



California Tree and Landscape Consulting, Inc.

359 Nevada Street, #201, Auburn, CA 95614

(530) 745-4086

June 20, 2024

D&S Development
Attn: Sara Lebastchi
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Sacramento, CA 95811
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Via Email: sara@dandsdev.com

REVISED¹ PRE-DEVELOPMENT ARBORIST REPORT & TREE INVENTORY

RE: 1995 Rocky Ridge Drive, APN #469-100-013; City of Roseville Jurisdiction

Executive Summary:

Sara Lebastchi of D&S Development, on behalf of the property owner, contacted California Tree and Landscape Consulting, Inc. to inventory and evaluate the protected trees on the site or within 25' of development for purposes of evaluating the impacts to the trees from development². The property is within the jurisdiction of the City of Roseville. See Supporting Information Appendix A –Tree Location Map.

Tyler Thomson, ISA Certified Arborist #WE-12751A visited the site on November 13, 2023. A total of 52 trees were evaluated on this property, 1 of which may be offsite, on the east edge of the property. 4 additional offsite trees (one at the northern tip of the property and 3 along the east edge of the property) were noted. Of the trees evaluated, 45 are protected: 6 Blue oaks (*Quercus douglasii*), 2 Interior live oaks (*Quercus wislizeni*), and 37 Valley oaks *Quercus lobata*).

Tree Species	Trees Inventoried	Trees located on the Parcel ³	Protected by Code	Proposed for Removal	Mitigation Inches
Blue oak, <i>Quercus douglasii</i>	6	4	6	4	31
Interior live oak, <i>Quercus wislizeni</i>	2	2	2	1	19.5
Valley oak, <i>Quercus lobata</i>	40	38 (1 may be offsite)	37	35	392.5
0-Dead/666-Unprotected	8	8	0	2	0
Total	56	52 (1 may be offsite)	45	42	443

See Appendices for specific information on each tree and preservation requirements and/or restrictions

¹ This report has been revised to include removal trees. The original report was dated 11/21/2023.

² Plan titled 'Preliminary Demolition Plan, Sheet G.1' dated 4/26/2024.

³ CalTLC is not a licensed land surveyor. Tree ownership was not determined. Conclusions within this report are based on existing fences or other landmarks which may not represent the actual property boundary.

METHODS

Appendix 2 in this report is the detailed inventory and recommendations for the trees. The following terms and Table A – Ratings Description will further explain our findings.

A Level 2 – Basic Visual Assessment was performed in accordance with the International Society of Arboriculture’s best management practices. This assessment level is limited to the observation of conditions and defects which are readily visible. Additional limiting factors, such as blackberries, poison oak, and/or debris piled at the base of a tree can inhibit the visual assessment.

Tree Location: The GPS location of each tree was collected using the ESRI’s ArcGIS collector application on an Apple iPhone or Samsung. The data was then processed in ESRI’s ArcMap to produce the tree location map.

Tree Measurements: DBH (diameter breast high) is normally measured at 4’6” (above the average ground height for “Urban Forestry”), but if that varies then the location where it is measured is noted. A steel diameter tape was used to measure the DBH. A Stanley laser distance meter was used to measure distances. Canopy radius measurements may also have been estimated due to obstructions.

Terms

Field Tag #	The pre-stamped tree number on the tag which is installed at approximately 6 feet above ground level on the north side of the tree.
Species	The species of a tree is listed by our local and correct common name and botanical name by genus (capitalized) and species (lower case). Oaks frequently cross-pollinate and hybridize, but the identification is towards the strongest characteristics.
DBH	Diameter at breast height is normally measured at 4’6” (above the average ground height for “Urban Forestry”), but if that varies then the location where it is measured is noted in the next column “measured at”
Canopy radius and Protection Zone Area	The farthest extent of the crown composed of leaves and small twigs. Most trees are not evenly balanced. This measurement represents the longest extension from the trunk to the outer canopy. The dripline measurement is from the center point of the tree and is shown on the Tree Location Map as a circle. This measurement further defines the radius of the protection zone to be specified on any development plans unless otherwise indicated in the arborist recommendations, Appendix 2.
Critical Root Zone	The radius of the critical root zone is a circle equal to the trunk diameter inches converted to feet and factored by tree age, condition and health pursuant to the industry standard. Best Management Practices: Managing Trees During Construction, the companion publication to the Approved American National Standard, provides guidance regarding minimum tree root protection zones for long term survival. In instances where a tree is multi-stemmed the protected root zone is equal to the extrapolated diameter (sum of the area of each stem converted to a single stem) factored by tree age, condition and health.
Arborist Rating	Subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead) as in Chart A. The rating was done in the field at the time of the measuring and inspection.

Roseville Rating	Arborist	Rating	
Excellent	Excellent	5	No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect
Good	Good	4	The tree is in good condition and there are no apparent problems that can be seen from a visual ground inspection.
Fair	Fair	3	The tree is in fair condition. There are some minor structural or health problems that pose no immediate risk of death or failure. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated and/or health can be improved.
Fair to Poor	Poor	2	The tree has major problems. If the option is taken to preserve the tree, additional evaluation to identify if health or structure can be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. Additionally, risk should be evaluated as a tree rated 2 may have structural conditions which indicate there is a high likelihood of failure. Trees rated 2 should be removed if these additional evaluations will not be performed.
Poor	Very Poor	1	The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a high risk.
Dead	Dead	0	This indicates the tree has no significant sign of life.

Notes: Provide notable details about each tree which are factors considered in the determination of the tree rating including: (a) condition of root crown and/or roots; (b) condition of trunk; (c) condition of limbs and structure; (d) growth history and twig condition; (e) leaf appearance; and (f) dripline environment. Notes also indicate if the standard tree evaluation procedure was not followed (for example - why dbh may have been measured at a location other than the standard 54"). Additionally, notes will list any evaluation limiting factors such as debris at the base of a tree.

Development Restrictions/Actions Recommended actions to increase health and longevity.

Development Impacts Projected development impacts are based solely on distance relationships between tree location and grading. Field inspections and findings during the project at the time of grading and trenching can change relative impacts. Closely followed guidelines and requirements can result in a higher chance of survival, while requirements that are overlooked can result in a dramatically lower chance of survival. Impacts are measured as follows:

Impact Term:

Long Term Result of Impact:

Negligible

Tree is unlikely to show any symptoms. Chance of survival post development is excellent. Impacts to the Protected Root Zone are less than 5%.

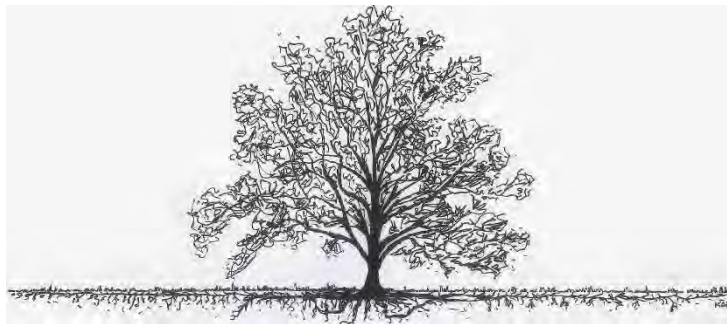
Minor	Tree is likely to show minor symptoms. Chance of survival post development is good. Impacts to the Protected Root Zone are less than 15% and species tolerance is good.
Moderate	Tree is likely to show moderate symptoms. Chance of survival post development is fair. Impacts to the Protected Root Zone are less than 35% and species tolerance is good or moderate.
Severe	Tree is likely to show moderate symptoms annually and a pattern of decline. Chance of long term survival post development is low. Impacts to the Protected Root Zone are up to 50% and species tolerance is moderate to poor.
Critical	Tree is likely to show moderate to severe symptoms annually and a pattern of decline. Chance of long term survival post development is negligible. Impacts to the Protected Root Zone are up to 80%.

Discussion

Trees need to be protected from normal construction practices if they are to remain healthy and viable on the site. Our recommendations are based on experience and the City ordinance requirements to enhance tree longevity. This requires their root zones remain intact and viable despite the use of heavy equipment to install foundations, driveways, underground utilities, and landscape irrigation systems. Simply walking and driving on soil can have serious consequences for tree health. Tree Protection measures should be incorporated into the site plans in order to protect the trees.

Root Structure

The majority of a tree's roots are contained in a radius from the main trunk outward approximately two to three times the canopy of the tree. These roots are located in the top 6" to 3' of soil. It is a common misconception that a tree underground resembles the canopy. The correct root structure of a tree is in the drawing below. All plants' roots need both water and air for survival. Poor canopy development or canopy decline in mature trees after development is often the result of inadequate root space and/or soil compaction.



The reality of where roots are generally located

Our native oak trees are easily damaged or killed by having the soil within the Protected Root Zone (PRZ) disturbed or compacted. All of the work initially performed around protected trees that will be saved should be done by people rather than by wheeled or track type tractors. Oaks are fragile giants that can take little change in soil grade, compaction, or warm season watering. Don't be fooled into believing that warm season watering has no adverse effects on native oaks. Decline and eventual death can take as long as 5-20 years with poor care and inappropriate watering. Oaks can live hundreds of years if treated properly during construction, as well as later with proper pruning, and the appropriate landscape/irrigation design.

Arborist Classifications

There are different types of Arborists:

Tree Removal and/or Pruning Companies: These companies may be licensed by the State of California to do business, but they do not necessarily know anything about trees;

Arborists: Arborist is a broad term. It is intended to mean someone with specialized knowledge of trees but is often used to imply knowledge that is not there.

ISA Certified Arborist: An International Society of Arboriculture Certified Arborist is someone who has been trained and tested to have specialized knowledge of trees. You can look up certified arborists at the International Society of Arboriculture website: isa-arbor.org.

Consulting Arborist: An American Society of Consulting Arborists Registered Consulting Arborist is someone who has been trained and tested to have specialized knowledge of trees and trained and tested to provide high quality reports and documentation. You can look up registered consulting arborists at the American Society of Consulting Arborists website: asca-consultants.org

RECOMMENDATIONS: Summary of Tree Protection Measures for Site Planning

The Owner and/or Developer should ensure the project arborist's protection measures are incorporated into the site plans and followed. Tree specific protection measures can be found in Appendix 2 – Tree Information Data.

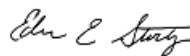
- **The stumps of the trees to be removed that are within the root zone of the City trees shall be removed using a backhoe or other piece of grading equipment only with supervision by the project arborist.** Roots from the other nearby trees may have intertwined and will be required to be severed and cut clean during the removal process. Pulling on the stumps with equipment will likely result in the lifting of the asphalt in the parking areas on the adjacent parcels.
- Clearance pruning should include removal of all the lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site or in the access path. The Project Arborist should approve the extent of foliage elevation and oversee the pruning to be performed by a contractor who is an ISA Certified Arborist.
- Clearly designate an area on the site outside the drip line of all trees on the adjacent parcels where construction materials may be stored and parking can take place. No materials or parking shall take place within the root zones of trees to be retained.
- Sewer line installation and trenching inside the root protection zone of trees to remain on the site shall be directly supervised by the project arborist. A hydraulic or air spade may be required for digging and placement of pipes underneath the roots, or boring of deeper trenches underneath the roots.
- Follow all of the General Development Guidelines, Appendix 3, for all trees not identified as requiring special preservation measures in the summary and in Appendix 2.

Report Prepared by:



Caroline Nicholas
Arborist Assistant

Project Arborist:



Edwin E. Stirtz
Consulting Arborist
ISA Certified Arborist #WE-0510A, TRAQ

Appendix 1A – Tree Location Map

Appendix 1B – Preliminary Demolition Plan

Appendix 2 – Tree Data and Tree Specific Recommendations

Appendix 3 – General Development Guidelines

Appendix 4 – Site Photographs

Bibliography

- International Society of Arboriculture. (2015). *Glossary of Arboricultural Terms*. Champaign: International Society of Arboriculture.
- L.R., C. (2003). *Reducing Infrastructure Damage by Tree Roots*. Porterville: International Society of Arboriculture.
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- Stamen, R. (1997). *California Arboriculture Law*. Riverside: Law Offices of Randall S. Stamen.
- Tree Care Industry Association. (2017). *Tree, Shrub, and Other Woody Plant Management - Standard Practices (Pruning)*. Londonderry: Tree Care Industry Association.
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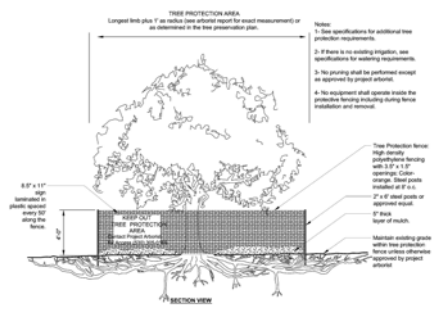


California Tree & Landscape Consulting, Inc.

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Tree Protection General Requirements

1. The project arborist for this project is California Tree & Landscape Consulting. The primary contact information is R. Cory Kinley (916) 955-6162. The project arborist may continue to provide expertise and make additional recommendations during the construction process if and when additional impacts occur or tree response is poor. Monitoring and construction oversight by the project arborist is recommended for all projects and required when a final letter of assessment is required by the jurisdiction.
2. The project arborist should inspect the exclusionary root protection fencing installed by the contractor prior to any grading and/or grubbing for compliance with the recommended protection zones. Additionally, the project arborist shall inspect the fencing at the onset of each phase of construction. The protection zone for trees is specified as the 'canopy radius' in Appendix 2 unless otherwise specified in the preservation requirements. The location of the tree protection fencing shall be depicted on the plans pursuant to the arborist recommendations. Note 'dripline' is not an acceptable location for installation of tree protection fencing.
3. The project arborist should directly supervise any clearance pruning, irrigation, fertilization, placement of mulch and/or chemical treatments. If clearance pruning is required, the Project Arborist should approve the extent of foliage elevation and oversee the pruning to be performed by a contractor who is an ISA Certified Arborist. Clearance pruning should include removal of all the lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site.
4. No trunk within the root protection zone of any trees shall be removed using a backhoe or other piece of grading equipment.
5. Clearly designate an area on the site outside the drip line of all trees where construction materials may be stored, and parking can take place. No materials or parking shall take place within the root zones of protected trees.
6. Any and all work to be performed inside the protected root zone fencing, including all grading and utility trenching, shall be approved and/or supervised by the project arborist.
7. Trenching, if required, inside the protected root zone shall be approved and/or supervised by the project arborist and may be required to be by a hydraulic or air spade, placing pipes underneath the roots, or boring deeper trenches underneath the roots.



TREE INVENTORY MAP

>Tree locat bns are approximate and were collected using apple IOS products.
>Property line informat bn was downloaded from Placer County on 11/20/2023.

Legend	
Arborist Rating	Parcel
0 - Dead	Canopy
1 - Extreme structure or health problems	
2 - Major Structure or health problems	
3 - Minor Problems	
4 - No Apparent Problems	
5 - Excellent	
▲ - Unprotected	



PLAC, Rocky Ridge

1995 Rocky Ridge
Roseville, Placer County, CA

Sheet No.
TPP 1.0

Prepared For: D&S Development

Date: 11/20/2023



CLIENT

PROJECT TITLE
Rocky Ridge
Apartments

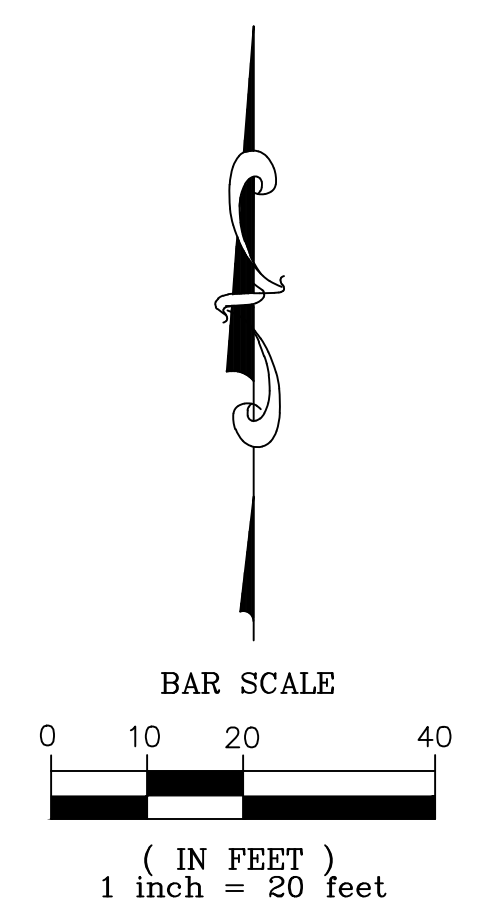
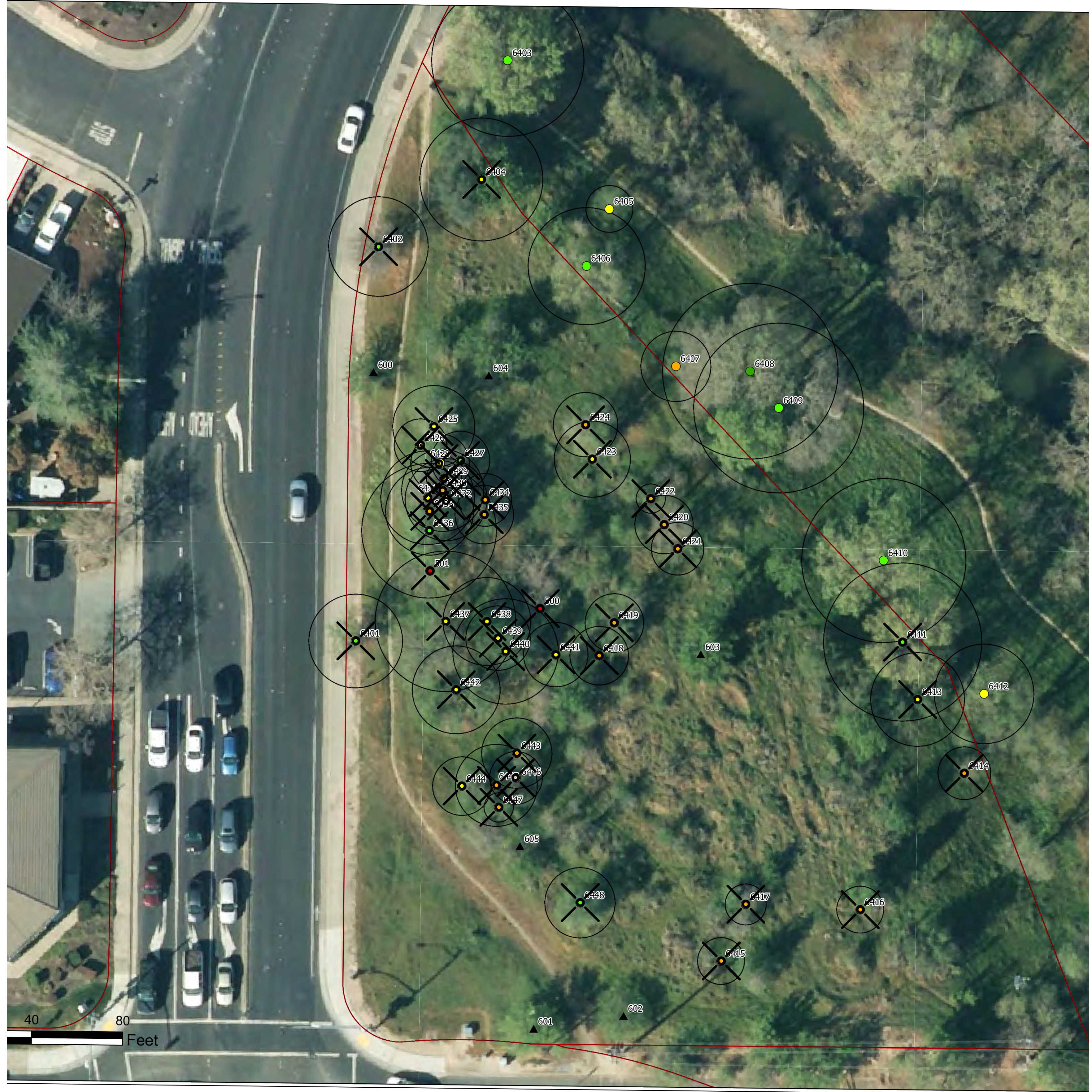
1995 ROCKY RIDGE DR.
ROSEVILLE
CALIFORNIA

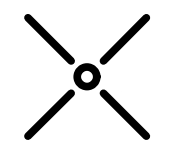
SHEET TITLE
**PRELIMINARY
DEMOLITION PLAN**

DATE	REVISION	DATE

DRAWN/CHK BY: MT / RP
DATE: 4/26/2024
JOB NO.: 0420.006
SHEET NUMBER

G.1



LEGEND:
 REMOVE EXISTING TREE

PRELIMINARY DEMOLITION PLAN
SCALE: 1"= 20'

APPENDIX 2 – TREE DATA

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
500		No		Valley oak	<i>Quercus lobata</i>	14		54		0-Dead		standing dead, 90% intact.	Proposed for removal
501		No		Valley oak	<i>Quercus lobata</i>	11		54		0-Dead		standing dead, 95% intact.	Proposed for removal
600		No		Almond	<i>Prunus dulcis</i>			54		666-Unprotected			
601		No		Almond	<i>Prunus dulcis</i>	10		6		666-Unprotected			
602		No		Almond	<i>Prunus dulcis</i>			6		666-Unprotected		cut stump, many small sprouts.	
603		No		Almond	<i>Prunus dulcis</i>			54		666-Unprotected		large decayed stump 3 feet high with small diameter sprouts.	
604		No		Almond	<i>Prunus dulcis</i>			54		666-Unprotected		large decayed stump with small diameter sprouts.	
605		No		Almond	<i>Prunus dulcis</i>			54		666-Unprotected		80% dead. stump with mature sprouts.	
6401		Yes		Valley oak	<i>Quercus lobata</i>	10		54	16	3-Minor Problems	Fair	partially buried flare, 1.5 feet from sidewalk. signs of sidewalk beginning to lift. codominant at 5 feet, fair connection. fair crown balance and density.	Proposed for removal
6402		Yes		Valley oak	<i>Quercus lobata</i>	15		15	17	3-Minor Problems	Fair	partially buried flare, 6 feet from sidewalk. signs of sidewalk beginning to lift. codominant at 2 feet, crowded connection with included bark. fair crown balance and density. low small lateral branches.	Proposed for removal
6403		Yes	Yes	Valley oak	<i>Quercus lobata</i>	21.5		12	26	3-Minor Problems	Fair	fair base on top of slope leading to drainage. fair crown balance and density. south canopy branches overlap property line by approximately 6 feet.	

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
6404		Yes		Interior live oak	<i>Quercus wislizeni</i>	19.5	10, 9.5	54	21	2-Major Structure or health problems	Fair to Poor	swollen codominant base grafted against adjacent almond trees base. both stems lean heavy south and west, lean low. healthy foliage.	Proposed for removal
6405		Yes		Valley oak	<i>Quercus lobata</i>	11.5	4, 4, 3.5	54	8	2-Major Structure or health problems	Fair to Poor	swollen base with staining, multi-stem with poor attachments, on slope. crowded stems. fair foliage health.	
6406		Yes		Valley oak	<i>Quercus lobata</i>	17.5		12	20	3-Minor Problems	Fair	fair flare. codominant at 2 feet with swollen/elevated inclusion. moderate small branch die-back throughout canopy. fair canopy balance and density.	
6407		Yes		Interior live oak	<i>Quercus wislizeni</i>	9.5		6	12	1-Extreme Structure or Health Problems	Poor	severe/extensive internal decay and dead bark on base and stems. unbalanced base on slope. good foliage health.	
6408	4	Yes	Yes	Blue oak	<i>Quercus douglasii</i>	25		54	30	4-No Apparent Problems	Good	good base, structure and vigor. low branches southwest overlap property line by approximately 20 feet.	
6409	3	Yes	Yes	Blue oak	<i>Quercus douglasii</i>	43	23, 20	54	29	3-Minor Problems	Fair	fair base, structure and vigor. low branches south overlap property line by approximately 25 feet. both stems lean moderately east.	
6410	2	Yes	Unknown	Valley oak	<i>Quercus lobata</i>	19.5		54	28	3-Minor Problems	Fair	base close to property line, if i had to guess id say its 3 feet north, offsite. slightly buried flare. codominant at 11 feet, fair connection. minor small branch die-back throughout canopy. fair crown balance and density. branches overlap property line by approximately 25 feet.	
6411	1	Yes		Valley oak	<i>Quercus lobata</i>	14.5		54	27	3-Minor Problems	Fair	fair flare. codominant at 8 feet, fair connection. south codominant stem	Proposed for removal

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
												leans heavy south. small branch die-back throughout canopy. fair vigor.	
6412		Yes	Yes	Valley oak	<i>Quercus lobata</i>	8.5		54	17	2-Major Structure or health problems	Fair to Poor	slightly swollen base. high amount of branch die-back throughout, high amount of epicormic sprouts. sparse foliage. low vigor. branches overlap property line by approximately 13 feet.	
6413		Yes		Valley oak	<i>Quercus lobata</i>	6		54	16	2-Major Structure or health problems	Fair to Poor	mostly closed vertical wound in south base with visible frass. high amount of dead main branches. epicormic sprouts. unbalanced canopy southeast, poor understory structure.	Proposed for removal
6414		Yes		Valley oak	<i>Quercus lobata</i>	6		54	9	1-Extreme Structure or Health Problems	Poor	extensive/severe internal decay and dead bark throughout entire tree. sparse foliage. low vigor.	Proposed for removal
6415		Yes		Valley oak	<i>Quercus lobata</i>	6.5		54	8	1-Extreme Structure or Health Problems	Poor	extensive bark decay throughout entire tree, crumbling dead bark with staining throughout, bark disease? low vigor.	Proposed for removal
6416		Yes		Valley oak	<i>Quercus lobata</i>	13.5	5.5, 4.5, 3.5	54	8	1-Extreme Structure or Health Problems	Poor	multi-stem at grade, heavy debris, base not visible. crowded unbalanced stems. short intranodal growth and miniaturized foliage. poor structure and vigor.	Proposed for removal
6417		Yes		Valley oak	<i>Quercus lobata</i>	13	7, 6	54	7	1-Extreme Structure or Health Problems	Poor	codominant at grade, swollen bases. severe branch die-back. poor structure. low vigor.	Proposed for removal
6418		Yes		Blue oak	<i>Quercus douglasii</i>	7		54	10	1-Extreme Structure or Health Problems	Poor	50% dead bark on base and lower trunk. severe/extensive internal decay east. 60% dead branches. sparse miniaturized foliage. low vigor.	Proposed for removal

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
6419		Yes		Valley oak	<i>Quercus lobata</i>	7.5		10	10	1-Extreme Structure or Health Problems	Poor	60% dead bark on base and lower trunk. severe/extensive internal decay south. multi-stem at 2 feet, weak attachments. miniaturized foliage. low vigor.	Proposed for removal
6420		Yes		Valley oak	<i>Quercus lobata</i>	11		12	10	1-Extreme Structure or Health Problems	Poor	buried flare. swollen codominant union at 2 feet. west codominant stem completely dead, still standing. east codominant stem has severe bark and internal decay. sparse foliage, severe branch die-back. low vigor.	Proposed for removal
6421		Yes		Valley oak	<i>Quercus lobata</i>	6		54	9	1-Extreme Structure or Health Problems	Poor	dead 4 inch lower stem northwest. 50% dead bark around base and trunk. severe branch die-back throughout. low vigor.	Proposed for removal
6422		Yes		Valley oak	<i>Quercus lobata</i>	10		3	5	1-Extreme Structure or Health Problems	Poor	85% dead. severe/extensive decay throughout. low vigor.	Proposed for removal
6423		Yes		Valley oak	<i>Quercus lobata</i>	13		3	13	2-Major Structure or health problems	Fair to Poor	buried flare. severely crowded multi-stem union at 1.5 feet. short intranodal growth, miniaturized foliage. low vigor.	Proposed for removal
6424		Yes		Valley oak	<i>Quercus lobata</i>	12	4.5, 4, 3.5	54	11	1-Extreme Structure or Health Problems	Poor	multi-stem at grade, possible weak connections. moderate bark decay in middle stem. top half dead north stem. severe branch die-back throughout. low vigor.	Proposed for removal
6425		Yes		Valley oak	<i>Quercus lobata</i>	26	6, 6, 6, 4, 4	54	14	2-Major Structure or health problems	Fair to Poor	crowded multi-stem union at grade, weak attachments. crowded unbalanced primary stems. epicormic sprouts. small branch die-back throughout. fair/low vigor.	Proposed for removal
6426		Yes		Blue oak	<i>Quercus douglasii</i>	6.5		12	9	2-Major Structure or	Fair to Poor	codominant at 2 feet, severe inclusion, open bark and staining. poor	Proposed for removal

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
										health problems		understory structure, leans southwest. sparse/small foliage. high branch die-back throughout.	
6427		Yes		Valley oak	<i>Quercus lobata</i>	6		48	10	3-Minor Problems	Fair	fair base, structure and vigor. leans slightly northeast. dead small lower branches.	Proposed for removal
6428		Yes		Valley oak	<i>Quercus lobata</i>	10	6.5, 3.5	6	10	2-Major Structure or health problems	Fair to Poor	codominant at grade, crowded stems. unbalanced canopy northwest. sparse foliage. low vigor.	Proposed for removal
6429		Yes		Valley oak	<i>Quercus lobata</i>	7		6	6	1-Extreme Structure or Health Problems	Poor	severe branch die-back, 75% dead throughout. low vigor.	Proposed for removal
6430		Yes		Valley oak	<i>Quercus lobata</i>	12	6, 6	12	14	1-Extreme Structure or Health Problems	Poor	crowded/swollen codominant union at grade. swollen lower trunks with decayed open wounds. east codominant stem 80% dead. west codominant stem leans heavy. low vigor.	Proposed for removal
6431		Yes		Valley oak	<i>Quercus lobata</i>	10.5		30	16	2-Major Structure or health problems	Fair to Poor	swollen base with closed large wound south. codominant at 3.5 feet, crowded stems with included bark. moderate/severe small branch die-back throughout. epicormic sprouts. fair/low vigor.	Proposed for removal
6432		No		Valley oak	<i>Quercus lobata</i>	8.5	5, 3.5	54	14	1-Extreme Structure or Health Problems	Poor	codominant at 1 foot, severely unbalanced codominant stems, weakly attached, open cavity in union. unbalanced stems east. low vigor.	Proposed for removal
6433		No		Valley oak	<i>Quercus lobata</i>	8.5	4.5, 4	54	15	1-Extreme Structure or Health Problems	Poor	severely swollen base. codominant at 1 foot, severely unbalanced codominant stems, weakly attached. unbalanced stems northwest, understory structure. low vigor.	Proposed for removal

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
6434		Yes		Valley oak	<i>Quercus lobata</i>	6.5		12	9	1-Extreme Structure or Health Problems	Poor	codominant at 2 feet, severe inclusion. northwest codominant stem 80% dead. south stem 60% dead. low vigor.	Proposed for removal
6435		Yes		Valley oak	<i>Quercus lobata</i>	6		54	10	1-Extreme Structure or Health Problems	Poor	swollen base with severe bark and internal decay, open cavity east. dead lower south stem along grade. fair upper canopy structure. miniaturized foliage. low vigor.	Proposed for removal
6436		Yes		Valley oak	<i>Quercus lobata</i>	13		54	23	3-Minor Problems	Fair	fair base, structure and vigor. moderate small lateral branch die-back mostly in east canopy.	Proposed for removal
6437		Yes		Valley oak	<i>Quercus lobata</i>	26.5	13.5, 13	54	24	2-Major Structure or health problems	Fair to Poor	codominant at 1 foot, fair attachment. fair branching and crown balance. low crown density with severe small branch die-back. low vigor.	Proposed for removal
6438		Yes		Valley oak	<i>Quercus lobata</i>	10		10	15	2-Major Structure or health problems	Fair to Poor	dead 6 inch stem at grade north. swollen lower trunk south at 1 foot. weak stem attachments with included bark. small branch die-back throughout.	Proposed for removal
6439		Yes		Blue oak	<i>Quercus douglasii</i>	8		12	11	2-Major Structure or health problems	Fair to Poor	swollen base, multiple small dead branches. codominant at 3 feet, crowded stems. sparse miniaturized foliage. low vigor.	Proposed for removal
6440		Yes		Valley oak	<i>Quercus lobata</i>	12		54	18	2-Major Structure or health problems	Fair to Poor	fair base. codominant at 8 feet. severe branch die-back throughout. low vigor.	Proposed for removal
6441		Yes		Blue oak	<i>Quercus douglasii</i>	9.5		3	11	2-Major Structure or health problems	Fair to Poor	severe bark and internal decay throughout base and stems. high amount of small branch die-back. sparse foliage. low vigor.	Proposed for removal
6442		Yes		Valley oak	<i>Quercus lobata</i>	15		6	15	2-Major Structure or	Fair to Poor	severely swollen lower trunk with crowded unbalanced stem	Proposed for removal

Tag #	Old Tag #	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Arborist Rating	City of Roseville Rating	Notes	Development Status
										health problems		attachments, bark decay, weak attachments. crowded branches and stems. moderate small branch die-back. fair/low vigor.	
6443		Yes		Valley oak	<i>Quercus lobata</i>	7		54	12	1-Extreme Structure or Health Problems	Poor	open 5 inch cavity in base east. severe bark decay throughout trunk and stems. severely unbalanced canopy south, 90 degree bend with severe decay, at risk of failure. low vigor.	Proposed for removal
6444		Yes		Valley oak	<i>Quercus lobata</i>	12		10	10	2-Major Structure or health problems	Fair to Poor	multi-stem at 2 feet, fair connections. sparse foliage, severe small branch die-back throughout. low vigor.	Proposed for removal
6445		Yes		Valley oak	<i>Quercus lobata</i>	12	6, 6	10	14	1-Extreme Structure or Health Problems	Poor	severely swollen codominant union at 2 feet, severely unbalanced codominant stems, 90 degree bends. high amount of epicormic sprouts on trunks. severe small branch die-back throughout. low vigor.	Proposed for removal
6446		No		Valley oak	<i>Quercus lobata</i>	8.5	4.5, 4	10	9	1-Extreme Structure or Health Problems	Poor	codominant at grade, severe bark decay. high amount of epicormic sprouts on stems. moderate/severe branch die-back throughout. low vigor.	Proposed for removal
6447		Yes		Valley oak	<i>Quercus lobata</i>	18	11, 7	6	5	1-Extreme Structure or Health Problems	Poor	codominant at grade, severe bark decay throughout. 11 dbh codominant stem completely dead. tree 95% dead.	Proposed for removal
6448		Yes		Valley oak	<i>Quercus lobata</i>	13.5		12	12	3-Minor Problems	Fair	fair base. crowded multi-stem union at 2 feet. fair crown balance and density. short intranodal growth, stunted short tree. small low branches all directions.	Proposed for removal

APPENDIX 3 – GENERAL PRACTICES FOR TREE PROTECTION

Definitions

Root zone: The roots of trees grow fairly close to the surface of the soil, and spread out in a radial direction from the trunk of tree. A general rule of thumb is that they spread 2 to 3 times the radius of the canopy, or 1 to 1 ½ times the height of the tree. It is generally accepted that disturbance to root zones should be kept as far as possible from the trunk of a tree.

Inner Bark: The bark on large valley oaks and coast live oaks is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed or removed. The cambial zone is the area of tissue responsible for adding new layers to the tree each year, so by removing it, the tree can only grow new tissue from the edges of the wound. In addition, the wood of the tree is exposed to decay fungi, so the trunk present at the time of the injury becomes susceptible to decay. Tree protection measures require that no activities occur which can knock the bark off the trees.

Methods Used in Tree Protection:

No matter how detailed Tree Protection Measures are in the initial Arborist Report, they will not accomplish their stated purpose unless they are applied to individual trees and a Project Arborist is hired to oversee the construction. The Project Arborist should have the ability to enforce the Protection Measures. The Project Arborist should be hired as soon as possible to assist in design and to become familiar with the project. He must be able to read and understand the project drawings and interpret the specifications. He should also have the ability to cooperate with the contractor, incorporating the contractor's ideas on how to accomplish the protection measures, wherever possible. It is advisable for the Project Arborist to be present at the Pre-Bid tour of the site, to answer questions the contractors may have about Tree Protection Measures. This also lets the contractors know how important tree preservation is to the developer.

Root Protection Zone (RPZ): Since in most construction projects it is not possible to protect the entire root zone of a tree, a Root Protection Zone is established for each tree to be preserved. The minimum Root Protection Zone is the area underneath the tree's canopy (out to the dripline, or edge of the canopy), plus 10'. The Project Arborist must approve work within the RPZ.

Irrigate, Fertilize, Mulch: Prior to grading on the site near any tree, the area within the Tree Protection fence should be fertilized with 4 pounds of nitrogen per 1000 square feet, and the fertilizer irrigated in. The irrigation should percolate at least 24 inches into the soil. This should be done no less than 2 weeks prior to grading or other root disturbing activities. After irrigating, cover the RPZ with at least 12" of leaf and twig mulch. Such mulch can be obtained from chipping or grinding the limbs of any trees removed on the site. Acceptable mulches can be obtained from nurseries or other commercial sources. Fibrous or shredded redwood or cedar bark mulch shall not be used anywhere on site.

Fence: Fence around the Root Protection Zone and restrict activity therein to prevent soil compaction by vehicles, foot traffic or material storage. The fenced area shall be off limits to all construction equipment, unless there is express written notification provided by the Project Arborist, and impacts are discussed and mitigated prior to work commencing.

No storage or cleaning of equipment or materials, or parking of any equipment can take place within the fenced off area, known as the RPZ.

The fence should be highly visible, and stout enough to keep vehicles and other equipment out. I recommend the fence be made of orange plastic protective fencing, kept in place by t-posts set no farther apart than 6’.

In areas of intense impact, a 6’ chain link fence is preferred.

In areas with many trees, the RPZ can be fenced as one unit, rather than separately for each tree.

Where tree trunks are within 3’ of the construction area, place 2” by 4” boards vertically against the tree trunks, even if fenced off. Hold the boards in place with wire. Do not nail them directly to the tree. The purpose of the boards is to protect the trunk, should any equipment stray into the RPZ.

Elevate Foliage: Where indicated, remove lower foliage from a tree to prevent limb breakage by equipment. Low foliage can usually be removed without harming the tree, unless more than 25% of the foliage is removed. Branches need to be removed at the anatomically correct location in order to prevent decay organisms from entering the trunk. For this reason, a contractor who is an ISA Certified Arborist should perform all pruning on protected trees.⁴

Expose and Cut Roots: Breaking roots with a backhoe, or crushing them with a grader, causes significant injury, which may subject the roots to decay. Ripping roots may cause them to splinter toward the base of the tree, creating much more injury than a clean cut would make. At any location where the root zone of a tree will be impacted by a trench or a cut (including a cut required for a fill and compaction), the roots shall be exposed with either a backhoe digging radially to the trunk, by hand digging, or by a hydraulic air spade, and then cut cleanly with a sharp instrument, such as chainsaw with a carbide chain. Once the roots are severed, the area behind the cut should be moistened and mulched. A root protection fence should also be erected to protect the remaining roots, if it is not already in place. Further grading or backhoe work required outside the established RPZ can then continue without further protection measures.

Protect Roots in Deeper Trenches: The location of utilities on the site can be very detrimental to trees. Design the project to use as few trenches as possible, and to keep them away from the major trees to be protected. Wherever possible, in areas where trenches will be very deep, consider boring under the roots of the trees, rather than digging the trench through the roots. This technique can be quite useful for utility trenches and pipelines.

Protect Roots in Small Trenches: After all construction is complete on a site, it is not unusual for the landscape contractor to come in and sever a large number of “preserved” roots during the installation of irrigation systems. The Project Arborist must therefore approve the landscape and irrigation plans. The irrigation system needs to be designed so the main lines are located outside the root zone of major trees, and the secondary lines are either laid on the surface (drip systems), or carefully dug with a hydraulic or air spade, and the flexible pipe fed underneath the major roots.

Design the irrigation system so it can slowly apply water (no more than ¼” to ½” of water per hour) over a longer period of time. This allows deep soaking of root zones. The system also needs to accommodate infrequent irrigation settings of once or twice a month, rather than several times a week.

Monitoring Tree Health During and After Construction: The Project Arborist should visit the site at least twice a month during construction to be certain the tree protection measures are being followed, to monitor the

⁴ International Society of Arboriculture (ISA), maintains a program of Certifying individuals. Each Certified Arborist has a number and must maintain continuing education credits to remain Certified.

health of impacted trees, and make recommendations as to irrigation or other needs. After construction is complete, the arborist should monitor the site monthly for one year and make recommendations for care where needed. If longer term monitoring is required, the arborist should report this to the developer and the planning agency overseeing the project.

APPENDIX 4 – SITE PHOTOGRAPHS by Tyler Thomson, November 13, 2023



Photo #1, Shows Tree #6401, 1.5 feet from sidewalk



Photo #2, Shows Tree #6402, 6 feet from sidewalk

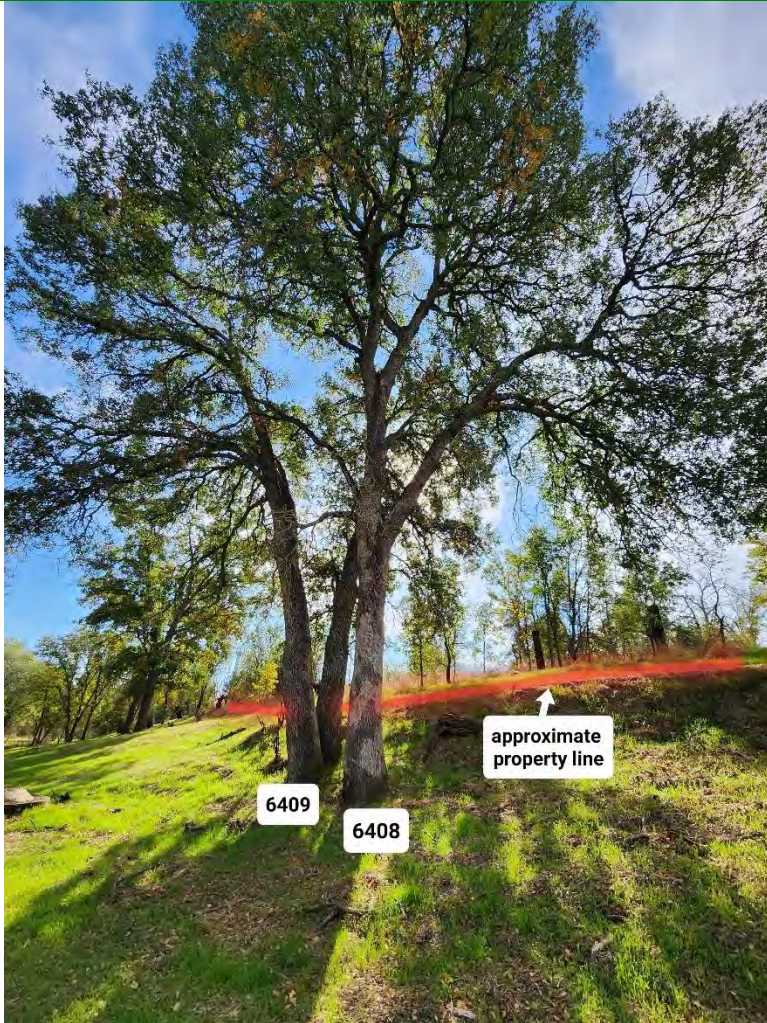


Photo #3, Shows offsite Trees #6409 & #6408, from left to right, and approximate property line



Photo #4, Shows Trees #6418 & #6419, from left to right



Photo #5, Shows Tree #6419, with dead bark and severe/ extensive internal decay



Photo #6, Shows Tree #6420, with dead codominant stem and sparse foliage



Photo #7, Shows Tree #6423, with severely crowded multi-stem union at 1.5 feet



Photo #8, Shows Tree #6437

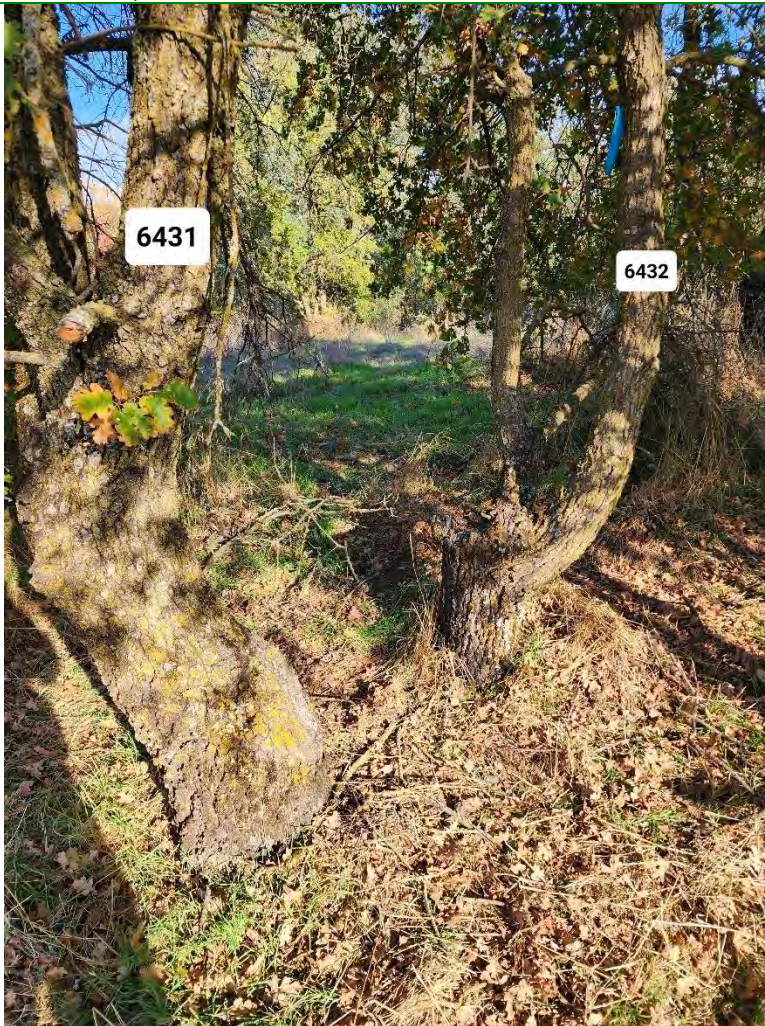


Photo #9, Shows Trees #6431 & #6432, from left to right



Photo #10, Shows Tree #6442, with crowded unbalanced stem attachments and bark decay



Photo #11, Shows Trees #6443, #6446, #6445 & #6444, from left to right