

Arborist Survey Report for the Century Palms Project

Sacramento County, California

Prepared For:

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
County Guidelines	Section 1.3.4 of the Downtown Rio Lindo SPA Ordinance, Chapter 19.12 of the Sacramento County Code for Tree Preservation and Protection, and Arborist Report Submittal Guidelines
dbh	diameter at breast height
ECORP	ECORP Consulting, Inc.
Project	Century Palms Project
SPA	Special Planning Area
Study Area	The Approximately 13.04-Acre Century Palms Project Area
USGS	U.S. Geological Survey

1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) conducted an arborist survey for the approximately 13.04-acre Century Palms Project (Project) Area (Study Area) located in Sacramento County, California (Figure 1). The purpose of this survey was to identify, map, and assess the general condition of all trees within the Study Area according to Section 1.3.4 of the Downtown Rio Lindo Special Planning Area (SPA) Ordinance, Chapter 19.12 of the Sacramento County Code for Tree Preservation and Protection, and Arborist Report Submittal Guidelines (collectively County Guidelines).

2.0 SITE DESCRIPTION

The Study Area is located southwest of the intersection of M Street and Rio Linda Boulevard (Figure 1). The Study Area corresponds to a portion of Section 29, Township 10 north, Range 5 east and a portion of the unsectioned Del Paso Land Grant of the "Rio Linda, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1992). The approximate center of the Study Area is located at 38.690248° latitude and -121.458671° longitude within the Lower American Watershed (Hydrologic Unit Code #18020111) (USGS 1992). The Study Area is an undeveloped lot and primarily composed of annual grassland plant species. The surrounding land use is a mix of residential and commercial.

3.0 METHODS

ECORP arborist Gabrielle Attisani (International Society of Arboriculture Certification # WE-15575A), with ECORP biologist Lena Molteni, conducted the field survey on June 3, 2025 by walking the Study Area during the field survey and recording data using a submeter capable Global Positioning System unit.

ECORP surveyed all trees that fall under the County Guidelines and that had trunks or a portion of their dripline radius within the Study Area. ECORP did not install tree tags on trees that were inaccessible or were located on private property; these trees were assigned numbers 1 through 4. Tree tag numbers from past surveys were recorded when the old tags were detectable in the field and new tags were installed if none were found. The following terms are defined in the County Guidelines:

- *Diameter at breast height (dbh)*: Measured diameter of the trunk at 54 inches above grade; if other than dbh, then alternate measurement height must be identified. If the tree is multi-trunked, include the diameter of all stems that are 1-inch dbh and larger. Size must be rounded to the nearest inch. *For multi-trunked trees, this report lists total aggregate diameter along with each trunk's diameter.*
- *Dripline*: A circle with the radius being the measurement of the length of the distance from the trunk to the end of the longest limb.

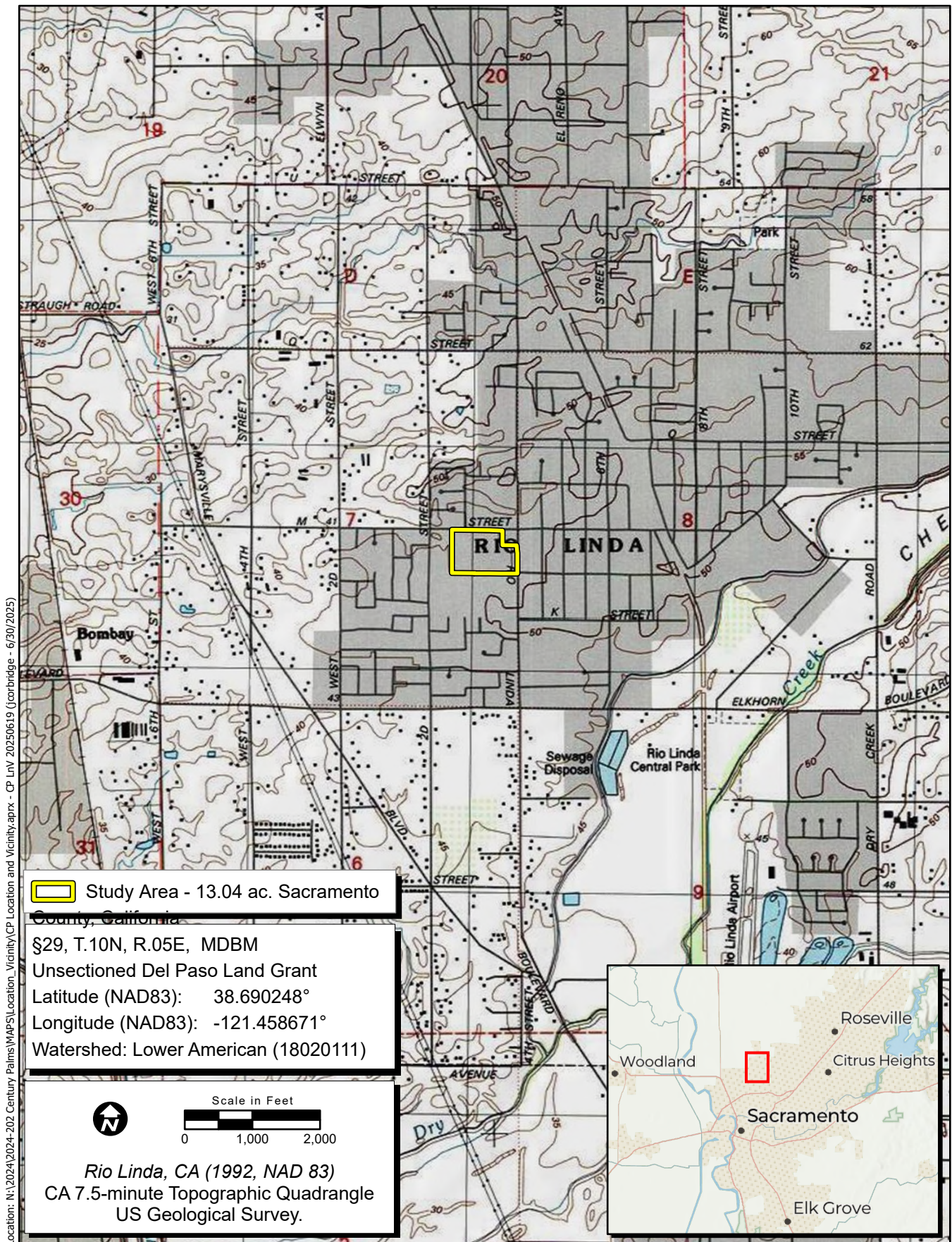


Figure 1. Project Location and Vicinity

- *Dripline Environment*: A brief written description of the growing condition of the immediate area beneath the defined dripline protection zone (i.e., natural grasses, steep terrain, existing roadway or structure, utility lines, drainage swales, previous grading cuts or fills, fire damage).
- *Health*: A measure of overall vigor and vitality of the tree and rated as good, fair, or poor based on an assessment of crown density, leaf color and size, active callusing, shoot growth rate, extent of crown dieback, cambium layer health, and tree age.
- *Heritage Tree*: This classification is for a California native oak tree growing on any land in Sacramento County, including privately owned land, with a trunk 60 inches or greater in girth (equal to 19 inches dbh or larger) measured 4.5 feet above the ground.
- *Landmark Tree*: An especially prominent or stately tree, or a special variety of a certain tree. It can be any native or nonnative tree that is exceptional for its type that is in good health and structural condition. Size is not a mandatory criterion.
- *Native Tree*: All native oak and specified non-oak native trees (refer to species list) that are 4 inches in diameter (dbh) and larger, or 10-inch aggregate diameter for multi-trunk native oak and Northern California black walnut trees.
- *Overall Tree Condition*: Based on the foregoing tree health and structural assessment, the arborist shall assign a numerical rating of the tree based on the following ratings: 0) dead, 1) severe decline, 2) declining, 3) fair, 4) good, and 5) excellent.
- *Species List*:
 - Valley oak (*Quercus lobata*)
 - Interior live oak (*Quercus wislizeni*)
 - Blue oak (*Quercus douglasii*)
 - Coast live oak (*Quercus agrifolia*), in the Delta area
 - Oracle oak (*Quercus X morehus*)
 - Native oak hybrids
 - California sycamore (*Platanus racemosa*)
 - Northern California black walnut (*Juglans californica* var. *hindsii*)
 - Oregon ash (*Fraxinus latifolia*)

- Goodding's black willow (*Salix gooddingii*)
 - Box elder (*Acer negundo* var. *californicum*)
 - White alder (*Alnus rhombifolia*)
 - California buckeye (*Aesculus californica*)
- **Structure:** A measure of the tree's structural stability and failure potential and rated as good, fair, or poor based on assessment of specific structural features (e.g., decay, conks, codominant trunks, included bark, abnormal lean, one-sided canopy, history of failure, prior construction impact, pruning history).

The surveyors collected data, which included species, tree tag number, dbh, dripline radius, health, structure, dripline environment, and overall tree condition. The survey results are intended for general Project planning purposes only; therefore, these results should not be considered a detailed tree analysis (i.e., results do not include hazard assessment, tree health diagnosis, preservation/removal recommendations, or pruning advisement).

4.0 RESULTS

ECORP inventoried a total of 45 Protected Trees within the Study Area consisting of 14 interior live oaks, (*Quercus wislizeni*) and 31 valley oak (*Quercus lobata*). A map depicting the locations of the inventoried trees is included as Appendix A. Detailed tree survey data for each tree are included as Appendix B. Representative site photographs are included as Appendix C.

5.0 IMPACTS

Based on the limits of work provided by D. R. Horton CA2, Inc., 42 of the 45 trees found during the inventory are proposed for removal/direct impact¹. Trees with trunks located outside the Study Area but with driplines that extend into the Study Area are considered to incur indirect impacts. This means that there will be impacts at the soil level within the dripline of the tree through some form of ground disturbance. See sections 6.1 and 6.2 for mitigation and protection measures for both direct and indirect impacts.

Tree 4's trunk is located on private property, so it is not anticipated that it will be removed. It is anticipated that there will be indirect impacts within Tree 4's root zone that will require tree protection measures that are noted in section 6.2 below. Trees 3 and 949 have trunks that are located between a chain-link fence on the southern border of the Study Area and a wood fence along the adjacent property

¹ This assumes that trees growing through or against the fences along the Study Area limits will be removed.

line. These two trees appear to be within the Study Area based on the survey boundaries provided and global positioning system location (collected with submeter accuracy). However, it is recommended that direct impacts to Trees 3 and 949 be avoided if the Project doesn't require their removal.

6.0 MITIGATION REQUIREMENTS AND TREE PROTECTION MEASURES

Mitigation for tree removal and preserved trees within the Project Area must comply with County and Downtown Rio Linda SPA guidelines. The following sections provide a general outline of the applicable mitigation requirements.

6.1 Direct Impact/Removed Trees

- a) Any substantial (>20 percent) encroachment and/or removal of native oak trees shall be compensated by planting native oaks and California black walnuts, equivalent to the dbh inches lost, based on the ratios listed below, at locations that are authorized by the Department of Planning and Environmental Review. On-site preservation of native oak trees that are less than 6 inches (<6 inches) dbh, may also be used to meet this compensation requirement. Encroachment of over 20 percent within the dripline radius of native trees will require compensatory mitigation based on the percentage of encroachment multiplied by the dbh. Encroachment over 50 percent will require compensation for the entire tree. Equivalent compensation based on the following ratios is required:
 - i. one preserved native oak tree < 6 inches dbh on-site = 1 inch dbh
 - ii. one "deepot" seedling (40 cubic inches or larger) = 1 inch dbh
 - iii. one 15-gallon tree = 1 inch dbh
 - iv. one 24-inch box tree = 2 inches dbh
 - v. one 36-inch box tree = 3 inches dbh
- b) Replacement tree planting shall be completed prior to the issuance of building permits or a bond shall be posted by the applicant to provide funding for purchase, planting, irrigation, and three years of maintenance, should the applicant default on replacement tree mitigation. The bond shall be in an amount equal to the prevailing rate of the County Tree Preservation Fund.
- c) Prior to the approval of Improvement Plans or building permits, a Replacement Oak Tree Planting Plan shall be prepared by a certified arborist or licensed landscape architect and shall be submitted to the Environmental Coordinator for approval.

- d) If oak tree replacement plantings are demonstrated to the satisfaction of the Environmental Coordinator to be infeasible for any or all trees removed, then compensation shall be through payment into the County Tree Preservation Fund. Payment shall be made at a rate of \$325.00 per dbh inch removed but not otherwise compensated, or at the prevailing rate at the time payment into the fund is made.

6.2 Indirect Impact/Preserved Trees

All healthy native trees that are 6 inches dbh or larger within the Project Area, all portions of adjacent off-site healthy native oak trees that are 6 inches dbh or larger which have driplines that extend into the Project Area, and all off-site healthy native oak trees that are 6 inches dbh or larger which may be impacted by utility installation and/or improvements associated with this Project, shall be preserved and protected as follows:

- a) A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.
- b) Any protected trees on the site that require pruning shall be pruned by a certified arborist prior to the start of construction work.
- c) Prior to initiating construction, temporary protective fencing shall be installed at least one foot outside the driplines of protected trees within 100-feet of construction related activities. Where encroachment occurs, temporary high visibility protective fencing shall be installed a maximum of one foot outside the work areas.
- d) Any removal of paving or structures (i.e., demolition) that occurs within the dripline of a protected oak tree shall be done under the direct supervision of a certified arborist. To the maximum extent feasible, demolition work within the dripline protection area of the oak tree shall be performed by hand. If the certified arborist determines that it is not feasible to perform some portion(s) of this work by hand, then the smallest/lightest weight equipment that will adequately perform the demolition work shall be used.
- e) No signs, ropes, cables (except those which may be installed by a certified arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of preparing tree reports and inventories shall be allowed.
- f) No vehicles, construction equipment, mobile home/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.

- g) No grading (grade cuts or fills) shall be allowed within the driplines of protected trees, except for the minimum required for construction and streetscape improvements.
- h) Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
- i) No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
- j) The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system per County standard detail shall be installed under the supervision of a certified arborist.
- k) All portions of any masonry wall that will encroach into the dripline protection area of any protected tree shall be constructed using grade beam wall panels and posts set no closer than 10 feet on center. Any wrought iron fencing shall be similarly installed, with posts set no closer than 10 feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the trees.
- l) Trunk protection measures, per Sacramento County standards, shall be used for all protected trees where development or construction activity, including installation of masonry walls or wrought iron fences, occurs within 10 feet of the trunk of a tree.

7.0 ANTICIPATED MITIGATION

For the 42 trees that are proposed for removal, there is a total of 585 inches dbh that will be lost. As such, mitigation can be achieved through one of the following options:

- i. Preserve 585 native oak trees < 6 inches dbh on-site
- ii. Plant 585 "deepot" seedlings (40 cubic inches or larger)
- iii. Plant 585 15-gallon trees
- iv. Plant 293 24-inch box trees
- v. Plant 195 36-inch box tree
- vi. Preserve and/or plant a mix of these options to reach the equivalent compensation to cover the loss of 585 inches.
- vii. Payment of \$190,125 to the County Tree Preservation Fund, subject to County Environmental Coordinator approval.

8.0 REFERENCES

- Sacramento County. 2025a. *Downtown Rio Linda Special Planning Area Ordinance - Chapter 1.3.4 Native Oak Tree Protection*.
[https://planning.saccounty.gov/Documents/Downtown%20Rio%20Linda%20\(Amended%2011.13.2023\)%20\(506-50\).pdf](https://planning.saccounty.gov/Documents/Downtown%20Rio%20Linda%20(Amended%2011.13.2023)%20(506-50).pdf). Accessed June 11, 2025.
- _____. 2025b. *Tree Preservation and Protection - Chapter 19.12, Article 19.50 Woodland Conservation*.
<https://ecode360.com/44038090#44038136>. Accessed June 2, 2025.
- U.S. Geological Survey (USGS). 1992. *Rio Linda, California 7.5-Minute Topographic Quadrangle*. United States Department of the Interior, Geological Survey, Denver.

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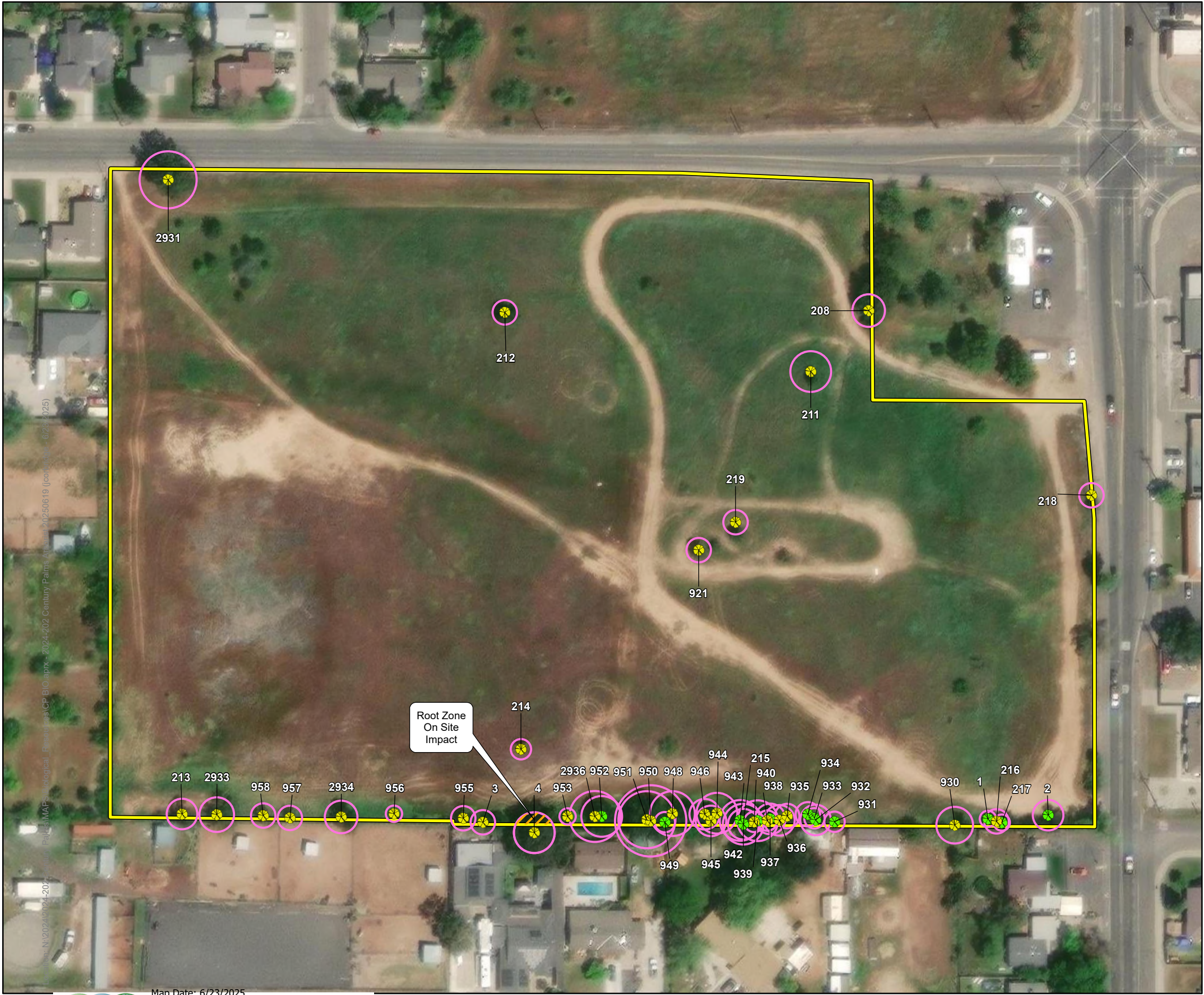
Appendix A – Arborist Survey Results

Appendix B – Tree Survey Data (June 3, 2025)

Appendix C – Representative Site Photographs

APPENDIX A

Arborist Survey Results



Map Contents

- Study Area - 13.04 ac.
- Surveyed Tree Dripline
- Root Zone OnSite Impact - 0.0073 ac.

Tree Species

- Live Oak
- Valley Oak

Sources: Esri, Maxar, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap



APPENDIX B

Tree Survey Data (June 3, 2025)

Appendix B – Tree Survey Data (June 3, 2025)

Tree Tag #	Common Name	Latin Name	DBH (inches, rounded)	Stem Description	Dripline	Dripline Environment	Height (feet)	Structure	Health	Overall Tree Condition	Field Notes
1	Interior Live Oak	<i>Quercus wislizeni</i>	19	1, 2, 2.5, 3, 3.5, 4, 3	8	Annual grassland	15	Fair to Good	Fair to Good	Good	Untagged due to accessibility.
2	Interior Live Oak	<i>Quercus wislizeni</i>	10	–	15	Duff	25	Fair	Good	Good	Untagged due to accessibility, along property line. Treehouse present.
3	Valley Oak	<i>Quercus lobata</i>	5	–	12	Annual grassland	20	Good	Good	Good	Untagged due to location between wire fencing and wooden fence of adjacent property.
4	Valley Oak	<i>Quercus lobata</i>	20	–	20	Annual grassland	35	Fair to Good	Good	Good	Untagged due to location in neighbor's yard, drip line extending into project boundary. DBH and dripline very rough estimate due to fence
208	Valley Oak	<i>Quercus lobata</i>	17	2.3, 2.4, 6, 6.4	16	Annual grassland	15	Fair	Fair to Good	Fair	–
211	Valley Oak	<i>Quercus lobata</i>	14	6.5, 7	20	Annual grassland	22	Fair	Fair to Poor	Declining	Significant branch death
212	Valley Oak	<i>Quercus lobata</i>	41	6.5, 6, 8, 10,0	12	Annual grassland	25	Fair	Fair to Good	Good	Codominant stems at base
213	Valley Oak	<i>Quercus lobata</i>	13	–	15	Annual grassland	30	Fair to Good	Fair to Good	Fair	Codominant stems, some branch death and galls

Appendix B – Tree Survey Data (June 3, 2025)

Tree Tag #	Common Name	Latin Name	DBH (inches, rounded)	Stem Description	Dripline	Dripline Environment	Height (feet)	Structure	Health	Overall Tree Condition	Field Notes
214	Valley Oak	<i>Quercus lobata</i>	11	4.2, 4.1, 2.5	10	Annual grassland	18	Fair	Fair to Good	Good	–
215	Interior Live Oak	<i>Quercus wislizeni</i>	8	–	15	Annual grassland	20	Good	Good	Good	–
216	Valley Oak	<i>Quercus lobata</i>	11	3.7, 3.8, 3.6	12	Duff	20	Fair to Good	Fair	Fair	–
217	Interior Live Oak	<i>Quercus wislizeni</i>	40	1.2, 1.3, 1.3, 1, 1, 1, 2.8, 2.5, 2, 3.2, 1, 1.3, 2, 3, 2.5, 3, 4, 1.8, 1.8, 2	8	Duff	18	Fair	Good	Good	–
218	Valley Oak	<i>Quercus lobata</i>	36	26,10	12	Annual grassland/ Asphalt	28	Good	Good	Good	–
219	Valley Oak	<i>Quercus lobata</i>	25	4, 3.8, 4.2, 4, 4, 3.8, 1, 1	12	Annual grassland	15	Fair	Fair	Fair	Codominant stems, branch death in lower canopy
921	Valley Oak	<i>Quercus lobata</i>	28	5, 5, 4.7, 5.2, 4.2, 2, 1.5	12	Annual grassland	20	Fair	Fair	Fair	Many galls, codominant stems
930	Valley Oak	<i>Quercus lobata</i>	17	4.8, 6, 1.5, 5	18	Annual grassland	25	Fair	Fair to Good	Good	–
931	Interior Live Oak	<i>Quercus wislizeni</i>	8	5.3, 3	10	Duff	15	Fair	Fair	Fair	Codominant stems
932	Interior Live Oak	<i>Quercus wislizeni</i>	5	–	15	Duff	20	Good	Good	Good	–
933	Interior Live Oak	<i>Quercus wislizeni</i>	7	–	10	Annual grassland	20	Fair to Good	Fair to Good	Good	–

Appendix B – Tree Survey Data (June 3, 2025)

Tree Tag #	Common Name	Latin Name	DBH (inches, rounded)	Stem Description	Dripline	Dripline Environment	Height (feet)	Structure	Health	Overall Tree Condition	Field Notes
934	Interior Live Oak	<i>Quercus wislizeni</i>	4	–	12	Duff	12	Fair	Fair	Fair	–
935	Valley Oak	<i>Quercus lobata</i>	7	–	12	Annual grassland	18	Fair to Good	Fair	Fair	–
936	Valley Oak	<i>Quercus lobata</i>	7	–	15	Annual grassland	18	Fair to Good	Poor	Declining	Extensive branch death
937	Interior Live Oak	<i>Quercus wislizeni</i>	9	–	15	Annual grassland	20	Fair	Good	Good	Codominant stems
938	Valley Oak	<i>Quercus lobata</i>	9	2.8, 6.2	10	Annual grassland	8	Fair	Fair to Poor	Declining	–
939	Interior Live Oak	<i>Quercus wislizeni</i>	10	–	20	Annual grassland	25	Fair to Good	Good	Good	–
940	Valley Oak	<i>Quercus lobata</i>	7	–	10	Annual grassland	20	Fair	Fair to Poor	Declining	Codominant stems, galls
942	Interior Live Oak	<i>Quercus wislizeni</i>	9	5.7, 3	20	Annual grassland	25	Fair	Fair to Good	Good	Codominant stems
943	Interior Live Oak	<i>Quercus wislizeni</i>	11	–	20	Annual grassland	25	Good	Good	Good	–
944	Valley Oak	<i>Quercus lobata</i>	10	–	20	Duff	30	Good	Fair	Fair	–
945	Valley Oak	<i>Quercus lobata</i>	10	4, 5.9	15	Duff	28	Fair	Fair	Fair	–
946	Valley Oak	<i>Quercus lobata</i>	8	–	15	Duff	25	Good	Good	Good	–
948	Valley Oak	<i>Quercus lobata</i>	16	8.1, 8	22	Annual grassland	25	Fair to Good	Fair	Fair	Codominant stems, some branch death

Appendix B – Tree Survey Data (June 3, 2025)

Tree Tag #	Common Name	Latin Name	DBH (inches, rounded)	Stem Description	Dripline	Dripline Environment	Height (feet)	Structure	Health	Overall Tree Condition	Field Notes
949	Interior Live Oak	<i>Quercus wislizeni</i>	11	5, 5.7	10	Annual grassland	25	Fair to Good	Good	Good	Between wire fencing and neighbors wood fence, codominant stems
950	Valley Oak	<i>Quercus lobata</i>	19	–	35	Annual grassland	35	Fair	Fair to Good	Fair	Codominance, occluded bark, some branch death
951	Valley Oak	<i>Quercus lobata</i>	13	–	28	Annual grassland	30	Fair to Poor	Fair	Fair	Strong lean, some branch death
952	Interior Live Oak	<i>Quercus wislizeni</i>	9	–	20	Duff	12	Fair	Good	Fair	Trunk is horizontal/growing sideways
953	Valley Oak	<i>Quercus lobata</i>	5	–	8	Annual grassland	15	Good	Fair to Good	Good	–
955	Valley Oak	<i>Quercus lobata</i>	10	–	12	Annual grassland	25	Fair	Fair	Fair	Codominance, some branch death
956	Valley Oak	<i>Quercus lobata</i>	6	–	8	Annual grassland	12	Fair to Good	Fair	Fair	Some dead branches
957	Valley Oak	<i>Quercus lobata</i>	11	–	12	Annual grassland	15	Fair to Poor	Fair to Poor	Declining	Galls, branch death
958	Valley Oak	<i>Quercus lobata</i>	10	–	12	Annual grassland	25	Good	Good	Good	–
2931	Valley Oak	<i>Quercus lobata</i>	30	27.4, 2.2	28	Annual grassland/ Asphalt	40	Fair	Fair to Good	Fair	Compacted soil along the roadside
2933	Valley Oak	<i>Quercus lobata</i>	16	–	17	Annual grassland	22	Fair	Poor	Declining	Most of canopy dead, watersprouts

Appendix B – Tree Survey Data (June 3, 2025)

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2934	Valley Oak	<i>Quercus lobata</i>	13	–	16	Annual grassland	25	Fair	Fair	Fair	–
2936	Valley Oak	<i>Quercus lobata</i>	16	–	25	Annual grassland	25	Fair to Good	Fair	Fair	Many galls

Notes: dbh = diameter at breast height

APPENDIX C

Representative Site Photographs



Photo 1. Representative Photo of the Trees within the Study Area (facing southeast; July 12, 2025).



Photo 2. Representative Photo of the Trees within the Study Area (facing northwest; July 12, 2025).



Photo 3. Representative Photo of the Trees within the Study Area (facing west; July 12, 2025).



Photo 4. Representative Photo of the Trees within the Study Area (facing northeast; October 30, 2024).

