Biological Resources Technical Report

# Santa Clarita Commerce Center Project

**MAY 2023**

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# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| CRPR | California Rare Plant Rank |
| CWA | Clean Water Act |
| Esri | Environmental Systems Research Institute |
| FESA | Federal Endangered Species Act |
| GIS | geographic information system |
| HCP | habitat conservation plan |
| IPaC | Information for Planning and Conservation System |
| ISA | International Society of Arboriculture |
| NCCP | natural community conservation plan |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| OHWM | ordinary high water mark |
| Project | Santa Clarita Commerce Center Project |
| SSC | California Species of Special Concern |
| Study Area | Project site plus 500-foot buffer |
| SWPPP | Storm Water Pollution Prevention Plan |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

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# 1 Introduction

This report presents the findings of a biological resources constraints assessment conducted by Dudek for the proposed Santa Clarita Commerce Center Project (Project). The purpose of this assessment was to evaluate the existing biological conditions and potential impacts to sensitive biological resources associated with the Project site, including a 500-foot buffer (Study Area), for a combined total of 45.66 acres. This report is prepared at a level of detail sufficient to address California Environmental Quality Act (CEQA) requirements, specifically the biological thresholds of significance included in Appendix G, as well as identifying the potential need for permits for sensitive resources protected under federal and state regulations.

## 1.1 Project Location

The approximately 22.31-gross-acre Project site is located in the western part of the City of Santa Clarita, which is located in the northern portion of Los Angeles County (Figure 1, Project Location). Locally, the project site is located at the northeast corner of Railroad Avenue and Oak Ridge Drive, just east of the Metrolink railway.

## 1.2 Project Description

The project would include construction of four industrial/warehouse buildings totaling approximately 433,185 square feet and associated improvements such as including loading docks, tractor-trailers, passenger vehicle parking spaces, stormwater detention basins, and landscape area. A new public street, Springbrook Avenue, would be constructed from Oak Ridge Drive to provide access to each buildings parking and loading areas.

## 1.3 Summary of Findings

The results of this report are summarized below based on the signifance criteria in Section 6 consistent with Appendix G of the CEQA Guidelines.

**Table 1. Summary of Impact Determinations**

| Analysis | Report Section | Significance Determinations | |
|---|---|---|---|
| | | Unmitigated | Mitigated |
| Special-Status Species | 6.2 | Less-than-Significant | Not Applicable |
| Riparian Habitat and Sensitive Communities | 6.3 | Less-than-Significant | Not Applicable |
| Jurisdictional Wetlands and Waters | 6.4 | Less-than-Significant | Not Applicable |
| Wildlife Corridors and Nurseries | 6.5 | Less-than-Significant | Not Applicable |
| Local Ordinances and Policies | 6.6 | Less-than-Significant | Not Applicable |
| Habitat Conservation Plan/Natural Community Conservation Plan | 6.7 | No Impact | Not Applicable |

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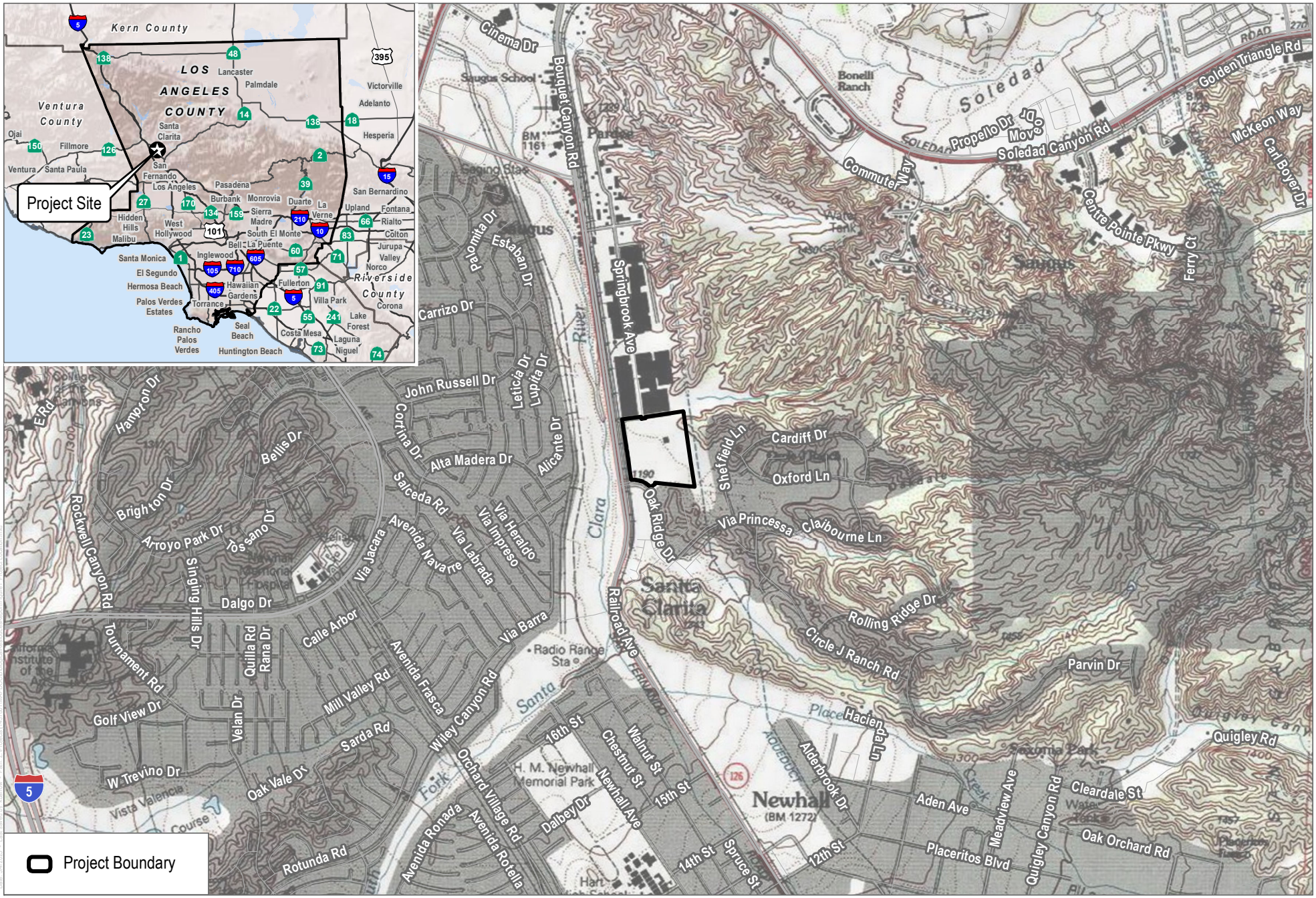


SOURCE: USGS 7.5-Minute Series Newhall Quadrangle

DUDEK

**FIGURE 1**

Project Location

Santa Clarita Commerce Center Project

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# 2 Regulatory Context

This section describes the regulatory framework relevant to the Project.

## 2.1 Federal Regulations

### 2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. FESA is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

### 2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others (16 USC 703–712). Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The Migratory Bird Treaty Act protects more than 800 species. Two species of eagles that are native to the United States—bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*)—were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent these species from becoming extinct.

### 2.1.3 Section 404 of the Clean Water Act

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, the USACE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. The USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

### 2.1.4 Section 401 of the Clean Water Act

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Los Angeles Regional Water Quality Control Board has authority for Section 401 compliance in the project area. A request for certification is submitted to the regional board at the same time that an application is filed with the USACE.

## 2.2 State Regulations

### 2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species 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."

CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

### 2.2.2 California Fish and Game Code Sections 3503, 3511, 3513, 3801, 4700, 5050, and 5515

Section 2081(b) and (c) of the California Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of "fully

protected" species or "specified birds" (California Fish and Game Code Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is planned in an area where a fully protected species or a specified bird occurs, an applicant must design the project to avoid take.

## 2.2.3 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

### Special-Status Plants and Wildlife

The CEQA Guidelines define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380[b][1]). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c).

### Special-Status Vegetation Communities

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or the USFWS."

## 2.2.4 California Fish and Game Code, Sections 1600–1616

California Fish and Game Code, Sections 1600–1616, mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity."

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which may include oak woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional. The CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code, Sections 1600–1616, the CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. The CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or

lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to the CDFW must include a complete certified CEQA document.

### 2.2.5 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the Regional Water Quality Control Board regulates discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]).

## 2.3 Local Regulations

### 2.3.1 City of Santa Clarita Oak Tree Ordinance

The City of Santa Clarita approved Oak Tree Ordinance No. 89-10 as a means of regulating impacts and to preserve all Quercus species within the City limits. Per the Santa Clarita Oak Tree Preservation Section 17.51.040, impacts such as pruning, encroaching cutting, relocating or removal of any *Quercus* species without prior approval through an oak tree permit (17.23.170) will not be allowed.

# 3 Methods

Data regarding biological resources present within the Study Area were obtained through a review of pertinent literature, field reconnaissance, and tree survey; both are described in detail below.

## 3.1 Literature Review

The following data sources were reviewed to assist with the assessment of biological resources:

- CDFW California Natural Diversity Database (CNDDB) (CDFW 2022a)
- USFWS Information for Planning and Consultation (IPaC) (USFWS 2022a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) (CNPS 2022a)
- USDA NRCS Web Soil Survey (USDA 2022a)
- CDFW Biogeographic Information and Observation System (CDFW 2022b)

Prior to conducting the field investigation, the CNDDB and CNPS Inventory were queried based on the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map for Newhall, California where the Study Area is located, as well as the surrounding eight USGS 7.5-minute quadrangle maps (i.e., Whitaker Peak, Warm Springs Mountain, Green Valley, Val Verde, Mint Canyon, Santa Susana, Oat Mountain, and San Fernando). The purpose of this review was to determine whether special-status plant and wildlife species are known to occur in the vicinity of or within the Study Area.

Other literature reviewed included A Manual of California Vegetation, Online Edition (CNPS 2022b); the California Natural Community list (CDFW 2022f); State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2022c); State and Federally Listed Endangered and Threatened Animals of California (CDFW 2022d); and the CDFW California Wildlife Habitat Relationships Life History Accounts and Range Maps (CDFW 2022e).

The following available resources were reviewed to assess the potential for jurisdictional waters: aerial photographs (Google Earth 2022; NETR 2022); the USGS Newhall 7.5-minute topographic quadrangle map (USGS 2018); the National Hydrography Dataset and Watershed Boundary Dataset (USGS 2022); and the USFWS National Wetland Inventory (USFWS 2022b).

## 3.2 General Field Reconnaissance

Dudek biologist Michael Cady conducted a general biological reconnaissance survey of the Study Area on June 13, 2022. The purpose of the field surveys was to map existing vegetation communities and land covers, identify commonly occurring plant or wildlife species, identify plant or wildlife species protected under FESA and CESA, determine the likelihood of occurrence of any special-status plant or wildlife species, and identify aquatic resources potentially regulated under the CWA, Porter–Cologne Act, or California Fish and Game Code.

### 3.2.1 Vegetation Community and Land Cover Mapping

Vegetation communities and land uses within the Study Area were mapped in the field using the Environmental Systems Research Institute (Esri) Collector, a mobile data collection application, on a digital aerial-based background (Esri 2022). Following completion of the fieldwork, all vegetation linework was finalized using Esri ArcGIS software and GIS coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover type within the Study Area was determined. Vegetation communities within the Study Area were mapped using CDFW's List of Vegetation Alliances and Associations (or California Natural Community List) (CDFW 2022f), which is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and A Manual of California Vegetation, Online Edition (CNPS 2022b), where feasible, with modifications made to accommodate the lack of conformity of the observed communities (e.g., developed/disturbed land cover types) using Oberbauer et al. (2008) and Jones and Stokes (1993). Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Each natural community was mapped to the association level, where feasible. Representative photos are included in Appendix A. Special-status vegetation communities are those communities identified as high priority for inventory in the California Natural Communities List (CDFW 2022f) by a state rarity ranking of S1, S2, or S3.

### 3.2.2 Plants

All plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (CRPR) follow the CNPS Inventory (CNPS 2022a). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2022), and common names follow the USDA NRCS Plants Database (USDA 2022b). Potential for special-status plant species to occur within the Study Area was assessed based on known geographic and elevation ranges as well as habitat and soil conditions that are known to support species occurring in the region.

### 3.2.3 Wildlife

All wildlife species, as detected during the field survey—by sight, calls, tracks, scat, or other signs—were identified and recorded. Binoculars were used to aid in the identification of observed wildlife. No trapping or focused surveys for special-status species or nocturnal species was conducted. In addition to species actually observed, expected wildlife usage of the Study Area was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Latin and common names for wildlife species referred to in this report follow Crother (2017) for reptiles and amphibians, American Ornithologists' Union Checklist (AOU 2018) for birds, Wilson and Reeder (2005) for mammals, and Moyle (2002) for fish. Potential for special-status wildlife species to occur within the Study Area was assessed based on known geographic ranges, the presence/absence of suitable habitat, and other natural history elements that might predict their occurrence.

## 3.3 Special-Status Plant and Wildlife Species Assessment

#### Special-Status Plant Species

Endangered, rare, or threatened plant species as defined in Section 15380(b) of the CEQA Guidelines (14 CCR 15000 et seq.) are referred to as "special-status plant species" and, as used in this report, include (1) plant species listed,

proposed for listing, or candidates for listing as endangered or threatened recognized in the context of CESA and the FESA (CDFW 2022c); and/or (2) plant species with a CRPR 1 or 2 as designated by the CNPS (2022a). Species with CRPR 3 or 4 generally do not qualify for protection under CEQA; therefore, are not analyzed in this report.

For each special-status plant species known to occur in the vicinity of or within the Study Area, a determination was made regarding the potential for the species to occur within the Study Area based on site-specific information gathered during the field reconnaissance, such as the location of the site, vegetation communities and soils present, current site conditions, and each species' known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period.

### Special-Status Wildlife Species

Endangered, rare, or threatened wildlife species as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status wildlife species" and, as used in this report, include (1) wildlife species listed, proposed for listing, or candidates for listing as endangered or threatened recognized in the context of CESA and FESA (CDFW 2022d); (2) California Species of Special Concern (SSC) as designated by CDFW (2022g); and (3) mammals and birds that are fully protected species as described in the California Fish and Game Code, Sections 4700 and 3511 (CDFW 2022h).

For each special-status wildlife species listed, a determination was made regarding potential use within the Study Area based on site-specific information gathered during the field reconnaissance, such as the location of the site, vegetation communities and soils present, current site conditions, and each species' known range, habitat preferences, and knowledge of the species' relative distributions in the area.

## 3.3.1 Survey Limitations

Binocular surveys were conducted in areas outside of the Project site due to trespassing concerns. The survey was conducted in June, so many botanical resources would have been blooming; however, precipitation was below normal for the time of the year. It was still possible to make an assessment of the potential for most special-status plant species to occur on site due to the limited, isolated native vegetation, the lack of suitable soils, and the extent of ornamental landscaping that appears to be regularly maintained within the Project site and surrounding Study Area.

Additional potential limitations of the field survey include a diurnal bias for most wildlife species and the absence of focused trapping for mammals and reptiles since trapping is generally only performed for select listed species. Surveys were conducted mostly during the daytime to maximize visibility and detection of plants and most animals. As such, birds represent the largest component of vertebrate fauna recorded during the surveys, as they are usually most active during daytime hours. In contrast, daytime surveys usually result in few observations of mammals, many of which may only be active at night, particularly rodent and bat species. Therefore, identification of mammals primarily relied on detection of surface sign such as scat, burrows, and tracks. Many species of reptiles and amphibians are similarly nocturnal and/or secretive in their habits and are difficult to observe using standard meandering transects. However, despite these limitations, the survey work conducted in the Study Area provides an adequate overall assessment of floral and faunal resources for purposes of evaluating potential biological constraints.

## 3.4 Protected Tree Survey

A Dudek International Society of Arboriculture (ISA)-Certified Arborist performed various functions associated with surveying, inventorying, and evaluating the condition of all protected trees located within the Project site to meet the requirements of City Municipal Code Chapters 13.76 Parkway Trees and 17.51.040 Oak Tree Preservation. Dudek mapped tree locations for all trees located on the Project site as well as heritage trees within 200 feet of the Project site. Tree mapping was conducted using a Trimble Pathfinder Pro XH GPS receiver with H-Star Technology. Because tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, Dudek also used an electronic compass and reflectorless electronic distance-measuring device to map tree locations. The reflectorless electronic distance measuring device/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. The electronic tree locations were then evaluated using ArcView 10.4 software to determine the position of the trees related to the Project development footprint.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the trunk of each tree. These numbers correspond to the tree attribute information presented in Appendix B (specifically, within Appendix B of the Projected Tree Report). Tree trunk diameters were measured using a diameter tape providing adjusted figures for diameter measurements when wrapping the tape around an object's circumference. Diameter measurements were taken using protocol provided by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (ISA 2000). The trunk diameter measurement of each tree was taken at 4.5 feet above the ground along the trunk axis, with common exceptions. For example, in cases where a tree's trunk was located on a slope, the 4.5-foot distance was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of a tree's trunk, respectively), and the measurement was made at this point. Tree height was visually estimated by experienced tree surveyors. Tree canopy diameters were typically estimated by "pacing-off" the measurement based on the investigator's knowledge of their stride length or by visually estimating the canopy width. The crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter. Additionally, Dudek arborists calculated composite trunk diameters for multiple-stem trees according to ISA standards. According to these standards, the sum of all stem diameters was calculated to ascertain composite trunk diameter values for multiple-stem trees.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to health factors such as insect and pathogen damage, mechanical damage, presence of decay, presence of wilted or dead leaves, and wound closure. Tree health and structure were graded as good, fair, poor, and dead, with "good" representing no apparent problems, and "dead" representing a dying and/or dead tree. Good condition trees exhibit acceptable vigor, healthy foliage, and adequate structure, and lack any major maladies. Fair condition trees are typically those with few maladies but declining vigor. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common urban forestry standards.

# 4 Environmental Setting

The following describes the existing abiotic conditions of the proposed Project site and surrounding area.

## 4.1 Land Use

The Project site has been recently graded (Google 2022) and a road with curbs has been constructed. Prior to these developments, the Project sire was used as an industrial parking lot and laydown yards (Google 2022). The western portion of the Project site has been developed/disturbed since 1998 and most of the eastern portion since 2005 (NETR 2022). The site had an agricultural use from at least 1947 to 1959 (NETR 2022). A chain-link fence has been erected on the western and southern portion of the Project site.

The Metrolink railroad and right-of-way is located immediately to the west and Railroad Avenue is immediately adjacent to that. Approximately 215 feet further west is the South Fork of the Santa Clara River that has a soft bottom with native vegetation communities and armored banks. An energy transmission right-of-way is located further west and then a large continuous residential and retail developed area. An industrial development is located immediately to the north and Oak Ridge Drive and multi-family residential development. Adjacent to the east is open space that has been partially disturbed, with single-family residential development approximately 320 feet from the boundary of the Project site. Undeveloped open space is located to the northeast that extends to north to Soledad Canyon Road and the Santa Clara River, and east to Golden Valley Road and Sierra Highway.

## 4.2 Climate

The Project region has a Mediterranean climate with cool, wet winters and hot, dry summers. August is the average warmest month with an average high temperature of 94˚F and December is the coolest month on average with a low of 45˚F (NOAA 2023). Rainfall occurs primarily between October and April, with the maximum average precipitation occurring in January. The mean annual rainfall for the region is approximately 17.35 inches of rain per year (LACPW 2022).

## 4.3 Topography

The Study Area site is located within a relatively flat area that has been previously graded and partially developed. The Study Area includes hills to the east and the South Fork Santa Clara River wash to the west. Elevations in the Project site range from approximately 1,187 feet above mean sea level in the southwest corner to 1,194 feet above mean sea level at the southwest corner.

## 4.4 Soils

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2022a), six soil mapping units of three soil series occur within the Study Area: Hanford sandy loam, 0%–2% slopes; Hanford sandy loam, 2%–9% slopes; Ojai loam, 30%-50% percent slopes; and Yolo loam, fan

piedmont, 0%–9% percent slopes (Figure 2, Soils). The three soil series are described by the NRCS as follows (USDA 2022a):

- **Hanford Series.** The Hanford series consist of very deep, well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are fine sandy loam and found on stream bottoms, floodplains and alluvial fans. Vegetation in uncultivated and undeveloped areas is mainly annual grasses and associated herbaceous plants.
- **Ojai Series.** The Ojai series consists of very deep, well drained soils that formed in alluvium derived from material weathering from mostly sandstone or related sedimentary rocks. Ojai fine-loamy soils are found on alluvial fans and terraces. Native vegetation is oak, grasses, forbs, sagebrush and various shrubs.
- **Yolo Series.** The Yolo series consists of very deep, well drained soils that formed in alluvium from mixed rocks. Yolo soils are fine-silty and found on alluvial fans and flood plains. Vegetation in uncultivated and undeveloped areas is annual grasses, forbs, and some scattered oak (*Quercus* spp.).


SOURCE: NAIP 2020; USDA SSURGO

DUDEK

0 100 200 Feet

**FIGURE 2**

Soils

Santa Clarita Commerce Center Project

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# 5 Results

Representative photos of the Study Area and the biological resources described in this chapter are included in Appendix A.

## 5.1 Vegetation Communities and Land Covers

The Project site and most of the Study Area have been disturbed or developed, with the almost all of the Project site having been recently graded (Google 2022; NETR 2022). As such, most of the natural vegetation communities that are typical of undisturbed open space in the Project vicinity are absent. Eight vegetation communities and three land covers were identified within the Study Area and are presented in Table 1, and their spatial distributions are presented on Figure 3, Vegetation Communities and Land Cover. Descriptions of these vegetation communities and land cover types are provided in detail below.

**Table 1. Vegetation Communities and Land Cover Types in the Study Area**

| Vegetation Community or Land Cover Type | Alliance[1] | Association | Ranking[2] (Global/State) | Map Code | Acreage |
|---|---|---|---|---|---|
| **Native Vegetation Communities** | | | | | |
| California Buckwheat Scrub | *Eriogonum fasciculatum* Shrubland | *Eriogonum fasciculatum* | G5/S5 | EF | 1.46 |
| **Naturalized Vegetation Communities** | | | | | |
| Wild Oats and Annual Brome Grasslands | *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural | *Avena barbata*–*Avena fatua* | NA/NA | AB-AF | 1.34 |
| Upland Mustards or Star-Thistle Fields | *Brassica nigra*–*Centaurea* (*solstitialis*, *melitensis*) Herbaceous Semi-Natural | *Hirschfeldia incana* Provisional Semi-natural | NA/NA | HI | 12.32 |
| | | | | *Naturalized Vegetation Communities Subtotal* | *13.67* |
| **Disturbed and Developed Land Cover Types** | | | | | |
| Disturbed Habitat | NA | NA | NA/NA | DH | 15.42 |
| Parks and Ornamental Plantings | NA | NA | NA/NA | ORN | 2.54 |
| Urban/Developed | NA | NA | NA/NA | DEV | 12.56 |
| | | | | *Disturbed and Developed Land Cover Types Subtotal* | *27.98* |
| | | | | **Grand Total[3]** | **45.66** |

Notes:

1 The term semi-natural stands vs. alliance is used in the Manual of California Vegetation to distinguish between natural vegetation communities and vegetation types dominated by non-native plants (Sawyer et al. 2009).

2 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2022): 5 = demonstrably widespread, abundant, and secure
NA = not applicable

3 Totals may not sum due to rounding

## 5.1.1 Native Vegetation Communities

### California Buckwheat Scrub

California buckwheat scrub communities (*Eriogonum fasciculatum* Shrubland Alliance) include California buckwheat (*Eriogonum fasciculatum*) or chaparral yucca (*Hesperoyucca whipplei*) as dominant or co-dominant species in the shrub canopy. This alliance has a continuous or intermittent shrub canopy less than 7 feet (2 meters) in height with a variable, sometimes grassy ground layer. Species associated with the alliance include California sagebrush, coyotebrush (*Baccharis pilularis*), bush monkeyflower (*Diplacus aurantiacus*), California brittle bush (*Encelia californica*), Menzies' goldenbush (*Isocoma menziesii*), deerweed (*Acmispon glaber*), bush mallow (*Malacothamnus fasciculatus*), white sage (*Salvia apiana*), or black sage (*Salvia mellifera*). These communities typically occur on upland slopes, intermittently flooded arroyos, channels and washes, and rarely flooded terraces in coarse well-drained soils (CNPS 2022b). One association within the alliance was mapped in the Study Area, *Eriogonum fasciculatum* Association, and it is found adjacent to the west-northwest of the Project site. It was composed of California buckwheat and California sagebrush, and had scattered occurrences of native clustered tarweed (*Deinandra fasciculata*) and non-native shortpod mustard (*Hirschfeldia incana*) in areas where shrub density was low. Native western ragweed (*Ambrosia psilostachya*), tacky phacelia (*Phacelia viscida*), and popcorn flower (*Plagiobothrys nothofulvus*) were also observed, but in very low abundance.

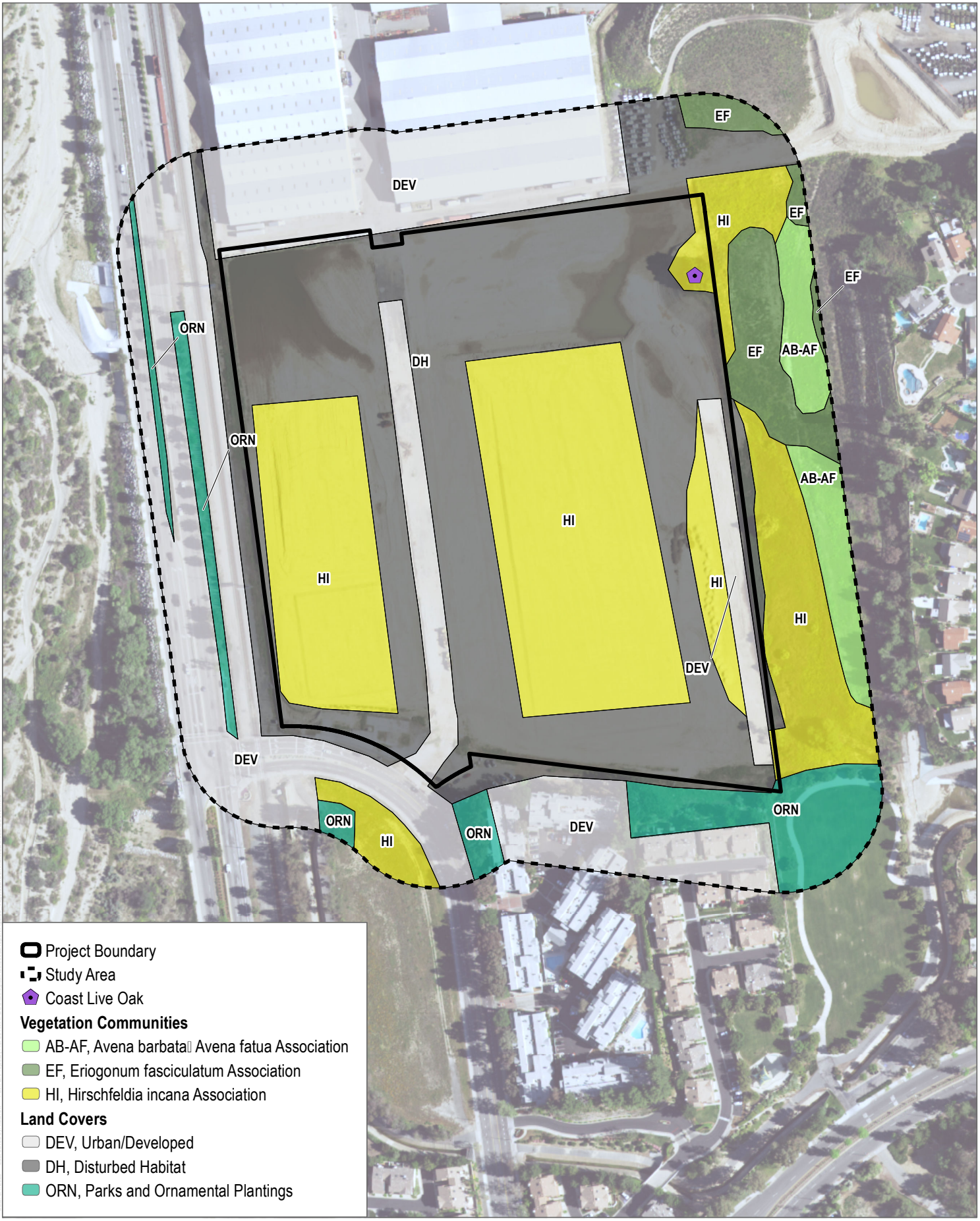
## 5.1.2 Naturalized Vegetation Communities

### Wild Oats and Annual Brome Grasslands

Wild oat and annual brome grasslands (*Avena* spp.-*Bromus* spp. Herbaceous Semi-Natural Alliance) have slender oat (*Avena barbata*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and/or soft brome (*Bromus hordeaceus*) is dominant or co-dominant with other non-natives in the herbaceous layer. Emergent trees and shrubs may be present at low cover. The community is found on all topographic settings in foothills, waste places, rangelands, openings in woodlands (CNPS 2022b). One association within the alliance, *Avena barbata–Avena fatua* Association, was identified in the Study Area east of the Project site.

### Upland Mustards or Star-Thistle Fields

Upland mustards or star-thistle fields communities feature black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), Italian plumeless thistle (*Carduus pycnocephalus*), Maltese star-thistle (*Centaurea melitensis*), yellow star-thistle (*Centaurea solstitialis*), cardoon (*Cynara cardunculus*), Geraldton carnation weed (*Euphorbia terracina*), shortpod mustard (*Hirschfeldia incana*), Dyer's woad (*Isatis tinctoria*), or cultivated radish (*Raphanus sativus*), among other similar ruderal forbs, as the dominant species in the herbaceous layer. These communities typically occur in fallow fields, rangelands, grasslands, roadsides, levee slopes, disturbed coastal scrub, disturbed riparian areas, and generally within disturbed areas (CNPS 2022b). One association within the alliance, *Hirschfeldia incana* Provisional Semi-natural Association was identified in the Study Area in two large continuous sections in the eastern and western portion of the Project site and in the eastern portion of the Study Area. These areas were dominated by shortpod mustard with Maltese star thistle, Russian thistle (*Salsola tragus*), prickly lettuce (*Lactuca serriola*), Canadian horseweed (*Erigeron canadensis*), and tree tobacco (*Nicotiana glauca*). There was one coast live oak (*Quercus agrifolia*) on a small knoll in the northeast corner of the Project site that was surrounded by shortpod mustard. There was one Goodding's willow (*Salix gooddingii*) and several mulefat (*Baccharis salicifolia*) within the upland mustards to the east-southeast of the Project site, but no obvious hydrology was associated with these typical riparian associated species.




SOURCE: NAIP 2020

DUDEK

0 100 200 Feet

**FIGURE 3**

Vegetation Communities and Land Cover

Santa Clarita Commerce Center Project

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### 5.1.3 Disturbed and Developed Land Cover Types

#### Disturbed Habitat

Although not recognized by the Manual of California Vegetation, Online Edition (CNPS 2022b) or the Natural Communities List (CDFW 2022f), disturbed habitat is described in the Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008). Disturbed habitat is described as areas generally lacking vegetation due to high levels of existing or historical human disturbance and are no longer recognizable as a native or naturalized vegetation association. Areas mapped as disturbed habitat may include unpaved roads, trails, and graded areas (Oberbauer et al. 2008). Vegetation in these areas, if present at all, is usually sparse and dominated by non-native weedy herbaceous species (Oberbauer et al. 2008). Areas mapped as disturbed habitat in the Study Area were found throughout the Project site. Native species included common sunflower (*Helianthus annuus*), Canadian horseweed, western ragweed, and *common fiddleneck*. Non-native species present included shortpod mustard, Maltese star-thistle, Russian thistle, sweet alyssum (*Lobularia maritima*), wild oat, red brome, redstem stork's bill (*Erodium cicutarium*), spiny sowthistle (*Sonchus asper*), cheeseweed mallow (*Malva parviflora*), sweetclover (*Melilotus officinalis*), tree tobacco, lambsquarters (*Chenopodium album*), puncturevine (*Tribulus terrestris*), sacred thorn-apple (*Datura wrightii*), golden crownbeard (*Verbesina encelioides*), Mexican tea (*Dysphania ambrosioides*), and nettleleaf goosefoot (*Chenopodium murale*).

#### Parks and Ornamental Plantings

Although not recognized by the Manual of California Vegetation (CNPS 2022b) or the Natural Communities List (CDFW 2022f), parks and ornamental plantings (or ornamental vegetation) is described in Methods Used to Survey the Vegetation of Orange County Parks and Open Space Areas and The Irvine Company Property (Jones and Stokes 1993). This mapping unit is described as vegetation comprised of non-native trees, shrubs, flowers, and turf grass introduced for landscaping purposes. This mapping unit type typically occurs in greenbelts, parks, and horticultural plantings (Jones and Stokes 1993). Areas mapped as parks and ornamental plantings in the Study Area were located along the Metrolink right-of-way and included stands of *Eucalyptus* spp.

#### Urban/Developed

Although not recognized by the Manual of California Vegetation (CNPS 2022b) or the Natural Communities List (CDFW 2022f), the urban/developed mapping unit (or developed land) is described in Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008). This mapping unit is described areas supporting human-made structures, including homes, yards, sidewalks, and other highly modified lands supporting structures associated with dwellings or other permanent structures. Vegetation in these areas, if present at all, is typically associated with ornamental landscaping that has been included in the development footprint (Oberbauer et al. 2008). Developed lands in the Study Area include industrial areas, residential areas, and roads.

## 5.2 Plants

The Project site has been heavily disturbed over a long period (Google 2022; NETR 2022). As such, the majority of the plant species observed were non-native, ruderal[1] species. The description of the plant species observed in the

[1] Vegetation that is often composed of invasive species, whether exotic or native, that have expanded in extent and abundance due to human disturbances (Faber-Langendoen et al. 2014).

Study Area can be found in the vegetation community descriptions. The open space portions of the Study Area to the east of the Project site are also expected to support some additional herbaceous annuals (Calflora 2022).

### 5.2.1 Special-Status Plant Species Assessment

Appendix C, Special-Status Plant Species Potentially Occurring in the Study Area, lists special-status plant species known to occur in the USGS 7.5-minute Newhall quadrangle and the surrounding eight USGS 7.5-minute quadrangles, as well as plant species included within the USFWS IPaC list generated for the Study Area (CDFW 2022a; CNPS 2022a; USFWS 2022a). No special-status plant species were observed within the Study Area during the general biological reconnaissance survey. However, three species, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), and mesa horkelia (*Horkelia cuneata* var. *puberula*), have a moderate potential to occur in the Study Area. However, the three species are not expected to occur in the Project site. Table 2 summarizes the regulatory status, ecological associations, and potential for the species to occur. The species not expected to occur or have low potential are assessed in Appendix C. No critical habitat for plants has been designated within the Study Area (USFWS 2022a).

**Table 2. Special-Status Plant Species Potentially Occurring in the Study Area**

| Scientific Name | Common Name | Status[1] (Federal/State/ CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Calochortus clavatus* var. *gracilis* | slender mariposa lily | None/None/1B.2 | Chaparral, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–June (Nov)/1045–3280 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum* Association) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |
| *Chorizanthe parryi* var. *parryi* | Parry's spineflower | None/None/1B.1 | Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/900–4,000 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum* Association) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |
| *Horkelia cuneata* var. *puberula* | mesa horkelia | None/None/1B.1 | Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July (Sep)/225–2,655 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum* Association) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |

**Notes:**
[1] Status Abbreviations
CRPR: California Rare Plant Rank
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 – Moderately threatened in California (20% - 80% of occurrences threatened/moderate degree and immediacy of threat)

# 5.3 Wildlife

Wildlife observations were low in abundance and diversity, which is expected due to the lack of habitat diversity and complexity created by the disturbed and developed nature of most of the Study Area, with most wildlife observed outside of the Project site. Species observed were limited to western kingbird (*Tyrannus verticalis*), house finch (*Haemorhous mexicanus*), common raven (*Corvus corax*), spotted towhee (*Pipilo maculatus*), California quail (*Callipepla californica*), California scrub-jay (*Aphelocoma californica*), lesser goldfinch (*Spinus psaltria*), lesser goldfinch (*Spinus psaltria*), and killdeer (*Charadrius vociferus*). Numerous other bird species would be expected to be transient through the Study Area during foraging and migration. Common side-blotched lizard (*Uta Stansburiana*) and Great Basin fence lizard (*Sceloporus occidentalis*) would be among the common reptiles expected to occur in the Study Area. Mammals observed was limited to California ground squirrel (*Otospermophilus beecheyi*), but other common mammals expected would be Audubon's cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

## 5.3.1 Special-Status Wildlife Species Assessment

Appendix D, Special-Status Wildlife Species Potentially Occurring in the Study Area, lists special-status wildlife species that are known to occur in the USGS 7.5-minute Newhall quadrangle and the surrounding eight USGS 7.5-minute quadrangles, as well as wildlife species included within the USFWS IPaC list generated for the Study Area (CDFW 2022a; CNPS 2022a, USFWS 2022a). One species, coastal whiptail (*Aspidoscelis tigris stejnegeri*), has a moderate potential to be a resident in the Study Area but is not expected in the Project site. Two other species, Crotch bumblebee (*Bombus crotchii*) and mountain lion (*Puma concolor*), have moderate potential to occur as transients in the Study Area, but not expected as residents. Table 3 summarizes the three species' regulatory status, ecological associations, and potential for each of the nine species. The species not expected to occur or have low potential are assessed in Appendix D. No critical habitat for wildlife has been designated within the Study Area (USFWS 2022a).

**Table 3. Special-Status Wildlife Species Potentially Occurring in the Study Area**

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Bombus crotchii* | Crotch bumble bee | None/None[2] | Open grassland and scrub communities supporting suitable floral resources. | Moderate potential to occur in the Study Area, but not expected on the Project site, except as a transient. The species may forage in the *Eriogonum fasciculatum* Association east of the Project site. |
| **Reptiles** | | | | |
| *Aspidoscelis tigris stejnegeri* | San Diegan tiger whiptail | None/SSC | Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas. | Moderate potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no |

**Table 3. Special-Status Wildlife Species Potentially Occurring in the Study Area**

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| | | | | suitable habitat within the Project site. |
| **Mammals** | | | | |
| *Puma concolor* (Southern California/ Central Coast Evolutionarily Significant Unit) | mountain lion | None/CST | Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts | Moderate potential to occur in the Study Area as a transient. The species is expected to occur in the Study Area, specifically the eastern-northeastern portion as a transient during foraging, movement through its home range, or during the dispersal of young. Natal dens of the species are not expected since females typically avoid areas of human activity (Center for Biological Diversity and the Mountain Lion Foundation 2019). |

Notes:

1 Status Abbreviations
CST: Candidate for State Threatened
SSC: California Species of Special Concern

2 None/None: these species are tracked by CDFW because a non-governmental organization considers the species to be declining in numbers

## 5.3.2 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Corridors can also be aquatic resources that provide passage for fish. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal.

On a regional level, the Study Area does not occur within any designated wildlife corridors or habitat linkages identified in the South Coast Missing Linkages analysis conducted by South Coast Wildlands (2008) or CDFW's California Essential Habitat Connectivity Project (Spencer et al. 2010), as shown in the CDFW BIOS (CDFW 2022b).

On a local level, the Study Area does not have any streams that would provide fish passage and it provides limited connectivity for terrestrial wildlife movement. The Project site is adjacent to Railroad Avenue, with industrial development to the north and residential to the residential to the south. There is natural open space to the northeast of the Project site and the South Fork Santa Clara River is to the west but historic developments and uses of the Project site have limited the site's use by wildlife to connect the two, so it is not expected to be regularly used as a linkage. The open space to the northeast has a connection to the main fork of the Santa Clara River that has less development and would likely be used as the main route for movement.

### 5.3.3 Native Wildlife Nursery Sites

No diagnostic signs of bird rookeries (e.g., numerous nests, whitewash) or large maternal or overwintering bat roosts (e.g., large concentrations of guano or guano odors) were identified in the Study Area and are not expected. The dominance of sparse ornamental vegetation and the lack of habitat to provide substantial foraging opportunities for birds on site or in the immediate area make rookeries unlikely. The lack of typical urban roosting habitat (bridges and older buildings with structural deficiencies) makes it unlikely for the Study Area to support native wildlife nursery sites. Vegetation located within and adjacent to the Project site provides suitable nesting habitat for birds.

## 5.4 Jurisdictional Wetlands and Waters

No potential wetlands, streams, or lakes that could be regulated under state and federal laws were identified in the Study Area. There is a stormwater channel along the eastern boundary of the Project site that was constructed by a previous development. However, historical imageries show that it was constructed in the uplands. Additionally, the channel is not expected to be directly impacted by the Project. The South Fork Santa Clara River is located approximately 217 feet to the west of the Project site, with the Metrolink railway and Railroad Avenue in between.

## 5.5 Local Policies or Ordinances–City of Santa Clarita Oak Tree Ordinance No. 89-10

A Protected Tree Report was prepared for the Project by a Dudek ISA-Certified Arborist (Appendix B). A total of seven non-protected trees (six blue elderberry and one Goodding's willow) and a protected coast live oak tree and a protected valley oak tree were inventoried within or immediately adjacent to the Project area as part of the preparation of the Protected Tree Report). In total, eight trees are located on-site (Tree Nos. 1 through 8) and one (Tree No. 9) is located on private property adjacent to the site. Of the eight trees found on site, only the coast live oak, Tree No. 2, meets the City's definition of a protected tree. The single off-site valley oak tree, Tree No. 9, located on the adjacent private property, meets the City's definition of a protected tree. Appendix B presents the details of the health of the tree, as well as the location of the trees. The coast live oak is the only protected tree whose trunk is within the Project boundaries.

## 5.6 Local, Regional, or State Habitat Conservation Plans

The Study Area is not within any habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan (CDFW 2019). The Study Area is not located within a County of Los Angeles designated Significant Ecological Area (County of Los Angeles 2022).

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# 6 Project Impacts

This chapter addresses direct and indirect impacts to biological resources that would result from implementation of the proposed project.

## 6.1 Definition of Impacts

### 6.1.1 Direct Permanent Impacts

Direct permanent impacts refer to the absolute and permanent physical loss of a biological resource due to clearing, grading, and/or construction of structures, which can be determined in four ways: (1) permanent loss of vegetation communities, land covers, and general wildlife and their habitat; (2) permanent loss of or harm to individuals of special-status plant and wildlife species; (3) permanent loss of suitable habitat for special-status species; and (4) permanent loss of wildlife movement and habitat connectivity.

### 6.1.2 Direct Temporary Impacts

Direct temporary impacts refer to a temporal loss of vegetation communities and land covers resulting from vegetation and land cover clearing. The main criterion for direct temporary impacts is that impacts would occur for a short period of time and would be reversible. Areas currently supporting native vegetation temporarily disturbed by construction activities would be restored and revegetated with a native species mix similar to that which existed prior to disturbance following completion of work in the area such that full biological function can be restored. Areas not currently supporting native vegetation would be adequately restored to prevent adverse effects such as erosion or establishment of invasive species following construction.

### 6.1.3 Indirect Impacts

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct construction disturbance zone that may occur during construction (i.e., short-term construction related indirect impacts) or later in time as a result of the development (i.e., long-term, or operational, indirect impacts). Indirect impacts may affect areas within the defined study area, but outside the construction disturbance zone. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to the human occupation of developed areas (i.e., development-related long-term effects) that are adjacent to naturalized areas.

For the proposed Project, it is assumed that the potential indirect impacts resulting from construction activities include fugitive dust from earthmoving activities, leaks or spills from construction equipment, noise from construction activities, and general human presence that may temporarily disrupt species and habitat vitality, as well construction-related soil erosion and runoff that could affect downstream resources.

### 6.1.4 Explanation of Findings of Significance

Impacts to sensitive vegetation communities or riparian habitat, special-status plant species, special-status wildlife species, wildlife corridors and habitat connectivity, and regional resource planning must be analyzed to determine

whether such impacts are significant. CEQA Guidelines Section 15064(b) states that an ironclad definition of "significant" effect is not possible because the significance of an activity may vary with the setting. However, CEQA Guidelines Section 15065(a) lists impacts that are helpful in defining whether a project may have a significant effect on the environment. Mandatory findings of significance occur when there is substantial evidence that a project could: (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, or (5) reduce the number or restrict the range of a rare or endangered plant or animal.

The following are the significance thresholds for biological resources provided in the CEQA Appendix G environmental checklist, which states that a project would potentially have a significant effect if it:

Impact BIO-1. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Impact BIO-2. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?

Impact BIO-3. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-4. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites?

Impact BIO-5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-6. Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The evaluation of whether or not an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or animal. Impacts may be important locally because they result in an adverse alteration of existing site conditions but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact and the offsetting benefits of mitigation are the primary determinants of whether or not that impact can be mitigated to a less-than-significant level.

## 6.2 Impact BIO-1: Special-Status Species

No special-status plant or wildlife species are expected to be directly or indirectly impacted by the Project. This is primarily due to the absence of suitable habitat associated with the species that have recorded occurrences in the Project vicinity.

## 6.3 Impact BIO-2: Riparian Habitat and Sensitive Communities

Riparian habitats or sensitive vegetation communities were not identified on the Project site, and no impacts would occur.

## 6.4 Impact BIO-3: Jurisdictional Wetlands and Waters

### 6.4.1 Direct Impacts

Jurisdictional wetlands and waters were not identified on the Project site. Therefore, there would be no direct or indirect impacts would occur.

### 6.4.2 Indirect Impacts

Potential temporary indirect impacts to the South Fork Santa Clara River and the on-site stormwater channel could result from construction activities and would include impacts from the generation of fugitive dust and the potential introduction of chemical pollutants (including herbicides). Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect wetlands/ jurisdictional waters. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures would be implemented as part of the Storm Water Pollution Prevention Plan (SWPPP) for the Project. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board (SWRCB) in order to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that results in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment. Therefore, temporary indirect impacts would be less than significant due to compliance with regulations.

## 6.5 Impact BIO-4: Wildlife Corridors and Nurseries

The Project site does not function as a wildlife corridor or habitat linkage and does not occur within any designated wildlife corridors of habitat linkages. Direct or indirect impacts to wildlife corridors and habitat connectivity are not anticipated; and would therefore, be less than significant.

The Project would be required to comply with the MBTA and sections 3503, 3503.5, and 3513 of the California Fish and Game Code by preventing the disturbance of nesting birds during construction activities. This would generally involve clearing a project site of all vegetation outside the nesting season (from September 1 through January 31) or if construction would commence within the nesting season (which generally runs from February 1 through August 31 and as early as February 1 for raptors), conducting a pre-construction nesting bird survey to determine the presence of nesting birds or active nests at a construction site. Any active nests and nesting birds must be protected from disturbance by construction activities through buffers between nest sites and construction activities. The buffer areas may be removed only after the birds have fledged. Compliance with the MBTA would ensure that the implementation of the Project would not interfere with the nesting of any native bird species. Therefore, direct and indirect impacts would be less than significant due to compliance with regulations.

## 6.6 Impact BIO-5: City Protected Trees

The City of Santa Clarita's Oak Tree Ordinance (Ordinance 88-34) is the only local policy or ordinance that protects biological resources within the City. A Protected Tree Report was prepared for the Project by a Dudek ISA-Certified Arborist (Appendix B). The Protected Tree identified one protected tree onsite, a coast live oak and one protected tree off-site, a valley oak. Seven non-protected trees were identified on-site. Of these seven non-protected threes, only one tree, an elderberry tree in poor health, would be removed. However, this tree, as well as the remaining non-protected trees, are located on private property and would not require a permit under the City Ordinance for Parkway Trees (Chapter 13.76) for removal or pruning.

One protected tree was identified off-site, a valley oak. A portion of this tree's canopy, and thus its protected tree zone, encroaches into the Project site's boundaries. Project improvements would involve the construction of a retaining wall within a portion of this protected tree zone.

Removal, pruning, or encroachment of the one protected on-site coast live oak tree and the one protected off-site valley oak tree would require issuance of a permit from the City. Based on an evaluation of the Project's design and the tree's location, the Protected Tree Report determined that the on-site coast live oak tree (Tree No. 4) and the off-site valley oak tree (Tree No. 9) would not be removed, but they could be encroached upon during construction. Prior to initiation of ground disturbing activities in proximity to this tree, the Project Applicant would be required to obtain an Oak Tree Encroachment Permit from the City.

Based on a review of the Conceptual Grading Plan, which identifies the limits of disturbance associated with the Project, grading activities would not encroach into the protected tree zone of the valley oak (Tree No. 2). Although the coast live oak (Tree No. 9) is located off-site, a portion of its canopy slightly overhangs into the Project site. The Project involves construction of a retaining wall along the Project site's southern boundary that partially encroaches into the tree's drip line and projected tree zone where these areas overhang on the Project site; however, construction activities associated with the retaining wall would encroach into less than 5% of the overall root system of Tree No. 9. Given this minimal disturbance, with implementation of the tree protection measures provided in the Protected Tree Report, it is anticipated that the tree would not be significantly impacted by the Project.

The Protected Tree Report identified tree protection measures that would minimize Project-related impacts. Among these measures, it is recommended that a tree protection zone be established with protective fencing and signage and that monitoring by conducted by a qualified ISA-certified arborist to ensure tree protection measures are followed. The tree protection measures identified in the Protected Tree Report would be incorporated into the conditions of the Oak Tree Encroachment Permit. Therefore, with adherence to the measures prescribed in the

Protected Tree Report and with issuance of an Oak Tree Encroachment permit, impacts with respect to local policies or ordinances protecting biological resources would be less than significant.

## 6.7 Impact BIO-6: HCP/NCCP

The Study Area is not within any HCP, NCCP, or other approved local, regional, or state HCP (CDFW 2019). The Study Area is not located within a County of Los Angeles designated Significant Ecological Area (County of Los Angeles 2022). Therefore, there is no impacts to HCP, NCCP, or other approved local, regional, or state HCP.

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# Appendix A
Photo Exhibit


**Photo 1.** Representative photo of Urban/Developed portions of the Project site.


**Photo 2.** Representative photo of Disturbed Habitat in the foreground and *Hirschfeldia incana* Provisional Semi-natural Association in the background.


**Photo 3.** Representative photo of Parks and Ornamental Plantings along the Metrolink ROW.

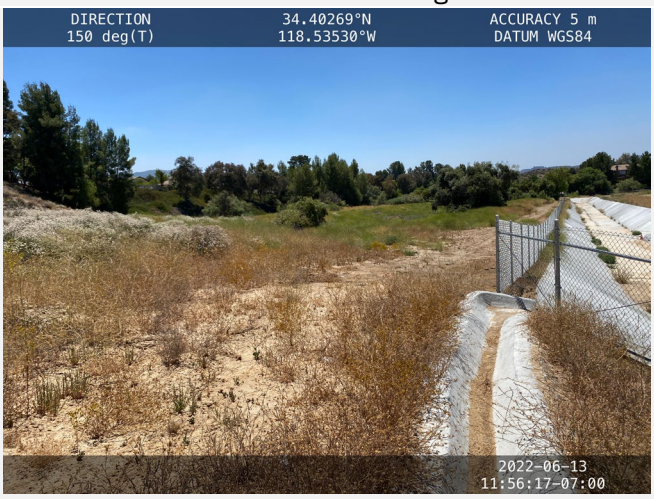


**Photo 4.** Representative photo of *Hirschfeldia incana* Provisional Semi-natural Association in the foreground and *Avena barbata–Avena fatua* Association in the background.


**Photo 5.** Representative photo of the stormwater channel previously constructed along the eastern boundary of the Project site.


**Photo 6.** Representative photo of the coast live oak within the Project site.


**Photo 7.** Representative photo of Urban/Developed north of the Project site with Disturbed Habitat in the foreground.


**Photo 8.** Representative photo of Oak Ridge Drive to the south of the Project site with a residential development with associated ornamental plantings in the background.

# Appendix B
Protected Tree Report

Protected Tree Report

# Santa Clarita Commerce Center Project
# City of Santa Clarita, California

**MAY 2023**

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Printed on 30% post-consumer recycled material.

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## FIGURE



## APPENDICES

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# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| City | City of Santa Clarita |
| GIS | geographic information system |
| ISA | International Society of Arboriculture |
| project | Santa Clarita Commerce Center Project |

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# 1 Introduction

This protected tree report provides an inventory and evaluation of the protected trees located on the Santa Clarita Commerce Center Project (project) site. The project site is located in the City of Santa Clarita, California (Figure 1). As such, this protected tree report covers the regulations and requirements for the protection and removal of protected trees within the jurisdiction of the City of Santa Clarita (City).

COV-SC Land LLC (Project Applicant) retained Dudek to conduct a tree inventory and assessment for the project site. The project site is located at the northeast corner of Oak Ridge Drive and Railroad Avenue in the City. The site encompasses approximately 22.3 acres and is located on Assessor's Parcel Numbers 2836-076-001, -016, and -017, -023 through -028, and 2836-006-029. A Dudek International Society of Arboriculture (ISA)-Certified Arborist performed various functions associated with surveying, inventorying, and evaluating the condition of all protected trees located within the project site to meet the requirements of City Municipal Code Chapters 13.76 Parkway Trees and 17.51.040 Oak Tree Preservation. This protected tree report addresses protected and non-protected trees.

The purpose of this protected tree report is to present the physical characteristics and mapped locations of the site's protected trees that are to be removed or protected in place during the proposed grading and construction-related activities, which are located at the northeast corner of Oak Ridge Drive and Railroad Avenue in the City.

## 1.1 Project Location

The project site is located in the City at the northeast corner of Oak Ridge Drive and Railroad Avenue. The site encompasses approximately 22.3 acres and is located on Assessor's Parcel Numbers 2836-076-001, -016, and -017, -023 through -028, and 2836-006-029.

## 1.2 Site Characteristics

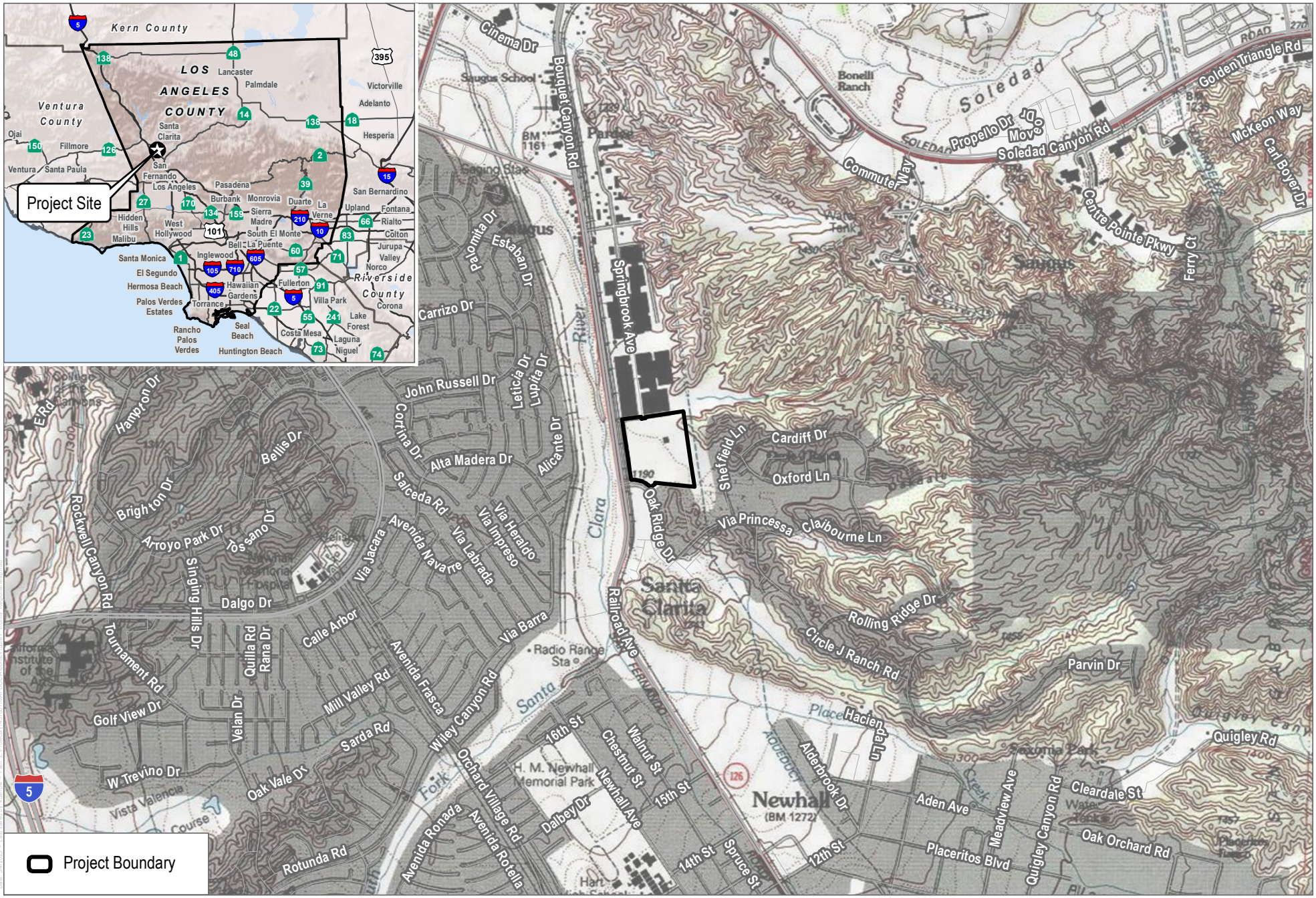
The project site is graded and consists of exposed soils. A portion of the site is currently being used for truck storage on a previously graded building pad. In 2009, the City approved Master Case 06-286, Tentative Parcel Map 062646, and Oak Tree Permit 06-049 for the development of an industrial/business park on 12 industrial lots. An Initial Study and Mitigated Negative Declaration was adopted as part of the previous project. Under these previous approvals, the project site was graded for development, but no structures were constructed.

## 1.3 Project Description

The project would include construction and operation of four warehouse buildings totaling approximately 433,185 square feet of development on an approximately 22.3-acre site. The largest building located in the southeast corner of the site (referred to as Building 1) would be 262,325 square feet; the southwestern building (referred to as Building 2) would be 50,712 square feet; the northwestern building (referred to as Building 3) would be 79,868 square feet; and the northeastern building (referred to as Building 4) would be 40,280 square feet. Each building would contain office/mezzanine space that would total approximately 26,000 square feet across the four buildings.

Access to the project site would be provided via Springbrook Avenue off Oak Ridge Drive, along the southern edge of the project site. Six entrances, ranging from 30 feet wide to 45 feet wide, would be located off Springbrook

Avenue to access the four industrial/warehouse buildings. The Project would provide a total of 545 passenger vehicle parking spots and 49 high dock doors. Approximately 73 passenger vehicle parking spaces would be designated for electric vehicle and clean air vehicle parking. Approximately 10% of the total parking spaces would be equipped with the necessary infrastructure for the future installation of electric vehicle parking spaces.




SOURCE: USGS 7.5-Minute Series Newhall Quadrangle

DUDEK

0 1,000 2,000 Feet

**FIGURE 1**

Local Vicinity and Regional Location Map

Santa Clarita Commerce Center Project

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# 2 Methods

## 2.1 Individual Tree Evaluation

Dudek mapped tree locations for all trees located on the project site. Tree mapping was conducted using a Trimble Pathfinder Pro XH GPS receiver with H-Star Technology. Because tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, Dudek also used an electronic compass and reflectorless, electronic distance-measuring device to map tree locations. The reflectorless, electronic distance-measuring device/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. The electronic tree locations were then evaluated using ArcView 10.4 software to determine the position of the trees related to the project development footprint.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the trunk of each tree. These numbers correspond to the tree attribute information presented in Appendix A, Tree Information Matrix. Tree trunk diameters were measured using a diameter tape providing adjusted figures[1] for diameter measurements when wrapping the tape around an object's circumference. Diameter measurements were taken using protocol provided by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (ISA 2000). The trunk diameter measurement of each tree was taken at 4.5 feet above the ground along the trunk axis, with common exceptions. For example, in cases where a tree's trunk was located on a slope, the 4.5-foot distance was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of a tree's trunk, respectively), and the measurement was made at this point. Tree height was visually estimated by experienced tree surveyors. Tree canopy diameters were typically estimated by "pacing-off" the measurement based on the investigator's knowledge of their stride length or by visually estimating the canopy width. The crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter. Additionally, Dudek arborists calculated composite trunk diameters for multiple-stem trees according to ISA standards. According to these standards, the sum of all stem diameters was calculated to ascertain composite trunk diameter values for multiple-stem trees.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to health factors such as insect and pathogen damage, mechanical damage, presence of decay, presence of wilted or dead leaves, and wound closure. Tree health and structure were graded as good, fair, poor, and dead, with "good" representing no apparent problems, and "dead" representing a dying and/or dead tree. Good condition trees exhibit acceptable vigor, healthy foliage, and adequate structure, and lack any major maladies. Fair condition trees are typically those with few maladies but declining vigor. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common urban forestry standards.

Individual tree attribute data is presented in Appendix A, and tree locations are presented in Appendix B, Tree Location and Protection Exhibit.

[1] Inches divided by 3.14 ($\pi$) provide diameter measurement in inches.

## 2.2 Tree Impact Analysis

Dudek's ISA-certified arborists determined tree impacts by conducting a spatial analysis of individual tree locations and canopy extents visible in project site aerial imagery in relation to the proposed development plan. The tree dataset, digital aerial imagery, and site development planning data were evaluated using geographic information system (GIS) software to determine where individual trees were located in relation to proposed development areas. Trees are considered impacted when anticipated disturbance to the tree is either 5 feet outside the dripline, or 15 feet from the trunk of a tree, whichever distance is greater. Trees with project-related construction activity occurring within their driplines are considered encroached upon for the purposes of this report. The impact analysis results were used to determine overall tree impacts for the project site.

## 2.3 Scope of Work Limitations

No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation or relocation in an urban setting be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation or relocation plans.

# 3 Observations

## 3.1 Individual Trees

A total of seven non-protected trees and two protected oak trees were inventoried within and immediately adjacent to the project area. In total, eight trees are located on-site (Tree Nos. 1 through 8) and one (Tree No. 9) is located on private property adjacent to the site. Of the eight trees found on site, only one tree, Tree No. 2, meets the City's definition of a protected tree. The single tree, Tree No. 9, located on the adjacent private property, meets the City's definition of a protected tree. Appendix B presents the location of the individual trees mapped and assessed for the project. The trees include various trunk and branch maladies and health and structural conditions. As presented in Appendix A, 11.11% of the individually mapped trees (1 tree) exhibit good health; 77.78% (7 trees) are in fair health; 11.11% (1 tree) is in poor health. Structurally, 0% (0 trees) of the individually mapped trees are considered to exhibit good structure; 55.56% (5 trees) exhibit fair structure; 22.22% (2 trees) exhibit poor structure; 11.11% (1 tree) exhibit very poor structure; and 11.11% (1 tree) exhibit critical structure. The trees in good condition exhibit acceptable vigor, healthy foliage, and adequate structure, and lack any major maladies[2]. Trees in fair condition are typical, with few maladies but declining vigor. Trees in poor condition exhibit declining vigor, unhealthy foliage, poor branch structure, and excessive lean. Tree No. 2, a coast live oak (*Quercus agrifolia*), showed signs of a beehive within a cavity.

Trees within and adjacent to the project site vary in size and stature according to species and available growing space. The site's trees are composed of single- and multi-stemmed trees, with single-stemmed trunk diameters that range from 3 to 65 inches, and multi-stemmed trunk diameters that range from 4 to 75 inches. Tree heights vary from 7 to 65 feet. Tree canopy extents range from 5 feet to approximately 70 feet across at their widest point.

[2] See Section 2.1, Methods, for a discussion of how tree health is determined.

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# 4 Regulatory Definitions and Requirements

A tree inventory and assessment of the project site was performed pursuant to City Municipal Code Chapters 13.76 Parkway Trees and 17.51.040 Oak Tree Preservation. The following is an outline of the key aspects of the ordinance.

## 4.1 Definitions

### Municipal Code Chapter 13.76 – Parkway Trees

For this project, trees subject to City permit requirements include those defined by Municipal Code Chapter 13.76, as follows:

- 13.76.030 Street Trees Property of City.

  All trees and shrubs planted or existing in the city's street, park, public right-of-way or easement or other public place within the City limits and so considered and/or dedicated as City property, is the property of the City (Ord. 90-15, 7/10/90).

- 13.76.100 Construction/Subdivision Requests, Alteration or Removal of Structures Affecting Street Trees.

  A. Permit Required. When the construction, repair, alteration or removal of a structure necessitates the planting, trimming, pruning or removal of a street tree, such work may be undertaken only upon the issuance of a written permit by the Director and at the expense of the applicant.

### Municipal Code Chapter 17.51.040 – Oak Tree Preservation

For this project, trees subject to City permit requirements include those defined by Municipal Code Chapter 17.51.040, as follows:

B. Oak Tree Permit. No person shall cut, prune, remove, relocate, endanger, damage or encroach into the protected zone of any oak tree on any public or private property within the City except in accordance with the conditions of a valid oak tree permit issued by the City, in conformance with Section 17.23.170 (Oak Tree Permit).

For the purposes of this report, no trees are located in a City-owned property, and therefore none are considered a parkway tree. However, Tree No. 2 is a coast live oak and as such is considered a protected tree by the City's oak tree preservation ordinance and would require a permit issued by the City if removal is needed. Trees with protected zones that have been encroached upon would also be considered impacted. The tree protection zone is considered the area within the dripline of a tree and extending from there to a point at least 5 feet outside the dripline, or 15 feet from the trunk of a tree, whichever distance is greater.

# 4.2 Regulations

## City of Santa Clarita – Municipal Code Chapter 17.51.040 Oak Tree Preservation

The purpose of Chapter 17.51.040 is to protect and preserve oak trees in the City and to provide regulatory measures designed to accomplish this purpose. The preservation program contributes to the welfare and aesthetics of the community and retains the great historical and environmental value of these trees. It shall be the policy of the City to require the preservation of all healthy oak trees unless compelling reasons justify the removal of such trees. This policy shall apply to the removal, pruning, cutting, and/or encroachment into the protected zone of oak trees.

## City of Santa Clarita – Municipal Code Chapter 13.76.010 Parkway Trees

Chapter 13.76.010 is adopted for the purpose of establishing rules and regulations relating to the planting, care, maintenance, and removal of trees, shrubs, and any other plantings in public areas, rights-of-way and easements, and relating to certain activities on private property (Ordinance 90-15, 7/10/90).

# 5 Impacts

The Project's development footprint is shown in the Project's Conceptual Grading Plan (Appendix C). It depicts all improvements associated with the Project. Tree impacts were determined using GIS software and spatial locations of trees relative to the Project's development footprint. Impacts were further determined based on Dudek's experience with native and non-native trees and their typical reactions to root disturbances from construction activities, such as soil compaction, excavation, and grading. The impact analysis results presented herein were used for developing appropriate mitigation measures for the Project.

For the purposes of this report, direct impacts to trees can be classified as a removal or encroachment. Trees are identified for removal when they are located within the permanent impact boundary, as shown in Appendix B, which presents the location of the individual trees mapped and assessed for the proposed project. Trees are identified as encroachment if the tree canopy is within 5 feet of the permanent impact boundary, or if the tree trunk is within 15 feet of the permanent impact boundary. Direct impacts to encroachment trees include root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, among others.

In general, there is a great deal of variation in tolerance to construction impacts among tree species, ages, and conditions. It is important to know how a certain tree, based on its species, age, and condition, would respond to different types of disturbance. The trees on the project site are of varying ages and conditions. Mature specimens are typically more sensitive to root disturbance and grade changes. In general, healthy trees will respond better to changes in their growing environment. Trees of poor health or stressed conditions may not be vigorous enough to cope with direct or indirect impacts from construction activities.

Impact totals presented are based on conceptual disturbance limits and development plans as of the date of this report. As such, the actual number of trees subject to direct impacts may change as the detailed site planning process proceeds. Actual tree impact numbers may be lower than anticipated and as presented in this report once detailed plans are developed. Measures to reduce impacts are encouraged and would be implemented in the field during grading operations. Following completion of construction-related disturbances, actual protected tree impact totals would be updated and provided, along with revised mitigation totals.

## 5.1 Direct Tree Impacts

For the purposes of this protected tree report, direct impacts are those associated with tree removal or earth-moving encroachment activities within the tree-protected zone (canopy dripline plus 5 feet or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside the permanent impact boundary. Encroachment is expected when soil and roots are disturbed within the tree protected zone. Given that direct impacts include encroachment within the tree protected zone, indirect impacts are treated as direct impacts and thus no indirect impacts would occur.

Direct tree impacts would result in the removal of one non-protected elderberry tree in poor health (Tree No. 1) and the potential encroachment of the two protected oak trees (Tree Nos. 2 and 9). Tree No. 2 is located on the Project site. However, grading activities would not encroach into the tree's drip line/protected tree zone, as demonstrated within the Conceptual Grading Plan (Appendix C). Tree No. 9 is located off-site, but a portion of its canopy slightly overhangs into the Project site. The Project involves construction of a retaining wall along the Project site's southern boundary that partially encroaches into the tree's drip line and projected tree zone where these areas overhang on

the Project site; however, construction activities associated with the retaining wall would encroach into less than 5% of the overall root system of Tree No. 9. Given this minimal disturbance, with implementation of the tree protection measures provided in this report, it is anticipated that the tree would not be significantly impacted by the Project. The locations of trees along with tree protection zones are presented in Appendix B. Measures to minimize the extent of impacts to preserved trees are provided in Appendix D, Tree Protection Measures.

# 6 Tree Protection Measures

In total, six non-protected trees and two protected oak trees located on and adjacent to the project site are recommended for preservation. Tree protection is a key component in the continued success of the trees on the site, especially those immediately adjacent (encroachment trees) to the project footprint. As such, and in an effort to enhance the survivability of those trees designated for retention adjacent to the project site and to minimize project-related impacts, Dudek recommends tree protection through implementation of the Tree Protection Measures provided in Attachment D. Furthermore, Dudek recommends that all work occurring within the tree protection zone of the retained trees be monitored by a qualified ISA-certified arborist to ensure tree protection measures are followed and to assess tree impacts that may lead to tree failure.

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# 7 Tree Encroachment Permit

Removal, pruning, or encroachment of the one protected on-site coast live oak tree and the one protected off-site valley oak tree would require issuance of a permit from the City. Based on an evaluation of the Project's design and the tree's location, the Protected Tree Report determined that the on-site coast live oak tree (Tree No. 4) and the off-site valley oak tree (Tree No. 9) would not be removed, but they could be encroached upon during construction. Prior to initiation of ground disturbing activities in proximity to this tree, the Project Applicant would be required to obtain an Oak Tree Encroachment Permit from the City.

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# 8 Conclusion

The project site contains seven non-protected trees and two protected oak trees (one of which is located off-site). All nine trees are located off City property and, with the exception of the two oak trees, would not require a permit under the City ordinance for Parkway Trees, Chapter 13.76, if removal or pruning were required. Tree No. 2 and 9 are protected oak trees and would require a permit if removal, encroachment, or pruning were required according to the City Oak Tree Preservation ordinance, Chapter 17.51.040. Based on an evaluation of the site, one non-protected tree (Tree No. 1) will require removal, and the two oak trees will be encroached upon. According to the City Municipal Code, encroachment into the protected zone of any oak tree is a direct impact that requires the issuance of an Oak Tree Permit and implementation of Tree Protection Measures is required. As such, an encroachment permit will be required by the City. Furthermore, in an effort to enhance the survivability of those trees designated for retention adjacent to the project site and to minimize potential project-related impacts, Dudek recommends tree protection through implementation of the Tree Protection Measures provided in Appendix D. Furthermore, Dudek recommends that all work occurring with the tree protection zone of the retained trees be monitored by a qualified ISA-certified arborist to ensure tree protection measures are followed and to assess tree impacts that may lead to tree failure.

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# 9 Arborist's Disclosure Statement

This protected tree report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an ISA-certified arborist and reasonable reliance on the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees; recommend measures to enhance the beauty and health of trees; and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and belowground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature, including, without limitation, storms of sufficient strength, which can cause an apparently healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural, and/or environmental conditions. Further, there is no guaranty or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this oak tree report nor Dudek assume any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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# 10 References Cited

ISA (International Society of Arboriculture). 2000. *Guide for Plant Appraisal*. 9th ed. Council of Tree and Landscape Appraisers.

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# Appendix A

Tree Information Matrix

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| Tree No. | Botanical Name | Common Name | No of Stems | Individual Stem Diameters (in.) | | | | | | Cumulative Stem Diameter (in.) | Height (ft.) | Crown Width (ft.) | Health | Structure | Notes | Disposition | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | D1 | D2 | D3 | D4 | D5 | D6 | | | | | | | | | |
| 1 | *Sambucus nigra* | Elderberry | 4 | 2 | 1 | 2 | 2 | 0 | 0 | 4 | 7 | 5 | Poor | Very Poor | | Remove | 6399923.97959 | 1969697.97864 |
| 2 | *Quercus agrifolia* | Coast live oak | 2 | 70 | 27 | 0 | 0 | 0 | 0 | 75 | 45 | 55 | Fair | Poor | Large stem has failed, beehive in cavity at base of tree | Preserve | 6400138.85813 | 1969574.01207 |
| 3 | *Sambucus nigra* | Elderberry | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 5 | Fair | Fair | | Preserve | 6400136.83250 | 1969533.26531 |
| 4 | *Sambucus nigra* | Elderberry | 2 | 13 | 18 | 0 | 0 | 0 | 0 | 22 | 15 | 20 | Fair | Fair | Could not access, no tag | Preserve | 6400280.90823 | 1969058.82931 |
| 5 | *Sambucus nigra* | Elderberry | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 14 | 10 | 15 | Fair | Critical | Fallen, trunk split | Preserve | 6400295.49391 | 1968843.01285 |
| 6 | *Sambucus nigra* | Elderberry | 3 | 8 | 9 | 12 | 0 | 0 | 0 | 17 | 12 | 12 | Fair | Fair | No tag no access | Preserve | 6400302.03876 | 1968816.90611 |
| 7 | *Sambucus nigra* | Elderberry | 4 | 8 | 4 | 15 | 4 | 0 | 0 | 18 | 18 | 15 | Fair | Fair | | Preserve | 6400302.89116 | 1968785.66657 |
| 8 | *Salix gooddingii* | Goodding's willow | 1 | 27 | 0 | 0 | 0 | 0 | 0 | 27 | 50 | 40 | Good | Fair | | Preserve | 6400317.33916 | 1968650.61627 |
| 9 | *Quercus lobata* | Valley oak | 1 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 65 | 70 | Fair | Poor | No tag, on adjacent private property | Preserve | 6400054.70955 | 1968515.32948 |

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# Appendix B

Tree Location and Protection Exhibit

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SOURCE: Bing Maps 2021

DUDEK

0 100 200 Feet

**APPENDIX B**

Tree Locations

Santa Clarita Commerce Center Project

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# Appendix C
Conceptual Grading Plan

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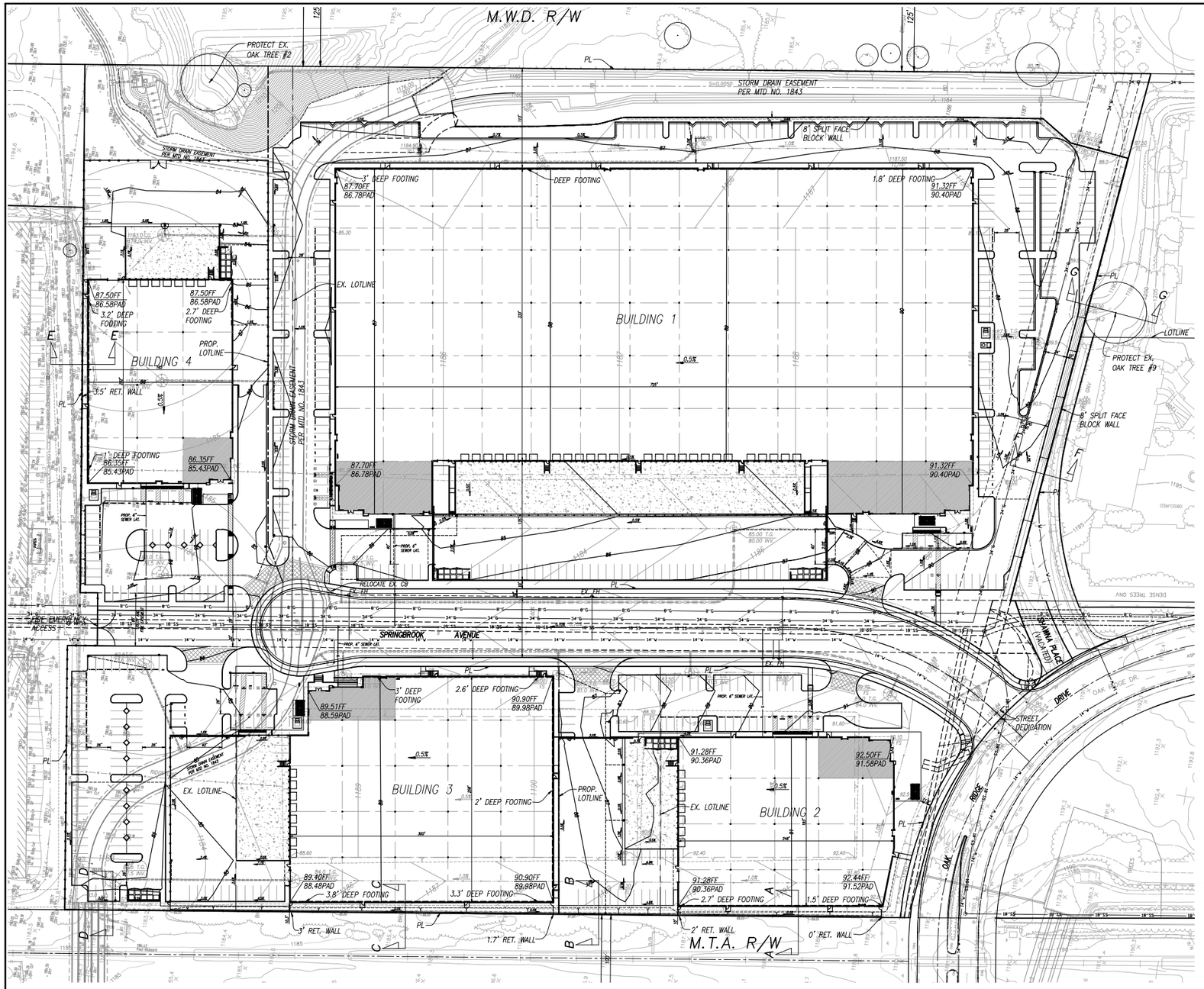


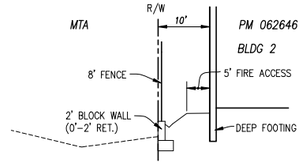


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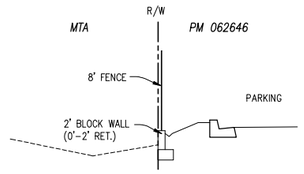


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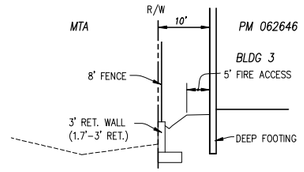


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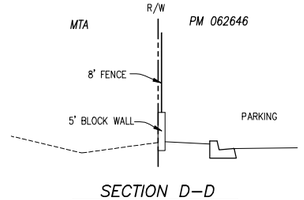


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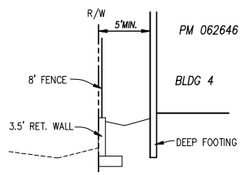


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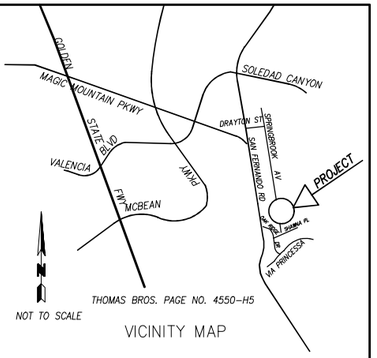
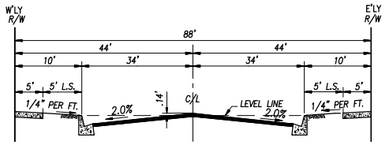
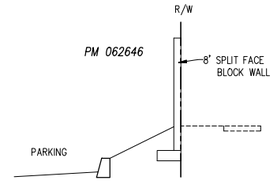



THOMAS BROS. PAGE NO. 4550–H5
NOT TO SCALE

VICINITY MAP




TYPICAL SECTION
NO SCALE
SPRINGBROOK AVENUE

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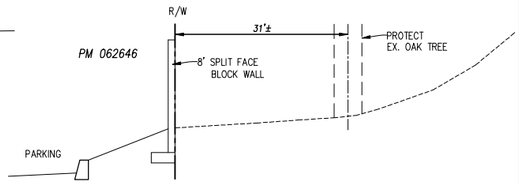


SECTION G–G
NOT TO SCALE

GEOTECHNICAL REVIEW BY:
GeoSoils Consultants Inc.
6634 VALJEAN AVENUE
VAN NUYS CA, 91406
TEL. (818) 785-2158 FAX. (818) 785-1548

PLANS PREPARED UNDER THE DIRECTION OF:
LANCE R. PUTNAM RCE# 2469 DATE

PREPARED FOR:
COVINGTON DEVELOPMENT PARTNERS LLC
3 CORPORATE PLAZA, SUITE 230
NEWPORT BEACH, CA 92660
ATTN: DANA WHITMER (949)-514-0274

PREPARED BY:
SIKAND
Engineering | Planning | Surveying
15230 Burbank Blvd.
Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

REGISTERED PROFESSIONAL ENGINEER
DOUG FARMER
No.49041
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA
PROJECT ENGINEER DATE

| NO. | REVISION | REVISED BY (SIGNATURE/PRINT NAME & NUMBER) | CITY APPROVALS | APPROVAL DATE |
|---|---|---|---|---|
| △ | | | | |

CITY OF SANTA CLARITA
PRELIMINARY GRADING PLAN
PARCEL MAP 062646

SCALE: AS SHOWN
DATE: 05/08/2023
JOB NO. 5099-037-02E
CASE NO:
SHEET: 1 OF 1

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# Appendix D
Tree Protection Measures

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# Tree Protection Measures

The following tree protection measures are provided as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

## Tree Protection Measures Prior to Construction

Prior to any construction activity (drainage, demolition, material removal or delivery), oak and landmark trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

**Fencing.** A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) with canopies that fall within 30 feet of construction activity. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius plus 5 feet (protected tree zone). For any trees that would be encroached upon by construction activities, fencing shall be placed as far away from trunk of the tree as possible while still allowing the required construction activities to proceed. This fencing will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

**Pre-Construction Meeting.** A pre-construction meeting shall be held between all contractors and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

## Protection and Maintenance During Construction

Once construction activities have begun, the following measures shall be adhered to:

**Avoidance:** Signs, ropes, cables, or any other items shall not be attached to any tree.

**Equipment Operation and Storage.** Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the City Arborist and under the supervision of an ISA Certified Arborist

**Storage and Disposal.** Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree protection zone; it is important

to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

**Moving Construction Materials.** Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

**Grade Changes.** Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

**Root Pruning.** Except where specifically approved in writing, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction, forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing the root system. The trench shall be made no deeper than necessary.

**Trenching.** Unless a Tree Permit has been issued for trenching activity within the fenced tree protection zone, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary

**Irrigation.** Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk***.

**Pruning.** Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

**Washing.** Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the

construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

**Inspection.** An ISA Certified Arborist shall inspect the trees on at least a monthly basis for the duration of construction activity. A summary report documenting observations and management recommendations shall be submitted to the owner following each inspection. Photographs of representative trees are to be included in each report.

# Maintenance After Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

**Mulch.** Provide a 4-inch mulch layer of mulch under the canopy of trees. Mulch shall be clean and organic and provide long-term soil conditioning, soil moisture retention, and soil temperature control.

**Pruning.** Pruning should only be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

**Watering.** Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

**Watering Adjacent Plant Material.** All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

**Spraying.** If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

**Inspection.** All trees within 30 feet of construction activity shall be monitored by an ISA Certified Arborist for the first two years after construction completion. An annual monitoring report shall be submitted to the City Arborist. Each report shall summarize the inspection efforts, document observations and management actions taken, include photographs of each tree, and compare postconstruction tree conditions with the original, pre-construction baseline condition. If any retained trees die within this inspection period, they shall be replaced at a ratio approved by the City.

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# Appendix C

Assessment of Special-Status Plant Species Potentially Occurring in the Study Area

| Scientific Name | Common Name | Status[1] (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Allium howellii* var. *clokeyi* | Mt. Pinos onion | None/None/1B.3 | Great Basin scrub, Meadows and seeps (edges), Pinyon and juniper woodland/perennial bulbiferous herb/Apr–June/4,265–6,065 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Arenaria paludicola* | marsh sandwort | FE/SE/1B.1 | Marshes and swamps (freshwater or brackish); sandy, openings/perennial stoloniferous herb/May–Aug/5–560 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Astragalus brauntonii* | Braunton's milk-vetch | FE/None/1B.1 | Chaparral, Coastal scrub, Valley and foothill grassland; recent burns or disturbed areas, usually sandstone with carbonate layers/perennial herb/Jan–Aug/10–2100 | Not expected to occur. Suitable micro-habitat (sandstone with carbonate layers) for the species is not present in the Study Area. |
| *Berberis nevinii* | Nevin's barberry | FE/SE/1B.1 | Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2,705 | Not expected to occur. This species is a conspicuous perennial shrub that would have been observed, if present, during the site visit. |
| *Calochortus clavatus* var. *gracilis* | slender mariposa lily | None/None/1B.2 | Chaparral, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/Mar–June (Nov)/ 1045–3280 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum Association*) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |
| *Calochortus fimbriatus* | late-flowered mariposa lily | None/None/1B.3 | Chaparral, Cismontane woodland, Riparian woodland; often serpentinite/perennial bulbiferous herb/June–Aug/900–6,250 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Calochortus palmeri* var. *palmeri* | Palmer's mariposa lily | None/None/1B.2 | Chaparral, Lower montane coniferous forest, Meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/2,325–7,840 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Castilleja gleasoni* | Mt. Gleason paintbrush | None/SR/1B.2 | Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; granitic/perennial herb (hemiparasitic)/May–June (Sep)/ 2,180–7,115 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Chorizanthe parryi* var. *fernandina* | San Fernando Valley spineflower | None/SE/1B.1 | Coastal scrub (sandy), Valley and foothill grassland/annual herb/Apr–July/490–4,000 | Not expected to occur. Suitable habitat is present in the Study Area, but not in the project site, and the species does not have any modern records east of Interstate 5 despite numerous modern development projects occurring that would have had rare plants surveys. |
| *Chorizanthe parryi* var. *parryi* | Parry's spineflower | None/None/1B.1 | Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; sandy or rocky, openings/ annual herb/Apr–June/900–4,000 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum Association*) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |
| *Deinandra minthornii* | Santa Susana tarplant | None/SR/1B.2 | Chaparral, Coastal scrub; rocky, often on sandstone /perennial deciduous shrub/July–Nov/915–2495 | Not expected to occur. Suitable micro-habitat (sandstone) for the species is not present in the Study Area. |
| *Dodecahema leptoceras* | slender-horned spineflower | FE/SE/1B.1 | Chaparral, Cismontane woodland, Coastal scrub (alluvial fan); sandy or gravelly/annual herb/Apr–June/ 655–2,490 | Not expected to occur. Suitable micro-habitat (alluvial fans) for the species is not present in the Study Area. |
| *Galium grande* | San Gabriel bedstraw | None/None/1B.2 | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest/ perennial deciduous shrub/Jan–July/1,390–4,920 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Helianthus inexpectatus* | Newhall sunflower | None/None/1B.1 | Marshes and swamps, Riparian woodland; freshwater seeps/ perennial rhizomatous herb/Aug–Oct/1,000–1,000 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Helianthus nuttallii* ssp. *parishii* | Los Angeles sunflower | None/None/1A | Marshes and swamps (coastal salt and freshwater)/perennial rhizomatous herb/Aug–Oct/ 30–5,000 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Horkelia cuneata* var. *puberula* | mesa horkelia | None/None/1B.1 | Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July (Sep)/225–2,655 | Moderate potential to occur. Suitable habitat (*Eriogonum fasciculatum Association*) is present in the eastern portion of Study Area; however, it is not expected within the Project site. |
| *Lepechinia rossii* | Ross' pitcher sage | None/None/1B.2 | Chaparral/perennial shrub/May–Sep/1,000–2,590 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Lupinus paynei* | Payne's bush lupine | None/None/1B.1 | Coastal scrub, Riparian scrub, Valley and foothill grassland; Sandy/ perennial shrub/Mar–Apr (May–July)/720–1,375 | Not expected to occur. This species is a conspicuous perennial shrub that would have been observed, if present, during the site visit. |
| *Malacothamnus davidsonii* | Davidson's bush-mallow | None/None/1B.2 | Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/ perennial deciduous shrub/June–Jan/605–3,740 | Not expected to occur. This species is a conspicuous perennial shrub that would have been observed, if present, during the site visit. |
| *Nasturtium gambelii* | Gambel's water cress | FE/ST/1B.1 | Marshes and swamps (freshwater or brackish)/perennial rhizomatous herb/Apr–Oct/15–1,080 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Navarretia fossalis* | spreading navarretia | FT/None/1B.1 | Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools; alkali or clay soil with hydrological regimes similar to vernal pools/ annual herb/Apr–June/95–2,145 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Navarretia ojaiensis* | Ojai navarretia | None/None/1B.1 | Chaparral (openings), Coastal scrub (openings), Valley and foothill grassland; clay/annual herb/May–July/900–2,030 | Not expected to occur. The Study Area lacks suitable soils to support this species. |

| Scientific Name | Common Name | Status[1] (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Navarretia setiloba* | Piute Mountains navarretia | None/None/1B.1 | Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; depressions in clay or gravelly loam/annual herb/Apr–July/ 935–6,885 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Opuntia basilaris* var. *brachyclada* | short-joint beavertail | None/None/1B.2 | Chaparral, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland/perennial stem succulent/Apr–June(Aug)/1,390–5,905 | Not expected to occur. The Study Area lacks suitable habitat for this species. |
| *Orcuttia californica* | California Orcutt grass | FE/SE/1B.1 | Vernal pools/annual herb/Apr–Aug/ 45–2,165 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Pseudognaphalium leucocephalum* | white rabbit-tobacco | None/None/2B.2 | Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly benches, dry stream bottoms, canyon bottoms/perennial herb/(July)Aug–Nov(Dec)/0–6,885 | Not expected to occur. Suitable micro-habitat (sandy, gravelly benches, dry stream bottoms, canyon bottoms) for the species is not present in the Study Area. |
| *Senecio aphanactis* | chaparral ragwort | None/None/2B.2 | Chaparral, Cismontane woodland, Coastal scrub; alkaline flats or dry open rocky areas/annual herb/Jan–Apr(May)/45–2,620 | Not expected to occur. Suitable micro-habitat (alkaline flats or dry open rocky areas) for the species is not present in the Study Area. |
| *Streptanthus campestris* | southern jewelflower | None/None/1B.3 | Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; rocky/perennial herb/ (Apr)May–July/2,950–7,545 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Stylocline masonii* | Mason's neststraw | None/None/1B.1 | Chenopod scrub, Pinyon and juniper woodland; Open, loose sand in washes and flats/annual herb/Mar–May/325–3,935 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State/CRPR) | Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet) | Potential to Occur[2] |
|---|---|---|---|---|
| *Symphyotrichum greatae* | Greata's aster | None/None/1B.3 | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; mesic/perennial rhizomatous herb/June–Oct/980–6,590 | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

**Notes:**

[1] **Status Abbreviations**

**Federal and State Statuses**

FE: Federally listed as endangered
FT: Federally listed as threatened
SE: State listed as endangered
ST: State listed as threatened
SR: State designated as rare

**CRPR: California Rare Plant Rank**

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
- Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- Moderately threatened in California (20% - 80% of occurrences threatened/moderate degree and immediacy of threat)
- Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat)

[2] Refers to records within the Newhall U.S. Geological Survey (USGS) 7.5-minute quadrangle and surrounding eight quadrangles (i.e., Santa Susana, Oat Mountain, San Fernando, Whitaker Peak, Warm Springs Mountain, Green Valley, Val Verde, and Mint Canyon)

# References

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# Appendix D

Assessment of Special-Status Wildlife Species Potentially Occurring in the Study Area

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Bombus crotchii* | Crotch bumble bee | None/None | Open grassland and scrub communities supporting suitable floral resources. | Moderate potential to occur in the Study Area, but not expected on the Project site, except as a transient. The species may forage in the Eriogonum fasciculatum Association east of the Project site. |
| *Branchinecta lynchi* | vernal pool fairy shrimp | FT/None | Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Euphydryas editha quino* | quino checkerspot butterfly | FE/None | Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta, Antirrhinum coulterianum*, and *Plantago patagonica* (Silverado Occurrence Complex) | Not expected to occur. The Study Area does not contain host plant species. In addition, this species is considered extirpated from Los Angeles County by the USFWS (CDFW 2021a; USFWS 2019). |
| *Streptocephalus woottoni* | Riverside fairy shrimp | FE/None | Vernal pools, non-vegetated ephemeral pools | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| **Fish** | | | | |
| *Catostomus santaanae* | Santa Ana sucker | FT/None | Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Gasterosteus aculeatus williamsoni* | unarmored threespine stickleback | FE/FP, SE | Slow-moving and backwater areas | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Gila orcuttii* | arroyo chub | None/SSC | Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Rhinichthys osculus* ssp. *3* | Santa Ana speckled dace | None/SSC | Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| **Amphibians** | | | | |
| *Anaxyrus californicus* | arroyo toad | FE/SSC | Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Rana boylii* | foothill yellow-legged frog | None/SE, SSC | Rocky streams and rivers with open banks in forest, chaparral, and woodland | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Rana draytonii* | California red-legged frog | FT/SSC | Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Rana muscosa* | mountain yellow-legged frog | FE/SE | Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Spea hammondii* | western spadefoot | None/SSC | Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Taricha torosa* (Monterey Co. south only) | California newt | None/SSC | Wet forests, oak forests, chaparral, and rolling grassland | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| **Reptiles** | | | | |
| *Actinemys marmorata* | northwestern pond turtle | None/SSC | Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Anniella stebbinsi* | southern California legless lizard | None/SSC | Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Arizona elegans occidentalis* | California glossy snake | None/SSC | Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas. | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Aspidoscelis tigris stejnegeri* | San Diegan tiger whiptail | None/SSC | Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas. | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Phrynosoma blainvillii* | Blainville's horned lizard | None/SSC | Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Thamnophis hammondii* | two-striped gartersnake | None/SSC | Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| **Birds** | | | | |
| *Ammodramus savannarum* (nesting) | grasshopper sparrow | None/SSC | Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Athene cunicularia* (burrow sites & some wintering sites) | burrowing owl | BCC/SSC | Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Buteo swainsoni* (nesting) | Swainson's hawk | BCC/ST | Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture | Not expected to occur for nesting in the Study Area but may occur as a transient. |
| *Coccyzus americanus occidentalis* (nesting) | western yellow-billed cuckoo | FT/SE | Nests in dense, wide riparian woodlands and forest with well-developed understories | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Elanus leucurus* (nesting) | white-tailed kite | None/FP | Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands | Not expected to occur for nesting but may forage in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Empidonax traillii extimus* (nesting) | southwestern willow flycatcher | FE/SE | Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Gymnogyps californianus* | California condor | FE/FP, SE | Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large animal carcasses can be detected | Not expected to occur for breeding or foraging but may be transient over the Study Area. |
| *Icteria virens* (nesting) | yellow-breasted chat | None/SSC | Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Lanius ludovicianus* (nesting) | loggerhead shrike | BCC/SSC | Nests and forages in open habitats with scattered shrubs, trees, or other perches | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Polioptila californica californica* | coastal California gnatcatcher | FT/SSC | Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. Additionally, there are few recent records of the species from the Santa Clarita Valley, which is at the northern limits of the species range. |
| *Pyrocephalus rubinus* (nesting) | vermilion flycatcher | None/SSC | Nests in riparian woodlands, riparian scrub, and freshwater marshes; typical desert riparian with cottonwood, willow, mesquite adjacent to irrigated fields, ditches, or pastures | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Riparia riparia* (nesting) | bank swallow | None/ST | Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Setophaga petechia* (nesting) | yellow warbler | BCC/SSC | Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Spinus lawrencei* (nesting) | Lawrence's goldfinch | BCC/None | Nests and forages in open oak, arid woodlands, and chaparral near water | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| *Vireo bellii pusillus* (nesting) | least Bell's vireo | FE/SE | Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season | Not expected to occur. Suitable habitat for the species is not present in the Study Area. |
| **Mammals** | | | | |
| *Antrozous pallidus* | pallid bat | None/SSC | Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees | Low potential to occur for roosting and may forage over the Study Area. Suitable roosting habitat (trees) for the species is present in the Study Area; however, no trees are expected to be removed by the Project. |
| *Corynorhinus townsendii* | Townsend's big-eared bat | None/SSC | Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels | Not expected to occur for roosting but may forage over the Study Area. Suitable roosting habitat for the species is not present in the Study Area. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Euderma maculatum* | spotted bat | None/SSC | Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes | Not expected to occur for roosting but may forage over the Study Area. Suitable roosting habitat for the species is not present in the Study Area. |
| *Eumops perotis californicus* | western mastiff bat | None/SSC | Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, and tunnels | Not expected to occur for roosting but may forage over the Study Area. Suitable roosting habitat for the species is not present in the Study Area. |
| *Lepus californicus bennettii* | San Diego black-tailed jackrabbit | None/SSC | Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Macrotus californicus* | Californian leaf-nosed bat | None/SSC | Riparian woodlands, desert wash, desert scrub; roosts in mines and caves, occasionally buildings | Not expected to occur for roosting but may forage over the Study Area. Suitable roosting habitat for the species is not present in the Study Area. |
| *Neotoma lepida intermedia* | San Diego desert woodrat | None/SSC | Coastal scrub, desert scrub, chaparral, cacti, rocky areas | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |
| *Onychomys torridus ramona* | southern grasshopper mouse | None/SSC | Grassland and sparse coastal scrub | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |

| Scientific Name | Common Name | Status[1] (Federal/State) | Habitat | Potential to Occur[2] |
|---|---|---|---|---|
| *Puma concolor* (Southern California/ Central Coast Evolutionarily Significant Unit) | mountain lion | None/CST | Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts | Moderate potential to occur in the Study Area as a transient. The species is expected to occur in the Study Area, specifically the eastern-northeastern portion as a transient during foraging, movement through its home range, or during the dispersal of young. Natal dens of the species are not expected since females typically avoid areas of human activity (Center for Biological Diversity and the Mountain Lion Foundation 2019). |
| *Taxidea taxus* | American badger | None/SSC | Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils | Low potential to occur in the Study Area. The species could occur in the east portions of the Study Area; however, there is no suitable habitat within the Project site. |

**Notes:**

[1] **Status Abbreviations**

BCC: Bird of Conservation Concern (U.S. Fish and Wildlife Service)
FE: Federally listed as endangered
FT: Federally listed as threatened
FDL: Federally de-listed
SE: State listed as endangered
ST: State listed as threatened
SDL: State de-listed
CSE: Candidate for State Endangered
CST: Candidate for State Threatened
SSC: California Species of Special Concern
FP: California Fully Protected Species

[2] Refers to records within the Newhall U.S. Geological Survey (USGS) 7.5-minute quadrangle and eight surrounding quadrangles (i.e., Santa Susana, Oat Mountain, San Fernando, Whitaker Peak, Warm Springs Mountain, Green Valley, Val Verde, and Mint Canyon)

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Protected Tree Report

# Santa Clarita Commerce Center Project
# City of Santa Clarita, California

**MAY 2023**

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## FIGURE



## APPENDICES

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# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| City | City of Santa Clarita |
| GIS | geographic information system |
| ISA | International Society of Arboriculture |
| project | Santa Clarita Commerce Center Project |

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# 1 Introduction

This protected tree report provides an inventory and evaluation of the protected trees located on the Santa Clarita Commerce Center Project (project) site. The project site is located in the City of Santa Clarita, California (Figure 1). As such, this protected tree report covers the regulations and requirements for the protection and removal of protected trees within the jurisdiction of the City of Santa Clarita (City).

COV-SC Land LLC (Project Applicant) retained Dudek to conduct a tree inventory and assessment for the project site. The project site is located at the northeast corner of Oak Ridge Drive and Railroad Avenue in the City. The site encompasses approximately 22.3 acres and is located on Assessor's Parcel Numbers 2836-076-001, -016, and -017, -023 through -028, and 2836-006-029. A Dudek International Society of Arboriculture (ISA)-Certified Arborist performed various functions associated with surveying, inventorying, and evaluating the condition of all protected trees located within the project site to meet the requirements of City Municipal Code Chapters 13.76 Parkway Trees and 17.51.040 Oak Tree Preservation. This protected tree report addresses protected and non-protected trees.

The purpose of this protected tree report is to present the physical characteristics and mapped locations of the site's protected trees that are to be removed or protected in place during the proposed grading and construction-related activities, which are located at the northeast corner of Oak Ridge Drive and Railroad Avenue in the City.

## 1.1 Project Location

The project site is located in the City at the northeast corner of Oak Ridge Drive and Railroad Avenue. The site encompasses approximately 22.3 acres and is located on Assessor's Parcel Numbers 2836-076-001, -016, and -017, -023 through -028, and 2836-006-029.

## 1.2 Site Characteristics

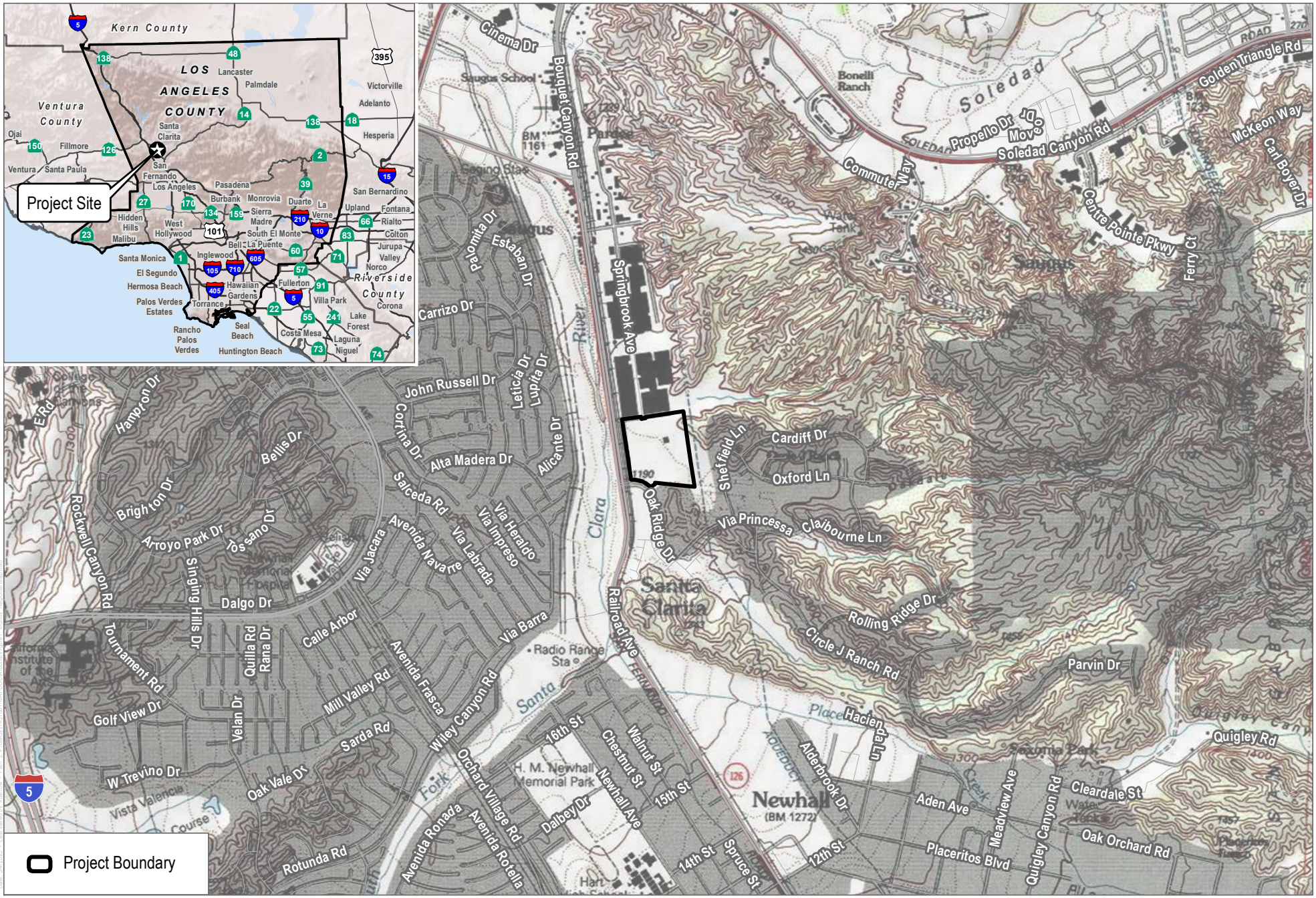
The project site is graded and consists of exposed soils. A portion of the site is currently being used for truck storage on a previously graded building pad. In 2009, the City approved Master Case 06-286, Tentative Parcel Map 062646, and Oak Tree Permit 06-049 for the development of an industrial/business park on 12 industrial lots. An Initial Study and Mitigated Negative Declaration was adopted as part of the previous project. Under these previous approvals, the project site was graded for development, but no structures were constructed.

## 1.3 Project Description

The project would include construction and operation of four warehouse buildings totaling approximately 433,185 square feet of development on an approximately 22.3-acre site. The largest building located in the southeast corner of the site (referred to as Building 1) would be 262,325 square feet; the southwestern building (referred to as Building 2) would be 50,712 square feet; the northwestern building (referred to as Building 3) would be 79,868 square feet; and the northeastern building (referred to as Building 4) would be 40,280 square feet. Each building would contain office/mezzanine space that would total approximately 26,000 square feet across the four buildings.

Access to the project site would be provided via Springbrook Avenue off Oak Ridge Drive, along the southern edge of the project site. Six entrances, ranging from 30 feet wide to 45 feet wide, would be located off Springbrook

Avenue to access the four industrial/warehouse buildings. The Project would provide a total of 545 passenger vehicle parking spots and 49 high dock doors. Approximately 73 passenger vehicle parking spaces would be designated for electric vehicle and clean air vehicle parking. Approximately 10% of the total parking spaces would be equipped with the necessary infrastructure for the future installation of electric vehicle parking spaces.




SOURCE: USGS 7.5-Minute Series Newhall Quadrangle

DUDEK

0 1,000 2,000 Feet

**FIGURE 1**

Local Vicinity and Regional Location Map

Santa Clarita Commerce Center Project

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# 2 Methods

## 2.1 Individual Tree Evaluation

Dudek mapped tree locations for all trees located on the project site. Tree mapping was conducted using a Trimble Pathfinder Pro XH GPS receiver with H-Star Technology. Because tree canopies can sometimes cause loss of satellite lock by blocking the line-of-sight to satellites, Dudek also used an electronic compass and reflectorless, electronic distance-measuring device to map tree locations. The reflectorless, electronic distance-measuring device/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. The electronic tree locations were then evaluated using ArcView 10.4 software to determine the position of the trees related to the project development footprint.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the trunk of each tree. These numbers correspond to the tree attribute information presented in Appendix A, Tree Information Matrix. Tree trunk diameters were measured using a diameter tape providing adjusted figures[1] for diameter measurements when wrapping the tape around an object's circumference. Diameter measurements were taken using protocol provided by the Council of Tree and Landscape Appraisers in the Guide for Plant Appraisal (ISA 2000). The trunk diameter measurement of each tree was taken at 4.5 feet above the ground along the trunk axis, with common exceptions. For example, in cases where a tree's trunk was located on a slope, the 4.5-foot distance was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of a tree's trunk, respectively), and the measurement was made at this point. Tree height was visually estimated by experienced tree surveyors. Tree canopy diameters were typically estimated by "pacing-off" the measurement based on the investigator's knowledge of their stride length or by visually estimating the canopy width. The crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter. Additionally, Dudek arborists calculated composite trunk diameters for multiple-stem trees according to ISA standards. According to these standards, the sum of all stem diameters was calculated to ascertain composite trunk diameter values for multiple-stem trees.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five distinct tree components: roots, trunk, scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to health factors such as insect and pathogen damage, mechanical damage, presence of decay, presence of wilted or dead leaves, and wound closure. Tree health and structure were graded as good, fair, poor, and dead, with "good" representing no apparent problems, and "dead" representing a dying and/or dead tree. Good condition trees exhibit acceptable vigor, healthy foliage, and adequate structure, and lack any major maladies. Fair condition trees are typically those with few maladies but declining vigor. This method of tree condition rating is comprehensive and results in ratings that are useful for determining the status of trees based on common urban forestry standards.

Individual tree attribute data is presented in Appendix A, and tree locations are presented in Appendix B, Tree Location and Protection Exhibit.

[1] Inches divided by 3.14 ($\pi$) provide diameter measurement in inches.

## 2.2 Tree Impact Analysis

Dudek's ISA-certified arborists determined tree impacts by conducting a spatial analysis of individual tree locations and canopy extents visible in project site aerial imagery in relation to the proposed development plan. The tree dataset, digital aerial imagery, and site development planning data were evaluated using geographic information system (GIS) software to determine where individual trees were located in relation to proposed development areas. Trees are considered impacted when anticipated disturbance to the tree is either 5 feet outside the dripline, or 15 feet from the trunk of a tree, whichever distance is greater. Trees with project-related construction activity occurring within their driplines are considered encroached upon for the purposes of this report. The impact analysis results were used to determine overall tree impacts for the project site.

## 2.3 Scope of Work Limitations

No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden or inaccessible inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation or relocation in an urban setting be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation or relocation plans.

# 3 Observations

## 3.1 Individual Trees

A total of seven non-protected trees and two protected oak trees were inventoried within and immediately adjacent to the project area. In total, eight trees are located on-site (Tree Nos. 1 through 8) and one (Tree No. 9) is located on private property adjacent to the site. Of the eight trees found on site, only one tree, Tree No. 2, meets the City's definition of a protected tree. The single tree, Tree No. 9, located on the adjacent private property, meets the City's definition of a protected tree. Appendix B presents the location of the individual trees mapped and assessed for the project. The trees include various trunk and branch maladies and health and structural conditions. As presented in Appendix A, 11.11% of the individually mapped trees (1 tree) exhibit good health; 77.78% (7 trees) are in fair health; 11.11% (1 tree) is in poor health. Structurally, 0% (0 trees) of the individually mapped trees are considered to exhibit good structure; 55.56% (5 trees) exhibit fair structure; 22.22% (2 trees) exhibit poor structure; 11.11% (1 tree) exhibit very poor structure; and 11.11% (1 tree) exhibit critical structure. The trees in good condition exhibit acceptable vigor, healthy foliage, and adequate structure, and lack any major maladies[2]. Trees in fair condition are typical, with few maladies but declining vigor. Trees in poor condition exhibit declining vigor, unhealthy foliage, poor branch structure, and excessive lean. Tree No. 2, a coast live oak (*Quercus agrifolia*), showed signs of a beehive within a cavity.

Trees within and adjacent to the project site vary in size and stature according to species and available growing space. The site's trees are composed of single- and multi-stemmed trees, with single-stemmed trunk diameters that range from 3 to 65 inches, and multi-stemmed trunk diameters that range from 4 to 75 inches. Tree heights vary from 7 to 65 feet. Tree canopy extents range from 5 feet to approximately 70 feet across at their widest point.

[2] See Section 2.1, Methods, for a discussion of how tree health is determined.

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# 4 Regulatory Definitions and Requirements

A tree inventory and assessment of the project site was performed pursuant to City Municipal Code Chapters 13.76 Parkway Trees and 17.51.040 Oak Tree Preservation. The following is an outline of the key aspects of the ordinance.

## 4.1 Definitions

### Municipal Code Chapter 13.76 – Parkway Trees

For this project, trees subject to City permit requirements include those defined by Municipal Code Chapter 13.76, as follows:

- 13.76.030 Street Trees Property of City.

  All trees and shrubs planted or existing in the city's street, park, public right-of-way or easement or other public place within the City limits and so considered and/or dedicated as City property, is the property of the City (Ord. 90-15, 7/10/90).

- 13.76.100 Construction/Subdivision Requests, Alteration or Removal of Structures Affecting Street Trees.

  A. Permit Required. When the construction, repair, alteration or removal of a structure necessitates the planting, trimming, pruning or removal of a street tree, such work may be undertaken only upon the issuance of a written permit by the Director and at the expense of the applicant.

### Municipal Code Chapter 17.51.040 – Oak Tree Preservation

For this project, trees subject to City permit requirements include those defined by Municipal Code Chapter 17.51.040, as follows:

B. Oak Tree Permit. No person shall cut, prune, remove, relocate, endanger, damage or encroach into the protected zone of any oak tree on any public or private property within the City except in accordance with the conditions of a valid oak tree permit issued by the City, in conformance with Section 17.23.170 (Oak Tree Permit).

For the purposes of this report, no trees are located in a City-owned property, and therefore none are considered a parkway tree. However, Tree No. 2 is a coast live oak and as such is considered a protected tree by the City's oak tree preservation ordinance and would require a permit issued by the City if removal is needed. Trees with protected zones that have been encroached upon would also be considered impacted. The tree protection zone is considered the area within the dripline of a tree and extending from there to a point at least 5 feet outside the dripline, or 15 feet from the trunk of a tree, whichever distance is greater.

# 4.2 Regulations

## City of Santa Clarita – Municipal Code Chapter 17.51.040 Oak Tree Preservation

The purpose of Chapter 17.51.040 is to protect and preserve oak trees in the City and to provide regulatory measures designed to accomplish this purpose. The preservation program contributes to the welfare and aesthetics of the community and retains the great historical and environmental value of these trees. It shall be the policy of the City to require the preservation of all healthy oak trees unless compelling reasons justify the removal of such trees. This policy shall apply to the removal, pruning, cutting, and/or encroachment into the protected zone of oak trees.

## City of Santa Clarita – Municipal Code Chapter 13.76.010 Parkway Trees

Chapter 13.76.010 is adopted for the purpose of establishing rules and regulations relating to the planting, care, maintenance, and removal of trees, shrubs, and any other plantings in public areas, rights-of-way and easements, and relating to certain activities on private property (Ordinance 90-15, 7/10/90).

# 5 Impacts

The Project's development footprint is shown in the Project's Conceptual Grading Plan (Appendix C). It depicts all improvements associated with the Project. Tree impacts were determined using GIS software and spatial locations of trees relative to the Project's development footprint. Impacts were further determined based on Dudek's experience with native and non-native trees and their typical reactions to root disturbances from construction activities, such as soil compaction, excavation, and grading. The impact analysis results presented herein were used for developing appropriate mitigation measures for the Project.

For the purposes of this report, direct impacts to trees can be classified as a removal or encroachment. Trees are identified for removal when they are located within the permanent impact boundary, as shown in Appendix B, which presents the location of the individual trees mapped and assessed for the proposed project. Trees are identified as encroachment if the tree canopy is within 5 feet of the permanent impact boundary, or if the tree trunk is within 15 feet of the permanent impact boundary. Direct impacts to encroachment trees include root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, among others.

In general, there is a great deal of variation in tolerance to construction impacts among tree species, ages, and conditions. It is important to know how a certain tree, based on its species, age, and condition, would respond to different types of disturbance. The trees on the project site are of varying ages and conditions. Mature specimens are typically more sensitive to root disturbance and grade changes. In general, healthy trees will respond better to changes in their growing environment. Trees of poor health or stressed conditions may not be vigorous enough to cope with direct or indirect impacts from construction activities.

Impact totals presented are based on conceptual disturbance limits and development plans as of the date of this report. As such, the actual number of trees subject to direct impacts may change as the detailed site planning process proceeds. Actual tree impact numbers may be lower than anticipated and as presented in this report once detailed plans are developed. Measures to reduce impacts are encouraged and would be implemented in the field during grading operations. Following completion of construction-related disturbances, actual protected tree impact totals would be updated and provided, along with revised mitigation totals.

## 5.1 Direct Tree Impacts

For the purposes of this protected tree report, direct impacts are those associated with tree removal or earth-moving encroachment activities within the tree-protected zone (canopy dripline plus 5 feet or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside the permanent impact boundary. Encroachment is expected when soil and roots are disturbed within the tree protected zone. Given that direct impacts include encroachment within the tree protected zone, indirect impacts are treated as direct impacts and thus no indirect impacts would occur.

Direct tree impacts would result in the removal of one non-protected elderberry tree in poor health (Tree No. 1) and the potential encroachment of the two protected oak trees (Tree Nos. 2 and 9). Tree No. 2 is located on the Project site. However, grading activities would not encroach into the tree's drip line/protected tree zone, as demonstrated within the Conceptual Grading Plan (Appendix C). Tree No. 9 is located off-site, but a portion of its canopy slightly overhangs into the Project site. The Project involves construction of a retaining wall along the Project site's southern boundary that partially encroaches into the tree's drip line and projected tree zone where these areas overhang on

the Project site; however, construction activities associated with the retaining wall would encroach into less than 5% of the overall root system of Tree No. 9. Given this minimal disturbance, with implementation of the tree protection measures provided in this report, it is anticipated that the tree would not be significantly impacted by the Project. The locations of trees along with tree protection zones are presented in Appendix B. Measures to minimize the extent of impacts to preserved trees are provided in Appendix D, Tree Protection Measures.

# 6 Tree Protection Measures

In total, six non-protected trees and two protected oak trees located on and adjacent to the project site are recommended for preservation. Tree protection is a key component in the continued success of the trees on the site, especially those immediately adjacent (encroachment trees) to the project footprint. As such, and in an effort to enhance the survivability of those trees designated for retention adjacent to the project site and to minimize project-related impacts, Dudek recommends tree protection through implementation of the Tree Protection Measures provided in Attachment D. Furthermore, Dudek recommends that all work occurring within the tree protection zone of the retained trees be monitored by a qualified ISA-certified arborist to ensure tree protection measures are followed and to assess tree impacts that may lead to tree failure.

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# 7 Tree Encroachment Permit

Removal, pruning, or encroachment of the one protected on-site coast live oak tree and the one protected off-site valley oak tree would require issuance of a permit from the City. Based on an evaluation of the Project's design and the tree's location, the Protected Tree Report determined that the on-site coast live oak tree (Tree No. 4) and the off-site valley oak tree (Tree No. 9) would not be removed, but they could be encroached upon during construction. Prior to initiation of ground disturbing activities in proximity to this tree, the Project Applicant would be required to obtain an Oak Tree Encroachment Permit from the City.

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# 8 Conclusion

The project site contains seven non-protected trees and two protected oak trees (one of which is located off-site). All nine trees are located off City property and, with the exception of the two oak trees, would not require a permit under the City ordinance for Parkway Trees, Chapter 13.76, if removal or pruning were required. Tree No. 2 and 9 are protected oak trees and would require a permit if removal, encroachment, or pruning were required according to the City Oak Tree Preservation ordinance, Chapter 17.51.040. Based on an evaluation of the site, one non-protected tree (Tree No. 1) will require removal, and the two oak trees will be encroached upon. According to the City Municipal Code, encroachment into the protected zone of any oak tree is a direct impact that requires the issuance of an Oak Tree Permit and implementation of Tree Protection Measures is required. As such, an encroachment permit will be required by the City. Furthermore, in an effort to enhance the survivability of those trees designated for retention adjacent to the project site and to minimize potential project-related impacts, Dudek recommends tree protection through implementation of the Tree Protection Measures provided in Appendix D. Furthermore, Dudek recommends that all work occurring with the tree protection zone of the retained trees be monitored by a qualified ISA-certified arborist to ensure tree protection measures are followed and to assess tree impacts that may lead to tree failure.

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# 9 Arborist's Disclosure Statement

This protected tree report provides conclusions and recommendations based only on a visual examination of the trees and surrounding site by an ISA-certified arborist and reasonable reliance on the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees; recommend measures to enhance the beauty and health of trees; and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi, weather, and other forces of nature, and conditions that lead to failure are often hidden within trees and belowground. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Arborists cannot predict acts of nature, including, without limitation, storms of sufficient strength, which can cause an apparently healthy tree to fail. Additionally, arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for any specific period of time. A tree's condition could change over a short or long period of time due to climatic, cultural, and/or environmental conditions. Further, there is no guaranty or certainty that recommendations or efforts to correct unsafe conditions will prevent future breakage or failure of a tree.

To live or work near trees is to accept some degree of risk. Neither the author of this oak tree report nor Dudek assume any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property.

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# 10 References Cited

ISA (International Society of Arboriculture). 2000. *Guide for Plant Appraisal*. 9th ed. Council of Tree and Landscape Appraisers.

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# Appendix A

Tree Information Matrix

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| Tree No. | Botanical Name | Common Name | No of Stems | Individual Stem Diameters (in.) | | | | | | Cumulative Stem Diameter (in.) | Height (ft.) | Crown Width (ft.) | Health | Structure | Notes | Disposition | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | D1 | D2 | D3 | D4 | D5 | D6 | | | | | | | | | |
| 1 | *Sambucus nigra* | Elderberry | 4 | 2 | 1 | 2 | 2 | 0 | 0 | 4 | 7 | 5 | Poor | Very Poor | | Remove | 6399923.97959 | 1969697.97864 |
| 2 | *Quercus agrifolia* | Coast live oak | 2 | 70 | 27 | 0 | 0 | 0 | 0 | 75 | 45 | 55 | Fair | Poor | Large stem has failed, beehive in cavity at base of tree | Preserve | 6400138.85813 | 1969574.01207 |
| 3 | *Sambucus nigra* | Elderberry | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 5 | Fair | Fair | | Preserve | 6400136.83250 | 1969533.26531 |
| 4 | *Sambucus nigra* | Elderberry | 2 | 13 | 18 | 0 | 0 | 0 | 0 | 22 | 15 | 20 | Fair | Fair | Could not access, no tag | Preserve | 6400280.90823 | 1969058.82931 |
| 5 | *Sambucus nigra* | Elderberry | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 14 | 10 | 15 | Fair | Critical | Fallen, trunk split | Preserve | 6400295.49391 | 1968843.01285 |
| 6 | *Sambucus nigra* | Elderberry | 3 | 8 | 9 | 12 | 0 | 0 | 0 | 17 | 12 | 12 | Fair | Fair | No tag no access | Preserve | 6400302.03876 | 1968816.90611 |
| 7 | *Sambucus nigra* | Elderberry | 4 | 8 | 4 | 15 | 4 | 0 | 0 | 18 | 18 | 15 | Fair | Fair | | Preserve | 6400302.89116 | 1968785.66657 |
| 8 | *Salix gooddingii* | Goodding's willow | 1 | 27 | 0 | 0 | 0 | 0 | 0 | 27 | 50 | 40 | Good | Fair | | Preserve | 6400317.33916 | 1968650.61627 |
| 9 | *Quercus lobata* | Valley oak | 1 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 65 | 70 | Fair | Poor | No tag, on adjacent private property | Preserve | 6400054.70955 | 1968515.32948 |

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# Appendix B

Tree Location and Protection Exhibit

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SOURCE: Bing Maps 2021

DUDEK

0 100 200 Feet

**APPENDIX B**

Tree Locations

Santa Clarita Commerce Center Project

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# Appendix C
Conceptual Grading Plan

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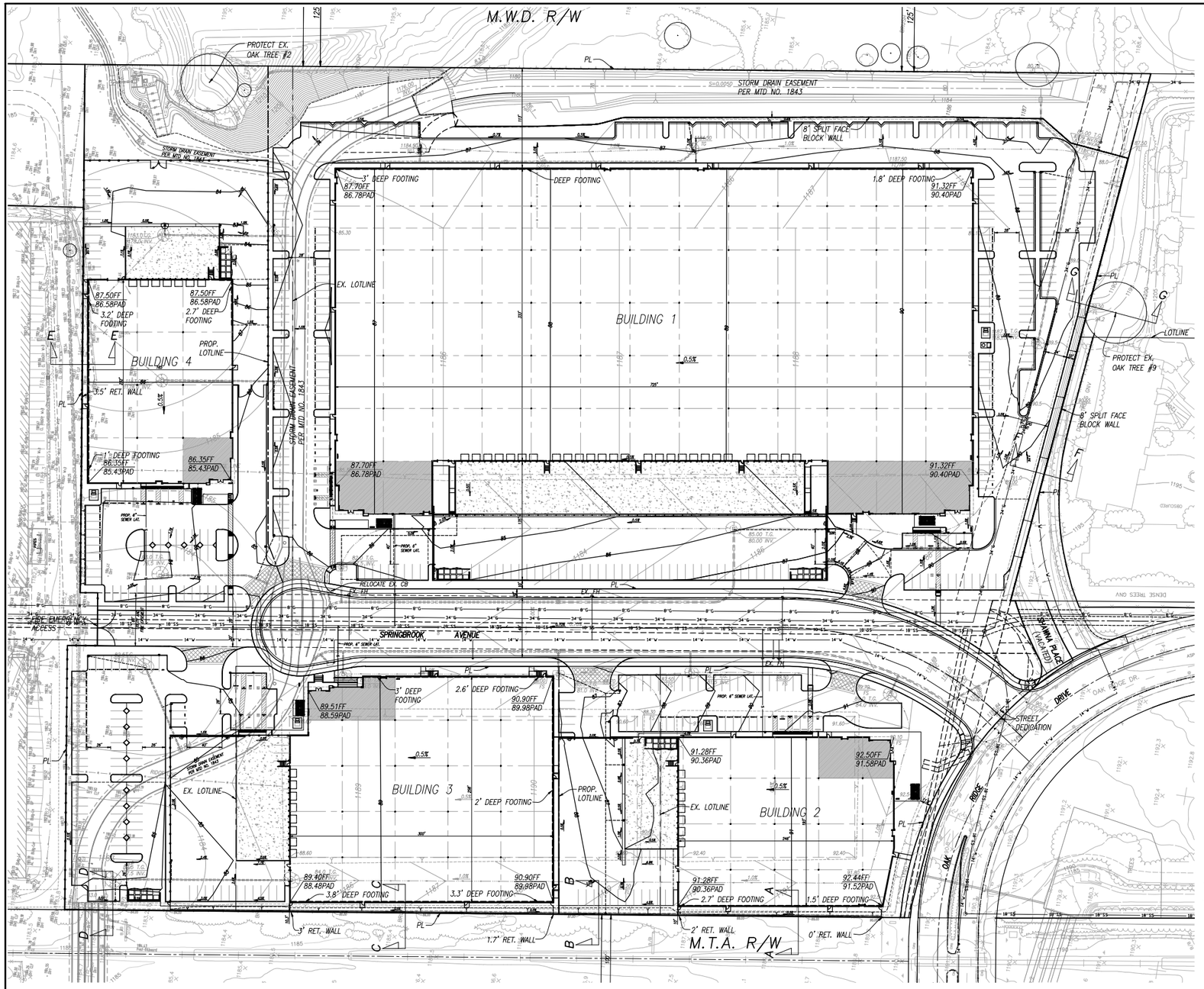


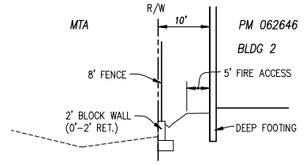


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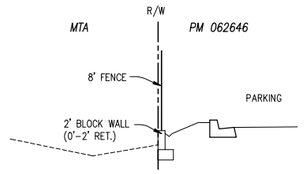


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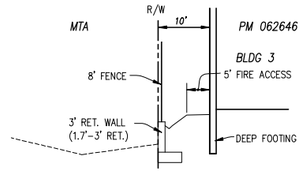


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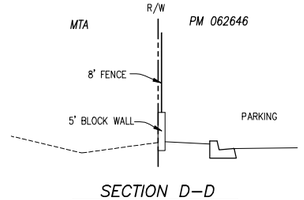


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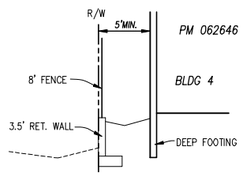


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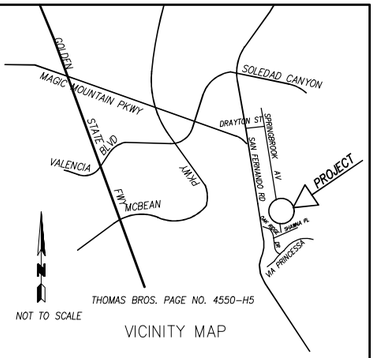


THOMAS BROS. PAGE NO. 4550–H5
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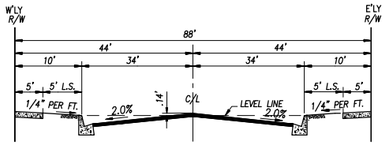
VICINITY MAP




TYPICAL SECTION
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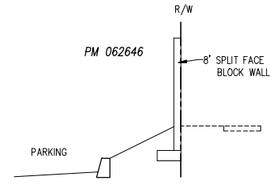
SPRINGBROOK AVENUE

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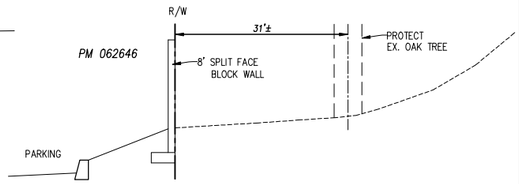


SECTION G–G
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GEOTECHNICAL REVIEW BY:
GeoSoils Consultants Inc.
6634 VALJEAN AVENUE
VAN NUYS CA, 91406
TEL. (818) 785-2158 FAX. (818) 785-1548

PLANS PREPARED UNDER THE DIRECTION OF:
LANCE R. PUTNAM RCE# 2469 DATE

PREPARED FOR:
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3 CORPORATE PLAZA, SUITE 230
NEWPORT BEACH, CA 92660
ATTN: DANA WHITMER (949)-514-0274

PREPARED BY:
SIKAND
Engineering | Planning | Surveying
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Van Nuys, CA 91411
Tel: (818) 787-8550
Fax: (818) 901-7451
info@sikand.com

REGISTERED PROFESSIONAL ENGINEER
DOUG FARMER
No.49041
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA
PROJECT ENGINEER DATE

| NO. | REVISION | REVISED BY (SIGNATURE/PRINT NAME & NUMBER) | CITY APPROVALS | APPROVAL DATE |
|---|---|---|---|---|
| △ | | | | |

CITY OF SANTA CLARITA
PRELIMINARY GRADING PLAN
PARCEL MAP 062646

SCALE: AS SHOWN
DATE: 05/08/2023
JOB NO. 5099-037-02E
CASE NO:
SHEET: 1 OF 1

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# Appendix D
Tree Protection Measures

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# Tree Protection Measures

The following tree protection measures are provided as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

## Tree Protection Measures Prior to Construction

Prior to any construction activity (drainage, demolition, material removal or delivery), oak and landmark trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

**Fencing.** A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) with canopies that fall within 30 feet of construction activity. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius plus 5 feet (protected tree zone). For any trees that would be encroached upon by construction activities, fencing shall be placed as far away from trunk of the tree as possible while still allowing the required construction activities to proceed. This fencing will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

**Pre-Construction Meeting.** A pre-construction meeting shall be held between all contractors and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

## Protection and Maintenance During Construction

Once construction activities have begun, the following measures shall be adhered to:

**Avoidance:** Signs, ropes, cables, or any other items shall not be attached to any tree.

**Equipment Operation and Storage.** Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the City Arborist and under the supervision of an ISA Certified Arborist

**Storage and Disposal.** Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree protection zone; it is important

to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

**Moving Construction Materials.** Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

**Grade Changes.** Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

**Root Pruning.** Except where specifically approved in writing, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction, forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing the root system. The trench shall be made no deeper than necessary.

**Trenching.** Unless a Tree Permit has been issued for trenching activity within the fenced tree protection zone, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary

**Irrigation.** Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk***.

**Pruning.** Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

**Washing.** Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the

construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

**Inspection.** An ISA Certified Arborist shall inspect the trees on at least a monthly basis for the duration of construction activity. A summary report documenting observations and management recommendations shall be submitted to the owner following each inspection. Photographs of representative trees are to be included in each report.

# Maintenance After Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

**Mulch.** Provide a 4-inch mulch layer of mulch under the canopy of trees. Mulch shall be clean and organic and provide long-term soil conditioning, soil moisture retention, and soil temperature control.

**Pruning.** Pruning should only be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

**Watering.** Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

**Watering Adjacent Plant Material.** All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

**Spraying.** If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

**Inspection.** All trees within 30 feet of construction activity shall be monitored by an ISA Certified Arborist for the first two years after construction completion. An annual monitoring report shall be submitted to the City Arborist. Each report shall summarize the inspection efforts, document observations and management actions taken, include photographs of each tree, and compare postconstruction tree conditions with the original, pre-construction baseline condition. If any retained trees die within this inspection period, they shall be replaced at a ratio approved by the City.

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