



May 8, 2018

Horizon Tower, LLC

RE: Biological Resource Assessment (Compliance)
Lake County Requested Biological Assessment
Horizon Tower ID: CA4043 / Horizon Tower Name: Kelseyville
Horizon Tower Address: 9475 Mojave Trail, Kelseyville, Lake County, CA 95451
GE²G Project # 310909

Geist Engineering and Environmental Group, Inc. (GE²G), appreciates the opportunity to submit this Biological Resource Assessment Report regarding the planned New Site Build (NSB) Horizon Tower, LLC facility as listed above.

Soils in the location of the proposed wireless compound support Chaparral and nonnative grasslands. During the Biological Resource Assessment, intermittent stream, ponds, wetlands or rare plant species were not identified in the study area. Potential habitat is present for 57 of 79 plant species per the completed research. Botanical surveys were conducted on March 28, 2018. These surveys were conducted within the blooming period of 32 of these 57 special-status plant species. No critical habitat was identified within the proposed project site or buffer area. No special-status natural communities were identified within the proposed project site or buffer area during biological surveys within the project area.

Biological Resource Assessment Findings:

Based on the completed work it appears that no special-status plant species nor animal species are present within the proposed project site. As long of project activities are confined to the proposed project site, we do not recommend further surveys or protection measures to protect these plant species.

Construction Best Management Practices (BMPs) Recommendation Executive Summary:

- A silt fence should be installed to contain spoils from construction excavation activities.
- Prior to the construction start a qualified biologist shall complete a biological clearance for special status species (plants, amphibians, birds, and bats) (seasonally dependent).
- Based on potential special status species to occur a Biological should make clearance assessments during trenching and construction activities as deemed warranted by the biologist.
- Environmental Awareness Training by a biologist shall be completed at the construction start.
- Project site boundaries shall be clearly delineated.

(The attached report has the full findings and recommendations)

Sincerely,

A handwritten signature in blue ink, appearing to read 'Stephen Geist', is written over a light blue horizontal line.

Stephen Geist, President,
 Geist Engineering and Environmental Group, Inc. sgeist@geistenvironmental.com

Attached: Biological Resource Assessment for the Horizon Tower, LLC, undertaking Kelseyville CA4043 Telecommunications Project Lake County, California by Synthesis Planning dated May 2018

GEIST ENGINEERING AND ENVIRONMENTAL GROUP, INC.

4200 Park Boulevard #149, Oakland, California 94602

510.238.8851 (p) / 510.238.8644 (f)

Field Offices: Arizona, California, Colorado, Oregon, and Washington

Biological Resource Assessment

CA4043 Communications Tower Telecommunications Project Lake County, California

May 2018

Prepared for:

**Horizon Tower, LLC
117 Town and Country Drive, Suite A
Danville, CA 94526**

Geist Engineering and Environmental Group, Inc.

Prepared by:

**Synthesis Planning
442 San Marin Drive
Novato, CA 94945
Contact: Cord Hute
Phone: (415) 328-7923**

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Summary

The proposed project is situated 4.9 miles southeast of the City of Kelseyville and 4.3 miles west of the City of Lower Lake in unincorporated Lake County, California. The project is located on the north side of Mojave Trail. This project is being undertaken to provide improved telecommunications services to the local area through the installation of a new communication tower and associated equipment. Synthesis Planning was contracted by Geist Engineering and Environmental Group, Inc and Horizon Tower, LLC to perform this Biological Resources Assessment for the proposed project.

Two (2) vegetation communities were observed within the study area and include the following: 1) chaparral and 2) ruderal vegetation. As part of this Biological Resource Assessment, we also evaluated the potential for occurrence of special-status plant species and special-status wildlife species.

Best Construction Practices and Avoidance and Minimization Measures as well as Standard Construction Conditions to prevent take of individuals discussed above are included in this report.

List of Acronyms and Abbreviations

| | |
|--------|--|
| BRA | Biological Resource Assessment |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CNDDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CSC | California Species of Concern |
| FESA | Federal Endangered Species Act |
| FGC | Fish and Game Code |
| MBTA | Migratory Bird Treaty Act |
| NMFS | National Marine Fisheries Service |
| RWQCB | Regional Water Quality Control Board |
| SWPPP | Stormwater Pollution Prevention Plan |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | United States Geological Survey |
| USACE | US Army Corps of Engineers |
| UTM | Universal Trans Mercator |
| WHR | Wildlife Habitat Relationships |

1.0 Introduction

The purpose of this Biological Resource Assessment is to provide technical information and to review the proposed project study area, located 4.9 miles southeast of the City of Kelseyville and 4.3 miles west of the City of Lower Lake in unincorporated Lake County, California (Appendix A, Figures 1 and 2). This project is being undertaken to provide improved telecommunications services to the local area through the installation of a new communication tower and associated equipment. Synthesis Planning prepared this Biological Resources Assessment (BRA) to provide sufficient detail to determine the potential effects of the proposed project on federally- and state-listed wildlife and plant species. This BRA was conducted to determine the potential for special-status vegetation communities, plant and animal species to occur within the project study area, and to identify the limitations to potential development of the project. The BRA is prepared in accordance with legal requirements found in Section 7 (a)(2) of the Endangered Species Act (16 U.S.C. 1536(c)) and also provides information required for an Initial Study/Mitigated Negative Declaration as part of the California Environmental Quality Act (CEQA) review for the project. The document presents technical information upon which later decisions regarding project effects are developed.

The project is located on the north side of Mojave Trail (see Appendix A, Figures 2). The project area is located in Section 22 of the Clearlake Highlands 7.5-minute topographic quadrangle. The project sites are located within Township 13N and Range 08W. Surrounding land uses consist of rural residences and open space.

1.1 Project Description

A review of zoning drawings indicated that the proposed action would include:

- Construction of a 50 feet by 50 feet (2,500 square feet) level pad area. The pad area would be covered with gravel on portions not used for equipment installation;
- Installation of 85-foot tall stealth broadleaf tree steel self-supporting pole tower;
- Installation of telecommunications equipment and other related equipment within various areas of the gravel pad;
- Installation 6 foot tall chain link fence around telecommunications site;
- Installation of 320 feet of overhead power cable line between tower site and existing pole behind private residence south of tower site; and
- Improvement of existing access road (1,500 square feet, of which 750 square feet would fall within chaparral habitat).

The proposed construction of the wireless facilities would permanently displace approximately 4,000 square feet of land (0.09 acres) which would be disturbed as a result of constructing the facility pad. Of this disturbance, 3,250 square feet (0.07 acres) would occur within previously disturbed lands and 750 square feet (0.02 acres) would occur with chaparral habitat.

Staging Areas and Fueling

Storage areas for contractor equipment and materials will be determined prior to project construction activities. Horizon Tower, LLC, with the assistance of a biologist, will review the local project area and locate staging areas that are in previously disturbed areas that will not have potential to affect wildlife habitat or species. All staging areas must be approved by Lake County prior to use. In addition, to prevent contamination of fuel into sensitive habitats, the following measures will apply:

- The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the State and U.S.,
- Areas for fuel storage, refueling and servicing of construction equipment must be located in an upland location,
- Wash sites must be located in upland locations to ensure wash water does not flow into the stream channel or adjacent wetlands.
- All construction equipment must be in good working condition, showing no signs of fuel or oil leaks. All questionable motor oil, coolant, transmission fluid, and hydraulic fluid hoses, fittings and seals shall be replaced. The mechanical equipment shall be inspected on a daily basis to ensure no leaks. All leaks shall be repaired in the equipment staging area or other suitable location prior to resumption of construction activity.
- Oil absorbent and spill containment materials shall be located on site when mechanical equipment is in operation within 100 feet of waterway. If a spill occurs, no additional work shall occur in-channel until, 1) the mechanical equipment is inspected by the contractor and the leak has been repaired, 2) the spill has been contained, and 3) CDFW and Lake County are contacted and have evaluated the impacts of the spill.

Construction Scheduling

The estimated time period for construction is 90 working days for the entire project. Work will begin as soon as all regulatory clearances and permits are obtained.

Operations and Maintenance

The facilities would be constructed to current construction-industry standards and codes.

Construction Best Management Practices

Construction BMPs will be incorporated in the construction of the project and include, but are not limited to, the following:

- To avoid debris contamination into drainages and other sensitive wildlife habitats, silt fence or other sediment control devices will be placed around construction sites to contain spoils from construction excavation activities.
- Surveys for special-status species (i.e., plants, amphibians, birds, bats) by qualified biologists shall be conducted at the appropriate times before construction starts to determine occupancy at the site. If no special-status species are found, no further action other than the Best Management Practices identified above are required. If individuals are found, including plants or nesting birds, a buffer zone around the species or nest will be required at a sufficient distance to prevent take of individual plants, or until after the nesting season.
- Due to the potential for special-status species to occur, move through, or into the project area, an on-site biological monitor, shall at a minimum, check the ground beneath all equipment and stored materials each morning prior to work activities during disturbing activities to prevent take of individuals. All pipes or tubing Four (4) inches or greater shall be sealed by the relevant contractor with tape at both ends to prevent animals from entering the pipes at night. All trenches and other excavations shall be backfilled the same day they are opened, or shall have an exit ramp built into the excavation to allow animals to escape.
- Environmental Awareness Training shall be presented to all personnel working in the field on the proposed project site. Training shall consist of a brief presentation in which biologists knowledgeable of endangered species biology and legislative protection shall explain endangered species concerns. Training shall include a discussion of special-status plants and sensitive wildlife species. Species biology, habitat needs, status under the Endangered Species Act, and measures being incorporated for the protection of these species and their habitats shall also be discussed.
- Project site boundaries shall be clearly delineated by stakes and /or flagging to minimize inadvertent degradation or loss of adjacent habitat during project operations. Staff and/or its contractors shall post signs and/or place fence around the project site to restrict access of vehicles and equipment unrelated to drilling operations.

2.0 Study Methodology

This Biological Resource Assessment used the best available scientific and commercial data to evaluate the potential effects to biological resources from the proposed project. Literature review, aerial imagery and field surveys informed the descriptions of the vegetation communities, identification of present and past occurrences of special-status species in the vicinity of the proposed project, and the assessment of habitats for special-status animal species.

2.1 Literature Search

Information on special-status plant species was compiled through a review of the literature and database searches. Database searches for known occurrences of special-status species focused on the Clearlake Highlands U.S. Geologic Service 7.5-minute topographic quadrangle. The following sources were reviewed to determine which special-status plant and wildlife species have been documented in the vicinity of the project site:

- U.S. Fish and Wildlife Service (USFWS) quadrangle species lists (USFWS 2018)
- USFWS list of special-status animals for Lake County (USFWS 2018)
- California Natural Diversity Database records (CNDDDB) (CNDDDB 2018)
- California Department of Fish and Wildlife's (CDFW) Special Animals List (CDFW 2018)
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2018)
- California Native Plant Society (CNPS) Electronic Inventory records (CNPS 2018)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)

The USFWS electronic list of Endangered and Threatened Species was queried electronically (www.fws.gov/sacramento/es_spp_lists-overview.htm). We also reviewed the CalFish IMAPS Viewer (www.calfish.org/DataandMaps/CalFishGeographicData), developed by CDFW Biogeographic Branch for analysis of fisheries.

The CDFW BIOS website and the *California Essential Habitat Connectivity Project: A strategy for conserving a connected California* (Spencer et al. 2010) were reviewed for wildlife movement information. The CDFW BIOS website and the CNDDDB were review for documented nursery sites. Other sources of information regarding reported occurrences include locations previously reported to the U.C Berkeley Museum of Vertebrate Zoology and the California Academy of Sciences.

2.2 Personnel and Survey Dates

Cord Hute, wildlife biologist of Synthesis Planning, conducted botanical and biological surveys of the project site on March 28, 2018. Mr. Hute analyzed on-site and buffer area habitats for suitability for special-status plant and animal species during these surveys.

2.3 Impact Assessment Methodology

We examined the on-site vegetation communities, present and past occurrence locations of federally and state listed species and federal and state species of concern within close proximity of the proposed project area, and habitats for special-status plant and animal species. Based on the current site conditions, we evaluated the potential for occurrence on the site for special-status biological resources and used the project description to determine any potential direct or indirect effects.

We based our determination of whether the proposed project may result in adverse impacts to federally-listed special-status species, based on guidelines established by the USFW under Section 7(a) of the Federal Endangered Species Act (FESA), in which a project that may have an adverse effect impact on listed biological resources must be assessed. FESA states that, “each federal agency shall...insure that any *action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an “agency action”) is not likely to jeopardize the continued existence of any endangered or threatened or result in the destruction or adverse modification of habitat of such species.” Thus, components of the proposed project were deemed to have an adverse impact on special-status biological resources if they could result in effects as described in the above statement to any listed species or its habitat.

We based our determination of whether the proposed project may result in adverse impacts to State special-status species based on CEQA, the CDFW and the CNPS guidelines for special status plants and animals.

We also evaluated potential impacts from the project to habitats not occupied by species but for which habitats occurred.

3.0 Environmental Baseline

The project area is located within the North Coast Bioregion (Welsh 1994), a bioregion that encompasses the area from southwestern Oregon to southern Monterey County and contains the southern extent of the mixed hardwood forest with redwood. The North Coast Bioregion is delineated by the Pacific Ocean on the west and the Coast Ranges Mountains on the east and encompasses those lands west of the highest ridgeline dividing areas that drain directly into the Pacific Ocean from those areas that drain toward the interior (Welsh 1994). Habitats within this bioregion include both mesic (moist) habitats, such as freshwater marsh, and xeric (dry) habitats, such as chaparral, and are typical of a Mediterranean type climate. Average rainfall in the area is 40 inches (NCRCD 2004).

3.1 Wetlands and Waters of the U.S. and State

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards have been developed as a method of defining wetlands through consideration of three criteria: hydrology, soils, and vegetation (USACE 1987).

The U.S. Army Corps of Engineers (USACE), CDFW, and Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to stream channels, river banks, lakes, and other wetland features. Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into “waters” of the United States without a permit, including certain wetlands and unvegetated “other waters of the U.S.” The Corps also has jurisdiction over navigable waters, including tidally influenced ones below Mean High Water, under Section 10 of the Rivers and Harbors Act. Jurisdictional authority of the CDFW is established under Section 1602 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code states that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying the Department, incorporating necessary mitigation, and obtaining a Streambed Alteration agreement. The Wetlands Resources Policy of the CDFW states that the Fish and Game Commission will “strongly discourage development in or conversion of wetlands... unless, at a minimum, project mitigation assures there will be no net loss of either wetland habitat values or acreage.” Jurisdictional authority of the RWQCB is established pursuant to Section 401 of the Clean Water Act, which typically requires a water quality certification when an individual or nationwide permit is issued by the Corps. The RWQCB also has jurisdiction over “waters of the State” under the Porter-Cologne Water Quality Control Act.

A delineation of wetlands and watercourses within the project study area was conducted by Synthesis Planning wetland ecologists during the March 28, 2018 site visit. Synthesis Planning did

not identify any intermittent stream, ponds, or wetlands within the proposed project site or buffer area.

3.2 Vegetation Communities

Two (2) vegetation community types were observed within the study area. Where appropriate vegetation community types are described using *The Manual of California Vegetation* (Sawyer, et. al. 2009). Vegetation types observed were: 1) chaparral and 2) ruderal vegetation.

1. Chaparral was observed within portions of the proposed project site (expansion areas of existing access road) and throughout the project buffer area. The growth form of chaparral species can vary from treelike (up to 10 feet) to prostrate. When mature, it is often impenetrable to large mammals. Its structure is affected by site quality, history of disturbance (e.g., fire, erosion, logging) and the influence of browsing animals. Chaparral is characterized by evergreen species; however, deciduous or partially deciduous species may also be present. Understory vegetation in the mature chaparral is largely absent. Conifer and oak trees may occur in sparse stands or as scattered individuals within the chaparral type. Chaparral varies markedly throughout California. Species composition changes with elevational and geographical range, soil type, and aspect.

Montane chaparral in California occurs in gradations between two characteristic successional sequences: the first sequence is associated with poorer, typically shallow soils (in early stages of development), often overlying fractured bedrock. Here, chaparral species may predominate to form an edaphic climax community. In the second sequence, chaparral is a secondary succession following disturbance on deeper forest soils. After disturbance (logging, fire, erosion) chaparral proliferates and may exclude conifers and other vegetation for many years. However, chaparral may facilitate the germination of red fir seedlings (Barbour 1984) and other shade tolerant conifers by providing a protective cover, moderating microclimate, and improving soil conditions. Chaparral shrubs may be an essential link in forest succession by building up soil nutrient levels, especially nitrogen, to the point where trees can survive. In mature timber stands, chaparral species may senesce due to insufficient light through the canopy and are only present as a sparse understory. Most montane chaparral species are fire adapted. Mature plants sprout back from the root crown. Some species require scarification of the seed for germination and may produce numerous seedlings after a fire. However, if fires are too frequent, these species may be eliminated changing the subsequent structure of the community. Deer and livestock foraging on sprouting chaparral may also have a significant effect on its rate of development, structure, and ultimate species composition. Following fire, herbaceous plants may dominate for up to 5 years. Usually within 7 to 9 years the brush overstory is fully developed. Chaparral may persist for up to 50 years or longer before conifer development begins to significantly reduce the shrub growth through shading. Where chaparral types occur as an edaphic climax (i.e., on poor, rocky soils, fractured bedrock or lava caps), growth rates may be rather slow, growth form is usually small and stunted, and individuals may be quite old.

One or more of the following species usually characterize montane chaparral communities: whitethorn ceanothus (*Ceanothus cordulatus*), snowbrush ceanothus (*Ceanothus velutinus*), greenleaf manzanita (*Arctostaphylos patula*), pinemat manzanita (*Arctostaphylos nevadensis*), hoary manzanita (*Arctostaphylos canescens*), bitter cherry (*Prunus emarginata*), Fremont silktassel (*Garrya fremontii*), Greene goldenweed (*Ericameria greenei*), mountain mahogany (*Cercocarpus betuloides*), and toyon (*Heteromeles arbutifolia*). As one or more of these species become dominant under various environmental regimes, further subclassification of the montane chaparral series is possible.

Montane chaparral provides habitat for a wide variety of wildlife. Numerous rodents inhabit chaparral. Deer and other herbivores often make extensive use of chaparral. Montane chaparral provides critical summer range foraging areas, escape cover and fawning habitat. Some small herbivores use chaparral species in fall and winter when grasses are not in abundance. Rabbits and hares eat twigs, evergreen leaves and bark from chaparral. Shrubs are important to many mammals as shade during hot weather, and moderate temperature and wind velocity in the winter. Many birds find a variety of habitat needs in the montane chaparral. It provides seeds, fruits, insects, protection from predators and climate, as well as singing, roosting and nesting sites.

2. Ruderal vegetation was observed within the proposed project site, access road, and power and fiber underground right-of-way. This vegetation type is comprised mostly of non-native weedy herbaceous forb plants.

3.3 Wildlife Habitats

Wildlife habitat classifications for this report is based on the California Department of Fish and Game's Wildlife Habitat Relationships (WHR) System (CDFG 1988) which places an emphasis on dominant vegetation, vegetation diversity and physiographic character of the habitat. The value of a site to wildlife is influenced by a combination of the physical and biological components of the immediate environment, and includes such features as type, size, and diversity of vegetation communities present and their degree of disturbance. As a plant community is degraded by loss of understory species, creation of openings, and a reduction in canopy area, a loss of structural diversity generally results. Degradation of the structural diversity of a community typically diminishes wildlife habitat quality, often resulting in a reduction of wildlife species diversity.

Vegetation communities are often classified based on the dominant plant species within the community. Wildlife habitats are typically distinguished by vegetation type, with varying combinations of plant species providing different resources for use by wildlife. As a result, wildlife habitats are often classified on a more inclusive manner of the structure of the habitat rather than the specifics of the plant species, resulting in several vegetation communities occurring under one type of wildlife habitat (Table 1).

The following is a discussion of existing wildlife habitats found within the proposed project sites and buffer areas, and the wildlife species they support.

Table 1: Vegetation Communities and Wildlife Habitat Corollary

| Vegetation Community | Wildlife Habitat (WHR) |
|-----------------------------|-------------------------------|
| Chaparral | Chaparral |

Chaparral: Chaparral was observed within portions of the proposed project site (expansion areas of existing access road) and throughout the project buffer area. The growth form of chaparral species can vary from treelike (up to 10 feet) to prostrate. When mature, it is often impenetrable to large mammals. Its structure is affected by site quality, history of disturbance (e.g., fire, erosion, logging) and the influence of browsing animals. Chaparral is characterized by evergreen species; however, deciduous or partially deciduous species may also be present. Understory vegetation in the mature chaparral is largely absent. Conifer and oak trees may occur in sparse stands or as scattered individuals within the chaparral type. Chaparral varies markedly throughout California. Species composition changes with elevational and geographical range, soil type, and aspect.

Montane chaparral in California occurs in gradations between two characteristic successional sequences: the first sequence is associated with poorer, typically shallow soils (in early stages of development), often overlying fractured bedrock. Here, chaparral species may predominate to form an edaphic climax community. In the second sequence, chaparral is a secondary succession following disturbance on deeper forest soils. After disturbance (logging, fire, erosion) chaparral proliferates and may exclude conifers and other vegetation for many years. However, chaparral may facilitate the germination of red fir seedlings (Barbour 1984) and other shade tolerant conifers by providing a protective cover, moderating microclimate, and improving soil conditions. Chaparral shrubs may be an essential link in forest succession by building up soil nutrient levels, especially nitrogen, to the point where trees can survive. In mature timber stands, chaparral species may senesce due to insufficient light through the canopy and are only present as a sparse understory. Most montane chaparral species are fire adapted. Mature plants sprout back from the root crown. Some species require scarification of the seed for germination and may produce numerous seedlings after a fire. However, if fires are too frequent, these species may be eliminated changing the subsequent structure of the community. Deer and livestock foraging on sprouting chaparral may also have a significant effect on its rate of development, structure, and ultimate species composition. Following fire, herbaceous plants may dominate for up to 5 years. Usually within 7 to 9 years the brush overstory is fully developed. Chaparral may persist for up to 50 years or longer before conifer development begins to significantly reduce the shrub growth through shading. Where chaparral types occur as an edaphic climax (i.e., on poor, rocky soils, fractured bedrock or lava caps), growth rates may be rather slow, growth form is usually small and stunted, and individuals may be quite old.

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4.0 Special-Status Species and Their Habitats

4.1 Regulatory Requirements

4.1.1 Federal Endangered Species Act (FESA)

To determine whether the proposed project may result in adverse effects to federally listed species, the criteria used was based on guidelines established by the USFWS under Section 7(a) of the FESA, in which a project that may have an adverse effect on listed biological resources must be assessed. FESA (16 U.S. Code [USC 1531–1544]) provides for the conservation of species that are Endangered or Threatened throughout all or a significant portion of their range, as well as the protection of habitats on which they depend.

Section 7 requires federal agencies to consult with USFWS or NMFS, or both, before performing any action (including actions such as funding a program or issuing a permit) that may affect listed species or designated Critical Habitat. The section 7 consultations are designed to assist Federal agencies in fulfilling their duty to ensure federal actions "do not jeopardize" the continued existence of a species or destroy or adversely modify Critical Habitat.

The USFWS defines temporary and permanent effects as areas denuded, manipulated, or otherwise modified from their pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. According to the USFWS, temporary effects are limited to one construction season and, at a minimum, are fully restored to baseline habitat values or better within one year following initial disturbance. Permanent effects are not temporally limited and include all effects not fulfilling the criteria for temporary effects.

4.1.2 Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (Title 16, United States Code [USC], Part 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 Code of Federal Regulations [CFR] 21, 50 CFR 10). Most actions that result in taking of, or the permanent or temporary possession of, a protected species constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. The Migratory Bird Permit Memorandum (MBPM-2) dated April 15, 2003, clarifies that destruction of most unoccupied bird nests (without eggs or nestlings) is permissible under the MBTA; exceptions include nests of federally threatened or endangered migratory birds, bald eagles (*Haliaeetus leucocephalus*), and golden eagles (*Aquila chrysaetos*). USFWS is responsible for overseeing compliance with the MBTA.

4.1.3 California Endangered Species Act (CESA)

The California Endangered Species Act (CESA (FGC §§ 2050–2116) is administered by CDFW. The CESA prohibits the “taking” of listed species except as otherwise provided in state law. The CESA includes FGC Sections 2050–2116, and policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The CESA requires mitigation measures or alternatives to a proposed project to address impacts to any State listed endangered, threatened or candidate species, or if a project would jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy. Section 86 of the FGC defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Unlike the ESA, CESA applies the take prohibitions to species under petition for listing (state candidates) in addition to listed species. Section 2081 of the FGC expressly allows CDFW to authorize the incidental take of endangered, threatened, and candidate species if all of the following conditions are met:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take are minimized and fully mitigated.
- Issuance of the permit will not jeopardize the continued existence of the species.
- The permit is consistent with any regulations adopted in accordance with §§ 2112 and 2114 (legislature-funded recovery strategy pilot programs in the affected area).
- The applicant ensures that adequate funding is provided for implementing mitigation measures and monitoring compliance with these measures and their effectiveness.

The CESA provides that if a person obtains an incidental take permit under specified provisions of the ESA for species also listed under the CESA, no further authorization is necessary under CESA if the federal permit satisfies all the requirements of CESA and the person follows specified steps (FGC § 2080.1).

4.1.4 California Fish and Game Code

The California Constitution establishes the California Fish and Game Commission (Commission) (CA Constitution Article 4, § 20). The California Fish and Game Code (FGC) delegates the power to the Commission to regulate the taking or possession of birds, mammals, fish, amphibian and reptiles (FGC § 200). The Commission has adopted regulations setting forth the manner and method of the take of certain fish and wildlife in the California Code of Regulations, Title 14.

4.1.5 California Fish and Game Code- Species Protection

The FGC establishes CDFW (FGC § 700) and states that the fish and wildlife resources of the state are held in trust for the people of the state by and through CDFW (FGC § 711.7(a)). All licenses, permits, tag reservations and other entitlements for the take of fish and game authorized by FGC are prepared and issued by CDFW (FGC § 1050 (a)).

Provisions of the FGC provide special protection to certain enumerated species such as:

- § 3503 protects eggs and nests of all birds.
- § 3503.5 protects birds of prey and their nests.
- § 3511 lists fully protected birds.
- § 3513 protects all birds covered under the federal Migratory Bird Treaty Act.
- § 3800 defines nongame birds.
- § 4150 defines nongame mammals.
- § 4700 lists fully protected mammals.
- § 5050 lists fully protected amphibians and reptiles.
- § 5515 lists fully protected fish species.

4.2 Special-Status Species Reviewed

For the purposes of this Biological Resources Assessment, special-status species include those that are federally listed as Endangered, Threatened or Proposed for federal listing (candidate) under the USFWS. Other species also evaluated in this Biological Assessment include non-listed federal and California Special Species of Concern (CSC) and those species that fall under the jurisdiction of the USFWS such as the Migratory Bird Treaty Act (MBTA) and the CDFW, such as CEQA Section 15380(d).

Impacts to special-status species were assessed if: (1) those species occurred in habitats similar to those of the project sites and buffer areas, and (2) were known to occur within the general vicinity of the proposed project sites.

Federally and State-Listed Plant Species. Review of the USFWS (USFWS 2018), the CNPS (CNPS 2018), and the CNDDB (CNDDB 2018) revealed that 79 listed plant species and species of concern have potential to occur in the general project area. Please refer to Table 2 for a list of these species and their habitat requirements. Potential habitat is present for 57 of these 79 plant species. Botanical surveys were conducted on March 28, 2018. These surveys were conducted within the blooming period of 32 of these 57 special-status plant species.

Survey findings for the 32 targeted special-status plant species that had blooming periods during our surveys were negative. Therefore, no impacts to those species are expected due to project implementation.

Because our botanical surveys were conducted outside of the blooming period of the remaining 25 special-status plant species that bloom outside of our survey dates, we cannot say with certainty that these species do not occur within the proposed project site and buffer area.

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--------------------------------|---|----------------|--------------|--|---|
| Birds | | | | | |
| Western yellow-billed cuckoo | <i>Coccyzus americanus occidentalis</i> | FT | CE | Riparian forest. | None. No potential habitat suitable for this species was observed within the proposed project site or buffer area. |
| Northern spotted owl | <i>Strix occidentalis caurina</i> | FT | CT | Northern spotted owls are very territorial and intolerant of habitat disturbance. They prefer old-growth forests with tree canopies that are high and open enough for the owls to fly between and underneath the trees. Preferred areas have large trees with broken tops, deformed limbs or large holes used as nesting sites. Each pair needs a large amount of land for hunting and nesting, and although they do not migrate, spotted owls may shift their ranges in response to seasonal changes that make hunting difficult. | None. No potential habitat suitable for this species was observed within the proposed project site or buffer area. |
| Mammals | | | | | |
| Pallid bat | <i>Antrozous pallidus</i> | - | CSC | Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | Potentially present. Potential habitat for this species occurs in the project site and buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3a). |
| Townsend's big-eared bat | <i>Corynorhinus townsendii</i> | - | CSC | Found throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance. | Potentially present. Potential habitat for this species occurs in the project site and buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3a). |
| Amphibians and Reptiles | | | | | |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|-----------------------------|---------------------------------|----------------|--------------|---|---|
| Western pond turtle | <i>Emys marmorata</i> | - | CSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Require basking sites and suitable upland habitat (sandy banks or grassy open fields) for egg-laying. | None. No potential habitat suitable for this species was observed within the proposed project site or buffer area. |
| California red-legged frog | <i>Rana draytonii</i> | FT | CSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to aestivation habitat, consisting of small mammal burrows and moist leaf litter. | None. No potential habitat suitable for this species was observed within the proposed project site or buffer area. |
| Foothill yellow-legged frog | <i>Rana boylei</i> | - | CSC | Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Require at least 15 weeks to attain metamorphosis. | None. No potential habitat suitable for this species was observed within the proposed project site or buffer area. |
| Fish | | | | | |
| Sacramento perch | <i>Archoplites interruptus</i> | - | CSC | Prefers warm water, aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions. | None. No potential habitat suitable for this species was observed within the proposed project sites. |
| Delta smelt | <i>Hypomesus transpacificus</i> | FT | CT | Found only from the Suisun Bay upstream within the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with mixing zone and disperse widely into river channels and tidally influenced backwater sloughs. Spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally influenced backwater sloughs and channel edgewater. | None. No potential habitat suitable for this species was observed within the proposed project sites. |
| Clear Lake hitch | <i>Lavinia exilicauda chi</i> | - | CT | Found only in Clear Lake, Lake County, and associated ponds. Spawns in streams flowing into Clear Lake. | None. No potential habitat suitable for this species was observed within the proposed project sites. |
| Plants | | | | | |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--------------------------|---|----------------|--------------|---|---|
| Bent-flowered fiddleneck | <i>Amsinckia</i> | - | List 1B.2 | Coastal bluff scrub, cismontane woodland, and valley and foothill grassland. Blooms March to June. Elevation: 3-500 m. | None. No habitat in project area. |
| Dimorphic snapdragon | <i>Antirrhinum subcordatum</i> | - | List 4.3 | Chaparral and lower montane coniferous forest. Blooms April to July. Elevation: 185-800 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Twig-like snapdragon | <i>Antirrhinum virga</i> | - | List 4.3 | Chaparral and lower montane coniferous forest. Blooms June to July. Elevation: 100-2,015 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Coast rockcress | <i>Arabis blepharophylla</i> | - | List 4.3 | Broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub. Blooms February to May. Elevation: 3-1,100 m. | None. No habitat in project area. |
| Konocti manzanita | <i>Arctostaphylos Manzanita ssp. elegans</i> | - | List 1B.3 | Chaparral, cismontane woodland, and lower montane coniferous forest. Blooms January to July. Elevation: 225-1,830 meters. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has been documented approximately 1.2 miles to the northwest of the proposed project site (CDFW 2018) (see Figure 3b). |
| Raiche's manzanita | <i>Arctostaphylos stanfordiana ssp. raichei</i> | - | List 1B.1 | Chaparral and lower montane coniferous forest. Blooms February to April. Elevation: 485 – 1,070 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|------------------------|---|----------------|--------------|---|---|
| | | | | | This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Serpentine milkweed | <i>Asclepias solanoana</i> | - | List 4.2 | Chaparral, cismontane woodland, and lower montane coniferous forest. Blooms May to August. Elevation: 230-1,860 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Brewer's milk-vetch | <i>Astragalus breweri</i> | - | List 4.2 | Chaparral, cismontane woodland, meadows, seeps, and valley and foothill grassland. Blooms April to June. Elevation: 90-730 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Cleveland's milk-vetch | <i>Astragalus clelandii</i> | - | List 4.3 | Chaparral, cismontane woodland, and riparian forest. Blooms June to September. Elevation: 200-1,500 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Jepson's milk-vetch | <i>Astragalus rattanii</i> <i>var. jepsonianus</i> | - | List 1B.2 | Chaparral, cismontane woodland, and valley and foothill grassland. Blooms March to June. Elevation: 295-700 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|------------------------|-----------------------------------|----------------|---------------|---|---|
| | | | | | to the proposed project site (CDFW 2018) (see Figure 3b). |
| Mexican mosquito fern | <i>Azolla microphylla</i> | - | List 4.2 | Marshes and swamps. Blooms August. Elevation: 30-100 m. | None. No habitat in project area. |
| Watershield | <i>Brasenia schreberi</i> | - | List 2B.3 | Marshes and swamps. Blooms June to September. Elevation: 30-2,200 m. | None. No habitat in project area. |
| Indian Valley brodiaea | <i>Brodiaea rosea</i> | - | CE, List 1B.1 | Chaparral, closed-cone coniferous forest, cismontane woodland, and valley and foothill grassland. Blooms May to June. Elevation: 335-1,450 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Serpentine reed grass | <i>Calamagrostis ophitidis</i> | - | List 4.3 | Chaparral, meadows, seeps, valley and foothill grassland, and lower montane coniferous forest. Blooms April to July. Elevation: 90-1,065 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Pink star-tulip | <i>Calochortus uniflorus</i> | - | List 4.2 | Coastal prairie, coastal scrub, meadows, seeps, north coast coniferous forest. Elevational range: 10 – 1,070 meters. Blooming period: April through June. | None. No habitat in project area. |
| Four-petaled pussypaws | <i>Calyptridium quadripetalum</i> | - | List 4.3 | Chaparral and lower montane coniferous forest. Blooms April to June. Elevation: 315-2,040 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--------------------------------|---|----------------|--------------|--|---|
| Mt. Saint Helena morning-glory | <i>Calystegia collina ssp. oxyphylla</i> | - | List 4.2 | Found in chaparral, lower montane coniferous forest, valley and foothill grassland. Elevational range: 279 to 1,010 meters. Blooming period: April through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Three-fingered | <i>Calystegia collina ssp. tridactylosa</i> | - | List 1B2 | Chaparral and cismontane woodland. Blooms April to June. Elevation: 0-600 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Northern meadow sedge | <i>Carex praticola</i> | - | List 2B.2 | Meadows and seeps. Blooms May to June. Elevation: 0-3,200m. | None. No habitat in project area. |
| Rincon Ridge ceanothus | <i>Ceanothus confusus</i> | - | List 1B.1 | Found in chaparral, cismontane woodland and closed-cone coniferous forests. Elevational range: 75 to 1065 meters. Blooming period: February through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Calistoga ceanothus | <i>Ceanothus divergens</i> | - | List 1B.2 | Found in chaparral (serpentinite or volcanic, rocky). Elevational range: 170 to 950 meters. Blooming period: February through April. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|------------------------|---|----------------|--------------|---|---|
| Dwarf soaproot | <i>Chlorogalum pomeridianum</i> var. <i>minus</i> | - | List 1B.2 | Chaparral. Blooms March to August. Elevation: 305-1,000 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Tracy's clarkia | <i>Clarkia gracilis</i> ssp. <i>tracyi</i> | - | List 4.2 | Chaparral. Blooms April to July. Elevation: 65-650 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Serpentine collomia | <i>Collomia diversifolia</i> | - | List 4.3 | Chaparral and cismontane woodland. Blooms May to June. Elevation: 200-600 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Serpentine bird's-beak | <i>Cordylanthus tenuis</i> ssp. <i>brunneus</i> | - | List 4.3 | Chaparral, closed-cone coniferous forest, and cismontane woodland. Blooms July to August. Elevation: 305-915 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Serpentine cryptantha | <i>Cryptantha dissita</i> | - | List 1B.2 | Chaparral. Blooms April to June. Elevation: 395-580 m. | Potentially present. Potential habitat for this species occurs within the proposed |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|------------------------------|------------------------------|----------------|--------------|--|---|
| | | | | | project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Swamp larkspur | <i>Delphinium uliginosum</i> | - | List 4.2 | Chaparral, valley and foothill grassland. Blooms May to June. Elevation: 340-610 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| California satintail | <i>Imperata brevifolia</i> | - | List 2B.1 | Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows, seeps, and riparian scrub. Blooms September to May. Elevation: 3-1,495m. | None. No habitat in project area. |
| Brandegee's eriastrum | <i>Eriastrum brandegeae</i> | - | List 1B.1 | Chaparral and cismontane woodland. Blooms April to August. Elevation: 410-845m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Greene's narrow-leaved daisy | <i>Erigeron greenei</i> | - | List 1B.2 | Chaparral. Blooms May to September. Elevation: 80-1,000 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|---------------------------|-------------------------------|----------------|---------------|---|---|
| Snow Mountain buckwheat | <i>Eriogonum nervulosum</i> | - | List 1B.2 | Chaparral. Blooms June to September. Elevation: 300-2,105 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Loch Lomond button-celery | <i>Eryngium constancei</i> | FE | CE, List 1B.1 | Vernal pools. Blooms April to June. Elevation: 460-855 m. | None. No habitat in project area. |
| Adobe-lily | <i>Fritillaria pluriflora</i> | - | List 1B.2 | Chaparral, cismontane woodland, and valley and foothill grassland. Blooms February to April. Elevation: 60-705 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Boggs Lake hedge-hyssop | <i>Gratiola heterosepala</i> | - | CE, List 1B.2 | Found in marshes and swamps (lake margins), vernal pools. Elevational range: 10 to 2,375 meters. Blooming period: April through August. | None. No habitat in project area. |
| Toren's grimmia | <i>Grimmia toreni</i> | - | List 1B.3 | Chaparral, cismontane woodland, and lower montane coniferous forest. No blooming period. Elevation: 325-1,160 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Hall's harmonia | <i>Harmonia hallii</i> | - | List 1B.2 | Chaparral on serpentine hills and ridges. Elevational range: 335 – 930 meters. Blooming period: April to June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|-----------------------------|-----------------------------------|----------------|---------------|---|---|
| | | | | | within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Glandular western flax | <i>Hesperolinon adenophyllum</i> | - | List 1B.2 | Chaparral, cismontane woodland, and valley and foothill grassland. Blooms May to August. Elevation: 150-1315 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Two-carpellate western flax | <i>Hesperolinon bicarpellatum</i> | - | List 1B.2 | Chaparral on serpentine barrens. Elevational range: 180 – 825 meters. Blooming period: May to July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Lake County western flax | <i>Hesperolinon didymocarpum</i> | - | CE, List 1B.2 | Chaparral, cismontane woodland, and valley and foothill grassland. Blooms May to July. Elevation: 330-365 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Sharsmith's western flax | <i>Hesperolinon sharsmithiae</i> | - | List 1B.2 | Chaparral. Blooms May to July. Elevation: 270-300 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|----------------------|-------------------------------|----------------|---------------|---|---|
| | | | | | the proposed project site (CDFW 2018) (see Figure 3b). |
| Bolander's horkelia | <i>Horkelia bolanderi</i> | - | List 1B.2 | Lower montane coniferous forest, chaparral, meadows, seeps, valley and foothill grassland. Elevational range: 455 – 855 meters. Blooming period: May to August. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| California satintail | <i>Imperata brevifolia</i> | - | List 2B.1 | Chaparral, coastal scrub, Mojavean desert scrub, meadows, seeps, and riparian scrub. Blooms September to May. Elevation: 0-1,215 m. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Burke's goldfields | <i>Lasthenia burkei</i> | FE | CE, List 1B.1 | Vernal pools, meadows, and seeps. Elevational range: 15 to 600 meters. Blooming period: April through June. | None. No habitat in project area. |
| Colusa layia | <i>Layia septentrionalis</i> | - | List 1B.2 | Found in chaparral, cismontane woodland, valley and foothill grassland. Elevational range: 100 to 1095 meters. Blooming period: April through May. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Legenere | <i>Legenere limosa</i> | - | List 1B.1 | Found in vernal pools. Elevational range: 1 to 880 meters. Blooming period: April through June. | None. No habitat in project area. |
| Bristly leptosiphon | <i>Leptosiphon acicularis</i> | - | List 4.2 | Found in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. Elevational | Potentially present. Potential habitat for this species occurs within the proposed |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|----------------------|--|----------------|--------------|---|---|
| | | | | range: 55 to 1,500 meters. Blooming period: April through July. | project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Jepson's leptosiphon | <i>Leptosiphon jepsonii</i> | - | List 1B.2 | Chaparral, cismontane woodland/usually volcanic. Elevation ranges from 100 to 500 meters. Blooms March through May. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Woolly meadowfoam | <i>Limnanthes floccose ssp. floccosa</i> | - | List 4.2 | Chaparral, cismontane woodland, vernal pools, and valley and foothill grassland. Elevation range: 60 to 1,335 meters. Blooming period: March through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Napa lomatium | <i>Lomatium repostum</i> | - | List 4.3 | Chaparral and cismontane woodland. Elevation ranges from 90 to 830 meters. Blooms March through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Cobb Mountain lupine | <i>Lupinus sericatus</i> | - | List 1B.2 | Broadleaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. Elevation ranges from 275 to 1,525 meters. Blooms March through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|-----------------------|-----------------------------------|----------------|--------------|--|---|
| | | | | | This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Heller's bush-mallow | <i>Malacothamnus helleri</i> | - | List 3.3 | Chaparral and riparian woodland. Elevation ranges from 305 to 635 meters. Blooms May through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Mt. Diablo cottonweed | <i>Micropus amphibolus</i> | - | List 3.2 | Found in broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevational range: 45 to 825 meters. Blooming period: March to May. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Elongate copper moss | <i>Mielichhoferia elongata</i> | - | List 4.3 | Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows, seeps, and subalpine coniferous forest. Elevation ranges from 0 to 1,960 meters. No blooming period. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Little mouseltail | <i>Myosurus minimus ssp. apus</i> | - | List 3.1 | Valley and foothill grassland, and vernal pools. Elevation range: 20 to 640 meters. Blooming period: March through June. | None. No habitat in project area. |
| Cotula navarretia | <i>Navarretia cotulifolia</i> | - | List 4.2 | Found in chaparral, cismontane woodland, valley and foothill grassland. Elevational range: 4 to 1,830 meters. Blooming period: May to June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--------------------------|---|----------------|---------------|---|---|
| | | | | | species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Jepson's navarretia | <i>Navarretia jepsonii</i> | - | List 4.3 | Chaparral, cismontane woodland, and valley and foothill grassland. Elevation range: 175 to 855. Blooming period: April to June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Baker's navarretia | <i>Navarretia leucocephala</i> ssp. <i>bakeri</i> | - | List 1B.1 | Cismontane woodland, lower montane coniferous forests, meadows and seeps, valley and foothill grassland, mesic vernal pools. Elevation range: 5 to 1,740. Blooming period: April to July. | None. No habitat in project area. |
| Few-flowered navarretia | <i>Navarretia leucocephala</i> ssp. <i>pauciflora</i> | FE | CT, List 1B.1 | Vernal pools. Elevational range: 400 to 855 meters. Blooming period: May through July. | None. No habitat in project area. |
| Many-flowered navarretia | <i>Navarretia leucocephala</i> ssp. <i>plieantha</i> | FE | CE, List 1B.2 | Found in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools/mesic. Elevation ranges from 20 to 5710 feet (5 to 1740 meters). Blooms April through July. | None. No habitat in project area. |
| Porter's navarretia | <i>Navarretia paradoxinota</i> | - | List 1B.3 | Meadows and seeps, often drainages. Elevation range: 165 to 840. Blooming period: May to July. | None. No habitat in project area. |
| Slender orcutt grass | <i>Orcuttia tenuis</i> | FT | CT/List 1B.1 | Vernal pools. Elevational range: 35 to 1,760 meters. Blooming period: May through October. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|-----------------------|---|----------------|---------------|--|---|
| | | | | | the proposed project site (CDFW 2018) (see Figure 3b). |
| Geysers panicum | <i>Panicum acuminatum</i> <i>var. thermale</i> | - | CE, List 1B.2 | Geothermally-altered soil, streamsides, closed-cone coniferous forest, riparian forest, and valley and foothill grassland. Elevation range: 305 to 2,470. Blooming period: June to August. | None. No habitat in project area. |
| Sonoma beardtongue | <i>Penstemon newberryi</i> <i>var. sonomensis</i> | - | List 1B.3 | Found in chaparral (rocky). Elevational range: 700 to 1,370 meters. Blooming period: April through August. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Michael's rein orchid | <i>Piperia michaelii</i> | - | List 4.2 | Coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest. Elevational range: 3 to 915 meters. Blooming period: April through August. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Eel-grass pondweed | <i>Potamogeton</i> <i>zosteriformis</i> | - | List 2B.2 | Marshes and swamps. Ponds, lakes, and streams. Elevational range: 0 to 1,860 meters. Blooming period: June through July. | None. No habitat in project area. |
| Lake County stonecrop | <i>Sedella leiocarpa</i> | FE | CE, List 1B.1 | Valley and foothill grassland, vernal pools, and cismontane woodland. Blooms April to May. Elevation: 515 – 640 m. | None. No habitat in project area. |
| Cleveland's ragwort | <i>Senecio clevelandii</i> <i>var. clevelandii</i> | - | List 4.3 | Found in chaparral (serpentine seeps). Elevational range: 365 to 900 meters. Blooming period: June through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|-------------------------------|--|----------------|--------------|---|---|
| | | | | | the proposed project site (CDFW 2018) (see Figure 3b). |
| Marsh checkerbloom | <i>Sidalcea oregano ssp. hydrophila</i> | - | List 1B.2 | Meadows, seeps, and riparian forest on wet soils. Blooms June to August. Elevation: 455 – 2,030 meters. | None. No habitat in project area. |
| Bearded jewelflower | <i>Streptanthus barbiger</i> | - | List 4.2 | Found in chaparral (openings), cismontane woodland Elevational range: 150 to 1,070. meters. Blooming period: May through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Socrates Mine jewelflower | <i>Streptanthus brachiatus ssp. brachiatus</i> | - | List 1B.2 | Found in chaparral and closed-cone coniferous forest. Elevational range: 545 to 1,000. meters. Blooming period: May through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Freed's jewelflower | <i>Streptanthus brachiatus ssp. hoffmanii</i> | - | List 1B.2 | Found in chaparral and cismontane woodland. Elevational range: 490 to 1,220. meters. Blooming period: May through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Hoffman's bristly jewelflower | <i>Streptanthus glandulosus ssp. hoffmanii</i> | - | List 1B.3 | Found in chaparral, cismontane woodland, and valley and foothill grassland. Elevational range: 120 to 475. meters. Blooming period: March through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--------------------------|--|----------------|--------------|--|---|
| | | | | | within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Green jewelflower | <i>Streptanthus hesperidis</i> | - | List 1B.2 | Found in chaparral (openings), cismontane woodland. Elevational range: 130 to 760. meters. Blooming period: May through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Three Peaks jewelflower | <i>Streptanthus morrisonii ssp. elatus</i> | - | List 1B.2 | Found in chaparral. Elevational range: 90 to 815. meters. Blooming period: June through September. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Kruckeberg's jewelflower | <i>Streptanthus morrisonii ssp. kruckebergii</i> | - | List 1B.2 | Cismontane woodland. Elevational range: 215 to 1,035 meters. Blooming period: April through July. | None. No habitat in project area. |
| Marsh zigadenus | <i>Toxicoscordion fontanum</i> | - | List 4.2 | Found in chaparral, cismontane woodland, lower montane coniferous forest, meadows, seeps, marshes and swamps. Elevational range: 15 to 1,000 meters. Blooming period: April through July. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Napa bluecurls | <i>Trichostema ruygtii</i> | - | List 1B.2 | Found in chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, and vernal pools. Elevational range: 30 to 680. meters. Blooming period: June through | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. |

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--|------------------------------|----------------|--------------|---|---|
| | | | | October. | This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Saline clover | <i>Trifolium hydrophilum</i> | - | List 1B.2 | Found in marshes, swamps, vernal pools, and valley and foothill grassland. Elevational range: 0 to 300. meters. Blooming period: April through June. | None. No habitat in project area. |
| Oval-leaved viburnum | <i>Viburnum ellipticum</i> | - | List 2B.3 | Found in chaparral, cismontane woodland, and lower montane coniferous forest. Elevational range: 215 to 1,400. meters. Blooming period: May through June. | Potentially present. Potential habitat for this species occurs within the proposed project buffer area. No individuals of this species were observed during surveys. This species has not been documented within the boundaries of or in proximity to the proposed project site (CDFW 2018) (see Figure 3b). |
| Sensitive Vegetative Communities | | | | | |
| Clear Lake Drainage Resident Trout Stream (Not present in project site or buffer area) | | | | | |
| Northern Basalt Flow Vernal Pool (Not present in project site or buffer area) | | | | | |
| Northern Volcanic Ash Vernal Pool (Not present in project site or buffer area) | | | | | |
| Coastal and Valley Freshwater Marsh (Not present in project site or buffer area) | | | | | |

Status Codes:

Federal

FE = Federally listed as Endangered
FT = Federally listed as Threatened
FC = Federal Candidate species

State

CE = California listed as Endangered
CT = California listed as Threatened
CR = California listed as Rare
CFP = California Fully Protected
CSC = Species of Special Concern
WL = CDFW Watch List

California Rare Plant Rank (formerly known as CNPS Lists)

California Rare Plant Rank 1A = Plants presumed extinct in California

Table 2
Special-Status Species Potentially Occurring in the Proposed Project Site and Buffer Area

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Observances | Potential to Occur on Project Site and Buffer Area |
|--|-----------------|----------------|--------------|---------------------|--|
| California Rare Plant Rank 1B = Plants rare, threatened, or endangered in California and elsewhere | | | | | |
| California Rare Plant Rank 2A = Plants presumed extirpated from California, but more common elsewhere | | | | | |
| California Rare Plant Rank 2B = Plants rare or endangered in California, but more common elsewhere | | | | | |
| California Rare Plant Rank 3 = Plants about which we need more information; a review list | | | | | |
| California Rare Plant Rank 4 = Plants of limited distribution; a watch list. | | | | | |
| California Rare Plant Rank Rarity Status of .1 = Seriously endangered in California | | | | | |
| California Rare Plant Rank Rarity Status of .2 = Fairly endangered in California | | | | | |
| Status, distribution, and habitat information from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database RareFind 5 (CDFW 2018); California Native Plant Society, California Rare Plant Electronic Inventory (CNPS 2018); and USFWS Online Endangered Species Database (USFWS 2018). | | | | | |

4.3 SPECIAL-STATUS WILDLIFE SPECIES

The following is a discussion of species having potential to occur on site and/or are species that are prominent in today's regulatory environment. This document does not address impacts to species that may occur in the region but for which no habitat occurs on site.

Pallid Bat - The pallid bat is a California Species of Special Concern. Pallid bats are found in deserts, grasslands, shrublands, woodlands, and forests. It is most commonly found in dry habitats with rocky areas for roosting. They primarily sleep in rock crevices and buildings. Pallid bats are skilled at climbing and crawling.

Pallid bats have larger eyes than most other species of bats in North America and have pale, long, and wide ears. Their fur is generally lightly colored. Pallid Bats are insectivores so they feed on insects such as crickets and scorpions, and are capable of consuming up to half their weight in insects every night. Although they normally catch their prey on the ground, they usually transport their prey to their night roost to eat it. Their large ears allow them to hear the footsteps of insects on the ground and they use their voices to make ultrasonic sounds that bounce back to their ears. The reflected sound waves let them sense flying insects and know the environment they are flying through.

Pallid bats are a unique type of bat because they are both heterothermic and homoeothermic. They have the ability to control their body temperature and equilibrate it with the environment during winter hibernation and whenever they rest.

The mating season ranges from October to February. Female bats gives birth to twins during early June. In four or five weeks they are capable of making short flights. They don't attain adult size until about eight weeks of age, and don't become sexually mature until after approximately two years.

Suitable foraging habitat for the pallid bat was identified primarily within the buffer area of the project site. No potential or known active roosting/maternity sites of these species were observed within the project site or buffer area during biological surveys. No individual bats were observed during biological surveys. No documented sightings of these species have been recorded within the project area (see Figure 3a) (CDFW 2018).

Townsend's Big-Eared Bat - Townsend's big-eared bat is a California Species of Special Concern. This bat species inhabits a wide variety of habitats. It roosts in the open, hanging from walls and ceilings of buildings and structures. During the winter, these bats hibernate, often when temperatures are around 32 and 53°F. Hibernation occurs in tightly packed clusters, which could possibly help stabilize body temperature against the cold. Males often hibernate in warmer places than females and are more easily aroused and active in winter than females. The bats are often interrupted from their sleep because they tend to wake up frequently and move around in the cave or move from one cave entirely to another. During summer, males and females occupy separate roosting sites. Males live a solitary lifestyle away from females. Females and their pups

form maternity colonies, which often number from around 12 to 200.

The mating season for Townsend's big-eared bats takes place in late fall. Courtship rituals are done by the male. Until spring, when ovulation and fertilization begin, the female stores the male's sperm in her reproductive tract. Gestation lasts from 50 to 60 days. When the pup is born, it is pink, naked, and helpless. Only one pup is birthed per female, although 90% of females give birth.

Suitable foraging habitat for the Townsend's big-eared bat was identified primarily within the buffer area of the project site. No potential or known active roosting/maternity sites of these species were observed within the project site or buffer area during biological surveys. No individual bats were observed during biological surveys. No documented sightings of these species have been recorded within the project area (see Figure 3a) (CDFW 2018).

4.4 CRITICAL HABITAT

No critical habitat was identified within the proposed project site or buffer area (USFWS 2018).

4.5 SPECIAL STATUS NATURAL COMMUNITIES

No special-status natural communities were identified within the proposed project site or buffer area during biological surveys within the project area (CDFG 2018 and USFWS 2018).

5.0 Impacts Analysis and Standard Construction Conditions

This section summarizes the potential biological impacts from implementation of the proposed project. The analysis of these effects is based on a reconnaissance-level biological survey of the project site and buffer area, a review of existing databases and literature, and personal professional experience with biological resources of the region. Potential effects to federally- and state-listed special-status animal species may occur from the proposed project. Standard Construction Conditions for these biological impacts are provided below. A synopsis of the species potentially affected is presented in Table 3, and is followed by Standard Construction Conditions to avoid “take” of individuals.

Table 3: Special Status Animal Species Potentially Affected by the Proposed Project

| Species | Status (Federal/State) | Habitat Present/ Absent | Avoidance Yes/No |
|--------------------------|---------------------------|-------------------------------|------------------|
| Pallid Bat | -/CSC | Present | Yes |
| Townsend’s big-eared bat | -/CSC | Present | Yes |

Potential Impacts to Common Wildlife and Plant Populations from Project Activities

Direct mortality or injury to common wildlife and plant populations could occur during ground disturbance activities associated with implementation of the project. Small vertebrate, invertebrate, and plant species are particularly prone to impact during project implementation because they are much less to non-mobile, and cannot easily move out of the path of project activities. Other more mobile wildlife species, such as most birds and larger mammals, can avoid project-related activities by moving to other adjacent areas temporarily. Increased human activity and vehicle traffic in the vicinity may disturb some wildlife species. Because common wildlife species found in the project area are locally and regionally common, potential impacts to these resources are considered less than significant. Therefore, no avoidance or minimization measures are proposed at this time.

Potential Impacts to Nesting Special-Status Avian Species from Project Activities

Implementation of the proposed project could potentially impact individual, foraging, and nesting migratory birds and raptor species should they become established within the proposed project site or buffer area prior to project implementation. Impacts to these species could occur through crushing by construction equipment during implementation of project activities. Actively nesting birds could also be affected due to noise and vibration from project activities, if nests are located close enough to project activities. Project related noise and vibration could cause the abandonment of active nest sites. Impacts to these species would be considered significant. In the event that nesting birds become established in the proposed project site or buffer area, the following Standard Construction Conditions measures will be implemented.

If ground disturbing activities occur during the breeding season of migratory avian or raptor species (February through mid-September), surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to start of activities. Pre-construction nesting surveys shall be conducted for nesting migratory avian and raptor species in the project site and buffer area. Pre-construction biological surveys shall occur prior to the proposed project implementation, and during the appropriate survey periods for nesting activities for individual avian species. Surveys will follow required CDFW and USFWS protocols, where applicable. A qualified biologist will survey suitable habitat for the presence of these species. If a migratory avian or raptor species is observed and suspected to be nesting, a buffer area will be established to avoid impacts to the active nest site. Identified nests should be continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline. If no nesting avian species are found, project activities may proceed and no further Standard Construction Conditions measures will be required. If active nesting sites are found, the following exclusion buffers will be established, and no project activities will occur within these buffer zones until young birds have fledged and are no longer reliant upon the nest or parental care for survival.

- Minimum no disturbance of 250 feet around active nest of non-listed bird species and 250 foot no disturbance buffer around migratory birds;
- Minimum no disturbance of 500 feet around active nest of non-listed raptor species;
- and 0.5-mile no disturbance buffer from listed species and fully protected species until breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.
- Once work commences, all nests should be continuously monitored to detect any behavioral changes as a result of project activities. If behavioral changes are observed, the work causing that change should cease and the appropriate regulatory agencies (i.e. CDFW, USFWS, etc.) shall be consulted for additional avoidance and minimization measures.
- A variance from these no disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when the project area would be concealed from a nest site by topography. Any variance from these buffers is advised to be supported by a qualified wildlife biologist and is recommended that CDFW and USFWS be notified in advance of implementation of a no disturbance buffer variance.

Potential Impacts to Special-Status Bat Species from Project Activities

Implementation of the proposed project could potentially impact bat maternity sites if these species are present in the proposed project site or buffer area during implementation of the project and if they have established maternity or roosting sites. Impacts to bat maternity/roost sites would occur primarily from noise and vibration created from project construction

equipment and construction related activities. Noise and vibration could lead to these bat species abandoning established roost/maternity sites. Direct mortality of these species could also occur if these species are present in any shrubs/trees that are removed during project activities. Impacts to these species would be considered significant. Horizon Tower, LLC will implement the following Standard Construction Conditions measures to avoid or minimize impacts to bat species during project implementation:

A bat habitat assessment should be conducted by a qualified bat biologist prior to project construction. If shrub/tree removal becomes necessary, it must only occur during seasonal periods of bat activity, between March 1, or when evening temperatures are above 45F and rainfall less than 1/2" in 24 hours occurs, and April 15, prior to parturition of pups. The next acceptable period for tree removal with suitable roosting habitat is after pups become self-sufficiently volant – September 1 through about October 15, or prior to evening temperatures dropping below 45F and onset of rainfall greater than 1/2" in 24 hours.

Potential Impacts to Special-Status Plant Species from Project Activities

Review of the USFWS (USFWS 2018), the CNPS (CNPS 2018), and the CNDDDB (CNDDDB 2018) revealed that 79 listed plant species and species of concern have potential to occur in the general project area. Please refer to Table 2 for a list of these species and their habitat requirements. Potential habitat is present for 57 of these 79 plant species. Botanical surveys were conducted on March 28, 2018. These surveys were conducted within the blooming period of 32 of these 57 special-status plant species.

Survey findings for the 32 targeted special-status species that had blooming periods during our surveys were negative. Therefore, no impacts to those species are expected due to project implementation.

Because our botanical surveys were conducted outside of the blooming period of the remaining 25 special-status plant species that bloom outside of our survey dates, we cannot say with certainty that these species do not occur within the proposed project site or buffer area.

Implementation of the proposed project could potentially result in impacts on these 25 special-status plant species if they are located within the proposed project site during project activities. Direct impacts to these plant species could result from ground disturbance activities during project implementation. Special-status plant species could be directly impacted by crushing of plants by construction equipment. These impacts could result in direct mortality of individuals or small populations of special-status plant species.

A qualified botanist will conduct pre-construction field surveys to identify any populations of special-status plant species within the proposed project site that will be disturbed during project activities. These surveys shall be conducted prior to the initiation of any construction activities and coincide with the appropriate flowering period of the special-status plant species with the potential to occur in the project area. If any special-status plant species populations are

identified within or adjacent to the proposed disturbance areas, the project proponent shall implement the following measures to avoid impacts to these species:

- If any population(s) of special-status plant species is identified directly adjacent to the proposed project site, a qualified biologist retained by project proponent will clearly delineate the location of the plant population, and install protective fencing between the disturbance zone and the plant population to ensure that the plant population is adequately protected.

If a special-status plant population is identified within the proposed disturbance zone, the project proponent will consult with CDFW and USFWS to determine the appropriate measures to avoid or mitigate for impacts to the species or population. The project proponent will adjust the boundaries of the disturbance zone, where feasible, to avoid impacts to the plant species/population. Where avoidance is not feasible, the project proponent will implement one or more of the following measures: (1) transplant potentially affected plants to areas not planned for disturbance. If a plant is transplanted, two more plants shall be planted. Plantings shall be managed and monitored by the applicant and shall survive to 5 years after planting; (2) seed or purchase plants and place them in an area adjacent to the disturbance zone; (3) purchase credits at an approved mitigation bank at a ratio approved by CDFW, USFWS, and the project proponent.

6.0 Conclusions and Determinations

6.1 Conclusions

This project will incorporate reasonable and prudent measures for avoidance and minimization, described in Section 1.0, and species-specific avoidance and minimization measures. As a result, the project is not anticipated to result in take of any of the listed species described in this biological assessment.

Provided the precautions outlined above are followed, it is our opinion the proposed project would:

- Have less than significant impacts upon federal and California endangered, threatened, proposed or candidate species;
- Not result in destruction or adverse modification of a critical habitat area of a federal or California endangered or threatened species; and
- Not result in “take” of migratory birds protected under the Migratory Bird Treaty Act and other state, local or federal laws.

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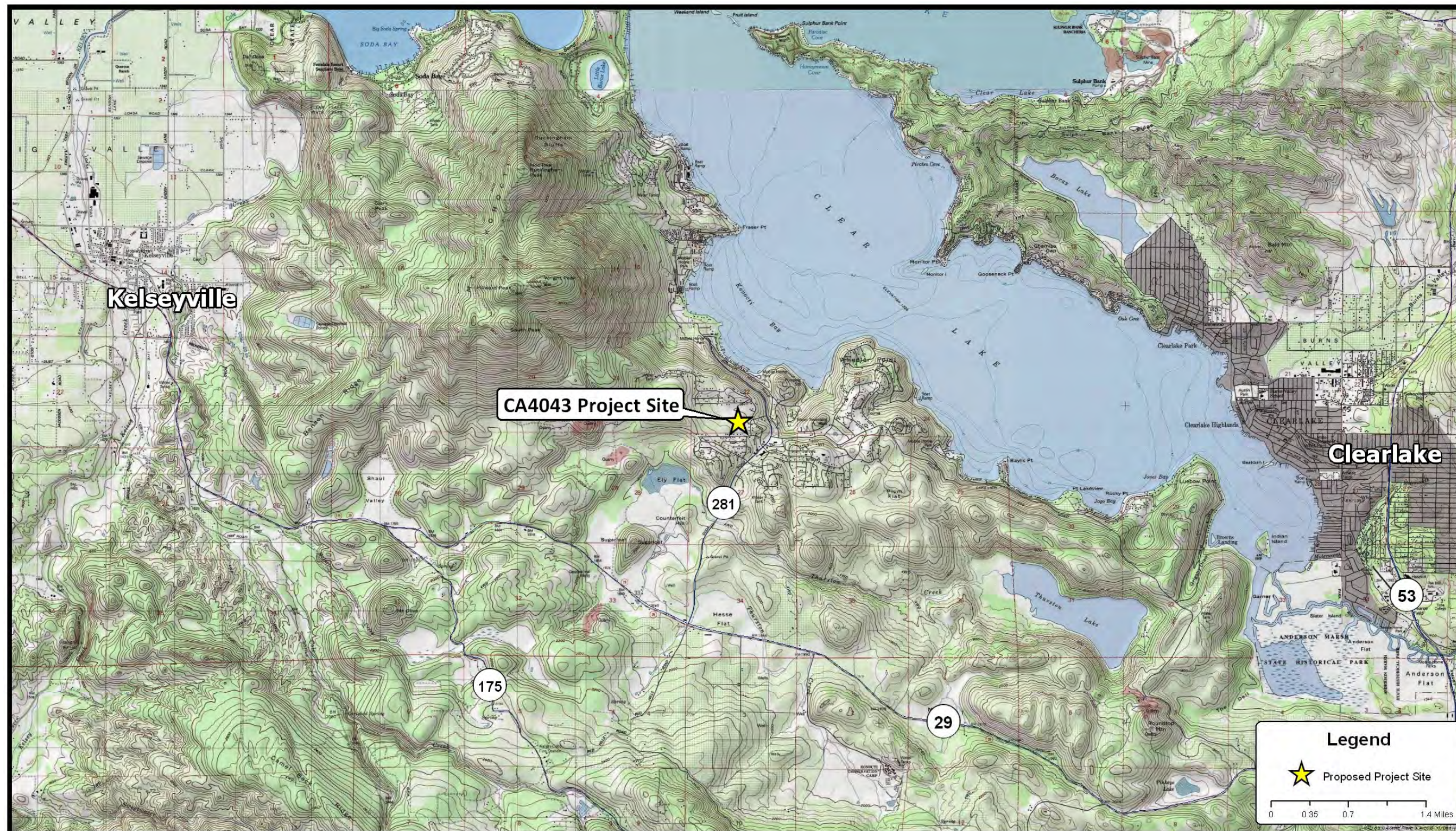
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Appendix A: Project Figures



Synthesis Planning
442 San Marin Drive
Novato, California 94945
Telephone (415) 328-7923

FIGURE 1
Project Vicinity Map

Horizon Tower, LLC
117 Town and Country Drive, Suite A
Danville, California 94526
Phone: (925) 314-1113



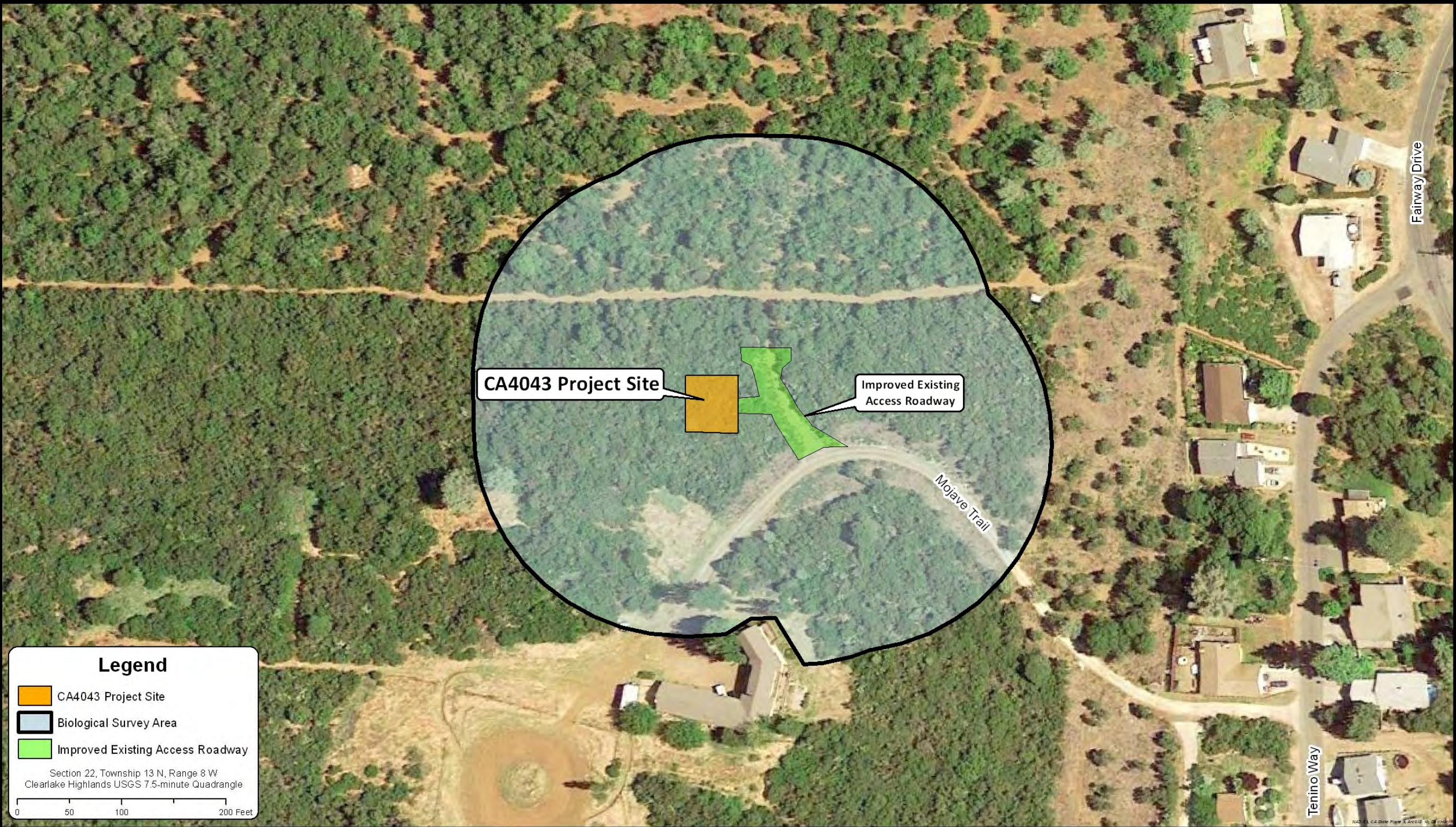
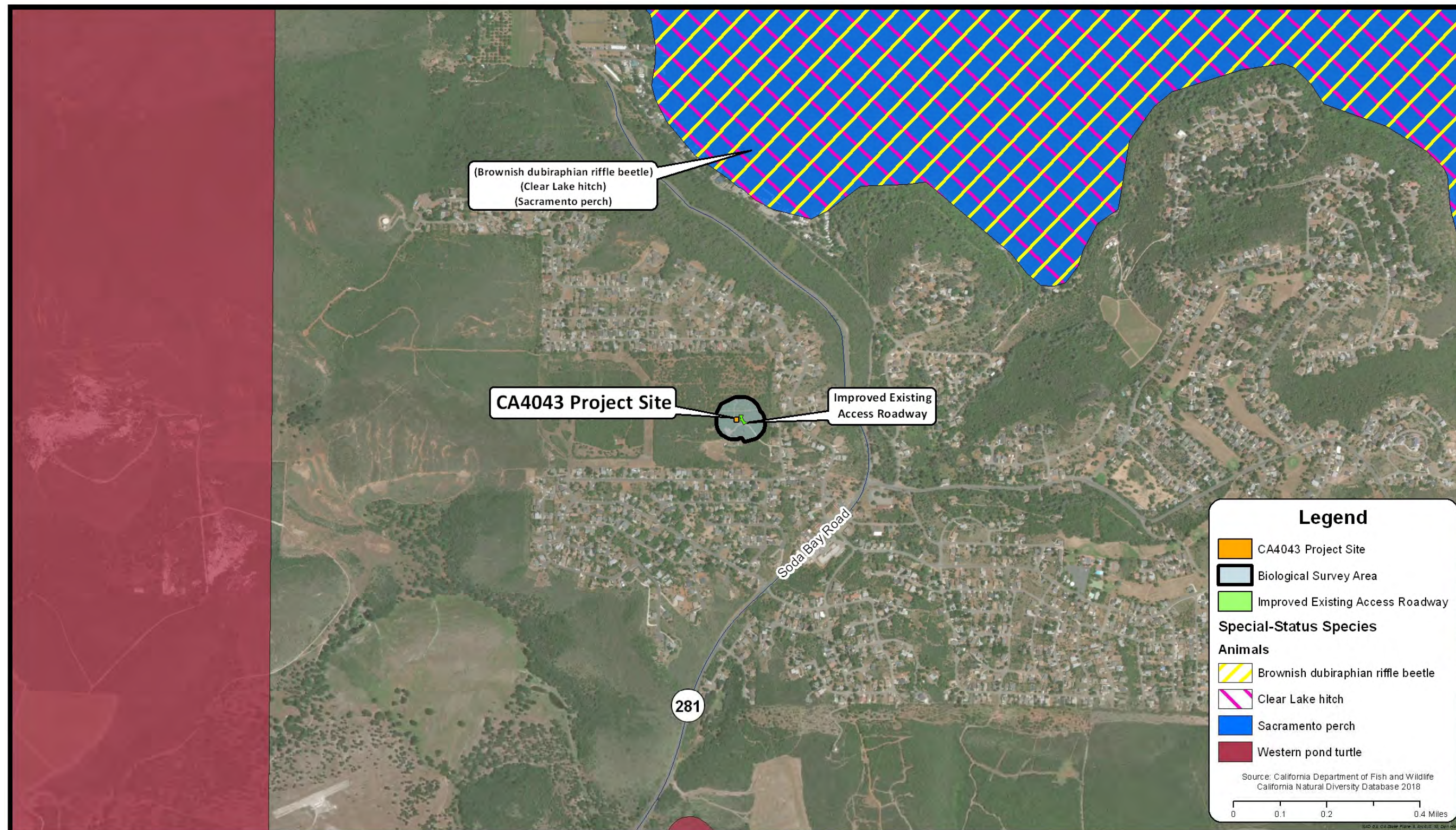


FIGURE 2
Project Location Map

Synthesis Planning
442 San Marin Drive
Novato, California 94945
Telephone (415) 328-7923

Horizon Tower, LLC
117 Town and Country Drive, Suite A
Danville, California 94526
Phone: (925) 314-1113



(Brownish dubiraphian riffle beetle)
(Clear Lake hitch)
(Sacramento perch)

CA4043 Project Site

Improved Existing
Access Roadway

Soda Bay Road

281

Legend

- CA4043 Project Site
- Biological Survey Area
- Improved Existing Access Roadway
- Special-Status Species**
- Animals**
- Brownish dubiraphian riffle beetle
- Clear Lake hitch
- Sacramento perch
- Western pond turtle

Source: California Department of Fish and Wildlife
California Natural Diversity Database 2018

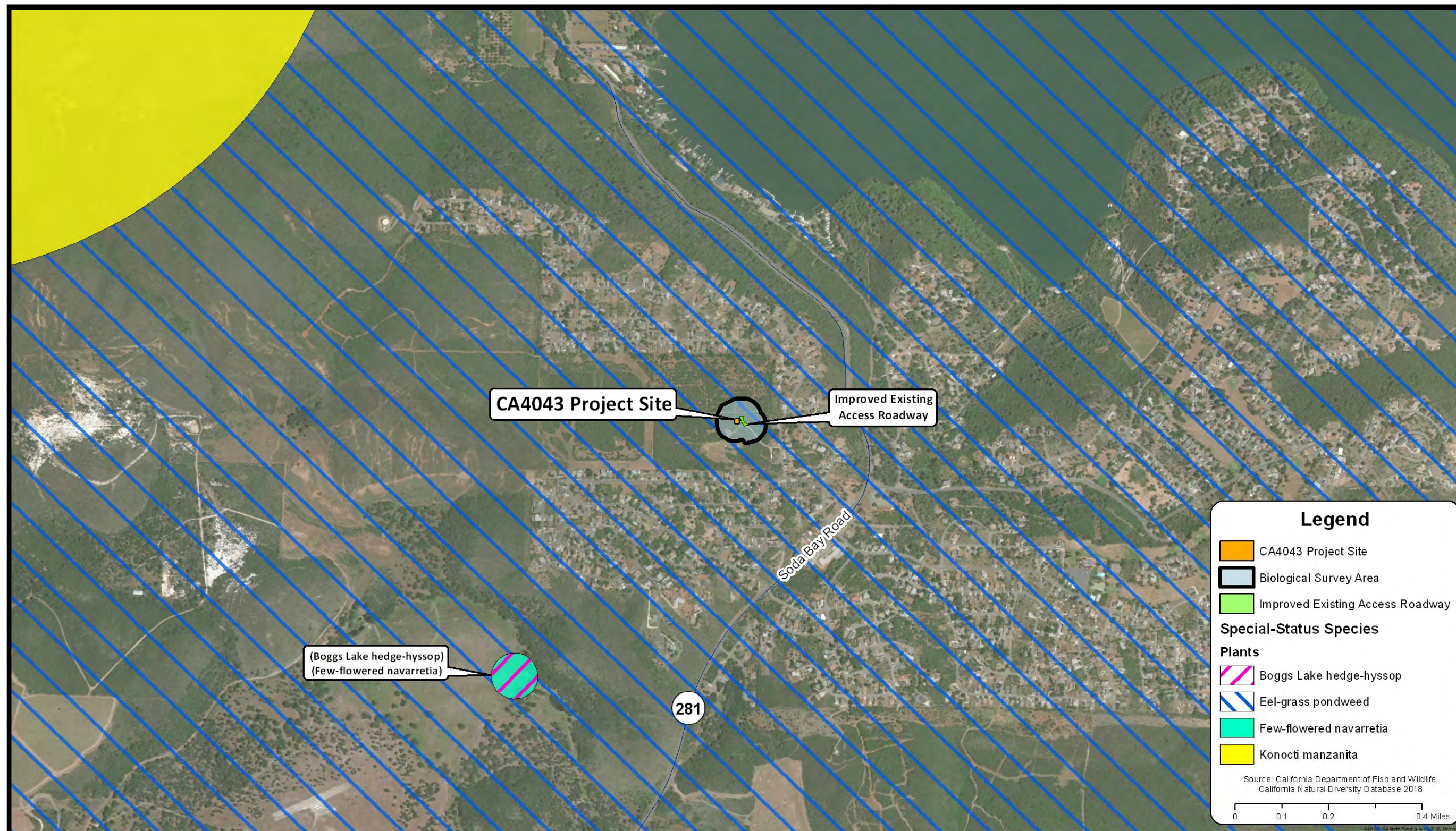
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Synthesis Planning
442 San Marin Drive
Novato, California 94945
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FIGURE 3a
CNDDDB Animal Species Occurrences in the Vicinity of Project Area

Horizon Tower, LLC
117 Town and Country Drive, Suite A
Danville, California 94526
Phone: (925) 314-1113





Synthesis Planning
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Novato, California 94945
Telephone (415) 328-7923

FIGURE 3b
CNDDDB Plant Species Occurrences in the Vicinity of Project Area

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Danville, California 94526
Phone: (925) 314-1113



Appendix B

List of Plant Species Observed During Biological Surveys

| Common Name / Scientific Name |
|--|
| Hoary manzanita (<i>Arctostaphylos canescens</i>) |
| Pinemat manzanita (<i>Arctostaphylos nevadensis</i>) |
| Greenleaf manzanita (<i>Arctostaphylos patula</i>) |
| Indian woolly paintbrush (<i>Castilleja falcifolium</i>) |
| Whitethorn ceanothus (<i>Ceanothus cordulatus</i>) |
| Buck brush (<i>Ceanothus cuneatus</i>) |
| Deer brush (<i>Ceanothus integerrius</i>) |
| Snowbrush ceanothus (<i>Ceanothus velutinus</i>) |
| Mountain mahogany (<i>Cercocarpus betuloides</i>) |
| Squirreltail (<i>Elymus elymoides</i>) |
| Greene goldenweed (<i>Ericameria greenei</i>) |
| Flannelbush (<i>Fremontodendron californica</i>) |
| Fremont silktassel (<i>Garrya fremontii</i>) |
| Birds-eye gilia (<i>Gilia tricolor</i>) |
| Dwarf wild flax (<i>Hesperolinon spp.</i>) |
| Toyon (<i>Heteromeles arbutifolia</i>) |
| Lupine (<i>Lupinus sericatus</i>) |
| Oniongrass (<i>Melica californica</i>) |
| Bitter cherry (<i>Prunus emarginata</i>) |
| Jewelflower (<i>Streptanthus spp.</i>) |

Appendix C

Site Photos



Existing access road to project site (Mojave Trail).



Proposed communications tower and equipment site. View looking east at project site from western edge of site.



Proposed communications tower and equipment site. View looking south at project site from northern edge of site.



Existing access road along eastern edge of project site. This road will be widened and expanded.

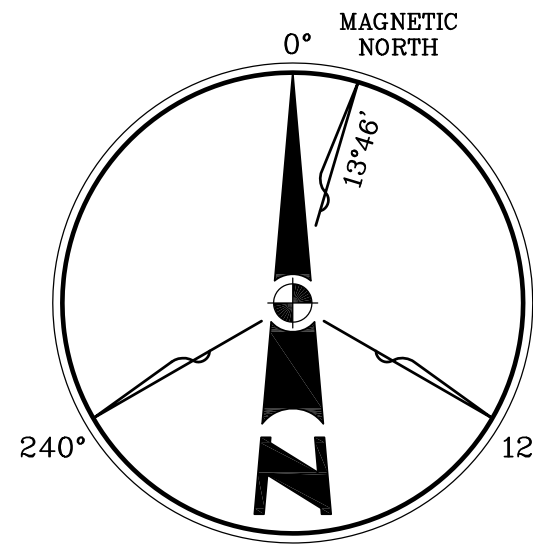
Appendix D

Engineering Drawings

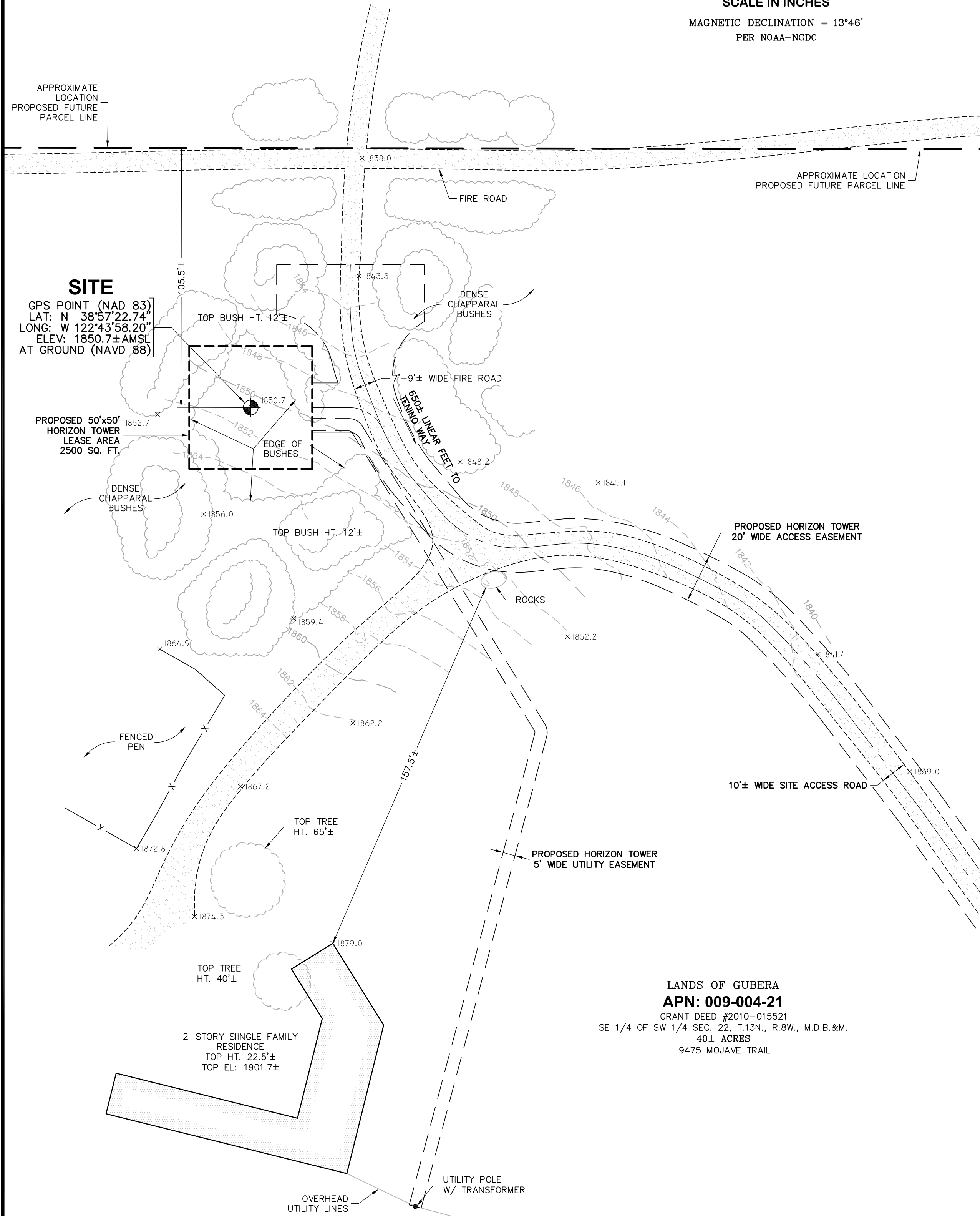
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SUFFICIENT SURVEY EVIDENCE WAS NOT RECOVERED TO ESTABLISH THE POSITION OF THE BOUNDARY LINES SHOWN HEREON. THE BOUNDARY REPRESENTED ON THIS MAP IS BASED ON COMPILED RECORD DATA AND BEST FIT ONTO EXISTING IMPROVEMENTS. IT IS POSSIBLE FOR THE LOCATION OF THE SUBJECT PROPERTY TO SHIFT FROM THE PLACEMENT SHOWN HEREON WITH ADDITIONAL FIELD WORK AND RESEARCH. THEREFORE, ANY SPATIAL REFERENCE MADE OR SHOWN BETWEEN THE RELATIONSHIP OF THE BOUNDARY LINES AND EXISTING GROUND FEATURES, EASEMENTS OR LEASE AREA SHOWN HEREON IS INTENDED TO BE APPROXIMATE AND IS SUBJECT TO VERIFICATION BY RESOLVING THE POSITION OF THE BOUNDARY LINES.

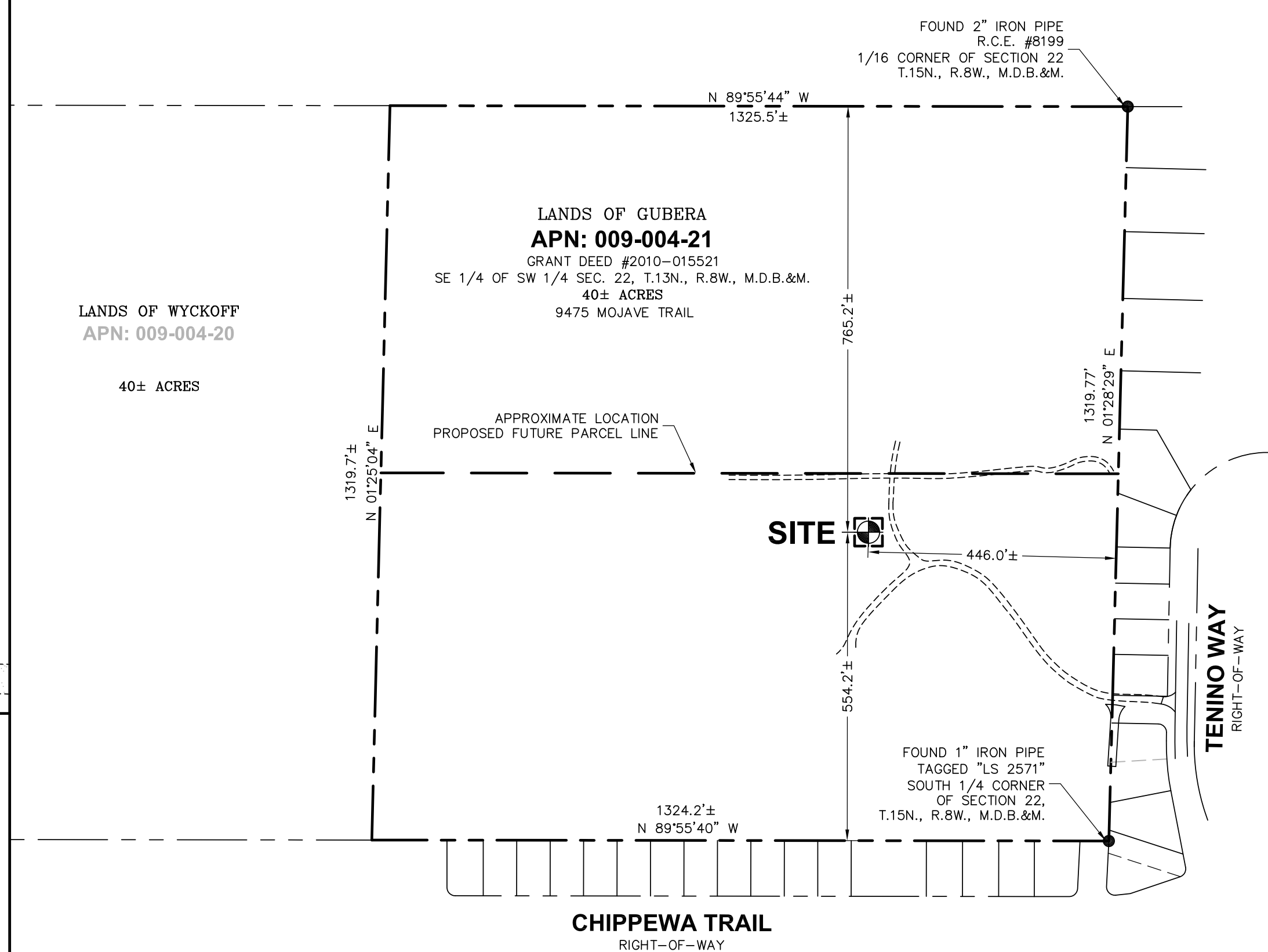
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SUBJECT PARCEL IS AN UNSURVED ALIQUOT PART OF SECTION 22. THE PRECISE BOUNDARIES AND ACERAGE HAS NOT BEEN DETERMINED.



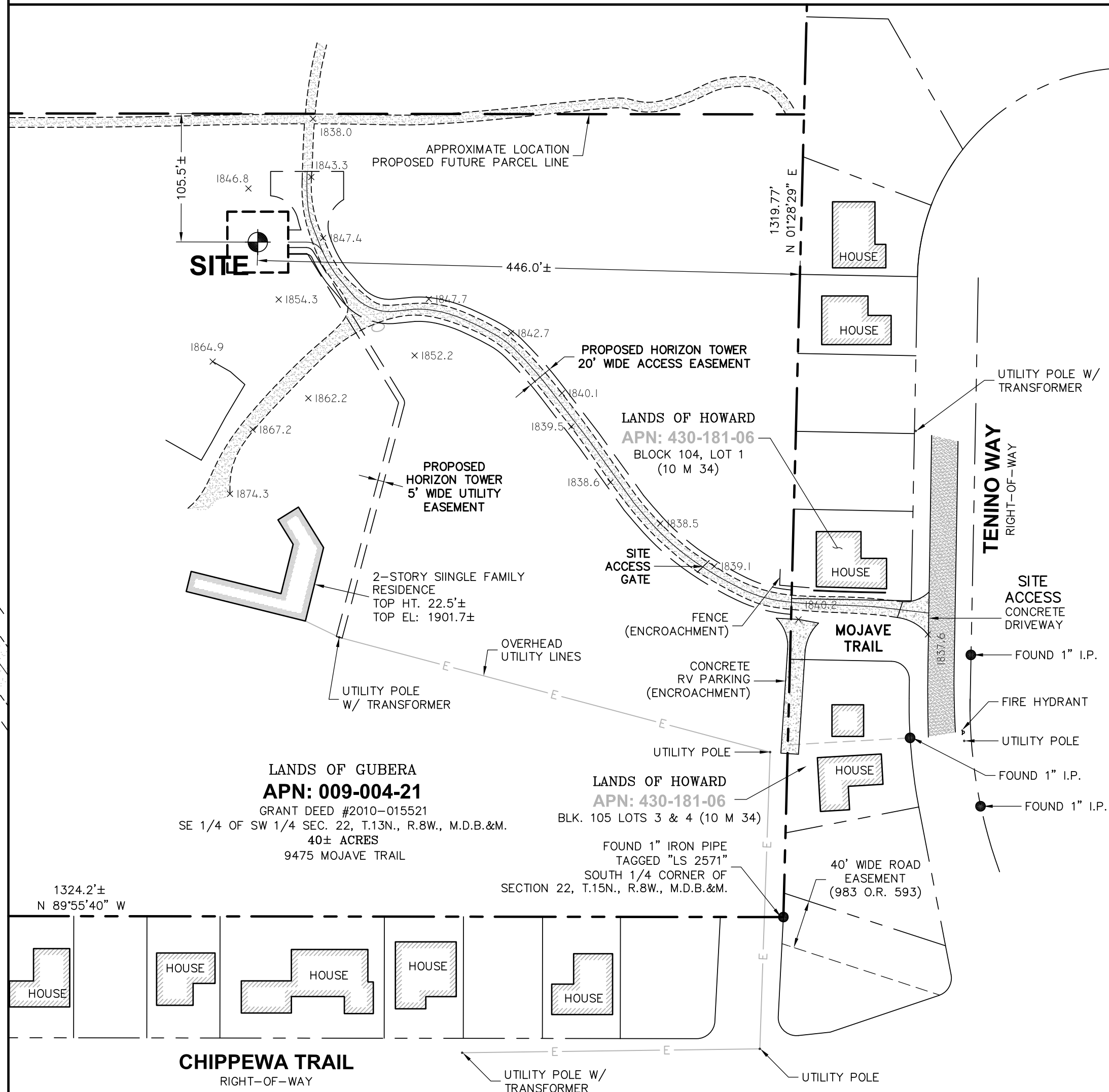
QUIET RIVER
Land Services Inc.
SCALE IN INCHES
MAGNETIC DECLINATION = 13°46'
PER NOAA-NGDC



3
C1 ENLARGED SITE PLAN
SCALE: 1" = 30'

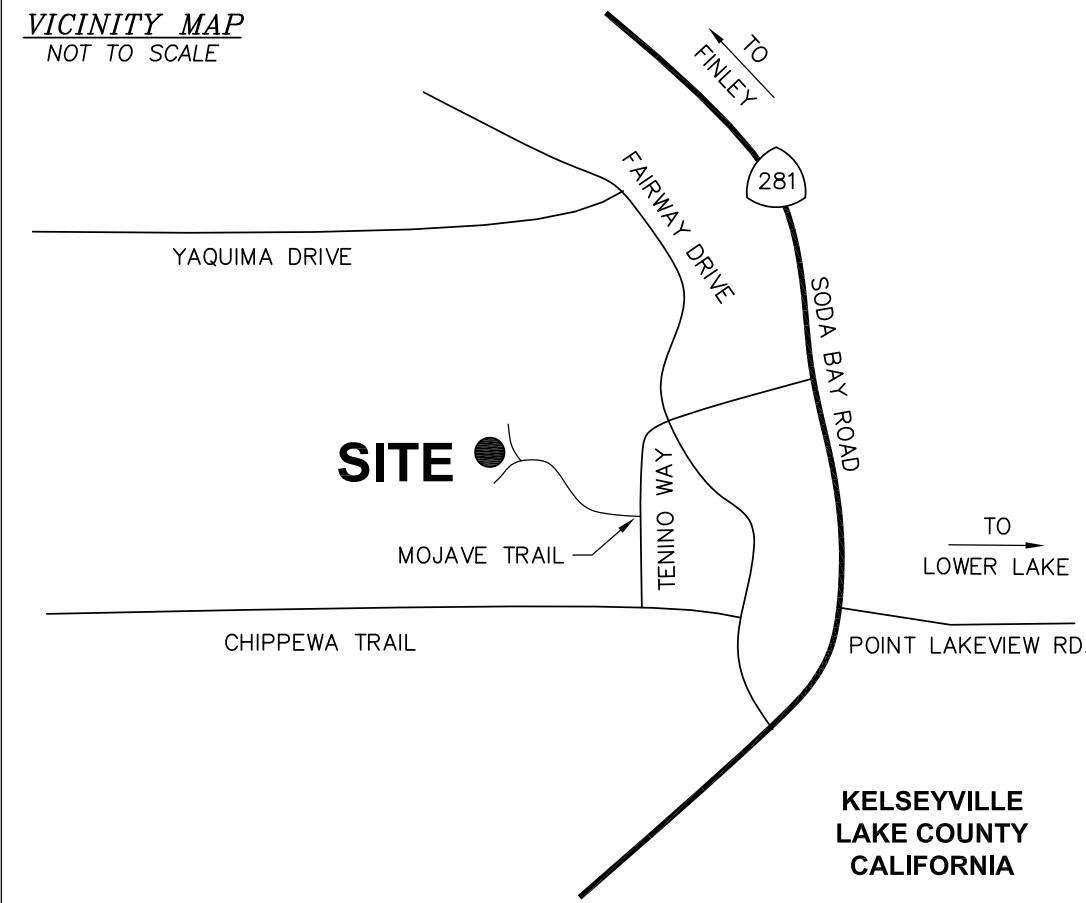


1
C1 SITE PLAN
SCALE: 1" = 200'



2
C1 OVERALL SITE PLAN
SCALE: 1" = 80'

VICINITY MAP
NOT TO SCALE



PROPERTY INFORMATION

Owner: RICHARD & SHERRY GUBERA
Address: 9475 MOJAVE TRAIL
KELSEYVILLE, CA 95451
Site: CA4043 / KELSEYVILLE
Address: 9475 MOJAVE TRAIL
KELSEYVILLE, CA 95451
Assessor's Parcel Number: 009-004-21
Height of Building/Tower: N/A
Title Report:
TITLE REPORT FOR THIS PROPERTY WAS PROVIDED BY FIDELITY NATIONAL TITLE COMPANY, REPORT NO. FSNX-T01601819L, DATED AS OF JULY 6, 2016.
Legal Description:
PROPERTY SITUATED IN THE CITY OF KELSEYVILLE, COUNTY OF LAKE, STATE OF CALIFORNIA.

FEMA FLOOD ZONE DESIGNATION National Flood Insurance Program
County: LAKE Effective Date: SEPTEMBER 30, 2005
Community-Panel Number: 06033C-0678-D
The Flood Zone Designation for this site as plotted by scale is:
ZONE X (no shading) - Areas determined to be outside the 0.2% annual chance floodplain.

SURVEY DATA

NAD 83 Datum:
Lat: N 38°57'22.74" Long: W 122°43'58.20"
Datum Base: NAD 83 Equipment Used: CHCX900-OPUS Receiver
(See Note 2)
Site Ground Elevation: 1850.7± AMSL (NAVD88) AT GPS SITE LOCATION
Basis of Elevations:
GLOBAL POSITIONING SYSTEM (GPS)
(SEE NOTE 2)
Basis of Bearings:
MAP OF CLEAR LAKE RIVERA, UNIT NO. 11, FILED FOR RECORD IN BOOK 10 OF MAPS AT PAGE 34, RECORDS OF LAKE COUNTY, AND TWO FOUND MONUMENTS.
Date of Field Survey: SEPTEMBER 7, 2017

NOTES

- 1.) This is not a boundary survey. This is a specialized topographic map with property lines and easements being a graphic depiction of various information gathered from preliminary title reports, back-up documents of record, maps and available monuments found during the field survey. No property monuments were set. No title research was performed by Quiet River Land Services, Inc.
- 2.) The latitude, longitude and elevation shown hereon were derived from post-processed L1/L2 data collected using Novatel Global Positioning System (GPS) and a CHCX900-OPUS Receiver. CHC Navigation specifications report decimeter level accuracy (horizontally) when data is properly collected and processed. (Elevation = ±3.0 feet.)
- 3.) Unless otherwise noted, no underground utility locating service company was contacted prior to this map being prepared; therefore, there may be non-visible or obscure utilities existing on the property not shown on this map - so CALL BEFORE YOU DIG.
- 4.) Any electronic digital media provided by Quiet River Land Services, Inc. to our client is a courtesy and is not to be reproduced, distributed, sold, altered, revised, edited or amended without the express written consent of an Officer of Quiet River Land Services, Inc. Further, only the final stamped, signed and dated original "hard copy" version of our survey or map is considered to be our legally recognized product.

SURVEYOR'S STATEMENT

I, the undersigned, a Registered Professional Land Surveyor licensed under the laws of the State of California do hereby state that the information, measurements, easements, record boundary lines, bearings and distances as shown hereon are based upon a field survey as dated above and upon items of public record and data contained in a title report, as referenced. Furthermore, the Latitude and Longitude coordinates are reported in NAD 83 Datum and are accurate to within ±15 feet horizontally, and the ground elevation, reported in NAVD 1988 Datum, is within ±3 feet vertically. The coordinate values and elevations are within the 1-A Accuracy Code designation as listed in the A.S.A.C. Information Sheet 91:003 and are accurate to the best of my knowledge and belief.

SIGNATURE DATE

LEGEND

| | | |
|---------|--------------------------|-------------------------|
| APN: | ASSESSOR'S PARCEL NUMBER | ASPHALT |
| CP: | CONTROL POINT | CONCRETE |
| EL: | ELEVATION | CONTROL POINT |
| FH: | FIRE HYDRANT | FOUND MONUMENT |
| FND: | FOUND | GPS POINT |
| HT: | HEIGHT | PARAPET/ROOF ELEVATIONS |
| MON: | MONUMENT | SPOT ELEVATION |
| (M-M): | MONUMENT TO MONUMENT | TEMPORARY BENCHMARK |
| P.O.B: | POINT OF BEGINNING | |
| P.O.C: | POINT OF COMMENCEMENT | |
| PP: | POWER POLE | |
| (TYP.): | TYPICAL | |

| | | |
|---------------|------------------|---------|
| DATE: | JANUARY 31, 2018 | |
| DRAWN BY: MAS | | |
| FILE NO.: | HORT1702 | |
| REVISIONS | | |
| DATE | DESCRIPTION | INITIAL |
| /14/17 | 90% ISSUE | MAS |
| /31/18 | 100% ISSUE | RO |
| | | |
| | | |
| | | |
| | | |
| | | |

HORIZON TOWER, LLC

140 TOWN & COUNTRY DRIVE, SUITE E
DANVILLE, CA 94526
PHONE : (925) 314-1113
FAX : (925) 314-1114

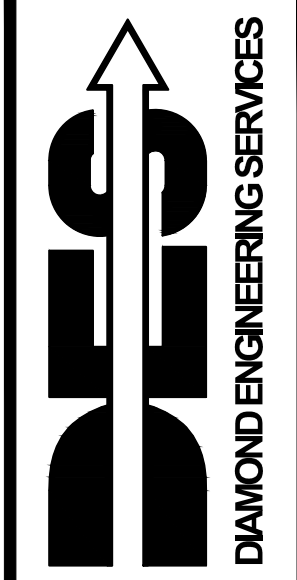
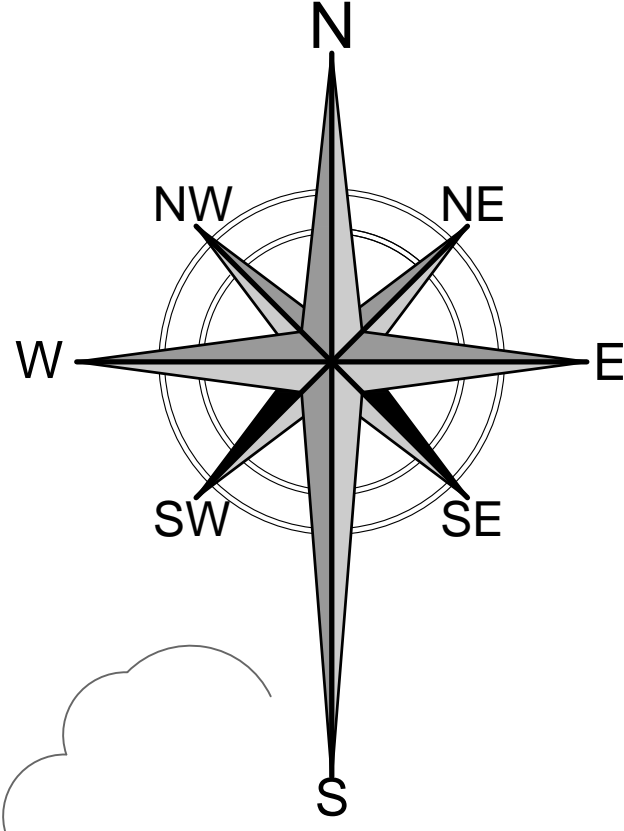
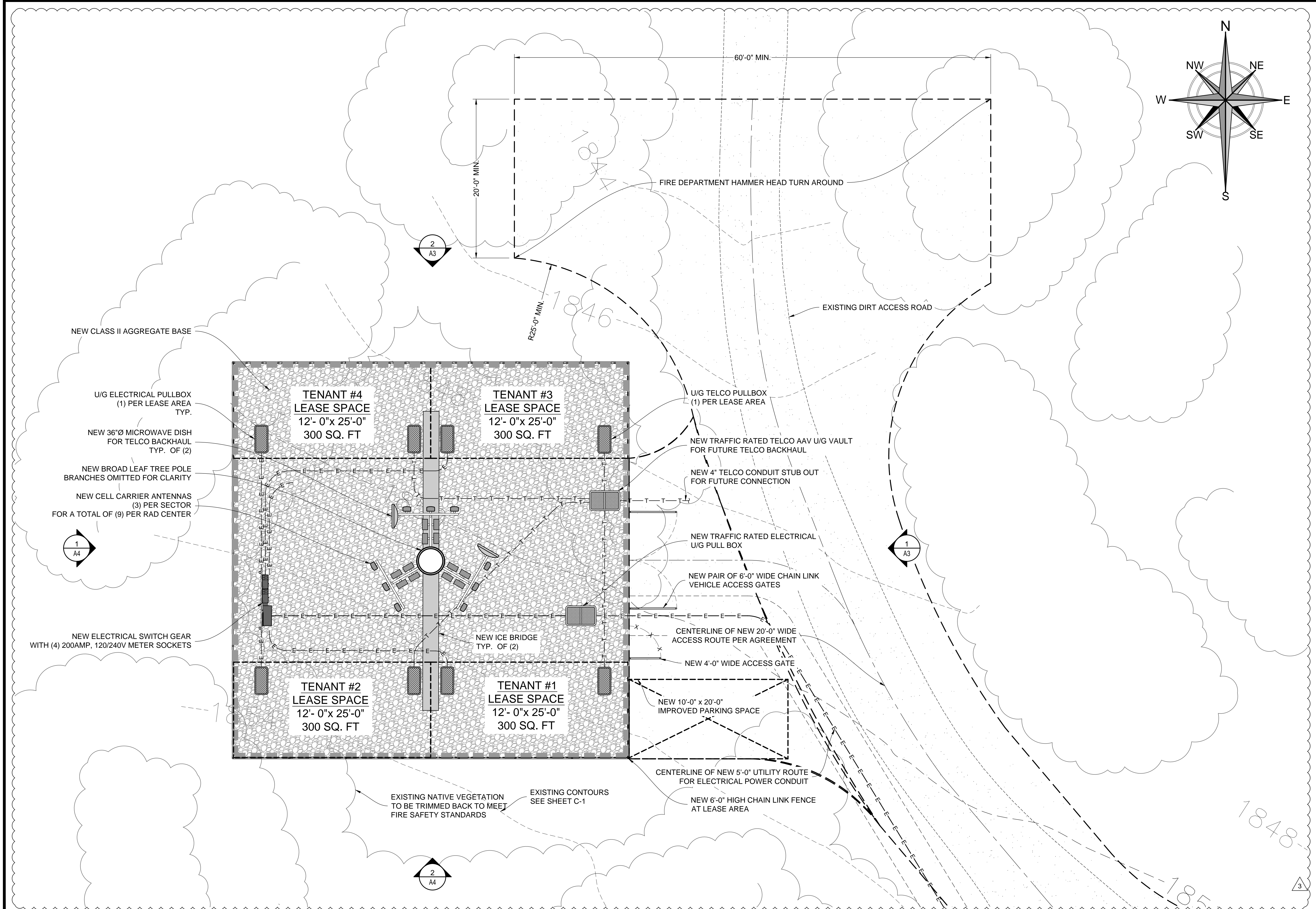
QUIET RIVER
Land Services Inc.
6747 Sierra Court, Suite K
Dublin, CA 94568
(925) 734-6788 Phone

EXISTING SITE CONDITIONS

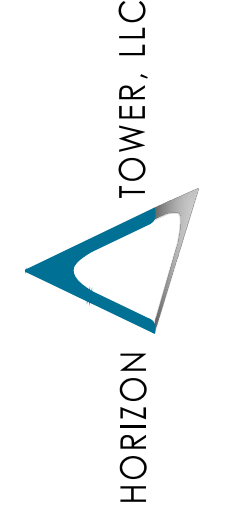
CA4043
KELSEYVILLE

9475 MOJAVE TRAIL
KELSEYVILLE, CA 95451

C1
OF 1 SHEET



DIAMOND ENGINEERING SERVICES
4255 PARK ROAD
BENICIA, CA 94510



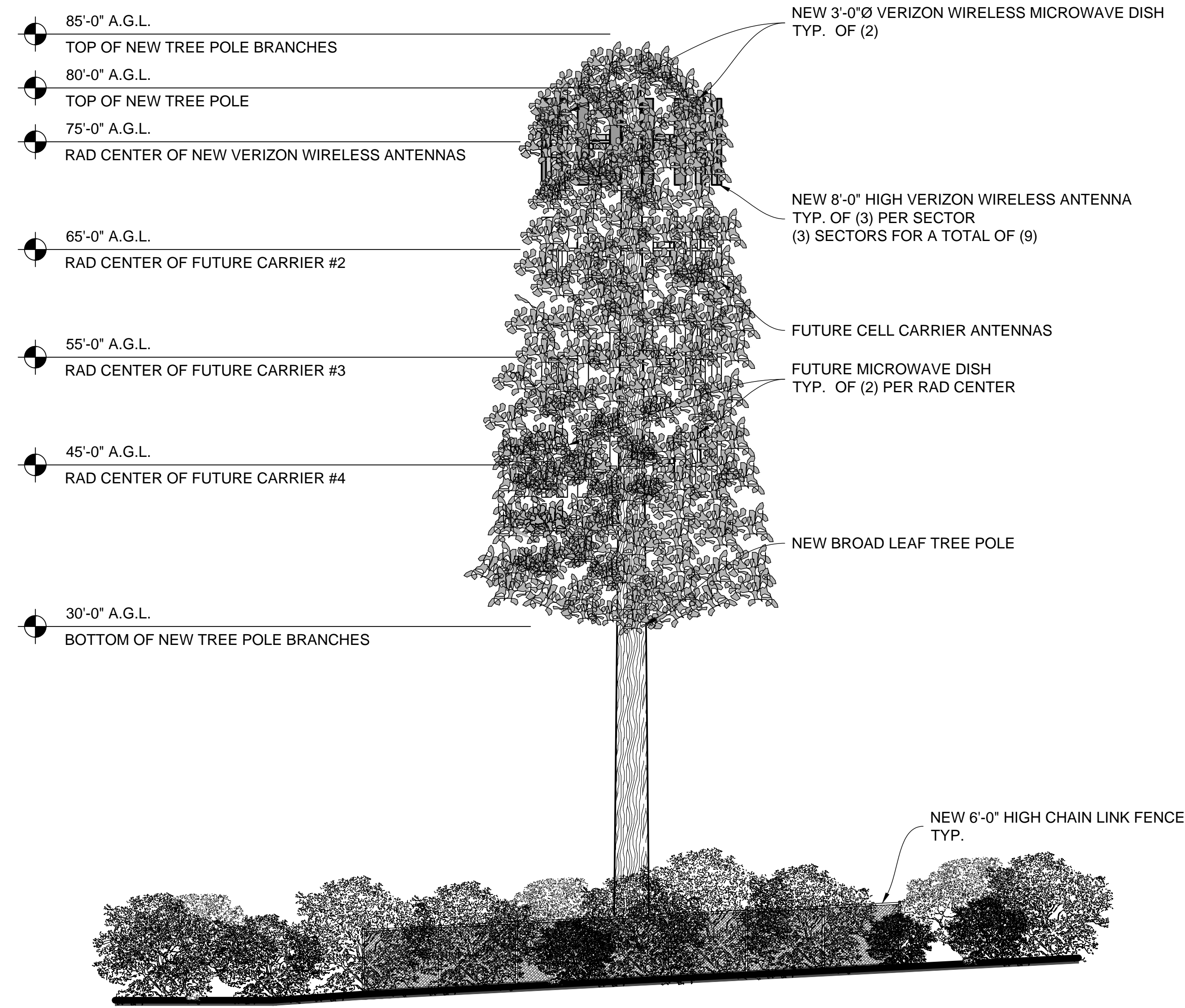
TOWER, LLC
117 Town & Country Drive, Suite A
Danville, CA 94526
Phone: 925-314-1113
Fax: 925-314-1114

Horizon Tower
CA4043 - Kelseyville
9475 Mojave Trail
Kelseyville, CA 95451

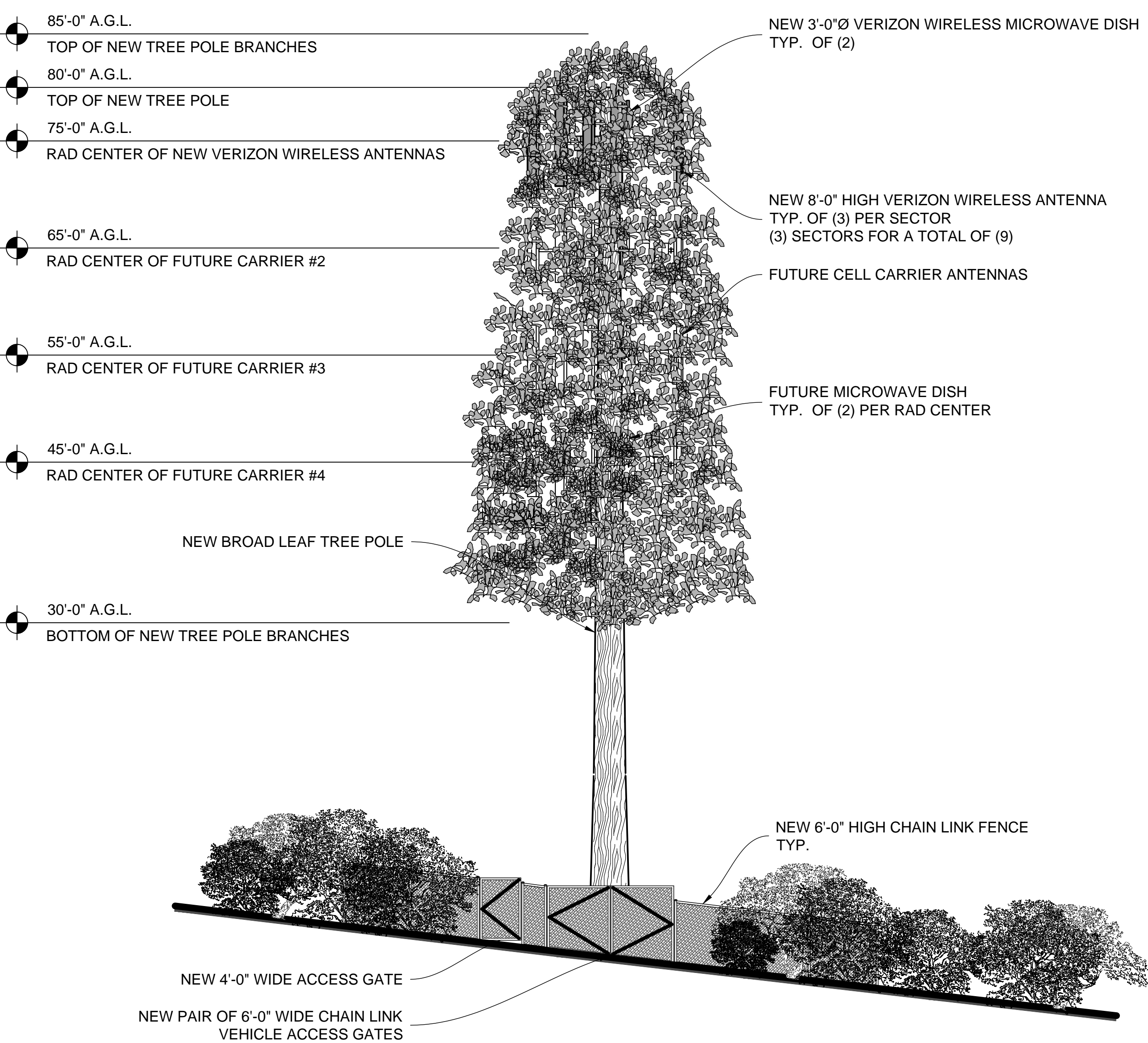
LEASE AREA PLAN

| REVISIONS | | DATE |
|-----------|---------------------|------------|
| No. | DESCRIPTION | |
| 0 | BASELINE | 10-24-2017 |
| 1 | REVISED MONO PINE | 11-22-2017 |
| 2 | REVISED BRANCHES | 11-27-2017 |
| 3 | RESPONSE TO COUNTY | 03-05-2018 |
| 4 | ADDED SEPTIC SYSTEM | 03-09-2018 |

Job No.: HT17002
Draw/Check By: LBS / BLL



- NOTE:
1. TREE POLE AND FOUNDATION TO BE STRUCTURALLY DESIGNED TO CARRY (4) CARRIERS, EACH WITH UP TO (4) SECTORS OF (3) ANTENNAS AND (3) RRUS, (12) ANTENNAS TOTAL AND (12) RRUS TOTAL EACH CARRIER. EACH ANTENNA TO USE STEALTHING ANTENNA SOCKS AND ANTENNA BRANCHES.
 2. BRANCHES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE



- NOTE:
1. TREE POLE AND FOUNDATION TO BE STRUCTURALLY DESIGNED TO CARRY (4) CARRIERS, EACH WITH UP TO (4) SECTORS OF (3) ANTENNAS AND (3) RRUS, (12) ANTENNAS TOTAL AND (12) RRUS TOTAL EACH CARRIER. EACH ANTENNA TO USE STEALTHING ANTENNA SOCKS AND ANTENNA BRANCHES.
 2. BRANCHES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE

2 NORTH ELEVATION

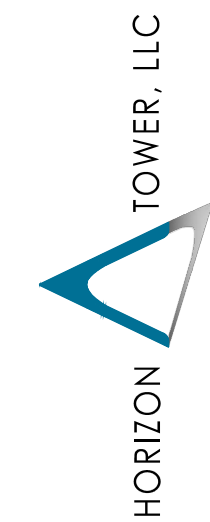
1 EAST ELEVATION

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"



DIAMOND ENGINEERING SERVICES



TOWER, LLC

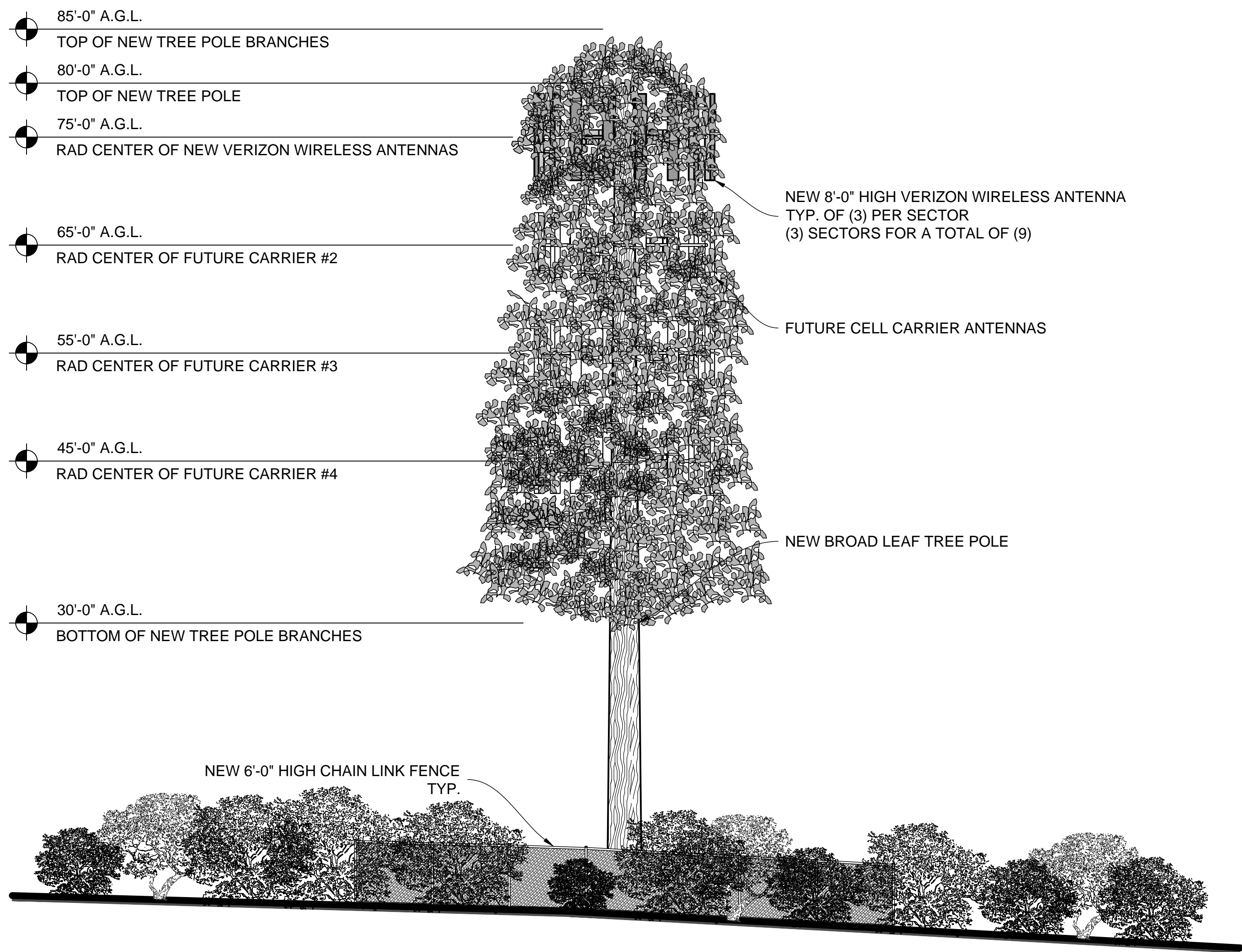
117 Town & Country Drive, Suite A
Danville, CA 94526
Phone: 925-314-1113
Fax: 925-314-1114

Horizon Tower
CA4043 - Kelseyville
9475 Mojave Trail
Kelseyville, CA 95451

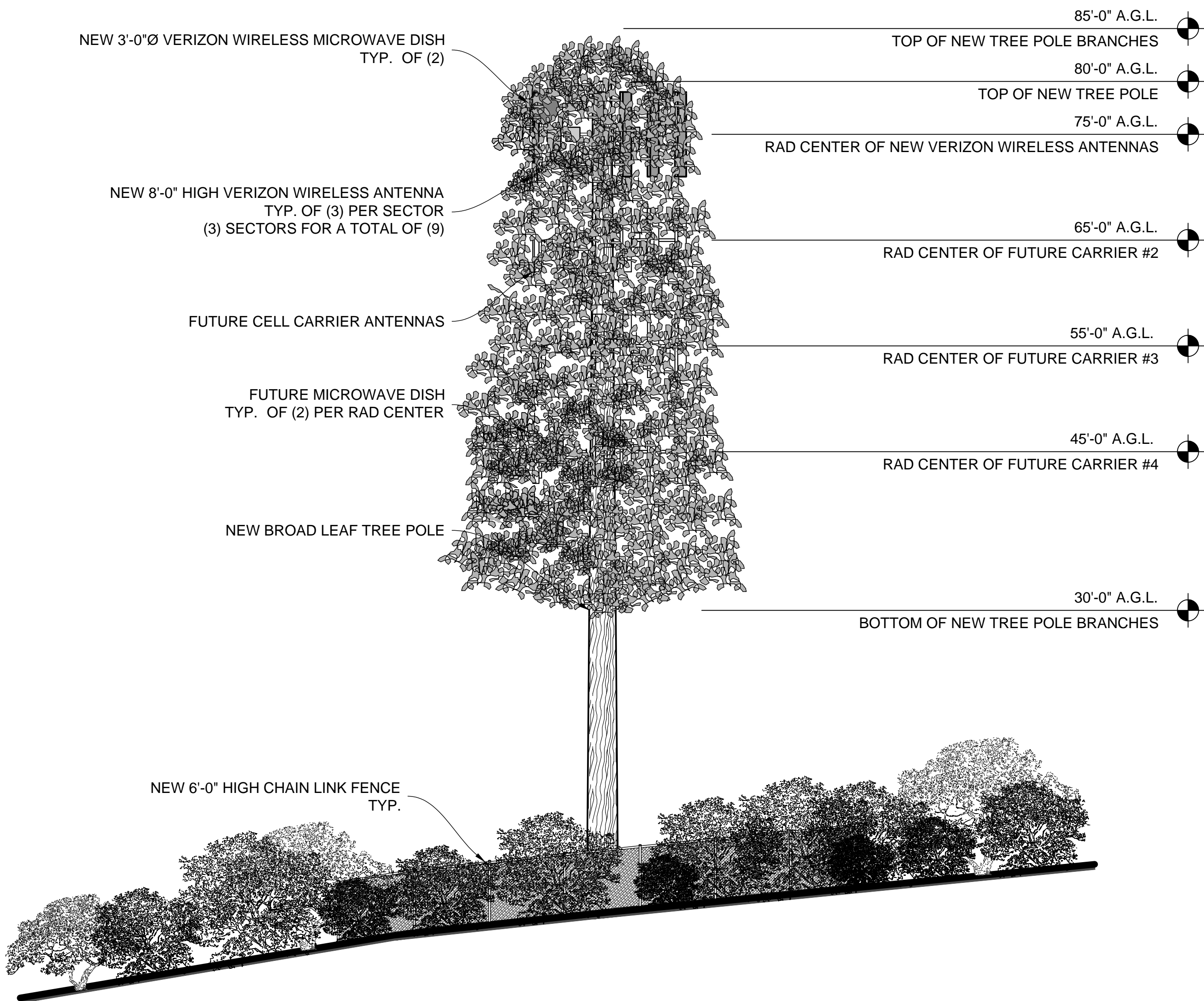
EAST & NORTH ELEVATIONS

| REVISIONS | | DATE |
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| No. | DESCRIPTION | |
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| 1 | REVISED MONO PINE | 11-22-2017 |
| 2 | REVISED BRANCHES | 11-27-2017 |
| 3 | RESPONSE TO COUNTY | 03-05-2018 |
| 4 | ADDED SEPTIC SYSTEM | 03-09-2018 |

Job No.: HT17002
Draw/Check By: LBS / BLL



- NOTE:
1. TREE POLE AND FOUNDATION TO BE STRUCTURALLY DESIGNED TO CARRY (4) CARRIERS, EACH WITH UP TO (4) SECTORS OF (3) ANTENNAS AND (3) RRUS, (12) ANTENNAS TOTAL AND (12) RRUS TOTAL EACH CARRIER. EACH ANTENNA TO USE STEALTHING ANTENNA SOCKS AND ANTENNA BRANCHES.
 2. BRANCHES SHOWN ARE FOR ILLUSTRATIVE PURPOSED ONLY. NOT TO SCALE



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 2. BRANCHES SHOWN ARE FOR ILLUSTRATIVE PURPOSED ONLY. NOT TO SCALE

2 SOUTH ELEVATION

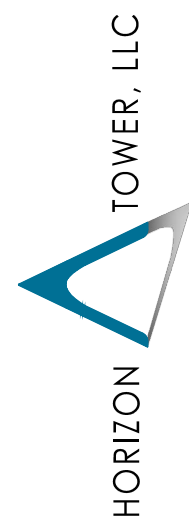
1 WEST ELEVATION

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"



DIAMOND ENGINEERING SERVICES



117 Town & Country Drive, Suite A
Danville, CA 94526
Phone: 925-314-1113
Fax: 925-314-1114

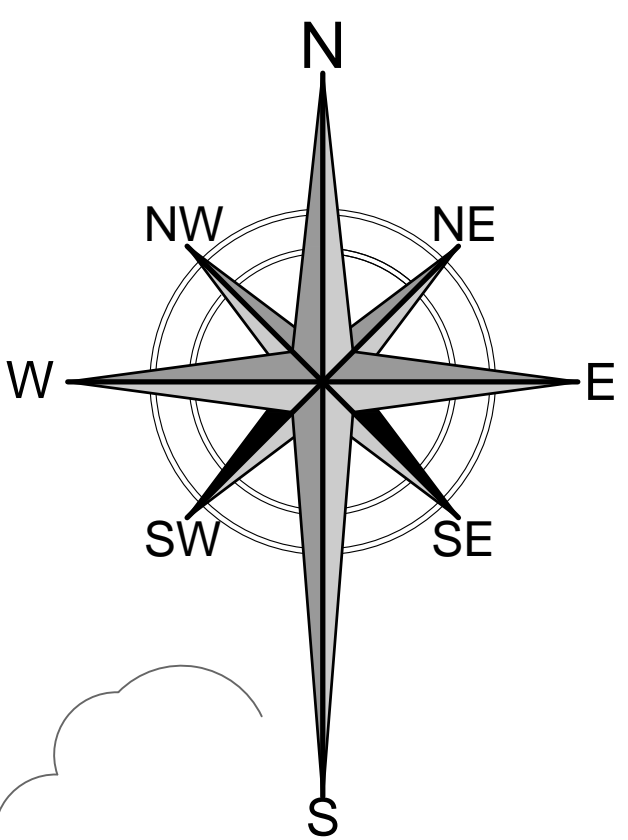
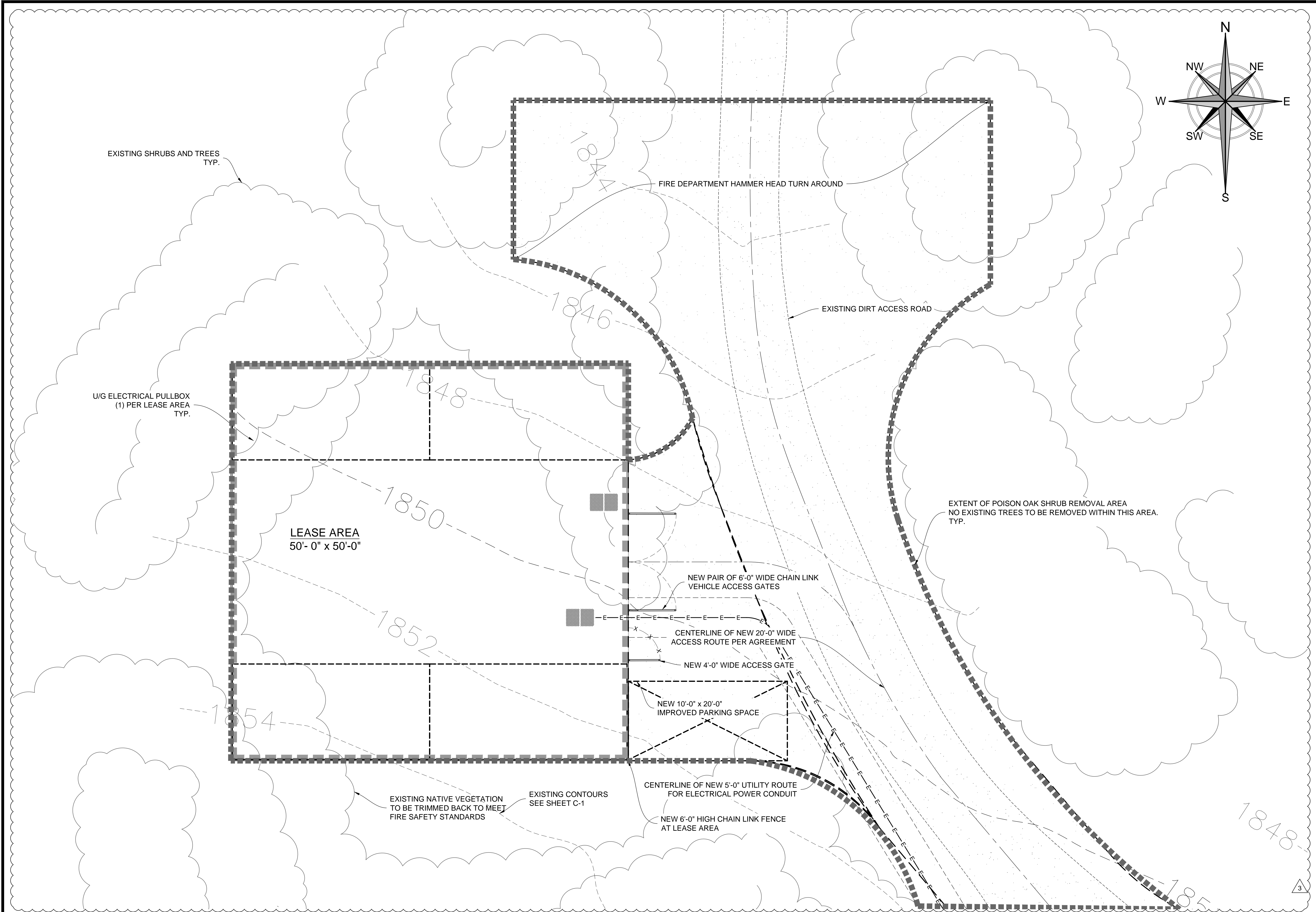
Horizon Tower
CA4043 - Kelseyville
9475 Mojave Trail
Kelseyville, CA 95451

WEST & SOUTH ELEVATIONS

| REVISIONS | | DATE |
|-----------|---------------------|------------|
| No. | DESCRIPTION | |
| 0 | BASELINE | 10-24-2017 |
| 1 | REVISED MONO PINE | 11-22-2017 |
| 2 | REVISED BRANCHES | 11-27-2017 |
| 3 | RESPONSE TO COUNTY | 03-05-2018 |
| 4 | ADDED SEPTIC SYSTEM | 03-09-2018 |

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A4

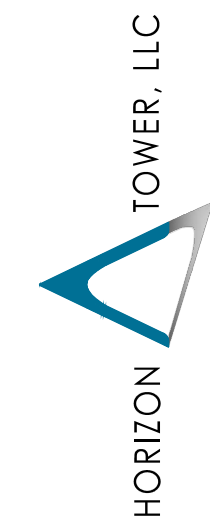


1 LEASE AREA PLAN

SCALE: 3/16" = 1'-0"



DIAMOND ENGINEERING SERVICES



TOWER, LLC

117 Town & Country Drive, Suite A
Danville, CA 94526
Phone: 925-314-1113
Fax: 925-314-1114

Horizon Tower
CA4043 - Kelseyville
9475 Mojave Trail
Kelseyville, CA 95451

TREE AND SHRUB
REMOVAL AREA PLAN

| REVISIONS | | DATE |
|-----------|---------------------|------------|
| No. | DESCRIPTION | |
| 0 | BASELINE | 10-24-2017 |
| 1 | REVISED MONO PINE | 11-22-2017 |
| 2 | REVISED BRANCHES | 11-27-2017 |
| 3 | RESPONSE TO COUNTY | 03-05-2018 |
| 4 | ADDED SEPTIC SYSTEM | 03-09-2018 |

Job No.: HT17002
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