endangered	Endangered	G1	S1	1B.1
Catalina mountainsnail <i>Radiocentrum avalonense</i>	IMGASB6010	None	None	G1	S1	
chaparral ragwort <i>Senecio aphanactis</i>	PDAST8H060	None	None	G3	S2	2B.2
cliff spurge <i>Euphorbia misera</i>	PDEUP0Q1B0	None	None	G5	S2	2B.2
coast woolly-heads <i>Nemacaulis denudata var. denudata</i>	PDPGN0G011	None	None	G3G4T2	S2	1B.2
Coulter's saltbush <i>Atriplex coulteri</i>	PDCHE040E0	None	None	G3	S1S2	1B.2
Davidson's saltscale <i>Atriplex serenana var. davidsonii</i>	PDCHE041T1	None	None	G5T1	S1	1B.2
decumbent goldenbush <i>Isocoma menziesii var. decumbens</i>	PDAST57091	None	None	G3G5T2T3	S2	1B.2
globose dune beetle <i>Coelus globosus</i>	IICOL4A010	None	None	G1G2	S1S2	
golden-spined cereus <i>Bergerocactus emoryi</i>	PDCAC11010	None	None	G2	S2	2B.2
island green dudleya <i>Dudleya virens ssp. insularis</i>	PDCRA040S2	None	None	G3?T3	S3	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
island rush-rose <i>Crocانthemum greenei</i>	PDCIS02090	Threatened	None	G3	S3	1B.2
Lyon's pentachaeta <i>Pentachaeta lyonii</i>	PDAST6X060	Endangered	Endangered	G1	S1	1B.1
Maritime Succulent Scrub <i>Maritime Succulent Scrub</i>	CTT32400CA	None	None	G2	S1.1	
Nevin's woolly sunflower <i>Constancea nevinii</i>	PDAST3N090	None	None	G3	S3	1B.3
round-leaved filaree <i>California macrophylla</i>	PDGER01070	None	None	G3?	S3?	1B.2
San Clemente Island blunt-top snail <i>Sterkia clementina</i>	IMGAS19020	None	None	G1	S1S2	
sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	IICOL02101	None	None	G5T2	S2	
Santa Barbara honeysuckle <i>Lonicera subspicata</i> var. <i>subspicata</i>	PDCPR030R3	None	None	G5T2	S2	1B.2
Santa Catalina figwort <i>Scrophularia villosa</i>	PDSCR1S0D0	None	None	G3	S3	1B.2
Santa Catalina Island bedstraw <i>Galium catalinense</i> ssp. <i>catalinense</i>	PDRUB0N0F2	None	None	G4T2T3	S2S3	1B.3
Santa Catalina Island currant <i>Ribes viburnifolium</i>	PDGRO021P0	None	None	G2?	S2?	1B.2
Santa Catalina Island desert-thorn <i>Lycium brevipes</i> var. <i>hassei</i>	PDSOL0G0N0	None	None	G5T1Q	S1	3.1
Santa Catalina Island fox <i>Urocyon littoralis catalinae</i>	AMAJA04022	Endangered	Threatened	G1T1	S1	
Santa Catalina Island ironwood <i>Lyonothamnus floribundus</i> ssp. <i>floribundus</i>	PDR0S12012	None	None	G3T2	S2	1B.2
Santa Catalina Island manzanita <i>Arctostaphylos catalinae</i>	PDERI04070	None	None	G2?	S2?	1B.2
Santa Catalina Island monkeyflower <i>Mimulus traskiae</i>	PDSCR1B2P0	None	None	GX	SX	1A
Santa Catalina lancetooth <i>Haplotrema catalinense</i>	IMGAS36030	None	None	G1	S1	
Santa Catalina shrew <i>Sorex ornatus willetti</i>	AMABA01101	None	None	G5T1	S1	SSC
Santa Cruz Island winged-rockcress <i>Sibara filifolia</i>	PDBRA2A020	Endangered	None	G2	S2	1B.1
Scripps's murrelet <i>Synthliboramphus scrippsi</i>	ABNNN07012	Candidate	Threatened	G3	S2	
Shepard's snail <i>Pristiloma shepardae</i>	IMGAS80110	None	None	G1	S1	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
short-lobed broomrape <i>Orobanche parishii</i> ssp. <i>brachyloba</i>	PDORO040A2	None	None	G4?T4	S3	4.2
showy island snapdragon <i>Gambelia speciosa</i>	PDSCR2H010	None	None	G3	S3	1B.2
south coast saltscare <i>Atriplex pacifica</i>	PDCHE041C0	None	None	G4	S2	1B.2
south island bush-poppy <i>Dendromecon harfordii</i> var. <i>rhamnoides</i>	PDPAP08012	None	None	G4T1Q	S1	3.1
southern island mallow <i>Lavatera assurgentiflora</i> ssp. <i>glabra</i>	PDMAL0N022	None	None	G1T1	S1	1B.1
southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	PDAST4R0P4	None	None	G3T2	S2	1B.1
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	Candidate Threatened	G3G4	S2	SSC
two-striped gartersnake <i>Thamnophis hammondi</i>	ARADB36160	None	None	G4	S3S4	SSC
Wallace's nightshade <i>Solanum wallacei</i>	PDSOL0Z280	None	None	G2Q	S2	1B.1
Wiggins' cryptantha <i>Cryptantha wigginsii</i>	PDBOR0A400	None	None	G2	S1	1B.2

Record Count: 50

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Plant List

2 matches found. [Click on scientific name for details](#)

Search Criteria

Rare Plant Rank is one of [1B, 2B, 3], FESA is one of [Endangered, Threatened, Species of Concern], CESA is one of [Endangered, Threatened, Rare], Found in 9 Quads around 33118C4

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Scientific Name	Common Name	Federal Listing Status	State Listing Status	Rare Plant Rank	State Rank	Global Rank	Family	Lifeform
Cercocarpus traskiae	Catalina Island mountain-mahogany	FE	CE	1B.1	S1	G1	Rosaceae	perennial evergreen shrub
Pentachaeta lyonii	Lyon's pentachaeta	FE	CE	1B.1	S1	G1	Asteraceae	annual herb

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 19 July 2016].

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Contributors

[The Calflora Database](#)

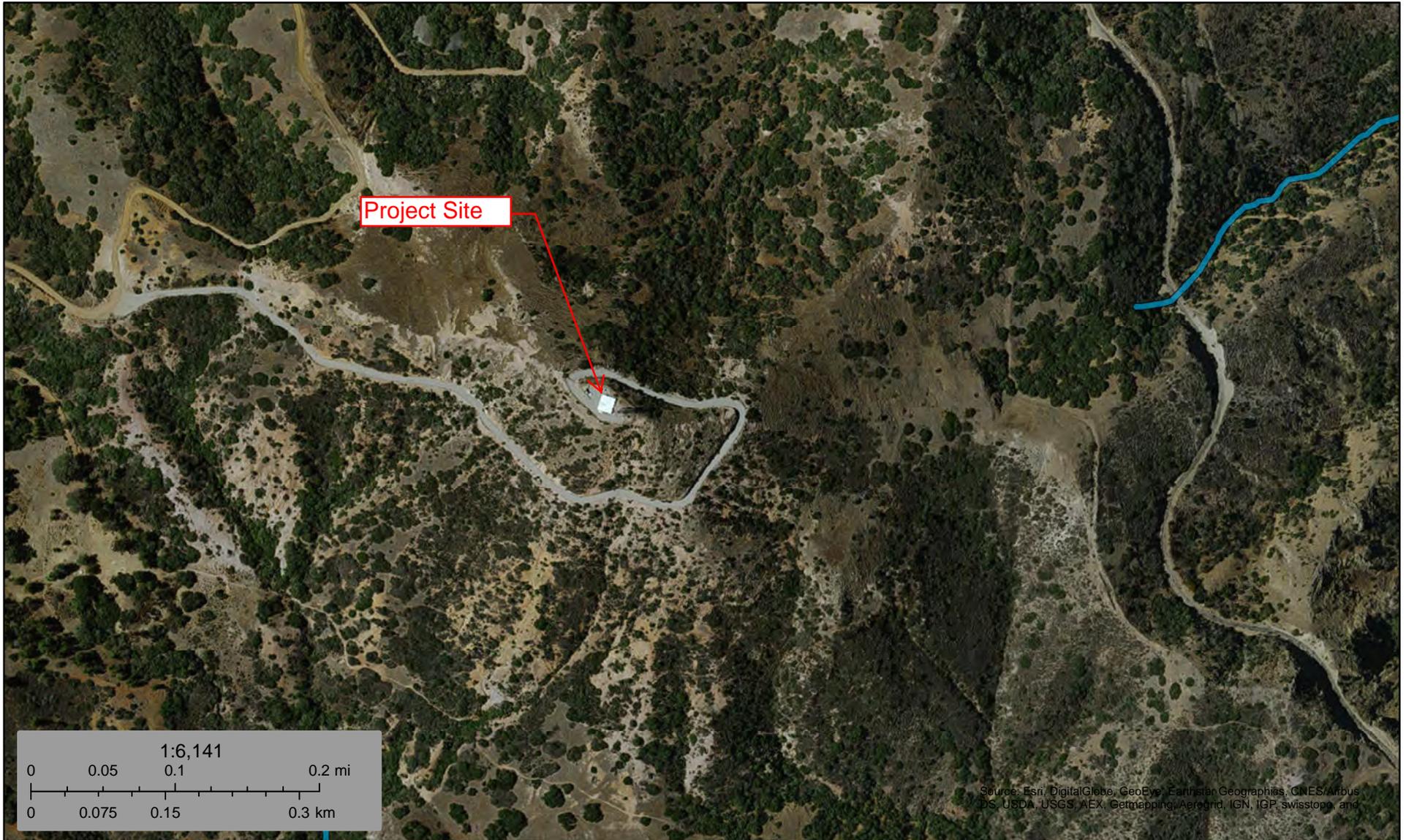
[The California Lichen Society](#)

Critical Habitat for Threatened & Endangered Species [USFWS]

A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.



U.S. Fish and Wildlife Service | USDA FSA, DigitalGlobe, Microsoft, CNES/Airbus DS



July 19, 2016

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Forested/Shrub Wetland |  Other |
|  Estuarine and Marine Wetland |  Freshwater Pond |  Riverine |
|  Freshwater Emergent Wetland |  Lake | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



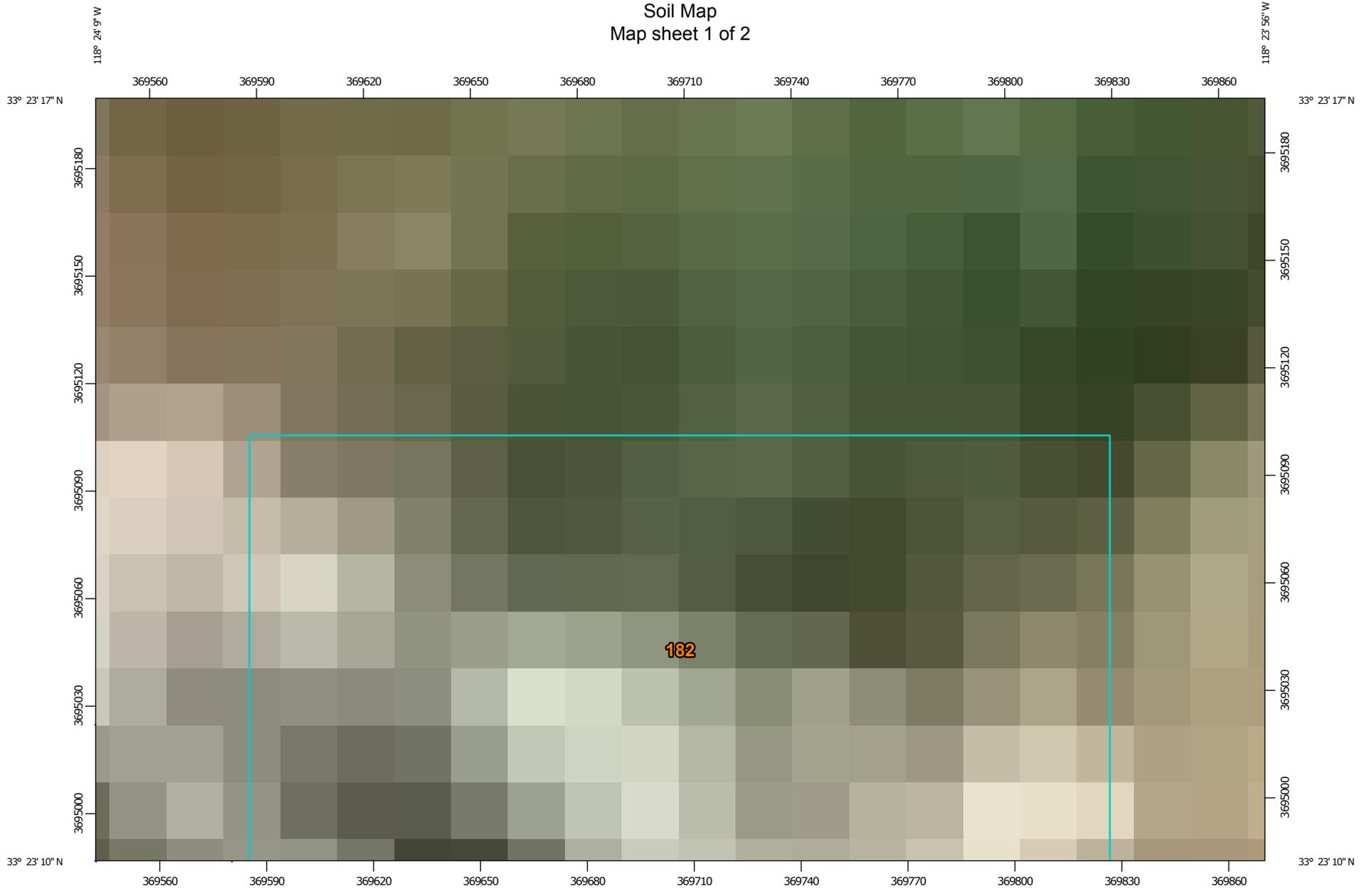
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Channel Islands Area, California, Parts of Santa Barbara and Los Angeles Counties

Blackjack



Custom Soil Resource Report
Soil Map
Map sheet 1 of 2

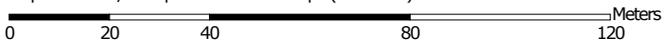


182

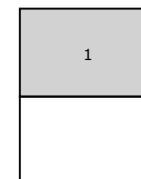
Joins sheet 2



Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



Map Sheet Location

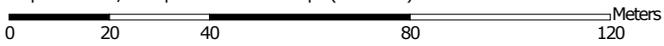
Custom Soil Resource Report

Soil Map Map sheet 2 of 2

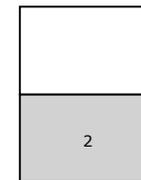
Joins sheet 1



Map Scale: 1:1,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



Map Sheet Location

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Channel Islands Area, California, Parts of Santa Barbara and Los Angeles Counties
 Survey Area Data: Version 10, Sep 23, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Channel Islands Area, California, Parts of Santa Barbara and Los Angeles Counties (CA688)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
182	Luff-Haploxerepts-Haploxerafls complex, 15 to 35 percent slopes	14.2	100.0%
Totals for Area of Interest		14.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Channel Islands Area, California, Parts of Santa Barbara and Los Angeles Counties

182—Luff-Haploxerepts-Haploxeralfs complex, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 21b16
Elevation: 0 to 1,970 feet
Mean annual precipitation: 7 to 17 inches
Mean annual air temperature: 55 to 70 degrees F
Frost-free period: 355 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Luff and similar soils: 35 percent
Haploxerepts and similar soils: 30 percent
Haploxeralfs and similar soils: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Luff

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Eolian deposits over residuum weathered from volcanic and metamorphic rock

Typical profile

A1 - 0 to 4 inches: gravelly silt loam
A2 - 4 to 10 inches: very gravelly silt loam
2Bt1 - 10 to 22 inches: clay
2Bt2 - 22 to 26 inches: clay
2R - 26 to 39 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: 4 to 33 inches to abrupt textural change; 20 to 39 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Other vegetative classification: Scrub Communities-Coastal Sage Scrub (CSS)

Description of Haploxerepts

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Volcanic rock and/or andesite

Typical profile

A1 - 0 to 3 inches: sandy loam

A2 - 3 to 11 inches: gravelly sandy loam

Bw1 - 11 to 19 inches: very gravelly loam

Bw2 - 19 to 31 inches: extremely gravelly loam

Bw3 - 31 to 41 inches: extremely gravelly loamy sand

Cr - 41 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent

Percent of area covered with surface fragments: 2.0 percent

Depth to restrictive feature: 39 to 59 inches to paralithic bedrock

Natural drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Other vegetative classification: Scrub Communities-Coastal Sage Scrub (CSS)

Description of Haploxeralfs

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Volcanic rock and/or andesite

Typical profile

A - 0 to 1 inches: clay loam

Bt1 - 1 to 16 inches: clay

Bt2 - 16 to 26 inches: clay

Bt3 - 26 to 39 inches: clay

Bt4 - 39 to 79 inches: gravelly clay loam

Properties and qualities

Slope: 15 to 35 percent

Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Natural drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Other vegetative classification: Non-Vegetated Areas-Bare Ground (B), Scrub Communities-Coastal Sage Scrub (CSS)

Minor Components

Freeboard

Percent of map unit: 4 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Other vegetative classification: Scrub Communities-Coastal Sage Scrub (CSS)

Tongva

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: Loamy volcanic slopes 13-24" p.z. (R020XI113CA)
Other vegetative classification: Scrub Communities-Coastal Sage Scrub (CSS)

Rock outcrop

Percent of map unit: 2 percent
Landform: Drainageways on hills
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Other vegetative classification: Non-Vegetated Areas-Bare Ground (B)

Topdeck

Percent of map unit: 2 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: Clayey slopes 13-31" p.z. (R020XI116CA)
Other vegetative classification: Scrub Communities-Coastal Sage Scrub (CSS)

Typic xerofluvents

Percent of map unit: 2 percent

APPENDIX D
PROFESSIONAL QUALIFICATIONS

SUMMARY OF EXPERIENCE

Mr. Maguire received his BS in Wildlife from Humboldt State University with an emphasis on waterfowl and shorebird ecology/management. He has worked for Point Reyes Bird observatory and the Hoopa Valley Indian Reservation where he was responsible for conducting avian nests surveys, capturing, and banding protected avian species as well as conducting vegetation surveys. He is a certified Professional Wetland Scientist (PWS) who has spent the last 15 years consulting on a variety of wetland and upland communities within the Pacific Northwest and U.S. southeast. He has acquired permits from a variety of State and Federal agencies including environmental resource permits, Coastal Construction Control Line permits, Joint Coastal Permits, Section 10 permits, Section 401 and 404 permits, and Incidental Take Permits (ITP).

RELEVANT PROJECT EXPERIENCE

Mr. Maguire has worked closely with the U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service to assess project impacts, develop project alternatives, and develop mitigation measures under National Environmental Protection Act (NEPA) guidelines. He has also worked with the USACE to conduct feasibility studies and prepare project alternatives for Section 1135 Ecosystem Restoration projects. He has worked with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to prepare Section 7 Consultation documents for nesting marine turtle's, California tiger salamander, California red-legged frog, Alameda whipsnake, West Indian Manatee, Shortnose Sturgeon, Anastasia Beach Mouse, Piping Plover, Eastern Indigo Snake, Atlantic Salt Marsh Snake, Gopher Tortoise, Wood Stork, Least Tern, California Clapper Rail, and Salt Marsh Harvest Mouse.

EDUCATION

Bachelors of Science, Wildlife Biology, December 1999

Humboldt State University, Arcata, CA

Associate of Science, Biology, December 1997

Canada College, Redwood City, CA

PROFESSIONAL AFFILIATIONS

Society of Wetland Scientists

Association of Environmental Professionals

California Native Plant Society

PROFESSIONAL REGISTRATIONS

Professional Wetland Scientist (PWS) – No. 1900

PUBLICATIONS

Black et al. 2003. Site Selection and Foraging Behavior of Aleutian Canada Geese in a Newly Colonized Spring Staging Area. Proceedings of the 2003 International Canada Goose Symposium.

Maguire, A. 2000. Whimbrel Attacked by a Peregrine Falcon and Killed by a Common Raven in Northern California. Wilson Bulletin 112(3), 2000, pp. 429-430.

SPECIALIZED TRAINING COURSES

Regional Supplemental Wetland Delineation Training, September 2014 (Richard Chinn Environmental Training, Inc.)

Biology and Conservation of the Alameda Striped Racer, May 2014 (Alameda County Resource Conservation District)

Managing Habitats for the California Red-legged Frog, November 2013 (Elkhorn Slough National Estuarine Research Reserve)

California Tiger Salamander Training, April 2013 (Elkhorn Slough National Estuarine Research Reserve)
California Red Legged Frog Survey Training, April 2012 (Elkhorn Slough National Estuarine Research Reserve)
Taxonomy Workshop – Composites, August 2011 (Regional Park Botanical Garden)
Advanced CEQA Workshop, February 2011 (Association of Environmental Professionals)
Planning, Site Selection, and Hydrology Models for Constructed Wetlands, February 2008 (Wetland Training Institute, Inc.)
Florida Wetlands, November 2007 (Continuing Legal Education, International)
Advanced Jurisdictional Hydrology, October 2006 (Wetland Training Institute, Inc.)
Wetland Creation and Restoration, June 2005 (Ohio State University, William J. Mitsch and Roy R. "Robin" Lewis)
Hydric Soils and Whole Landscape Hydrology, October 2004 (University of Florida, Wade Hurt)
USACE Wetland Delineation and Management Training Program, September 2002 (Richard Chinn Environmental Training, Inc.)
Prescription Burn Certification Course, October 2001 (U.S. Department of Forestry)