



October 19, 2023

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PRELIMINARY ARBORIST REPORT & TREE INVENTORY

RE: 3400 Chisom Trail, Loomis, CA & Vacant Land consisting of 6.6 Acres – APN #043-050-024-000, Town of Loomis jurisdiction, California

Executive Summary:

Aaron Whitfield of Breakers Realty, on behalf of the property owner, contacted California Tree and Landscape Consulting, Inc. to inventory the trees protected by the Town of Loomis oak tree preservation ordinance which are located on the site. The purpose of the inventory is to provide the tree information required for the planning phase for development of the parcel. The property is located at 3400 Chisom Trail and falls within the jurisdiction of the Town of Loomis, California. See Supporting Information Appendix 1 –Tree Location Map.

Previously, R. Cory Kinley, ISA Certified Arborist #WE-9717A, was on site October 28 – 29th, 2021, and conducted an inventory to provide species identification, measurements of diameter and canopy, field condition notes, and arborist ratings. This information was used by Tyler Thomson, ISA Certified Arborist #WE-12751A, on October 9th, 2023, when he visited the site to update the changes in size or condition of the trees on the parcel.

A total of 56 protected¹ trees were included in the survey. In addition, there are trees in the interior of the site which were included but are not required to be mitigated. These trees are generally poor and should be planned for removal. The frontage along Boyington Road includes a pocket of large riparian species trees (Cottonwood and Willow) and a few oak trees. These trees are included in the survey² for reference in the case that utilities lines will be required in this area. See Appendices for specific information on each tree.

Table 1 – Tree Inventory Summary

Tree Species	Trees Inventoried	Protected Trees	Trees on the Site ³	Trees in Good Condition ⁴	Mitigation Inches if Removed (See Appendices for individual tree requirements)
Blue Oak, <i>Quercus douglasii</i>	5	5	4	4	71
Coast redwood, <i>Sequoia sempervirens</i>	2	0	1	2	-

¹ Town of Loomis Chapter 13.54, Ordinance #252

² Riparian corridors within Placer County generally require protection. A local biologist should be consulted about the area. These trees were not included within this inventory because they are not protected according to the Town of Loomis requirements.

³ CalTLC is not a licensed land surveyor. Tree locations are approximate and we do not determine tree ownership. Trees which appear to be on another parcel are listed as off-site and treated as the property of that parcel.

⁴ Mitigation according to the Town requirements will be required for removal of these trees. Mitigation is generally charged in tree diameter inches.

Tree Species	Trees Inventoried	Protected Trees	Trees on the Site ³	Trees in Good Condition ⁴	Mitigation Inches if Removed (See Appendices for individual tree requirements)
Cottonwood, <i>Populus sp.</i>	21	0	21	12	-
Gray pine, <i>Pinus sabiniana</i>	24	0	23	1	-
Interior live oak, <i>Quercus wislizeni</i>	18	18	11	4	50
Pacific willow, <i>Salix lasiandra</i>	3	0	3	1	-
Valley Oak, <i>Quercus lobata</i>	34	33	33	21	455
Willow, <i>Salix sp.</i>	1	0	1	0	-
Total	108	56	97	45	576

METHODS

Appendix 2 in this report is the detailed inventory of the trees. The following terms will further explain our methods and findings.

The protected trees evaluated as part of this report have a numbered tag that was placed on each one that is 1-1/8" x 1-3/8", green anodized aluminum, "acorn" shaped, and labeled: CalTLC, Auburn, CA with 1/4" pre-stamped tree number and Tree Tag. They are attached with a natural-colored aluminum 10d nail, installed at approximately 6 feet above ground level on the approximate north side of the tree. The tag should last ~10-20+ years depending on the species, before it is enveloped by the trees' normal growth cycle.

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 for all trees. A Stanley laser distance meter was used to measure distances and/or pacing was used to estimate canopy measurements. Canopy radius measurements may also have been estimated due to obstructions, such as steep slopes or other trees.

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.
- Old Tag #** If additional field tags are found on the trees and are legible, they are listed here.
- 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 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 in the next column "measured at"		
Measured at	Height above average ground level where the measurement of DBH was taken		
Canopy radius	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 can further define a protection zone if specified in the local ordinance as such or can indicate if pruning may be required for development.		
Protected Root Zone	The radius of the protected 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.		
	No problem(s)	Excellent	5 No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect
	No apparent problem(s)	Good	4 The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.
	Minor problem(s)	Fair	3 The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. 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.
	Major or uncorrectable problems (2)	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 some type of failure. Tree rated 2 should be removed if these additional evaluations will not be performed.
	Extreme problem(s)	Hazardous	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 dangerous situation.
	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.

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 on the site and are expected to survive long term. While construction damage in the root zone is often the death of a tree, the time from when the damage occurs to when the symptoms begin and/or the tree dies can be years. Our recommendations are based on experience and the local ordinance requirements to enhance tree longevity. It requires the calculated root zone must remain intact as an underground ecosystem 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 to tree health. The Tree Preservation Requirements and General Development Guidelines should be incorporated into the site plans and enforced onsite. The project arborist should be included in the development team during construction to provide expertise and make additional recommendations if additional impacts occur or tree response is poor.

RECOMMENDATIONS: SUMMARY OF TREE PROTECTION MEASURES

For Project Submittal to the Town:

- Identify each tree on the final construction drawings and show the root protection zone.
- List the name and telephone number of the project arborist on the final construction drawings (grading plans) and a monitoring schedule a minimum of once per month during development.
- The project arborist should review the plans prior to submittal and provide detailed tree protection requirements for all the trees to be preserved.

Prior to Onsite Activity:

- The project arborist should inspect the installed tree protection fencing prior to grading and/or grubbing for compliance with the recommended protection zones.
- The project arborist should directly supervise the irrigation, fertilization, placement of mulch and chemical treatments.
- Prior to any grading, or other work on the site that will come within 50' of tree #2070, irrigation will be required from April through October and placement of a 4-6" layer of chip mulch over the protected root zone. Chips should be obtained from onsite trees onsite to be removed.
- Clearance pruning should include removal of all the lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site. The Project Arborist should approve the extent of foliage elevation and directly oversee the pruning to be performed by a contractor who is an ISA Certified Arborist.

During Construction:

- Any and all work to be performed inside the protected root zone fencing shall be supervised by the project arborist.
- The project arborist shall monitor the site a minimum of once per month during development and may require additional measures as a result of changing tree response.

Report Prepared by:



Caroline Nicholas
Arborist Assistant

Project Arborist:



Nicole Harrison
ISA Certified Arborist #WC-6500AM, TRAQ
ASCA Registered Consulting Arborist #719

Appendix 1 – Tree Location Map

Appendix 2 – Tree Data

Appendix 3 – General Development Guidelines

Appendix 4 – Site Photographs

Bibliography

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TREE INVENTORY MAP

>Tree locations are approximate and were collected using apple IOS products.
 >Property line information was downloaded from Placer County on 10/18/2023.

Legend

Arborist Rating

- (Dead)
- (Extreme Structure or Health Problems)
- (Major Structure or Health Problems)
- (Fair - Minor Problems)
- (Good - No Apparent Problems)
- (Excellent)

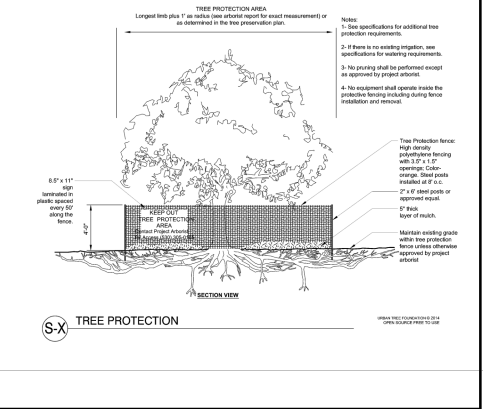
Permits
 Canopy



California Tree & Landscape Consulting, Inc.

359 Nevada Street, Suite 201
 Auburn, CA 95603

- Tree Protection General Requirements**
- 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.
 - 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 'drip-line' is not an acceptable location for installation of tree protection fencing.
 - 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.
 - No trunk within the root protection zone of any trees shall be removed using a backhoe or other piece of grading equipment.
 - 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.
 - 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.
 - 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.



LOOM, Chisom Trail

3400 Chisom Trail
 Loomis, Placer County, CA

Sheet No. TPP 1.0

Prepared For: Breakers RE

Date: 10/18/2023

APPENDIX 2 - TREE INFORMATION DATA

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
100	12	Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	13.5		54	21	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	unbalanced base south. tree leans heavy south. low branches, overlaps property line by approximately 10 feet. healthy foliage. small deep/sunken cavities on south trunk.
101	10	Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	18		54	21	\$90.00	\$1,620.00	3 Fair - Minor Problems	base flare looks fair, conks growing on east flare. fair overall branching and crown balance. moderate/high small branch die-back throughout. branches overlap property line by approximately 10 feet.
102	11		Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	14.5		54	20	\$90.00	\$1,305.00	3 Fair - Minor Problems	deep sinus south base, good wound wood. fair overall structure, slightly unbalanced canopy stems northeast. overlaps property line by approximately 15 feet.
103		Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	13.5		54	23	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	minor visible issues around base. high amount of epicormic sprouts on trunk, 50% dead sprouts. leans moderately east away from site. 30% overall branch die-back throughout tree. west branches overlap property line by approximately 8 feet.
104	8	Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	16.5		54	17	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	swollen base with 12 inch long by 6 inch wide open deep cavity east, extensive internal base hollowing present. crowded mature epicormic branches on trunk. healthy foliage. overlaps property line by approximately 14 feet, low branches.
105	7	Yes	Yes	Yes	Blue oak	<i>Quercus douglasii</i>	16.5		54	18	\$110.00	\$1,815.00	3 Fair - Minor Problems	good structure and vigor. leans slightly east.
106	6	Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	18		54	20	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	severe internal base and trunk decay, multiple deep, open cavities. sparse foliage. extensive branch die-back, 30%.

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
107	14	Yes	Yes		Blue oak	<i>Quercus douglasii</i>	31.5		15	30	\$130.00	\$4,095.00	3 Fair - Minor Problems	slightly buried base flare. codominant union with moderate included bark at 6 feet. heavy south codominant stem leaning over communication lines and over road. healthy foliage. fair crown balance.
600				Yes	Coast redwood	<i>Sequoia sempervirens</i>			54		\$0.00 (unprotected)	-	5 Excellent	mostly uniform, approximately 180 foot long row of offsite redwoods. roughly 8 foot average branch overlap south.
601					Coast redwood	<i>Sequoia sempervirens</i>			54		\$0.00 (unprotected)	-	5 Excellent	approximately 180 foot row of redwoods. branches do not yet overlap property line south.
4401		Yes	Yes		Valley oak	<i>Quercus lobata</i>	8		54	10	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Suppressed. Growing on side of cut bank.
4402					Cottonwood	<i>Populus sp.</i>	23		54	28	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair trunk and canopy structure. healthy foliage.
4403					Willow	<i>Salix sp.</i>	10		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	no visible issues at base. high amount of dead branches. unbalanced canopy.
4404					Cottonwood	<i>Populus sp.</i>	17		54	25	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	no visible issues at base. many burls and closed wounds on trunk. sparse branching and foliage throughout.
4405					Pacific willow	<i>Salix lasiandra</i>	7		54	18	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	unbalanced base, trunk and canopy northwest over communication lines.
4406					Cottonwood	<i>Populus sp.</i>	8		54	17	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	unbalanced base, trunk and canopy northwest over communication lines. sparse foliage. dead branch tops in canopy.
4407					Cottonwood	<i>Populus sp.</i>	17		54	37	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	no visible issues at base. severely unbalanced upper trunk and canopy. canopy branches lean and droop over road to the south.
4408					Cottonwood	<i>Populus sp.</i>	18		54	26	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair trunk and canopy structure. fair crown balance. fair vigor.

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
4409					Cottonwood	<i>Populus sp.</i>	12.5		54	24	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair trunk and canopy structure, leans moderately south. fair crown balance. fair vigor.
4412					Cottonwood	<i>Populus sp.</i>	21		54	27	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair trunk. 2 main canopy stems lean southwest moderately.
4413					Cottonwood	<i>Populus sp.</i>	8		54	8	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	swollen base, abnormally shaped, possible weak attachment. no mature branches, just trunk with sprouts. dead long top branches.
4414					Cottonwood	<i>Populus sp.</i>	8		54	20	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	unbalanced base leans south. trunk and canopy lean severely south. long dead top branch.
4415					Pacific willow	<i>Salix lasiandra</i>	7		54	17	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	large open cavity in base, severely hollowed out. trunk leans severely west, poor structure.
4416					Cottonwood	<i>Populus sp.</i>	19.5		54	35	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. trunk leans moderately west. fair crown balance.
4417					Cottonwood	<i>Populus sp.</i>	21.5		54	31	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair structure and vigor. moderate amount of dead branches in canopy.
4418					Cottonwood	<i>Populus sp.</i>	20.5		24	35	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	no visible issues at base. large burl southeast lower trunk, moderate bark damage and defects. trunk leans moderately south, canopy branches leans severely south.
4419			Yes		Valley oak	<i>Quercus lobata</i>	18.5		54	30	\$100.00	\$1,850.00	3 Fair - Minor Problems	no visual defects at base. straight tall trunk. canopy leans northwest.
4420			Yes		Valley oak	<i>Quercus lobata</i>	17.5		54	28	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	no visual defects at base. trunk and canopy leans heavy northeast starting at 18 feet, trunk at great failure risk. healthy foliage.
4421					Cottonwood	<i>Populus sp.</i>	14.5		54	26	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. strait tall trunk with minor visible defects, high canopy, fair crown balance and foliage health.
4422					Cottonwood	<i>Populus sp.</i>	9		54	24	\$0.00 (unprotected)	-	1 Extreme Structure or	base 85% hollowed out and decayed. tree leans severely north,

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													Health Problems	at extreme risk of failure, hanging over communication lines.
4423					Cottonwood	<i>Populus sp.</i>	52	25, 18, 9	54	40	\$0.00 (unprotected)	-	3 Fair - Minor Problems	multi-stem at grade, base connections appear fair. westernmost stem upper portion leans moderately south towards road. fair overall structure and vigor.
4424	21	Yes	Yes		Valley oak	<i>Quercus lobata</i>	27		54	35	\$110.00	\$2,970.00	3 Fair - Minor Problems	Good at Crown codominant Junction at 25 feet some failures fair vigor
4425	22	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	18		54	25	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Behaving tree fair to poor vigor
4426	23	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	14		54	15	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Hole at ground other evidence on trunk of dead, large failures mostly epicormic gross
4427	24	Yes	Yes		Valley oak	<i>Quercus lobata</i>	14		54	20	\$100.00	\$1,400.00	3 Fair - Minor Problems	Nice upright form made canopy crossing limbs good vigor
4428	na	Yes	Yes	Yes	Interior live oak	<i>Quercus wislizeni</i>	25		54	25	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Very poor structure from failures and decay, understory
4429	na	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	21.5		54	25	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Abnormal trunk shape and large open wound from codom removal, fair figure
4430	25	Yes	Yes		Valley oak	<i>Quercus lobata</i>	25		54	30	\$110.00	\$2,750.00	4 Good - No Apparent Problems	Good at Crown slight bend in trunk but otherwise good structure for canopy good vigor
4431	27	Yes	Yes		Blue oak	<i>Quercus douglasii</i>	15		54	15	\$110.00	\$1,650.00	3 Fair - Minor Problems	Growing over rock at base one-sided canopy from suppression. Suppressor is now gone, fair vigor small leaves
4432	26	Yes	Yes		Valley oak	<i>Quercus lobata</i>	26		54	20	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Poison oak up trunk, large failures in most structural limbs fair to poor vigor
4433	28	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	34	16, 18	54	30	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Too many removal cuts with extensive decay at Crown codom at 2 feet wide, fair to poor vigor and additional wounds made canopy

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
4434	29	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	20		54	30	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Open Rams Horn wounds below 4 feet closed removal cuts at 7 to 8 feet, one-sided canopy from suppression and slightly in mid to upper canopy, good figure
4435	30	Yes			Gray pine	<i>Pinus sabiniana</i>	15		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	
4436	31	Yes	Yes		Valley oak	<i>Quercus lobata</i>	26		54	35	\$110.00	\$2,860.00	3 Fair - Minor Problems	Fair structure with low narrow angle branch attachment at 5 feet upper canopy slightly in and overextended limbs West good vigor
4437	40	Yes	Yes		Valley oak	<i>Quercus lobata</i>	25		54	30	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Closed removal at 4 feet, gray pine and upper canopy poor lamb distribution fair to good vigor. adjacent foothill pine failed and tore off 2 main north stems, leaving large failure wounds. trees has very poor remaining structure.
4438	39	Yes			Gray pine	<i>Pinus sabiniana</i>	23		54	50	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	failure hanging on last three branches
4439	41	Yes	Yes		Valley oak	<i>Quercus lobata</i>	25.8		54	30	\$110.00	\$2,838.00	3 Fair - Minor Problems	Good at crown, single upright structure, fair limb distribution, poor vigor
4440	38	Yes			Gray pine	<i>Pinus sabiniana</i>	17		54	40	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	Extreme lean, remove
4441	32	Yes	Yes		Valley oak	<i>Quercus lobata</i>	23.9		54	30	\$100.00	\$2,390.00	3 Fair - Minor Problems	Moderate at flare hi canopy for upper canopy structure fair to good vigor
4442	33	Yes			Gray pine	<i>Pinus sabiniana</i>	24		54	30	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Surrounded by blackberries, liens
4443	34	Yes			Gray pine	<i>Pinus sabiniana</i>	18		54	15	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	Abnormal trunk shape from wounds and response growth, poor crown ratio

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
4444	35	Yes	Yes		Valley oak	<i>Quercus lobata</i>	24		54	30	\$100.00	\$2,400.00	3 Fair - Minor Problems	Slightly good canopy distribution fair to good figure
4445	36	Yes			Gray pine	<i>Pinus sabiniana</i>	16		54	20	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	poison oak. poor live crown ratio
4446	37	Yes			Gray pine	<i>Pinus sabiniana</i>	8		54	12	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	poison oak. poor live crown ratio
4447	na	Yes			Gray pine	<i>Pinus sabiniana</i>	15		54	20	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	poison oak. poor live crown ratio
4448	na	Yes			Gray pine	<i>Pinus sabiniana</i>	12		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	poison oak.
4449	na	Yes	Yes		Valley oak	<i>Quercus lobata</i>	26		54	45	\$110.00	\$2,860.00	3 Fair - Minor Problems	Fair at crown, significant upper canon feeling fair vigor
4450	na	Yes			Gray pine	<i>Pinus sabiniana</i>	16		54	20	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	poison oak. poor crown ratio, trunk bows
4451	na	Yes			Gray pine	<i>Pinus sabiniana</i>	10		54	25	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	poison oak. trunk bows over
4452	54	Yes			Gray pine	<i>Pinus sabiniana</i>	18		54	20	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	not measured,poison oak. Corrected lean
4453	53	Yes	Yes		Valley oak	<i>Quercus lobata</i>	25.5		54	35	\$110.00	\$2,805.00	3 Fair - Minor Problems	Moderate lean one sided canopy from suppression to the west, fair branch structure for vigor
4454	na	Yes			Gray pine	<i>Pinus sabiniana</i>	16		54	40	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	Extreme lean, remove
4455	51	Yes			Gray pine	<i>Pinus sabiniana</i>	25		54	35	\$0.00 (unprotected)	-	1 Extreme Structure or	Extreme lean, remove

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
													Health Problems	
4456	50	Yes	Yes		Valley oak	<i>Quercus lobata</i>	21		54	30	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Significant lien understory one sided canopy west fair vigor
4457	49	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	15		54	20	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Poor out crown significantly in understory fair vigor
4458	48	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	12		54	20	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Tear structure, one sided canopy from suppression, significantly in at top. vigor
4459	47	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	11		54	15	\$90.00	\$990.00	3 Fair - Minor Problems	vigor good
4460	45	Yes	Yes		Valley oak	<i>Quercus lobata</i>	19		54	25	\$100.00	\$1,900.00	3 Fair - Minor Problems	fair structure, vigor fair
4461	44	Yes	Yes		Valley oak	<i>Quercus lobata</i>	12		54	20	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Went with the K just above crown one-sided canopy from suppression fair vigor
4462	46	Yes	Yes		Blue oak	<i>Quercus douglasii</i>	18		54	20	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	habitat tree. decay at old cdl removal at 3ft, ps, birds cavity, poor vigor
4463	44	Yes	Yes		Blue oak	<i>Quercus douglasii</i>	8		54	12	\$100.00	\$800.00	4 Good - No Apparent Problems	Poison oak, fair to good structure and vigor
4464	42	Yes			Gray pine	<i>Pinus sabiniana</i>	32		54	45	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	poor at crown, liens with poor connection at 30 feet, remove
4465	na	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	19		54	20	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Advanced decay at 5 feet at owed codom removal, fair vigor otherwise
4466	43	Yes	Yes		Valley oak	<i>Quercus lobata</i>	15		54	18	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Questionable health, die back in upper canopy and epicormic growth, otherwise fair structure

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
4467	52	Yes	Yes		Valley oak	<i>Quercus lobata</i>	18		54	25	\$100.00	\$1,800.00	3 Fair - Minor Problems	Upper trunk and canopy lean west. Vigor good.
4468	N/A	Yes	Yes		Valley oak	<i>Quercus lobata</i>	19		54	25	\$100.00	\$1,900.00	3 Fair - Minor Problems	Upper trunk and canopy lean west. Minor dieback. Vigor good.
4469	N/A	Yes			Gray pine	<i>Pinus sabiniana</i>	8		54	40	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	Severe lean. Remove.
4470	N/A	Yes			Gray pine	<i>Pinus sabiniana</i>	13		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Severe lean. Remove.
4471	55	Yes	Yes		Valley oak	<i>Quercus lobata</i>	15		54	25	\$100.00	\$1,500.00	3 Fair - Minor Problems	Upper trunk and canopy lean west. Minor dieback. Vigor fair.
4472	N/A	Yes			Gray pine	<i>Pinus sabiniana</i>	10		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Suppressed. Remove.
4473	56	Yes	Yes		Valley oak	<i>Quercus lobata</i>	28		54	30	\$110.00	\$3,080.00	3 Fair - Minor Problems	Trunk surrounded by blackberry. Codominant at 15 feet. Vigor good.
4474	N/A	Yes			Gray pine	<i>Pinus sabiniana</i>	13		54	18	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Beetle exits. Suppressed. Remove.
4475	57	Yes	Yes		Valley oak	<i>Quercus lobata</i>	20		54	20	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Basal cavity with decay east. Minor failures.
4476		Yes			Gray pine	<i>Pinus sabiniana</i>	14		54	18	\$0.00 (unprotected)	-	1 Extreme Structure or Health Problems	Severe bow in trunk. Remove.
4477	62	Yes	Yes		Valley oak	<i>Quercus lobata</i>	23.8		54	40	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Basal and trunk cavity with decay east. Severe lean west.
4478	63	Yes	Yes		Valley oak	<i>Quercus lobata</i>	23		54	30	\$0.00 (poor condition)	-	1 Extreme Structure or Health Problems	Basal and trunk cavity with decay east. Severe canopy lean east.

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
4479	64	Yes	Yes		Valley oak	<i>Quercus lobata</i>	36		36	36	\$130.00	\$4,680.00	3 Fair - Minor Problems	Wound with decay 24 inches north. Codominant at 4 feet, 2 stems. Epicormic sprouts. Vigor fair.
4480	65	Yes			Gray pine	<i>Pinus sabiniana</i>	16		54	40	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Severe lean. remove.
4481	66	Yes	Yes		Valley oak	<i>Quercus lobata</i>	15		54	18	\$100.00	\$1,500.00	3 Fair - Minor Problems	Bulge in trunk south at 4 feet. Good crown ratio. Vigor good.
4482	67	Yes	Yes		Interior live oak	<i>Quercus wislizeni</i>	14		54	21	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	Suppressed leaner. Poor branch and canopy structure.
4483	58	Yes	Yes		Valley oak	<i>Quercus lobata</i>	22		54	32	\$100.00	\$2,200.00	3 Fair - Minor Problems	Bulge in lower trunk. Minor dieback. Vigor fair.
4484	59	Yes			Gray pine	<i>Pinus sabiniana</i>	10		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Suppressed leaner. Remove.
4485	60	Yes			Gray pine	<i>Pinus sabiniana</i>	10		54	15	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	Severe lean. Remove.
4486		Yes	Yes	Yes	Valley oak	<i>Quercus lobata</i>	42	22,20	54	40	\$130.00	\$5,460.00	3 Fair - Minor Problems	Off-site. Codominant at base. Southern stem significant lean. Vigor fair to poor. Trunk is 5 feet west of fence line. Canopy overhangs site 20 feet.
4487				Yes	Gray pine	<i>Pinus sabiniana</i>	24		54	30	\$0.00 (unprotected)	-	3 Fair - Minor Problems	Offsite. Tag on fence. Measurements approximate. Trunk is at fence line north. Canopy overhangs site 20 feet.
4982			Yes		Valley oak	<i>Quercus lobata</i>	7		24	9	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	fair base flare, minimal visible bark defects. swollen/crowded multi-stem union at 4 feet, stems rubbing one another. fair branching and crown balance. healthy foliage.
4983			Yes		Valley oak	<i>Quercus lobata</i>	16		12	15	\$0.00 (poor condition)	-	2 Major Structure or Health Problems	was originally virtually tagged as 4488, re tagged tree, got proper measurements and updated notes. fair base flare. codominant at 2 and 3 feet, severe inclusions below

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
														joints, crowded stems, weak attachments.
4984			Yes		Valley oak	<i>Quercus lobata</i>	10	6, 4	36		\$0.00 (poor condition)	-	2 Major Structure or Health Problems	codominant at grade, swollen base with included bark. crowded codominant union at 4 feet north, included bark, weak attachment, unbalanced stems.
4985					Valley oak	<i>Quercus lobata</i>	5		54	11	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair trunk and canopy structure, leans moderately south. fair crown balance. fair vigor.
4986			Yes		Interior live oak	<i>Quercus wislizeni</i>	6.5		54	10	\$80.00	\$520.00	3 Fair - Minor Problems	no visible issues at base. trunk leans moderately south. trunk grafting against small diameter valley oak at 6 feet, minor damage. fair branch structure. healthy foliage.
4988			Yes		Valley oak	<i>Quercus lobata</i>	6		54	18	\$90.00	\$540.00	3 Fair - Minor Problems	last tag in sequence was lost in blackberry. no visible issues at base. fair structure and vigor. branches lean south towards road.
4989					Cottonwood	<i>Populus sp.</i>	20		54	37	\$0.00 (unprotected)	-	3 Fair - Minor Problems	no visible issues at base. fair overall structure and vigor.
4990					Cottonwood	<i>Populus sp.</i>	26	13, 13	54	37	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	tree not tagged, heavy blackberry. base not visible, codominant around grade. trunk lean slightly. main canopy branch tops severely unbalanced and long, at great risk of failure.
4991					Cottonwood	<i>Populus sp.</i>	17		54	26	\$0.00 (unprotected)	-	3 Fair - Minor Problems	tree not tagged, heavy blackberry. base not visible. fair overall structure and vigor.
4992					Cottonwood	<i>Populus sp.</i>	38	25, 13	54	33	\$0.00 (unprotected)	-	3 Fair - Minor Problems	codominant at grade, base appears fair, visibility limited. some branches rubbing. fair branching and crown balance. healthy foliage.
4993					Cottonwood	<i>Populus sp.</i>	18	10, 8	54	23	\$0.00 (unprotected)	-	2 Major Structure or Health Problems	codominant at grade, base appears fair, visibility limited. both trunks lean northeast over and on communication lines. fair foliage health. poor understory structure.
4994					Cottonwood	<i>Populus sp.</i>	44		54	31	\$0.00 (unprotected)	-	3 Fair - Minor Problems	dbh approximate. large burls all around base and trunk, minor/moderate visible bark

Tag #	Old Tag #	In previous inventory	Protected by Code	Offsite	Species Common Name	Species Botanical Name	DBH (in.)	DBH Multi-Stem (in.)	Measured At (in.)	Canopy Radius (ft.)	Mitigation Rate	Tree Value	Arborist Rating	Notes
														defects. south side of base and trunk not visible, heavy blackberry. good branching and crown balance. healthy foliage. fair vigor.
4995					Pacific willow	<i>Salix lasiandra</i>	18		54	25	\$0.00 (unprotected)	-	3 Fair - Minor Problems	dbh approximate, heavy blackberry up to 10 feet. fair base, minor visible defects. minor/moderate small branch die-back, normal for species. fair overall structure and vigor.

APPENDIX 3 – GENERAL DEVELOPMENT GUIDELINES

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 most large trees is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed and/or removed. The cambial zone is the area where tissues responsible for adding new layers to the tree each year are located. Removing or damaging this tissue results in a tree that can only grow new tissue from the edges of the wound. In addition, the interior wood of the tree is exposed to decay fungi and 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 correctly and a Project Arborist oversees the construction. The Project Arborist should have the ability to enforce the Protection Measures. It is advisable for the Project Arborist to be present at the Pre-Construction meeting 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 calculated as 1 to 1.25' for every inch of trunk diameter (ie. A 10" diameter tree will have an RPZ of 10') or the dripline if required by local ordinance. The Project Arborist must approve work within the RPZ.

Irrigate, Fertilize, Mulch: Prior to grading on the site near any tree, if specified by the project arborist, 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.⁵

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 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.

⁵ 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.

Chemical Treatments: The owner or developer shall be responsible to contact an arborist with a pesticide applicators license to arrange for an application of a root enhancing hormone, such as Paclobutrazol, to mitigate the stress produced by the development **prior to grading**. Additionally, at the discretion of the project arborist, an insect infestation preventative for both boring insects and leaf feeding insects and/or fungal preventative for leaf surfaces may be required. Roots pruned during the course of performing a cut may be required to be treated with a biofungicide such as Bio-Tam.

APPENDIX 4 – SITE PHOTOGRAPHS by Tyler Thomson, October 9, 2023

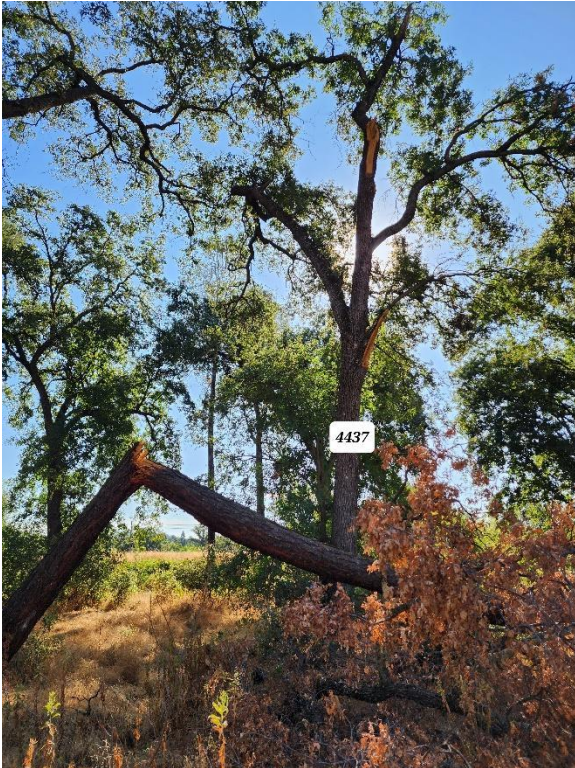


Photo #1, Shows Tree #4437



Photo #2, Shows Tree #4437



Photo #3, Shows Trees #4420 & #4419 (from right to left)



Photo #4, Shows Trees #4495 & #4494 (from left to right)