
Appendix C-2

Oak Tree Report

WILEY CANYON (SMISER RANCH) MIXED USE DEVELOPMENT

Oak Tree Report

Prepared for

City of Santa Clarita

23920 Valencia Boulevard, Suite 300

Santa Clarita, CA 91355

April 2020; Revised February 2024



WILEY CANYON (SMISER RANCH) MIXED USE DEVELOPMENT

Oak Tree Report

Prepared for

City of Santa Clarita

23920 Valencia Boulevard, Suite 300

Santa Clarita, CA 91355

April 2020; Revised February 2024

420 Exchange
Suite 260
Irvine, CA 92602
949.753.7001
esassoc.com



Bend	Orlando	San Jose
Camarillo	Pasadena	Santa Monica
Delray Beach	Petaluma	Sarasota
Destin	Portland	Seattle
Irvine	Sacramento	Tampa
Los Angeles	San Diego	
Oakland	San Francisco	

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

Wiley Canyon (Smiser Ranch) Mixed Use Development Oak Tree Report

	<u>Page</u>
Summary	1
Introduction	1
Background and Assignment	1
Project Description	3
Existing Conditions	3
Regulatory Authority	3
Methodology	4
Results	6
Discussion	8
Project Development	10
Roadway Infrastructure Improvement	10
Recommendations	10
Oak Tree Mitigation Measures	12
Certification of Performance	14
 Appendices	
A. Oak Tree Measurements	
B. Oak Tree Photographs	
C. Resume	
D. Field Appraisal Sheets	
 Figures	
Figure 1 Project Location	2
Figure 2 Oak Tree Locations	7
 Tables	
Table 1 Oak Tree Impacts and Possible Mitigation	8
Table 2 Maintenance Schedule For the Two-Year Oak Tree Establishment Effort	13

WILEY CANYON (SMISER RANCH) MIXED USE DEVELOPMENT

Oak Tree Report

Summary

Project Development (APN Parcels 2825-012-010 and 2825-012-011) Oak Trees

- Number of coast live oak (*Quercus agrifolia*) trees surveyed12
 - Number of dead trees surveyed0
 - Number of off-site coast live oak trees surveyed3
 - Number of living coast live oak trees surveyed not subject to the Santa Clarita Tree Preservation Ordinance (i.e., not protected due to size considerations)0
 - Number of coast live oak trees surveyed subject to the Santa Clarita Tree Preservation Ordinance (i.e., protected oaks)..... 12
- Number of protected coast live oak trees proposed for removal4
 - Non-heritage4
 - Heritage0
- Number of protected coast live oak trees proposed for pruning or encroachment5
 - Non-heritage3
 - Heritage2
- Total number of protected coast live oak trees within the Project Development requiring a Santa Clarita Tree Preservation Permit.....9
 - Non heritage7
 - Heritage2
- Number of protected coast live oak trees surveyed not impacted by the proposed project3

Roadway Infrastructure Improvement Oak Trees

- Total Oak (*Quercus* spp.) Trees surveyed24
- Non heritage.....24
- Heritage.....0
- Coast live oaks (*Quercus agrifolia*).....17
- Valley oaks (*Quercus lobata*)7
- Number of protected oak trees proposed for removal.....0
 - Non heritage0
 - Heritage0
- Number of protected coast live oak trees proposed for pruning or encroachment14
 - Non heritage12
 - Heritage0
 - Coast live oak8
 - Valley oak6
- Total number of roadway infrastructure improvement trees requiring a Santa Clarita Tree Preservation Permit.....14
 - Non heritage14
 - Heritage0
- Number of protected oak trees surveyed not impacted by the proposed project10

WILEY CANYON (SMISER RANCH) MIXED USE DEVELOPMENT

Oak Tree Report

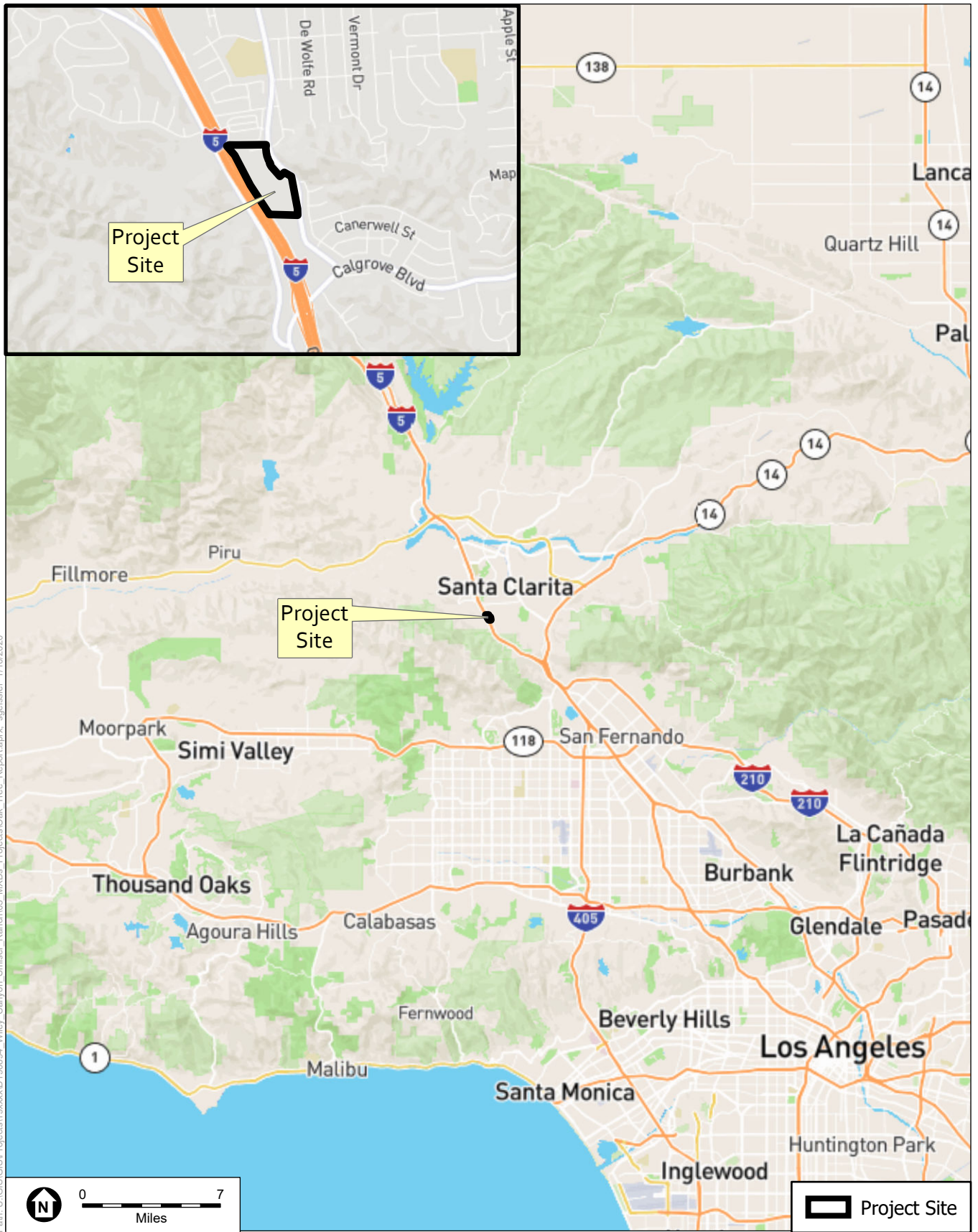
Introduction

The purpose of this oak tree report is to document occurrences of oak trees that are protected by the City of Santa Clarita Oak Tree Ordinance and Oak Tree Preservation and Protection Guidelines to obtain an Oak Tree Permit for Wiley Canyon Mixed Use Development Project (hereinafter referred to as the “Project”) in Los Angeles County, California.

Background and Assignment

The proposed Project is located on an approximately 31-acre site located at 24924 Hawkbryn Avenue, Santa Clarita, County of Los Angeles (project site). The project site is located immediately east of Interstate Highway 5 (I5), north of Calgrove Boulevard, and with access from and west of Wiley Canyon Road (**Figure 1 – Project Location**). The project site consists of two parcels (APNs 2825-012-010 and 2825-012-011) that are currently used for agricultural uses. A 2.5-acre portion of parcel APN 2825-012-011, which contains a 0.51-acre slope easement, lies east of Wiley Canyon Road, and will include improvements to the roadway infrastructure to create a traffic roundabout at the entrance. The project site also includes parcel APN 2825-012-007, which is 0.18 acre and located in the northwest corner of the project site. There are no oak trees located in this small parcel. Thirteen (13) acres of the project site will remain as open space, designated for the widening of Wiley Canyon Road, and the creation of storm water basins. A portion of the South Fork of the Santa Clara River runs along the eastern boundary of the property with the north end of the drainage being channelized, becoming part of a storm drain system, within a Los Angeles County Flood Control District parcel. These two parcels are referred to herein as the Project Development. Roadway infrastructure improvements are also proposed along Wiley Canyon Drive, Old Wiley Canyon Road, and at the intersection of Wiley Canyon Drive, Calgrove Boulevard, and Valley Oak Court, referred to herein as the Roadway Infrastructure Improvement area.

Surrounding land uses include Interstate Highway 5 on the west, a small commercial area to the south, and residential uses on the north and east. Regional access to the project site is provided by Interstate Highway 5 and Calgrove Boulevard to the southwest of the project site.



SOURCE: Open Street Map; ESA, 2019.

Wiley Canyon Road Oak Survey

Figure 1
Project Location Map



Project Description

The project proposes to develop a mixed-use facility organized into five neighborhoods, with 596 residential units, inclusive of a 217-unit senior living facility and 379 multifamily residential units, on about 15.8 acres with about 9,000 square feet commercial office building. The remainder of the project site, about 15.2 acres, would be retained for open space, recreation, road infrastructure, and drainage purposes. The primary project access would be from Wiley Canyon Road in the northeast portion of the project site. Roadway infrastructure improvements along Calgrove Boulevard and Wiley Canyon Road are also needed for implementation of the project. These improvements include a traffic roundabout at the entrance of the project which would reduce the cul-de-sac of Old Wiley Canyon Road and create a traffic circle along Wiley Canyon Road. An additional traffic circle is proposed at the intersection of Calgrove Boulevard, Wiley Canyon Road and Valley Oak Court. The project site is zoned Mixed Use Neighborhood (MX-N) and with the same land use category. A conditional use permit is anticipated to be needed for the assisted living component of the project.

Existing Conditions

The project site is agricultural land with large expanses of heavily disturbed land surrounded by fencing, some former equestrian facilities, and various small accessory buildings. Native trees occurring on the project site or immediately adjacent include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*) and non-native ornamental trees such as deodar cedar (*Cedrus deodara*), Chinese elm (*Ulmus parvifolia*), Peruvian pepper (*Schinus molle*) and Canary Island pine (*Pinus canariensis*) are also present.

Regulatory Authority

The city of Santa Clarita Municipal Code 17.51.040 – Oak Tree Preservation protects all indigenous oak trees, including but not limited to, canyon oak (*Quercus chrysolepis*), coast live oak, interior live oak (*Quercus wislizenii*), valley oak (*Quercus lobata*), and scrub oak (*Quercus dumosa*¹) in recognition of their historical, aesthetic, and environmental value. Trees protected by the ordinance must have a trunk with a circumference measuring 6 inches (approximately 1.9” diameter) or larger; measured four-and one-half feet above natural grade. Heritage oak trees measuring one hundred eight (108) inches or more in circumference (approximately 34.3-inch diameter) or in the case of a multiple trunk tree, two (2) or more trunks measuring seventy-two (72) inches each or greater in circumference (approximately 22.9-inch diameter). In addition, the Planning Commission and/or City Council may classify any oak tree as a heritage tree regardless of size, if a majority vote determines a tree has exceptional historic, aesthetic, and/or environmental qualities of major significance or prominence to the community.

¹ Considered *Q. dumosa* at time of ordinance publication, the species was split into multiple indistinct species. *Quercus berberidifolia*, which was formerly classified as *Q. dumosa* is more likely to occur near the City of Santa Clarita. In addition, *Q. john-tuckeri*, Tucker’s oak, has been recorded within the City of Santa Clarita.

Methodology

Environmental Science Associates (ESA) Registered Consulting Arborist Douglas Gordon-Blackwood (See **Appendix C – Resume**) measured the diameter of each oak tree on the property using a diameter tape and measured height and dripline radius at eight (8) compass directions (north, northwest, west, southwest, south, southeast, east, northeast) using a Nikon Forestry Pro laser hypsometer. Ratings were assigned to health, vigor, aesthetic and balance on an A to F scale. Numbered non-corrosive aluminum tree tags were attached to the tree using aluminum nails and were affixed to the north side of the tree at a height of three and one-half feet (3 ½ feet) above the natural elevation. Old aluminum tree tags were observed on trees throughout the project development area. Aluminum tree tags were also present on trees along Calgrove Boulevard, likely installed by landscape contractors associated with the homeowner’s association associated with that development. Because multiple trees were missing tags, new tags were affixed to each tree. For trees located on private property or deemed inaccessible during the field visit, no tree tags were applied.

Survey data for each tree is provided in **Appendix A – Coast Live Oak Tree Measurements**, attached. For each tree already previously recorded, trunk location was confirmed, and corresponding data was recorded. For trees not previously recorded, the trunk of each tree was recorded with Arrow 100 Submeter GNSS Receiver (GPS) with submeter accuracy and recorded within ArcGIS Field Maps or Collector. The following data was collected for each tree:

Physical Characteristics

- Diameter at Breast Height (DBH) – measured four feet, six inches from the base of the tree using a forester’s diameter-equivalent tape. Circumference was then calculated by multiplying diameter by pi (π , 3.14159265...).
- Canopy spread: The canopy spread from the trunk to the dripline in eight (8) directions (N, NE, E, SE, S, SW, W, NW).
- Height – Measured using a Nikon Forestry Pro Laser hypsometer.
- Balance and symmetry of the tree based on the crown radius measurements and whether the tree leans or is otherwise unstable.

Physical Condition

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity.
- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf chlorosis, thinning of crown, etc.
- Assessment of the overall health of the tree based on the overall appearance, presence of damage, and comparison to the typical archetype tree of the same species.
- Notes about damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity. Assessment of the overall health of the tree based on the

evaluation of vigor, presence of damage, and comparison to the typical archetype tree of the same species.

Rating

For each tree, a subjective alphabetical rank of “A” through “F” was assigned for health, vigor, balance and aesthetic. Ranks were based on the criteria described below:

- “A” = Very Healthy/Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation. With regards to balance and aesthetics, trunks are straight and canopies well balanced and the tree exemplifies the ideal archetype for the species.
- “B” = Healthy/Good: A healthy and vigorous tree with minor visible signs of stress, disease, and/or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches. Tree may lean slightly, canopies may not be evenly balanced, or the tree may otherwise be marginally challenged aesthetically.
- “C” = Average Health/Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed. The trunk may be growing at a more substantial angle, or the canopy may have “holes” or be further out of balance.
- “D” = Dying/Poor: A tree that may be exhibiting substantially more stress, disease, or insect damage than what is expected for the species. The tree may be in a state of rapid decline, and may show various signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests. The tree may lean significantly, and the canopy is far out of balance.
- “F” = Dead/Very Poor: This tree has no foliage and exhibits no sign of life or vigor. Tree may be prone on the ground or otherwise severely aesthetically compromised.

Results

Project Development

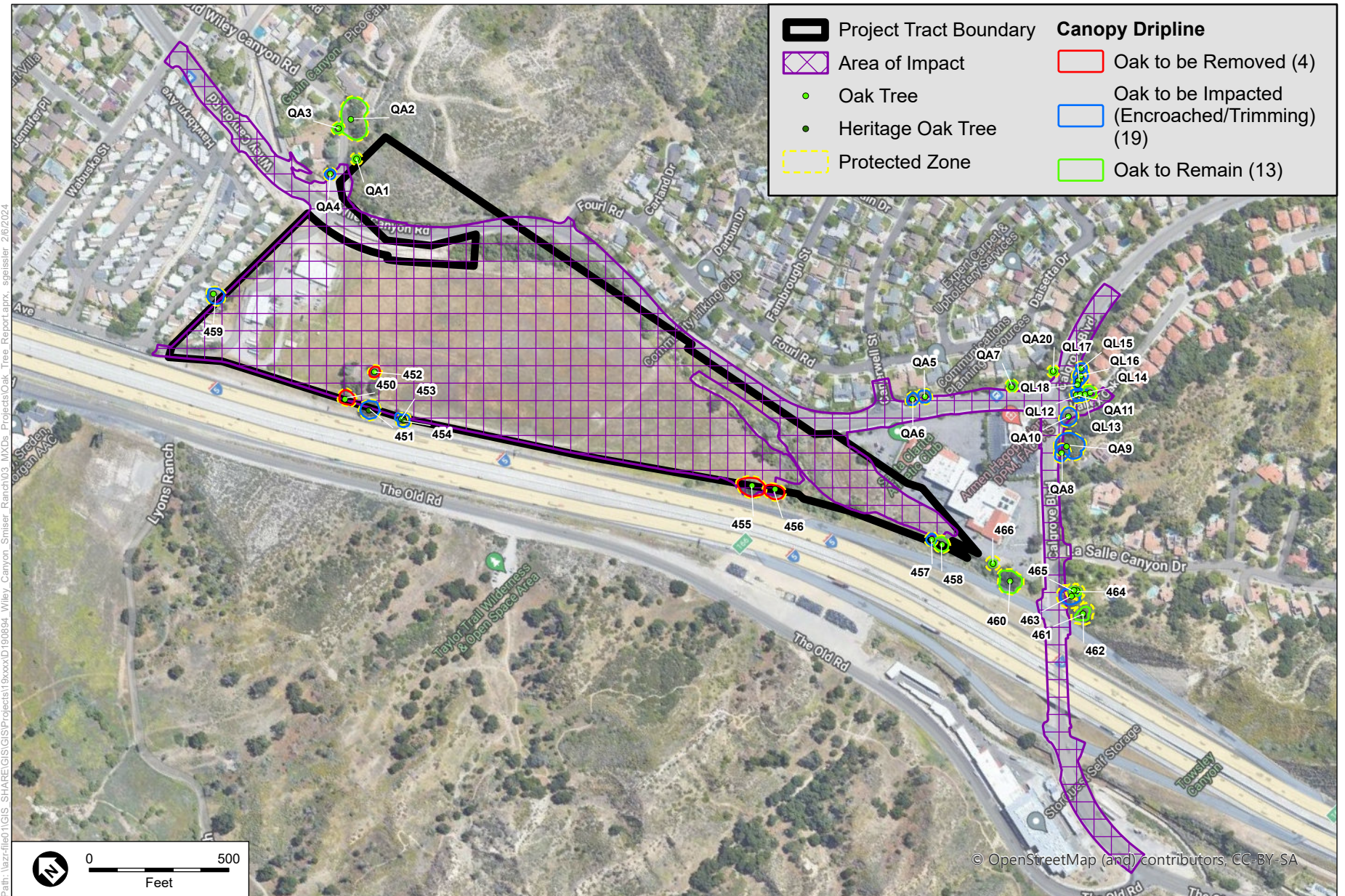
A total of twelve (12) coast live oaks that meet the minimum requirements described in the City of Santa Clarita Oak Tree Preservation and Protection Guidelines occur within the project site. Trees numbered 450 through 460, as well as tree 466 are located on or immediately adjacent to the main project site boundary. All 12 trees within the project site boundary were identified as coast live oaks. Two of the surveyed trees located on the property qualify as heritage, by exceeding the size threshold as described in the ordinance (trees 451 and 454). Both heritage trees may be minorly encroached by the project construction activities. Seven of the oak trees (trees 451, 453, 454, 455, 456, 457, and 458) occur along the western property boundary and may be offsite in the Caltrans highway right-of-way. Trees 460 and 466 are located east of the project boundary, between the eastern boundary and Calgrove boulevard. Tree 459 is located off the property on the northwest side. The locations of the 12 confirmed oak trees are provided in **Figure 2 – Oak Tree Locations**. A summary of the oak tree characteristics is provided in Appendix A – Oak Tree Measurements. Representative photographs of each tree are provided in **Appendix B – Oak Tree Photographs**.

In general, the overall physical condition of the oak trees was consistent with that of trees found within urban areas. Trees 458 and 459 have been improperly pruned for utility or property clearance, reducing the overall balance or health ratings. Tree 459 is not located within the project site and has been subject to minor pruning. Barrels of potentially hazardous hydraulic oil previously observed in the vicinity of two oak trees (Trees 453 and 454) have subsequently been removed since the initial site visit. Tree 453 also has a pronounced lean, but this is not out of the ordinary for coast live oak trees.

Trees 450, 451, 452, 453, 454, 455, and 456 were recorded within the proposed project design area and trees 450, 452, 455, and 456 will be removed because of proposed project grading. The project design will result in minor encroachment of canopy dripline of trees 451 (heritage), 453, 454 (heritage), 457 and 459. No impacts are anticipated for trees 458, 460, and 466.

Roadway Infrastructure Improvements

A total of twenty-four (24) oak trees that meet the minimum requirements described in the City of Santa Clarita Oak Tree Preservation and Protection Guidelines. Trees numbered QA1 through QL18, QA20, 461, 462, 463, 464, and 465 are located on or immediately adjacent to proposed roadway infrastructure improvements associated with the project entrance or the Wiley Canyon Road, Valley Oak Court, and Calgrove Boulevard intersection. Seventeen (17) trees are identified as coast live oaks (QA1 through QA11, QA20, 461 through 465) and seven (7) trees are identified as valley oaks (QL12 through QL18).



SOURCE: ESA, 2024

Wiley Canyon Oak Survey
Figure 2
 Oak Tree Locations



None of the surveyed trees associated with roadway infrastructure improvements qualify as ‘heritage’ status. The locations of the 24 confirmed oak trees are depicted in Figure 2 – Oak Tree Locations. A summary of the oak tree characteristics is provided in Appendix A – Oak Tree Measurements. Representative photographs of each tree are provided in Appendix B – Oak Tree Photographs. Trees were also assessed for their monetary value based on the International Society of Arboriculture (ISA) dollar value and the results are included in **Appendix D – Field Appraisal Sheet**.

In general, the overall physical condition of the oak trees surrounding the roadway infrastructure improvements were consistent with that of street trees and trees located within urban areas.

No impacts are anticipated for coast live oak trees QA1, QA2, QA3, QA7, QL14, QA20 461, 462, 464, and 465. Roadway infrastructure improvements will result in minor encroachment of the canopy dripline for oak trees QA4, QA5, QA6, QA8, QA9, QA10, QA11, QL12, QL13, QL14, QL15, QL16, QL17, and QL18.

These project impacts will require the project proponent to submit additional information and request an oak tree permit. A discussion of oak tree permit conditions follows below if the removal of these oak trees is required.

Discussion

Recommended mitigation for the tree impacts discussed herein are included below in **Table 1 – Oak Tree Impacts and Possible Mitigation**.

**TABLE 1
OAK TREE IMPACTS AND POSSIBLE MITIGATION**

Tree Number	Species	Trunk Diameter (Circumference) ^a	Heritage?	Removal or Minor/Major Encroachment	ISA Dollar Value ^b
Project Site Development					
450	<i>Quercus agrifolia</i>	12.6, 12.2 (39.6, 38.3)	No	Removal	\$26,000
451	<i>Quercus agrifolia</i>	28.5, 27.1 (89.8, 84.8)	Yes	Minor Encroachment	-
452	<i>Quercus agrifolia</i>	15.2 (47.8)	No	Removal	\$15,600
453	<i>Quercus agrifolia</i>	16.4 (51.5)	No	Minor Encroachment	-
454	<i>Quercus agrifolia</i>	37.5, 19.3 (117.8, 60.6)	Yes	Minor Encroachment	-
455	<i>Quercus agrifolia</i>	33.4, 21.1 (104.9, 66.3)	No	Removal	\$170,200

Tree Number	Species	Trunk Diameter (Circumference) ^a	Heritage?	Removal or Minor/Major Encroachment	ISA Dollar Value ^b
456	<i>Quercus agrifolia</i>	21.1, 18.3 (66.3, 57.8)	No	Removal	\$91,600
457	<i>Quercus agrifolia</i>	9.9 (30.8)	No	Minor Encroachment	-
459	<i>Quercus agrifolia</i>	19.4, 18.7 (60.9, 58.7)	No	Minor Encroachment	-
Total:					\$303,400
Roadway Infrastructure Improvements					
QA4	<i>Quercus agrifolia</i>	7, 6 (22, 18.9)	No	Minor Encroachment	-
QA5	<i>Quercus agrifolia</i>	19 (59.7)	No	Minor Encroachment	-
QA6	<i>Quercus agrifolia</i>	18.7 (58.7)	No	Minor Encroachment	-
QA8	<i>Quercus agrifolia</i>	4.1 (12.9)	No	Minor Encroachment	-
QA9	<i>Quercus agrifolia</i>	17.1, 15.1 (53.7, 47.4)	No	Minor Encroachment	-
QA10	<i>Quercus agrifolia</i>	31.4 (98.6)	No	Minor Encroachment	-
QA11	<i>Quercus agrifolia</i>	22.1, 13.6 (69.4, 42.7)	No	Minor Encroachment	-
QL12	<i>Quercus lobata</i>	14.9 (46.8)	No	Minor Encroachment	-
QL13	<i>Quercus lobata</i>	13.4 (42.1)	No	Minor Encroachment	-
QL15	<i>Quercus lobata</i>	11.3 (35.5)	No	Minor Encroachment	-
QL16	<i>Quercus lobata</i>	15.0 (47.1)	No	Minor Encroachment	-
QL17	<i>Quercus lobata</i>	9.8 (30.8)	No	Minor Encroachment	-
QL18	<i>Quercus lobata</i>	17.8 (55.9)	No	Minor Encroachment	-
463	<i>Quercus agrifolia</i>	28 (88)	No	Minor Encroachment	-
Total:					\$0

NOTES:

^a Measured in inches

^b Values based on appraisal value provided in Appendix D. Requires mitigation based upon the ISA dollar value of each oak tree proposed and approved for removal.

SOURCE: ESA 2024

Project Development

The ISA dollar value for Trees 450, 452, 455, and 456 is based upon the required tree replacement cost for construction of a new commercial development which requires mitigation based upon the ISA (International Society of Arboriculture) dollar value of each oak tree proposed and approved for removal. Currently the mitigation is estimated at approximately \$303,400 for the removal of four (4) oak trees: 450 (\$26,000), 452 (\$15,600), 455 (\$170,200), and 456 (\$91,600).

Roadway Infrastructure Improvement

No tree removals or major encroachment are anticipated in areas associated with the projects roadway infrastructure improvements.

Recommendations

A total of 4 trees will be removed for project site impacts. No replacement trees are recommended for trees with minor encroachments; however, relocation, replacement, or payment of a fee may also be required at the discretion of the planning commission. For trees with minor encroachment, concurrent and pre- and post-construction monitoring by a qualified arborist is recommended for any activities that may occur within the protected zone of the tree.

It is the policy of the City of Santa Clarita to require the preservation of all protected trees unless compelling reasons justify their removal. The project proponent must design the project to avoid the removal, cutting, pruning, or encroachment of protected trees to the maximum extent feasible. The ordinance states that no person shall cut, prune, remove or relocate oak trees or encroach into their protected zones on any public or private property within the City of Santa Clarita unless done in accordance with the conditions of a valid oak tree permit.

Oak tree permits issued by the City of Santa Clarita will require the project proponent to relocate or replace all trees proposed for removal or will require the payment of a fee or donation of boxed trees to the City of Santa Clarita or other approved public agency. The City of Santa Clarita will also require that the project proponent protect all oak trees that do not require removal, pruning, or encroachment, during the construction phase of the project by installing a chain-link fence at the outermost edge of the protected zone of each protected tree or group of trees. The fences will remain in place throughout the construction phase of the project until the City of Santa Clarita authorizes removal.

Signs attached to the fences will state:

WARNING!

**THIS FENCE SHALL NOT BE REMOVED OR RELOCATED WITHOUT WRITTEN
AUTHORIZATION FROM THE CITY OF SANTA CLARITA DEPARTMENT OF
PLANNING AND COMMUNITY DEVELOPMENT**

Payment of a fee or donation of boxed trees to the City or other approved public agency to be used elsewhere in the City. Such fee or boxed trees shall be of equivalent value to any and all oak trees removed from the property as defined by the current edition of the “Guide for Plant Appraisal,” published by the International Society of Arboriculture (ISA). The applicant shall be credited with the value of any replacement oak trees which may be required. Such fees shall be utilized for the purpose of furthering the preservation and regeneration of oak trees, the identification and official designation of heritage oak trees, the purchase, monitoring and ongoing maintenance of oak trees, landscaping and other habitat refurbishment and for educational and informational programs related to oak trees and their preservation. As an alternative to the payment of all or a portion of the fees described above, an applicant may also be credited with the value of any accepted dedications of property within the City which are suitable for the planting and survival of oak trees. Fees imposed under this section may be reduced as mitigated by specific circumstances and corrective measures undetected by the property owner.

Replacement trees shall be planted on the same property from which they were removed unless there is no appropriate place for planting. If an appropriate on-site location for replanting does not exist, mitigation trees may be donated to the City following the replacement schedule above or their monetary value may be paid to the City to the satisfaction of the Director.

Oak trees have a very sensitive root system that consists of both shallow and deep roots. Grading, cutting, or trenching around oak trees is often detrimental due mainly to the shallow feeder roots being cut or damaged by machinery, or exposed by scraping away the topsoil. This may weaken the tree by reducing its ability to take up water and nutrients from the soil. Where possible, grading/trenching should be restricted to areas outside the drip line and root zone of the trees. If trenches must be dug under oak trees, every effort should be made to put all utilities, etc. in one trench rather than digging many trenches. Tunnels and hand trenches are less destructive alternatives to machine trenching. Any roots permanently exposed from grading or scraping of topsoil should be cleanly cut just below the new soil grade.

Filling (adding soil) and/or compaction under the drip line of oaks is also harmful because it impairs the ability of roots to “breathe”. Oxygen is essential to root respiration and is directly related to the processes of active water absorption and nutrient uptake. Compaction caused by fine grading eliminates “pockets” of oxygen and/or water within the soil. If paving is unavoidable, the developer should strive to keep paving out of the drip line of the tree and no closer than about 15 feet from the tree trunk. A porous paving material, such as brick with sand joints, open bricks, or pervious concrete (this will allow some water penetration and gas exchange). Even with porous paving, the area around the trunk (at least a 10-ft radius) should be left natural and uncovered.

Parkway trees located along Calgrove Boulevard or Wiley Canyon Road, as defined under the Chapter 13.76 – Parkway Trees of the City of Santa Clarita Municipal Code² shall be addressed in a separate report and permit. A non-indigenous holly oak, *Quercus ilex*, may be removed because of the roadway infrastructure improvements. As a condition for the granting of a permit

² <https://www.codepublishing.com/CA/SantaClarita/html/SantaClarita13/SantaClarita1376.html#13.76>

for the removal of a street tree under this section, the applicant shall replace the removed tree with a predetermined sized tree as determined by the Director (replacement tree not to exceed the value of removed tree), replacement either on the same site or in an alternative location as approved by the Director. As this tree is larger than 12 inches in diameter DBH, it will require a minimum of 1 36" boxed size replacement tree. Before the permit may be issued, the applicant shall deposit adequate security (cash or bond) with the City in an amount to cover the cost of replacing the tree. The City may use the security to defray its cost of replacing the tree if the applicant fails to do so within a reasonable specified period of time. Such decisions may be appealed to the Parks, Recreation and Community Services Commission within twenty (20) days of notification. Various requirements for street trees to be removed because of roadway improvements shall incorporate plans for installation of a parkway or a tree planting area. Plans and specifications for planting such areas shall be integrated into the general plan of improvements and it shall be the duty of the City Engineer to coordinate the design of such improvements with the Director prior to the completion of final overall plans. (Ord. 90-15, 7/10/90; Ord. 05-1 § 2, 1/25/05)". It will also be required of the developers to notify the City Parks, Recreation, and Community services department of the types, quantities, and sites of trees planted.

Oak Tree Mitigation Measures

- **Replacement Trees:** The applicant shall be required to plant mitigation oak trees within the project site, easily visible to the general public. The planting of on-site mitigation oak trees referenced above shall be equal to or exceed the International Society of Arboriculture (ISA) dollar value of all oak trees proposed for removal, presently estimated at \$303,400 (which includes the 4 oak trees on site). Prior to the issuance of grading permits and the start of any construction, the applicant shall be required to bond for the International Society of Arboriculture (ISA) dollar value of all oak trees proposed for removal.
- **Eligible Replacement Trees:** All replacement trees for oaks removed within the project site or roadway infrastructure improvements shall be at least a 72" box specimen in size. Free-form trees with multiple stems are permissible. Replacement trees shall consist exclusively of the same species (coast live oak) and be sourced locally. Total value of 72" boxed specimens should be equal to or greater than the ISA cost value of \$303,400.
- **Protective fencing:** A plan shall be developed for protecting mitigation oak trees planted within the property before and during the development phase. This plan shall be approved by the Urban Forestry Division of the City of Santa Clarita. Equipment damage to limbs, trunks, and roots of all remaining trees shall be avoided during project construction and development. Even slight trunk injuries can result in susceptibility to long-term pathogenic maladies. Protective fencing not less than 4 feet in height shall be placed at the limits of the protective zone of any individual oak tree or dense stand of oak trees within 200 feet of the grading limits and shall be inspected by the forester or city approved qualified consulting arborist prior to commencement of any activity on the subject property and shall remain in place until construction is completed.

- Oak Tree Monitoring:** Certified arborists who are recognized as Qualified Consulting Arborists by the City of Santa Clarita³, will be retained to conduct regular monitoring and annual assessments of planted mitigation trees to be carried out in accordance with the Oak Tree permit for the project. Monitoring of each tree will begin with tree installation (including installation of an acorn within the dripline of each tree) and continue for a minimum of two years. Monitoring of the oak tree establishment effort is divided into three main phases: (1) prior to project start, (2) installation monitoring, and (3) annual technical monitoring (see **Table 2, Maintenance Schedule for the Two-Year Oak Tree Establishment Effort** below). The project arborist will provide a short field memo for each monitoring visit and will include notes on the conditions of each tree, including trunk diameter at breast height (4.5 feet above ground level), height, crown measurements in eight directions, health, vigor, aesthetic, balance, soil moisture, and other metrics regarding the health of each tree. The field memo will also include the status of each acorn planted within the dripline of each tree. Photos will also be taken of each tree during every site visit. If necessary, the project arborist will notify the client and the City of Santa Clarita Urban Forester immediately if the trees require any adaptive management or if any project related encroachments or impacts occur.

**TABLE 2
MAINTENANCE SCHEDULE FOR THE TWO-YEAR OAK TREE ESTABLISHMENT EFFORT***

Time Frame	Schedule
Prior to Project Start	
Retain Project Arborist	Prior to Tree Removal
Installation Monitoring	
Monitoring the Tree Installation	During Tree Installation
Annual Technical Monitoring	
Report on Permit Compliance upon completion of Tree Planting	After Tree Installation
120-day Establishment Period	Monthly Site Visits (3x Visits)
Remainder of Year 1 and 2	4 visits per year
November - May	Three Visits
June - October	One Visit

* This schedule is only a guideline; maintenance will be performed as necessary and as directed by the project arborist. Additional visits to check on oak tree health and inspect irrigation should also be conducted if any encroachments or changes to the mitigation plantings occur.

³ <https://santaclarita.gov/wp-content/uploads/sites/42/migration/Qualified%20Consulting%20Arborists%20July%202022.pdf>

Certification of Performance

I, Douglas Gordon-Blackwood, certify:

- That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions, and conclusions stated herein are my own;
- That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am a member of the American Society of Consulting Arborists, Registered Consulting Arborist #689, and acknowledge, accept, and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Certified Arborist, and have been involved in the practice of arboriculture and the study of trees for over 15 years.

Signed:



Date: 02/08/2024

Douglas Gordon-Blackwood
Registered Consulting Arborist, #689
Certified Arborist, WE-11726-AU



asca | **RCA**
Registered Consulting Arborist®

Conditions represented in this report are limited to the inventory date and time. Rating for health and structure do not constitute a health or structural guarantee beyond that date. Risk assessments were not performed for the purposes of this report.

APPENDIX A

Oak Tree Measurements

**APPENDIX A1
PROJECT DEVELOPMENT OAK TREE MEASUREMENTS**

Tree Tag #	Species	DBH (inches)	Circumference (inches) ¹		Height (feet)	Canopy Measurements (feet)								Health	Vigor	Aesthetic	Balance	Heritage	Comments
						N	NE	E	SE	S	SW	W	NW						
450	<i>Quercus agrifolia</i>	12.2, 12.6	39.6	38.3	20	13	15	19	26	25	14	13	12	B	A	C	C	No	Lean, Cavity in trunk.
451	<i>Quercus agrifolia</i>	28.5, 27.1, 14.1.	89.8	84.8	31	26	27	33	32	28	24	22	25	B	B	A	A	Yes	Trunk growing over fence, dead branches in crown.
452	<i>Quercus agrifolia</i>	15.2	47.8	-	24	10	12	15	14	13	13	15	11	B	A	B	A	No	Galls throughout canopy.
453	<i>Quercus agrifolia</i>	16.4	51.5	-	20	21	8	1	1	1	1	1	16	C	C	C	D	No	Strong lean, hydraulic oil drums leaking near base.
454	<i>Quercus agrifolia</i>	37.5, 19.3	117.8	60.6	25	15	15	16	14	18	18	19	16	B	B	B	A	Yes	Hydraulic oil drums leaking near base, some dieback in crown.
455	<i>Quercus agrifolia</i>	33.4, 21.1, 15.6, 11.3.	104.9	66.3	33	27	29	28	27	28	24	20	21	B	B	B	B	No	Galls throughout canopy, small cavities in trunk.
456	<i>Quercus agrifolia</i>	21.1, 18.3	66.3	57.8	28	20	9	6	8	22	19	16	18	B	B	C	C	No	Lean, no old tags present, Asymmetrical due to utility line clearance, small cavities in trunk.
457	<i>Quercus agrifolia</i>	9.9	30.8	-	9	10	15	14	11	8	9	8	10	A	A	A	B	No	slight lean, no old tag.
458	<i>Quercus agrifolia</i>	24.9	78.5	-	35	25	21	16	16	18	18	18	23	A	B	A	A	No	Galls throughout canopy.

¹ For trees with two or more trunks, the two greatest circumferences are provided.

Tree Tag #	Species	DBH (inches)	Circumference (inches) ¹		Height (feet)	Canopy Measurements (feet)								Health	Vigor	Aesthetic	Balance	Heritage	Comments
						N	NE	E	SE	S	SW	W	NW						
459	<i>Quercus agrifolia</i>	19.4, 18.7	60.9	58.7	31	r	16	16	20	28	24	16	14	C	B	C	D	No	Flush cuts along trunk and throughout crown, sparse canopy, crown raised.
460	<i>Quercus agrifolia</i>	22.7, 22.1	71.3	69.4	38	39	28	30	34	29	32	34	28	B	B	A	B	No	minor dieback in crown, fence through trunk and girdling trunk, root zone inundated with accumulated sediment from adjacent culvert.
466	<i>Quercus agrifolia</i>	5	15.7	-	15	7	7	7	6	4	4	6	6	c	b	c	c	no	lean, tree crowded and buried by debris and trash, chlorotic leaves, and die back in crown.

**APPENDIX A2
ROADWAY INFRASTRUCTURE OAK TREE MEASUREMENTS**

Tree Tag #	Species	DBH (inches)	Circumference (inches) ²		Height (feet)	Canopy Measurements (feet)								Health	Vigor	Aesthetic	Balance	Heritage	Comments
						N	NE	E	SE	S	SW	W	NW						
QA1	<i>Quercus agrifolia</i>	29.0	91.1	-	16	10	13	18	15	8	12	18	15	B	B	B	B	No	Minor dieback in crown. Tree located on private property and measurements estimated from a distance.
QA2	<i>Quercus agrifolia</i>	33.1	103.7	-	25	23	16	10	15	27	23	17	20	B	B	A	B	No	exposed roots, pruned for road clearance and utility line clearance.
QA3	<i>Quercus agrifolia</i>	11.5	36.1	-	15	7	6	6	6	7	7	7	7	A	A	A	A	No	Tree located on private property – Measurements estimated due to limited access.
QA4	<i>Quercus agrifolia</i>	7, 6, 6	22.0	18.9	18	6	6	7	7	7	6	5	6	A	A	A	A	No	Tree located on private property – Measurements estimated due to limited access.
QA5	<i>Quercus agrifolia</i>	19	59.7	-	16	16	13	15	17	16	13	13	14	B	A	B	B	No	Parkway Tree ³ , Tree trimmed for utility line clearance.
QA6	<i>Quercus agrifolia</i>	18.7	58.7	-	20	13	14	11	9	10	9	9	11	B	B	B	B	No	Parkway Tree ³ , Tree trimmed for utility line clearance.

² For trees with two or more trunks, the two greatest circumferences are provided.

³ Tree planted in parkway along Wiley Canyon Road and also protected as a parkway tree under the standards located within the City of Santa Clarita Ordinance 13.76 – Parkway Trees.

Tree Tag #	Species	DBH (inches)	Circumference (inches) ²		Height (feet)	Canopy Measurements (feet)								Health	Vigor	Aesthetic	Balance	Heritage	Comments
						N	NE	E	SE	S	SW	W	NW						
QA7	<i>Quercus agrifolia</i>	13	40.8	-	15	13	14	11	9	10	9	9	11	B	B	B	B	No	Parkway Tree ³ , Tree trimmed for utility line clearance.
QA8	<i>Quercus agrifolia</i>	4.1	12.9	-	7	6	5	4	5	5	6	7	5	A	B	A	A	No	Small branch dieback.
QA9	<i>Quercus agrifolia</i>	17.1, 15.1, 9.1, 7.2, 6.9, 6.0, 4.8	53.7	47.4	28	32	36	30	35	45	22	28	29	A	B	A	A	No	minor dieback in crown, some ornamental shrubs surrounding tree receiving supplemental irrigation
QA10	<i>Quercus agrifolia</i>	31.4	98.6	-	30	17	22	24	23	18	24	23	15	B	B	A	B	No	Large amount of mulch at base and likely frequently irrigated. Roots along the northern quadrant severed for seat wall and v-ditch.
QA11	<i>Quercus agrifolia</i>	22.1, 13.6, 11.7	69.4	42.7	30	16	13	4	6	7	9	8	11	B	B	C	B	No	old tag #4, Tree injection caps visible at base.
QL12	<i>Quercus lobata</i>	14.9	46.8	-	35	11	12	10	18	17	12	10	11	B	B	B	C	No	old tag #3, Tree injection caps visible at base.
QL13	<i>Quercus lobata</i>	13.4	42.1	-	35	17	13	12	15	15	18	10	11	C	C	B	B	No	old tag #2, Tree injection caps visible at base.
QL14	<i>Quercus lobata</i>	20.1	63.1	-	30	15	15	10	14	18	17	13	9	B	C	C	C	No	Tree injection caps visible at base.
QL15	<i>Quercus lobata</i>	11.3	35.5	-	35	15	11	10	11	12	13	12	14	C	C	C	C	No	Sparse canopy, tree injection caps visible at base.
QL16	<i>Quercus lobata</i>	15.0	47.1	-	35	22	18	14	16	15	12	16	15	B	C	C	B	No	Sparse canopy, tree injection

Tree Tag #	Species	DBH (inches)	Circumference (inches) ²	Height (feet)	Canopy Measurements (feet)								Health	Vigor	Aesthetic	Balance	Heritage	Comments	
					N	NE	E	SE	S	SW	W	NW							
																		caps visible at base.	
QL17	<i>Quercus lobata</i>	9.8	30.8	-	25	14	12	15	15	11	10	11	12	B	B	B	B	No	Sparse canopy, tree injection caps visible at base.
QL18	<i>Quercus lobata</i>	17.8	55.9	-	35	20	23	22	20	18	19	20	20	B	B	B	B	No	Sparse canopy, tree injection caps visible at base.
QA20	<i>Quercus agrifolia</i>	11.9	37.4	-	15	8	7	4	6	7	7	8	7	B	B	C	C	No	Private tree growing over wall, measurements estimated due to location on private property, regularly pruned for utility line clearance.
461	<i>Quercus agrifolia</i>	16	50.3	-	22	10	7	3	3	5	6	8	16	A	A	B	C	No	Tree behind fence, otherwise healthy.
462	<i>Quercus agrifolia</i>	7	22	-	15	8	5	4	4	7	6	7	8	A	A	B	B	No	Behind fence and unable to tag.
463	<i>Quercus agrifolia</i>	28	88	-	40	22	10	9	29	27	24	26	28	B	A	B	A	No	minor dieback in crown.
464	<i>Quercus agrifolia</i>	15	47.1	-	20	6	5	4	6	12	13	6	4	B	B	C	C	No	Ivy on trunk, lean, minor dieback in crown.
465	<i>Quercus agrifolia</i>	14.3	44.9	-	22	7	4	4	3	4	11	12	9	B	B	C	C	No	Trunk crowded by tropical ash, covered in ivy, lean.

APPENDIX B

Oak Tree Photographs



Photograph 1: Coast live oak 450, facing north.



Photograph 2: Coast live oak 451, facing northwest.



Photograph 3: Coast live oak 452, facing north.



Photograph 4: Coast live oak 453, facing west.



Photograph 5: Coast live oak tree 454, facing west.



Photograph 6: Coast live oak tree 455, facing west.



Photograph 7: Coast live oak tree 456, facing west.



Photograph 8: Coast live oak tree 457, facing west.



Photograph 9: Coast live oak tree 458, facing west. Note lopsided canopy due to utility line clearance.



Photograph 10: Coast live oak 459, facing northeast.



Photograph 11: coast live oak 460, facing northwest.



Photograph 12: coast live oak 461, facing south.



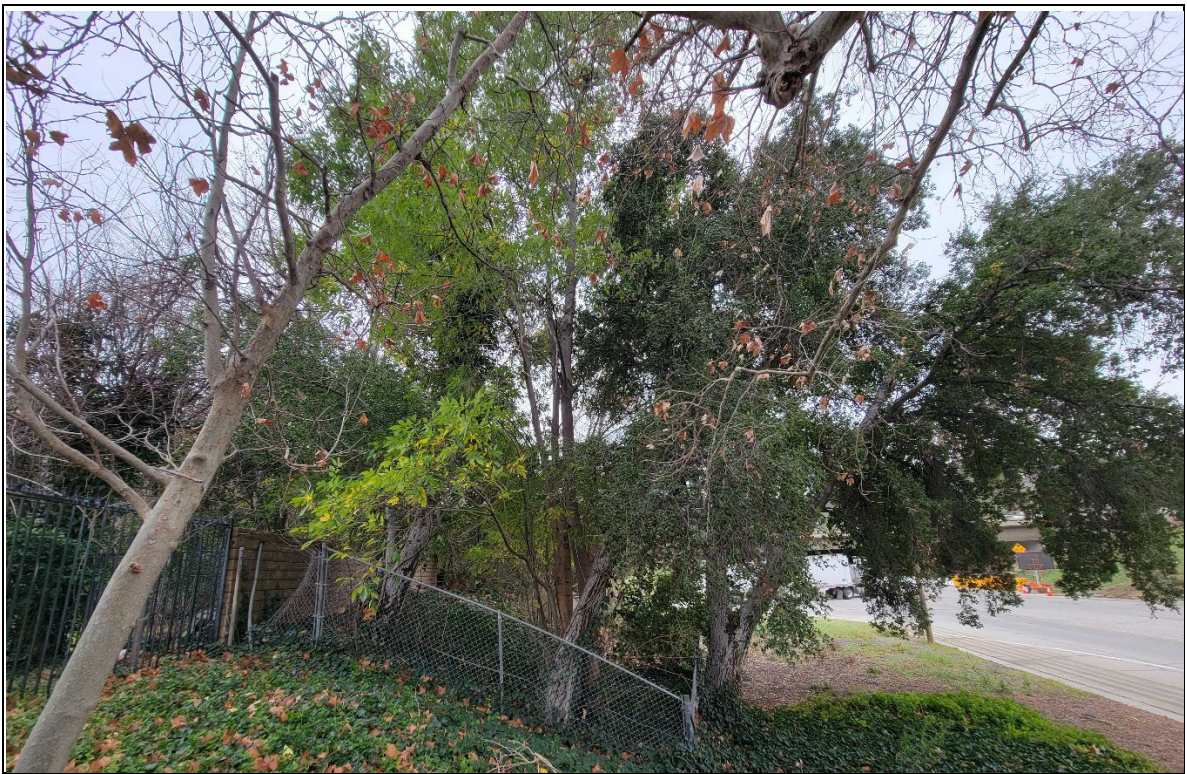
Photograph 13: coast live oak 462, facing southwest.



Photograph 14: coast live oak 463, facing northeast.



Photograph 15: coast live oak 464, facing northeast.



Photograph 16: coast live oak 465, facing southwest.



Photograph 17: coast live oak QA1, facing north.



Photograph 18: coast live oak QA2, facing north



Photograph 19: coast live oak QA3, facing north.



Photograph 20: coast live oak QA4, facing west.



Photograph 21: coast live oak QA5, facing northwest.



Photograph 22: coast live oak QA6, facing west.



Photograph 23: coast live oak QA7, facing northwest.



Photograph 24: coast live oak QA8, facing northeast.



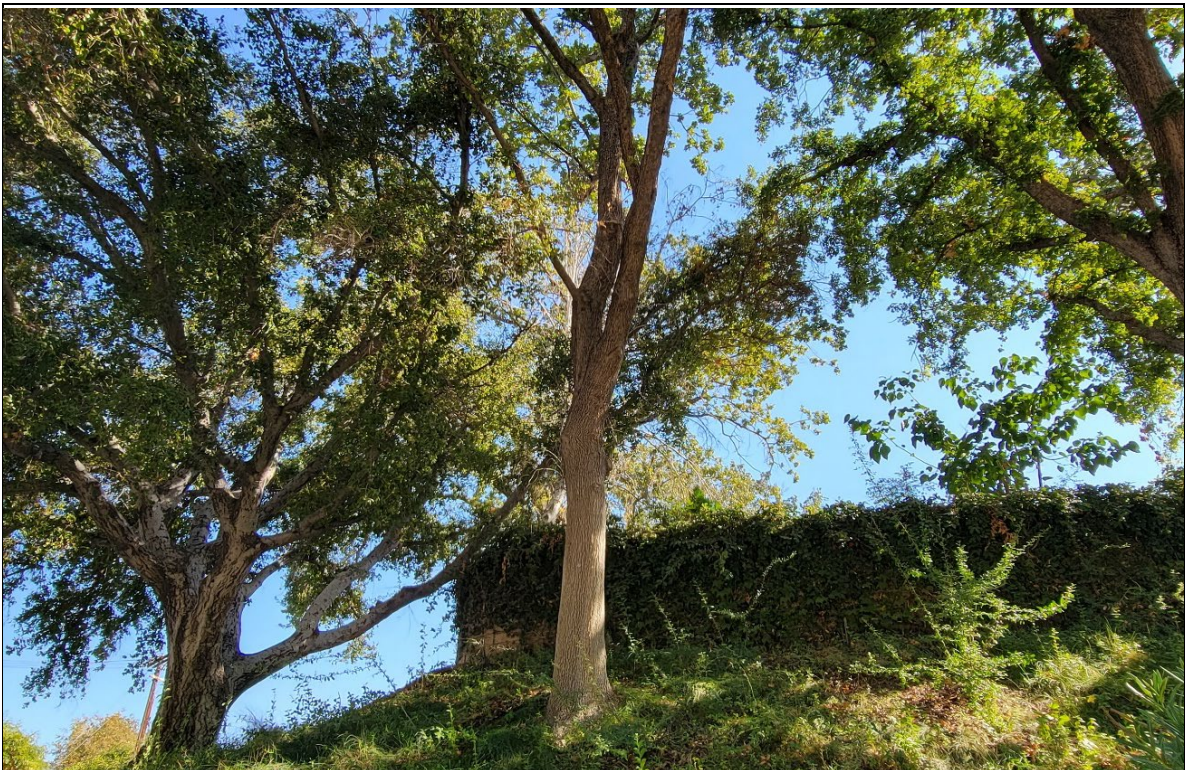
Photograph 25: coast live oak QA9, facing south.



Photograph 24: coast live oak QA10, facing south.



Photograph 25: coast live oak QA11, facing northwest.



Photograph 26: valley oak QL12, facing northeast.



Photograph 25: valley oak QL13, facing northeast.



Photograph 26: valley oak QL14, facing southeast.



Photograph 27: valley oak QL15, facing northeast.



Photograph 28: valley oak QL16, facing northeast.



Photograph 29: valley oak QL17, facing north.



Photograph 30: valley oak QL18, facing south.



Photograph 31: coast live oak QA20, facing north. Note tree extending from brick wall, not located within parkway.

APPENDIX C

Resume



Douglas Gordon-Blackwood

Senior Arborist/Botanist

EDUCATION

BS, Botany, California State Polytechnic University, Pomona

15 YEARS OF EXPERIENCE

CERTIFICATIONS/REGISTRATION

American Society of Consulting Arborists
Registered Consulting Arborist #689

International Society of Arboriculture, Certified Arborist/Utility Specialist -#WE-11726-AU

International Society of Arboriculture, Tree Risk Assessment Qualified (TRAQ)

CDFW Rare Plant Voucher Collecting Permit 2081(a)-17-021-V

University of California Cooperative Extension 2018 Gold-spotted Oak Borer / Invasive Shot Hole Borer Workshop

PROFESSIONAL AFFILIATIONS

California Native Plant Society

California Invasive Plant Council

American Society of Consulting Arborists

International Society of Arboriculture - Western Chapter

Utility Arborist Association

Douglas has been with ESA since 2018. He has 15 years of experience in arboriculture and 11 years as a botanist. Doug is an International Society of Arboriculture (ISA) Certified Arborist, Utility Specialist, and is Tree Risk Assessment Qualified (TRAQ). He is also a Registered Consulting Arborist (RCA) with the American Society of Consulting Arborists (ASCA). He has extensive experience conducting tree surveys, tree risk assessments, vegetation mapping, and tree removal monitoring. He has conducted arboricultural work throughout central and southern California. His experience includes working with private developers in conducting tree inventories and assessments, including evaluations of project-related effects and recommendations for minimizing and mitigating impacts to protected trees.

Relevant Experience

Mt. Baldy Development Project, Mt. Baldy, CA. *Arborist/Botanist.* Douglas acted as an arborist and botanist for a tree survey and vegetation mapping on a proposed recreation/development project in the town of Mt. Baldy. 4 days, January 2021.

Brookside Golf Course Development Project, City of Pasadena, Pasadena, CA. *Arborist.* Douglas conducted a tree survey and provided the tree report for a proposed development project within the City of Pasadena's Brookside Golf Course. October 2020.

Los Angeles County Department of Public Works Creek Fire Restoration Projects, Sylmar, CA. *Biologist.* Douglas conducted rare plant and oak tree surveys, conducted vegetation mapping, and weed abatement monitoring for four sites (MM 15.12, 15.62, MM15.67, and MM 16.92) along Little Tujunga Road within the Angeles National Forest. 4 days; January 2019 – November 2020.

San Bernardino County Transportation Authority I-215 Bi-County Landscape Project, Colton/Grand Terrace, CA. *Botanist/Arborist.* Douglas acted as botanist and arborist for habitat mapping, tree inventory, and biological surveys along Interstate 215 for a highway landscape renovation project in San Bernardino and Riverside Counties. 1 day; June 2019.

Los Angeles World Airport LAX Landside Access Modernization Program Tree Survey, Los Angeles, CA. *Arborist.* Douglas acted as project manager and arborist for the 127-acre Manchester Square property adjacent to the Los Angeles World Airport. Douglas provided arboricultural mapping and reporting services for approximately 1100 ornamental and native trees within the Los Angeles World Airport property. 2.5 Weeks; January 2019.

Trails at Santiago Creek Development, Orange, CA. *Biologist/Botanist.* Douglas conducted rare plant, vegetation mapping, tree inventory, jurisdictional delineations, and burrowing owl surveys of a 11-acre parcel of Rio Santiago, a large development located in the City of Orange. 1 week; April 2020

Newport Bay Conservancy Big Canyon Phase 2A Restoration Project, Newport Beach, CA. *Restoration Ecologist/Arborist.* Douglas conducted habitat restoration monitoring, arboricultural assessments, and invasive Shot-hole borer assessments of Newport Bay Phase 2A big canyon site. 2 Days; August 2020

Los Angeles Department of Public Works Los Angeles River Bike Path (Willowcrest Ave to Barham Blvd), Universal City, CA. *Arborist.* Douglas conducted a tree inventory and reporting for the LA River bike path between Willowcrest Avenue and Barham Boulevard, and within the Universal Studios Specific Plan Area. 6 days; June 2020

AT&T Communications Clock Tower Project, Newhall, CA. *Biologist.* Douglas conducted biological inventory, vegetation mapping, tree survey and site assessment for a proposed cell tower located within the Santa Susana Mountains/Simi Hills Significant Ecological Area and prepared the corresponding Biological Constraints Analysis and Biota Report. 1 Week; February 2020

Los Angeles County Department of Public Works Santa Monica Mountains/Mulholland Highway Storm Repair Project, Malibu, CA. *Biological Monitor.* Douglas provided biological monitoring and arboricultural and biological assessments for various road repair sites along Mulholland Highway. 7 Days; December 2019 – Present.

Calamigos Tennis Ranch Biological Support, Calabasas, CA. *Biologist/Arborist.* Douglas conducted oak and native tree inventory, biological survey, mapped sensitive environmental resource areas, and provided reporting for an 8-acre mixed-use facility in support of the Santa Monica Mountains LCP Biological Assessment requirements. 7 days; October 2019

Oaks at Monte Nido/Monte Nido Estates Residences Project, Monte Nido, CA. *Biologist.* Douglas conducted biological and arboricultural surveys and documentation in support of a coastal development permit application in the rural community of Monte Nido. 4 Days; November 2019

EF International Language Campus Project, Costa Mesa, CA. *Biologist.* Douglas conducted a biological and landscape assessment of the former Trinity Broadcasting Network facility for a proposed college campus in support of CEQA documents. 2 Days; September 2019

Trumark Homes Henry Avocado Ranch Tree Survey, Escondido, CA. *Arborist.* Douglas conducted a tree survey of 300 trees within a 34-acre proposed development in Escondido, CA. 1 Day; April 2019

Triunfo Canyon Corporate Retreat, Agoura Hills, CA. *Botanist/Arborist.* Douglas conducted rare plants, wildlife and habitat mapping of the Oak Canyon Ranch property within Triunfo Canyon. Douglas also conducted tree inventories and hazardous tree assessments. 2 days; May 2019 – June 2019



Berkeley Tuolumne Family Campground, Tuolumne Meadows, CA. *Lead Arborist.* Douglas conducted an arboricultural inventory for 2000+ trees burned during the 2013 Rim Fire within the City of Berkeley Family Campground. Douglas conducted tree risk assessments for each tree, mapped each location using sub-meter GPS, and tagged trees with appropriate tagging. Douglas also conducted vegetation mapping of portions of the site. 2 Weeks; January – February 2018

Seefried Industrial Properties Project, Fontana, CA *Lead Arborist.* Douglas conducted an arboricultural survey and reporting for a 17.6-acre proposed industrial site within Fontana, CA. Reporting was prepared in accordance with the City of Fontana Tree Policy Manual. 2 days; February 2018

SCE Deteriorated Pole Replacement, Southern California, CA. *Biologist.* Douglas conducted Habitat Resource Assessments for multiple deteriorated SCE utility poles throughout Southern California. Douglas conducted habitat and vegetation mapping, tree inventories, prepared project evaluation memos and conducted desktop analysis and monitored pole replacement in a wide range of sensitive species habitats. 10-20 Days; June 2017 - March 2018.

SCE HTRP/DRHTP Hazardous Tree Removal Program & Drought Related Hazardous Tree Program, Southern California, CA. *Biologist/Arborist.* Douglas acted as an arborist for SCE's hazardous tree program. Douglas conducted tree surveys, habitat assessment, jurisdictional assessments, and tree removal monitoring for hazardous trees throughout Southern California. 20-30 Days; June 2017 - March 2018.

SCE Mira Loma-Serrano Alignment Project, Yorba Linda, CA. *Restoration Ecologist.* Douglas conducted annual restoration site monitoring, willow stake planting, and reporting for a disturbed riparian site adjacent to SCE's Mira Loma-Serrano Alignment. 5 Days; April 2017 – June 2017.

SCE Tehachapi Renewable Transmission Project (TRTP) – Kern, Los Angeles, and San Bernardino Counties, CA. *Lead Botanist/ Lead Biological Monitor.* Douglas served as lead botanist, lead biological monitor, lead weed abatement monitor, nesting bird surveyor, and restoration ecologist for the Southern California Edison's (SCE) TRTP project spanning a 173-mile transmission line corridor, including construction of 500 kV overhead and underground high-voltage electric transmission lines. Douglas conducted rare plant surveys throughout Kern, Los Angeles, and San Bernardino counties. Douglas oversaw tree mapping and stump inventories throughout the Angeles National Forest. 6 Years; March 2011 – March 2017.

APPENDIX D

Field Appraisal Sheets

Appendix D: Field Appraisal Sheet
Project Site Development

Tree Number		450	451	452	453	454	455	456
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>
Basic Tree Cost	#1 Trunk Circumference	78 in	175 in	48 in	52 in	178 in	171 in	124 in
	#2 Trunk Diameter (#1 / 3.14)	25 in	56 in	15 in	16 in	57 in	55 in	40 in
	#3 Trunk Area (#2 ² / 4 x 3.14)	483.2 in	2427.2 in	181.9 in	211.2 in	2534.0 in	2333.6 in	1226.2 in
	#4 Unit Tree Cost	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in
	#5 Basic Tree Cost (#5 * #6 + #7)	\$69,090.97	\$347,084.23	\$26,013.70	\$30,196.80	\$362,356.54	\$333,698.24	\$175,343.62
Condition	#6 Health (10-100%)	85%	85%	85%	75%	85%	85%	85%
	#7 Structure (10-100%)	75%	95%	85%	75%	85%	85%	85%
	#8 Form (10-100%)	75%	95%	95%	65%	95%	85%	75%
	#9 Condition Rating (combine #6-#8)	78%	92%	88%	72%	88%	85%	82%
Limitations	#10 Functional Limitations	80%	80%	85%	80%	80%	80%	80%
	#11 External Limitations	60%	60%	80%	60%	60%	75%	80%
	#12 Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$25,978.21	\$152,717.06	\$15,625.56	\$10,387.70	\$153,639.17	\$170,186.10	\$91,646.26
Additional Costs	#13 Additional Costs: No additional costs assumed. If monitoring	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	#14 Total Cost	\$25,978.21	\$152,717.06	\$15,625.56	\$10,387.70	\$153,639.17	\$170,186.10	\$91,646.26
#15 Assignment Result (round #29)	\$26,000.00	\$152,700.00	\$15,600.00	\$10,400.00	\$153,600.00	\$170,200.00	\$91,600.00	
	Retain/Encroach/Remove?	Removal	Minor Encroachment	Removal	Minor Encroachment	Minor Encroachment	Removal	Removal

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) \$450/3.14 in² = \$143

Appendix D: Field Appraisal Sheet
Project Site Development

Tree Number		457	458	459	460	466
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	31 in	79 in	120 in	141 in	16 in
#2	Trunk Diameter (#1 / 3.14)	10 in	25 in	38 in	45 in	5 in
#3	Trunk Area (#2 ² / 4 x 3.14)	75.5 in	490.6 in	1138.9 in	1577.0 in	20.4 in
#4	Unit Tree Cost	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$144 / sq in	\$150 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$10,800.60	\$70,159.38	\$162,857.87	\$227,081.25	\$3,058.88
#6	Health (10-100%)	95%	95%	75%	85%	75%
#7	Structure (10-100%)	95%	95%	75%	85%	70%
#8	Form (10-100%)	85%	95%	65%	85%	70%
#9	Condition Rating (combine #6-#8)	92%	95%	72%	85%	72%
#10	Functional Limitations	80%	80%	60%	60%	60%
#11	External Limitations	80%	80%	60%	60%	60%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$6,336.35	\$42,656.90	\$42,017.33	\$69,486.86	\$789.19
#13	Additional Costs: No additional costs assumed. If monitoring	\$0.00	\$0.00	\$0.00	\$1.00	\$7.00
#14	Total Cost	\$6,336.35	\$42,656.90	\$42,017.33	\$69,487.86	\$796.19
#15	Assignment Result (round #29)	\$6,300.00	\$42,700.00	\$42,000.00	\$69,500.00	\$800.00
	Retain/Encroach/Remove?	No Impacts Anticipated	No Impacts Anticipated	No Impacts Anticipated	No Impacts Anticipated	No Impacts Anticipated

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) \$450/3.14 in² = \$143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		QA1	QA2	QA3	
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	
Basic Tree Cost	#1	Trunk Circumference	91 in	104 in	36 in
	#2	Trunk Diameter (#1 / 3.14)	29 in	33 in	11 in
	#3	Trunk Area (#2 ² / 4 x 3.14)	661.1 in	856.6 in	103.8 in
	#4	Unit Tree Cost ¹	\$143 / sq in	\$143 / sq in	\$143 / sq in
	#5	Basic Tree Cost (#5 * #6 + #7)	\$94,537.34	\$122,496.63	\$14,845.03
Condition	#6	Health (10-100%)	85%	85%	95%
	#7	Structure (10-100%)	85%	85%	95%
	#8	Form (10-100%)	85%	90%	95%
	#9	Condition Rating (combine #6-#8)	85%	87%	95%
Limitations	#10	Functional Limitations	80%	90%	80%
	#11	External Limitations	70%	90%	70%
	#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$44,999.77	\$85,992.63	\$7,897.55
Additional Costs	#13	Additional Costs	\$0.00	\$0.00	\$0.00
	#14	Total Cost	\$44,999.77	\$85,992.63	\$7,897.55
	#15	Assignment Result (round #29)	\$45,000.00	\$86,000.00	\$7,900.00
		Retain/Encroach/Remove?	No Impacts Anticipated	No Impacts Anticipated	No Impacts Anticipated

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		QA4	QA5	QA6	QA7
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	41 in	60 in	59 in	41 in
#2	Trunk Diameter (#1 / 3.14)	13 in	19 in	19 in	13 in
#3	Trunk Area (#2 ² / 4 x 3.14)	133.3 in	283.9 in	274.5 in	132.6 in
#4	Unit Tree Cost ¹	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$19,055.19	\$40,599.00	\$39,250.29	\$18,962.12
#6	Health (10-100%)	95%	85%	85%	85%
#7	Structure (10-100%)	95%	85%	85%	85%
#8	Form (10-100%)	95%	85%	85%	85%
#9	Condition Rating (combine #6-#8)	95%	85%	85%	85%
#10	Functional Limitations	80%	60%	60%	60%
#11	External Limitations	75%	50%	50%	30%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$10,861.46	\$10,352.74	\$10,008.82	\$2,901.20
#13	Additional Costs	\$0.00	\$0.00	\$0.00	\$0.00
#14	Total Cost	\$10,861.46	\$10,352.74	\$10,008.82	\$2,901.20
#15	Assignment Result (round #29)	\$10,900.00	\$10,400.00	\$10,000.00	\$2,900.00
Retain/Encroach/Remove?		Minor Encroachment	Removal	Removal	Removal

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		QA8	QA9	QA10	QA11
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	13 in	101 in	99 in	112 in
#2	Trunk Diameter (#1 / 3.14)	4 in	32 in	31 in	36 in
#3	Trunk Area (#2 ² / 4 x 3.14)	13.3 in	814.2 in	774.4 in	1001.0 in
#4	Unit Tree Cost ¹	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$1,895.60	\$116,431.08	\$110,744.06	\$143,145.55
#6	Health (10-100%)	95%	95%	85%	85%
#7	Structure (10-100%)	95%	95%	95%	85%
#8	Form (10-100%)	95%	95%	85%	75%
#9	Condition Rating (combine #6-#8)	95%	95%	88%	82%
#10	Functional Limitations	60%	80%	70%	60%
#11	External Limitations	30%	30%	60%	50%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$324.15	\$26,546.29	\$41,086.05	\$35,070.66
#13	Additional Costs	\$0.00	\$0.00	\$0.00	\$0.00
#14	Total Cost	\$324.15	\$26,546.29	\$41,086.05	\$35,070.66
#15	Assignment Result (round #29)	\$300.00	\$26,500.00	\$41,100.00	\$35,100.00
Retain/Encroach/Remove?		Removal	Minor Encroachment	Minor Encroachment	Minor Encroachment

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		QL12	QL13	QL14	QL15
Species		<i>Valley Oak - Quercus lobata</i>	<i>Valley Oak - Quercus lobata</i>	<i>Valley Oak - Quercus lobata</i>	<i>Valley Oak - Quercus lobata</i>
#1	Trunk Circumference	47 in	42 in	63 in	36 in
#2	Trunk Diameter (#1 / 3.14)	15 in	13 in	20 in	11 in
#3	Trunk Area (#2 ² / 4 x 3.14)	174.5 in	141.2 in	317.2 in	100.4 in
#4	Unit Tree Cost ¹	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$24,949.30	\$20,189.74	\$45,355.02	\$14,355.67
#6	Health (10-100%)	85%	75%	85%	75%
#7	Structure (10-100%)	75%	85%	75%	75%
#8	Form (10-100%)	85%	85%	75%	75%
#9	Condition Rating (combine #6-#8)	82%	82%	78%	75%
#10	Functional Limitations	60%	60%	60%	60%
#11	External Limitations	40%	40%	40%	40%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$4,890.06	\$3,957.19	\$8,526.74	\$2,584.02
#13	Additional Costs	\$0.00	\$0.00	\$0.00	\$0.00
#14	Total Cost	\$4,890.06	\$3,957.19	\$8,526.74	\$2,584.02
#15	Assignment Result (round #29)	\$4,900.00	\$4,000.00	\$8,500.00	\$2,600.00
Retain/Encroach/Remove?		Minor Encroachment	Minor Encroachment	Minor Encroachment	Minor Encroachment

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		QL16	QL17	QL18	QA20
Species		<i>Valley Oak - Quercus lobata</i>	<i>Valley Oak - Quercus lobata</i>	<i>Valley Oak - Quercus lobata</i>	<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	47 in	31 in	56 in	37 in
#2	Trunk Diameter (#1 / 3.14)	15 in	10 in	18 in	12 in
#3	Trunk Area (#2 ² / 4 x 3.14)	176.7 in	75.6 in	248.9 in	111.4 in
#4	Unit Tree Cost ¹	\$143 / sq in	\$143 / sq in	\$143 / sq in	\$143 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$25,270.19	\$10,806.08	\$35,595.10	\$15,933.45
#6	Health (10-100%)	85%	85%	85%	85%
#7	Structure (10-100%)	75%	85%	85%	75%
#8	Form (10-100%)	85%	85%	85%	75%
#9	Condition Rating (combine #6-#8)	82%	85%	85%	78%
#10	Functional Limitations	60%	60%	60%	60%
#11	External Limitations	40%	40%	40%	60%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$4,952.96	\$2,204.44	\$7,261.40	\$4,493.23
#13	Additional Costs	\$0.00	\$0.00	\$0.00	\$0.00
#14	Total Cost	\$4,952.96	\$2,204.44	\$7,261.40	\$4,493.23
#15	Assignment Result (round #29)	\$5,000.00	\$2,200.00	\$7,300.00	\$4,500.00
Retain/Encroach/Remove?		Minor Encroachment	Minor Encroachment	Minor Encroachment	Minor Encroachment

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		461	462	463	464
Species		<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>	<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	50 in	22 in	88 in	47 in
#2	Trunk Diameter (#1 / 3.14)	16 in	7 in	28 in	15 in
#3	Trunk Area (#2 ² / 4 x 3.14)	201.5 in	38.6 in	616.9 in	176.0 in
#4	Unit Tree Cost ¹	\$145 / sq in	\$146 / sq in	\$147 / sq in	\$148 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$29,223.66	\$5,628.97	\$90,680.37	\$26,042.82
#6	Health (10-100%)	85%	85%	85%	75%
#7	Structure (10-100%)	80%	85%	85%	75%
#8	Form (10-100%)	80%	85%	85%	75%
#9	Condition Rating (combine #6-#8)	82%	85%	85%	75%
#10	Functional Limitations	60%	60%	60%	60%
#11	External Limitations	60%	60%	60%	60%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$8,591.76	\$1,722.46	\$27,748.19	\$7,031.56
#13	Additional Costs	\$2.00	\$3.00	\$4.00	\$5.00
#14	Total Cost	\$8,593.76	\$1,725.46	\$27,752.19	\$7,036.56
#15	Assignment Result (round #29)	\$8,600.00	\$1,700.00	\$27,800.00	\$7,000.00
Retain/Encroach/Remove?		No Impacts Anticipated	No Impacts Anticipated	Minor Encroachment	No Impacts Anticipated

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

Appendix D: Field Appraisal Sheet
Roadway Infrastructure Improvements

Tree Number		465
Species		<i>Coast Live Oak - Quercus agrifolia</i>
#1	Trunk Circumference	45 in
#2	Trunk Diameter (#1 / 3.14)	14 in
#3	Trunk Area (#2 ² / 4 x 3.14)	161.3 in
#4	Unit Tree Cost ¹	\$149 / sq in
#5	Basic Tree Cost (#5 * #6 + #7)	\$24,034.88
#6	Health (10-100%)	75%
#7	Structure (10-100%)	75%
#8	Form (10-100%)	75%
#9	Condition Rating (combine #6-#8)	75%
#10	Functional Limitations	60%
#11	External Limitations	60%
#12	Depreciated Cost (#5 x #9 x #10 x #11 x #12)	\$6,489.42
#13	Additional Costs	\$6.00
#14	Total Cost	\$6,495.42
#15	Assignment Result (round #29)	\$6,500.00
Retain/Encroach/Remove?		No Impacts Anticipated

¹Unit Tree Cost: 24 inch box oak @ \$450 with installation, avg 2" trunk diameter, 3.14 sq inches trunk area.) $\$450/3.14 \text{ in}^2 = \143

