Tree Survey Report

NAPA CREEKSIDE HOUSING PROJECT
NAPA, NAPA COUNTY, CALIFORNIA

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1.0 INTRODUCTION

On June 28, 2018, March 26, 2019, and June 26, 2019, WRA, Inc. (WRA) conducted an arborist survey at the site of the proposed Napa Creekside Housing Project (Study Area). The surveys were conducted by ISA-Certified Arborists, Scott Yarger (ISA #WE-9300A) and Gavin Albertoli (ISA #WE-12027A), for the purpose of identifying and documenting the presence of "protected native trees" as defined by Chapter 12.45, "Trees on Private Property" of the City of Napa Municipal Code (Tree Ordinance).

GPS locations for all trees surveyed within the Study Area and information regarding the species, size in diameter at breast height (DBH; as measured at 4.5 feet above grade), estimated crown radius, estimated height, and health, condition, and structure ratings were collected and are included in this report. A table with all relevant information pertaining to surveyed trees is provided in Appendix A. A tree survey location map is provided in Appendix B. Representative photographs are provided in Appendix C. Trees planned for removal as part of the project are displayed on the Existing Tree Plan provided in Appendix D.

1.1 Study Area Description

The site of the proposed Napa Creekside Housing Project is approximately 3.27 acres at 3700 Valle Verde Drive in the City of Napa (City), Napa County, California. The Study Area includes the proposed limits of work and additional areas along the stream corridor. The Study Area has been altered by historic and recent human activity. Developed portions of the Study Area include a vacant apartment building, paved areas, and a portion of Valle Verde Drive. An intermittent stream, Salvador Creek, and associated riparian areas are present along the northeastern boundary of the Study Area. The Study Area is approximately two miles north of downtown Napa and is located in the Napa USGS 7.5-minute quadrangle (USGS 1980).

1.2 Regulatory Background

City of Napa Tree Ordinance

The City of Napa recognizes the importance of maintaining a healthy urban forest that contributes to clean air, soil conservation, energy conservation, scenic beauty, enhanced property value, and a high quality of life. Chapter 12.45, "Trees on Private Property", of the City's Tree Ordinance regulates the protection of certain trees on private properties within the city limits. The Tree Ordinance defines a "protected native tree" as any of the following native species that have a DBH as follows and that are located on private property over one acre in size and zoned for residential or agricultural purposes:

- valley oak (*Quercus lobata*) (DBH = 12 inches or greater);
- coast live oak (*Quercus agrifolia*) (DBH = 12 inches or greater);
- black oak (*Quercus kelloggii*) (DBH = 12 inches or greater);
- blue oak (*Quercus douglasii*) (DBH = 6 inches or greater);
- coast redwood (*Sequoia sempervirens*) (DBH = 36 inches or greater);
- California bay (*Umbellularia californica*) (DBH = 12 inches or greater); and
- black walnut (*Juglans hindsii*) (DBH = 12 inches or greater).

A protected native tree pruning and removal permit must be obtained by the property owner, or person authorized by the property owner, from the Director of Parks and Recreation prior to doing any of the following to a protected native tree on private property:

- Prune any branch or limb of a protected native tree greater than 4 inches in diameter or remove more than 10 percent of any live foliage in any 1-year period;
- Cut any root over 2 inches in diameter within the drip line area of a protected native tree;
- Change, by more than 2 feet, grade elevations within the drip line area of a protected native tree; or
- Place or allow to flow into or over the drip line area of any protected native tree any oil, fuel, concrete mix or other substance that could injure the tree.

Chapter 12.44, "Public Trees and Plants", of the Tree Ordinance regulates the protection of all trees in the public right-of-way and gives the City's Parks and Recreation Department jurisdiction over the planning, planting, maintenance, and removal of all street trees. The Tree Ordinance defines a street tree as any tree within the public right-of-way. A permit issued by the Director of Parks and Recreation is required to plant, injure, or remove any street tree.

2.0 METHODS

On June 28, 2018, March 26, 2019, and June 26, 2019, the Study Area was traversed on foot to inventory all protected native trees on private property per Chapter 12.45 of the Tree Ordinance. Street trees within any potential public right-of-way areas were not evaluated separately. WRA's ISA-Certified Arborists surveyed the area and recorded relevant tree information for all surveyed trees including species, DBH, estimated crown radius, estimated height, and health, condition, and structure ratings.

2.1 Tree Inventory

All trees with at least one trunk greater than or equal to 6 inches DBH in the Study Area were inventoried. DBH was calculated for surveyed trees by measuring the trunk diameter at 4.5 feet above grade. DBH for multi-trunk trees was calculated by measuring each individual trunk and calculating the sum total of trunk diameters. In cases where multi-trunked trees had more than five main trunks, only the five largest trunks were measured. In cases where an irregular buttress or bulge occurred at DBH, measurements were taken above or below the irregular feature to best represent the size of the tree. The locations of each tree surveyed within the Study Area were recorded using a GPS unit with sub-meter accuracy and each surveyed tree was given a unique, numbered aluminum tree tag. A total of three trees, that were inaccessible due to an active wasp nest, were given a unique sequential identification number but not tagged.

2.2 Tree Assessment

General notes on the condition of surveyed trees were taken, including health, structure, and overall condition. Assessment of the health, structure, and overall condition of each surveyed tree was conducted according to the narratives listed in Table 1.

Table 1. Rating Narratives for Tree Assessment

Health	
Good	Tree is free from symptoms of disease and stress
Fair	Tree shows some symptoms of disease or stress including twig and small branch dieback, evidence of fungal / parasitic infection, thinning of crown, or poor leaf color
Poor	Tree shows symptoms of severe decline
Structure	
Good	Tree is free from major structural defects
Fair	Tree shows some structural defects in branches but overall structure is stable
Poor	Tree shows structural failure of a major branch or co-dominant trunk
General Condition	
Good	Tree shows condition of foliage, bark, and overall structure characteristic of the species and lacking obvious defect, or disease
Fair	Tree shows condition of foliage, bark, and overall structure characteristic of the species with some evidence of stress, defect, or disease
Poor	Tree shows condition of foliage, bark, and overall structure uncharacteristic of the species with obvious evidence of stress, defect, or disease.

3.0 RESULTS

3.1 Tree Inventory

A total of 109 trees representing 18 species were inventoried during this assessment. Only three of the species surveyed are considered native protected species per Chapter 12.45 of the Tree Ordinance (Trees on Private Property). Native protected tree species include valley oak, black walnut, and coast live oak. Surveyed species considered non-native by the Tree Ordinance include arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), Callery pear (*Pyrus calleryana*), crape myrtle (*Lagerstroemia indica*), Chinese pistache (*Pistacia chinensis*), Deodar cedar (*Cedrus deodara*), Juniper (*Juniperus* sp.), silver wattle (*Acacia dealbata*), white mulberry (*Morus alba*), Oregon ash (*Fraxinus latifolia*), Lombardy poplar (*Populus nigra*), raywood ash (*Fraxinus angustifolia*), red iron bark (*Eucalyptus sideroxylon*), Monterey pine (*Pinus radiata*), and cherry plum (*Prunus cerasifera*). A total of 29 trees are considered protected native trees per Chapter 12.45 of the tree ordinance (Trees on Private Property). A complete list of surveyed trees is included in Appendix A. The GPS locations of surveyed trees are shown on the figure in Appendix B.

The largest protected native tree surveyed was a 69.1-inch multi-trunk valley oak (tree #761). The largest single-trunk protected native tree surveyed was a 33.0-inch coast live oak (tree #816).

Approximate canopy radii averaged from 4 to 40 feet. Approximate height ranged from 8 to 70 feet. If there is a public right of way in the Study Area, there may be additional street trees which are protected per Chapter 12.44 of the Tree Ordinance (Public Trees and Plants).

3.2 Tree Assessment

The overall condition and health of trees inventoried during this assessment ranged from poor to good, with most trees ranking fair in health and general condition. A total of 61 trees surveyed within the Study Area ranked fair in general condition with most trees displaying little to no signs of maladies or decline in vigor. Only five trees received a poor health ranking due to minor defoliation and decline associated with poor growth formation and intensive pruning. Two of the trees (tree #784 and tree #811) that received a poor health ranking were found to be nearly dead and displayed major trunk decay and defoliation. Trees that received a good health ranking had visibly healthy foliage and displayed no signs of constrained growth or suppression.

The structural condition of surveyed trees ranged from poor to good, with the majority of trees ranking fair. Seventeen (17) percent of trees received a poor structure ranking due to visible trunk and scaffold branch rot, intensive pruning, failure of one or more trunks on multi-trunk trees, and poor growth form with excessive lean. Table 2 below summarizes the assessment results of all inventoried trees in the Study Area.

Table 2. Tree Assessment Results Summary

Criteria Assessed/Rating	Condition	Health	Structure
Good	35 (32%)	41 (37%)	29 (27%)
Fair	61 (56%)	63 (58%)	61 (56%)
Poor	13 (12%)	5 (5%)	19 (17%)

3.3 Tree Impact Assessment

A total of 45 trees will potentially be impacted by removal as a result of proposed project improvements as shown in the Existing Tree Plan (Appendix D). Of the 45 trees that will be potentially removed, 12 trees are considered protected native trees per Chapter 12.45 of the Tree Ordinance (Trees on Private Property). Protected native trees which will potentially be removed range in size from 12.3 inches to 51.5 inches DBH and are either valley oak or coast live oak. Potential permit, mitigation, and tree protection requirements as required by the Tree Ordinance are provided below. If there is a public right of way in the Study Area, additional street trees may be impacted by removal.

Of the 45 trees that will be potentially removed, 15 of these trees will be removed as a result of the proposed bike trail improvements along the western side of the Study Area. This includes seven protected native trees. If no bike trail improvements are constructed, these 15 trees will remain.

An option to remove an existing bridge which spans Salvador Creek in the northern portion of the Study Area is being evaluated as a component of the Project. If the bridge is removed, it is anticipated that an additional two trees (tree #359 and #360) will be impacted by removal (for a total of 47 trees). One of the two trees is considered a protected native tree. Both trees are directly adjacent to the limit of work and it was assumed they would need to be removed prior to the start of bridge removal. If the existing bridge is not removed, neither tree will be impacted by the Project.

A number of trees surveyed are located directly outside of the Study Area, but have overhanging canopies and/or root zones into the Study Area. All trees surveyed with overhanging canopies and/or root zones are displayed in the Study Area on the tree survey map in Appendix B. Potential impacts to tree canopy or root systems could include damage to branches or trunks during construction, ripping or tearing roots during subgrade excavation, or smothering roots due to soil compaction or grade fills. These types of injuries can lead to reduced tree vigor, increased susceptibility to pathogens or pests, or in severe cases, eventual tree decline or death.

4.0 SUMMARY AND RECOMMENDATIONS

As described above, the Project will potentially remove 13 protected native trees (12 if the bridge remains in place) per Chapter 12.45 of the Tree Ordinance (Trees on Private Property). All protected native trees proposed for removal should be included on a protected native tree pruning and removal permit (permit). Replacement tree plantings may be required as a condition of approval according to the following provisions as specified in the Tree Ordinance:

- For each 6 inches or fraction thereof of the protected tree, two trees of the same species as the protected tree (or any other species with approval) and a minimum 15-gallon container or larger size as determined by the Director of Parks and Recreation shall be planted on the project site.
- If the project site is inadequate in size to accommodate the replacement trees, with the recommendation of the Director of Parks and Recreation, the trees shall be planted on public property. The Director of Parks and Recreation may accept an in-lieu fee, per 15-gallon replacement tree with the moneys to be used for tree-related educational projects and/or planting programs. In-lieu fees shall be set by the City Council resolution and adjusted on an annual basis as necessary and include the cost of planting.
- Each protected native tree approved for removal shall be replaced within 60 days or at a reasonable time approved by the Director of Parks and Recreation or according to the conditions of any discretionary permit allowing removal of a protected native tree.

In order to avoid and minimize damage to existing protected native trees which are not proposed for direct impact by project activities, the following measures should be implemented during construction.

- All construction activity (grading, filling, paving, landscaping, etc.) should respect the root protection zone (RPZ) around all trees within the vicinity of the Study Area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not affect

the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.

- Temporary protective fencing should be installed around the dripline of protected native trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence should be clearly marked to prevent inadvertent encroachment by heavy machinery.
- Drainage should not be allowed to pond around the base of any tree.
- An ISA-Certified Arborist or tree specialist should be retained to perform any necessary pruning of trees during construction activity.
- Should any utility lines encroach within the tree protection zone, a single, shared utility conduit should be used where possible to avoid negative impact to trees.
- Roots exposed as a result of construction activities should be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Construction materials or heavy equipment should not be stored within the RPZ of preserved trees.

5.0 REFERENCES

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APPENDIX A

TREE SURVEY TABLE

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Appendix A. Napa Creekside Tree Survey, June 2018 and March 2019

Tag ID	Common Name	Species	Potential Project Impact	Napa City Protected Tree on Private Property	Total DBH (Inches)	Multi-Trunk	Estimated Dripline Radius (Feet)	Estimated Height (Feet)	Condition	Health	Structure
759	Silver Wattle	*Acacia dealbata*	Removal	No	25.0	Yes	10	25	Fair	Fair	Fair
760	Valley Oak	*Quercus lobata*	Removal	Yes	18.5	Yes	8	15	Fair	Fair	Fair
761	Valley Oak	*Quercus lobata*	Remaining	Yes	69.1	Yes	30	40	Good	Good	Fair
762	Valley Oak	*Quercus lobata*	Removal	Yes	30.0	Yes	28	45	Good	Good	Good
763	Coast live oak	*Quercus agrifolia*	Remaining	No	9.0	No	8	18	Fair	Good	Fair
764	Cherry plum	*Prunus cerasifera*	Remaining	No	8.2	Yes	6	11	Fair	Fair	Fair
765	Deodar cedar	*Cedrus deodara*	Removal	No	34.0	No	27	40	Fair	Fair	Fair
766	Coast live oak	*Quercus agrifolia*	Removal	No	10.8	No	12	22	Fair	Fair	Fair
767	Coast live oak	*Quercus agrifolia*	Removal	Yes	21.5	Yes	15	20	Fair	Good	Fair
768	Juniper	*Juniperus sp.*	Removal	No	15.1	Yes	8	8	Poor	Fair	Poor
769	White mulberry	*Morus alba*	Removal	No	13.9	No	15	22	Poor	Poor	Poor
770	White mulberry	*Morus alba*	Removal	No	11.8	No	25	25	Fair	Fair	Poor
771	Oregon ash	*Fraxinus latifolia*	Removal	No	21.0	Yes	18	20	Fair	Fair	Fair
772	Valley Oak	*Quercus lobata*	Removal	Yes	12.3	Yes	9	18	Good	Good	Fair
773	Oregon ash	*Fraxinus latifolia*	Removal	No	14.6	Yes	11	25	Fair	Fair	Fair
774	Coast live oak	*Quercus agrifolia*	Removal	Yes	25.0	Yes	12	18	Fair	Fair	Fair
775	Coast live oak	*Quercus agrifolia*	Removal	No	6.5	Yes	5	15	Fair	Fair	Fair
776	Oregon ash	*Fraxinus latifolia*	Removal	No	10.6	Yes	8	20	Fair	Fair	Fair
777	Valley Oak	*Quercus lobata*	Remaining	Yes	15.1	Yes	12	20	Fair	Fair	Fair
778	Valley Oak	*Quercus lobata*	Removal	No	9.6	No	10	20	Fair	Fair	Good
779	Valley Oak	*Quercus lobata*	Remaining	No	7.2	No	11	18	Fair	Fair	Fair
780	Cherry plum	*Prunus cerasifera*	Remaining	No	18.0	Yes	9	12	Poor	Fair	Poor
781	Valley Oak	*Quercus lobata*	Remaining	Yes	25.4	Yes	15	12	Fair	Fair	Fair
782	Oregon ash	*Fraxinus latifolia*	Remaining	No	36.7	Yes	25	28	Fair	Fair	Fair
783	Oregon ash	*Fraxinus latifolia*	Removal	No	28.5	Yes	25	40	Fair	Fair	Fair
784	Red willow	*Salix laevigata*	Remaining	No	12.0	No	8	25	Poor	Poor	Poor
785	Arroyo willow	*Salix lasiolepis*	Remaining	No	10.4	Yes	10	25	Poor	Poor	Poor
786	Valley Oak	*Quercus lobata*	Remaining	Yes	16.5	No	30	25	Fair	Good	Poor
787	Red willow	*Salix laevigata*	Remaining	No	35.0	Yes	25	20	Poor	Fair	Poor
788	Oregon ash	*Fraxinus latifolia*	Remaining	No	24.4	No	25	50	Fair	Fair	Fair
789	Oregon ash	*Fraxinus latifolia*	Remaining	No	16.1	No	17	40	Fair	Fair	Fair
790	Coast live oak	*Quercus agrifolia*	Remaining	Yes	39.6	Yes	30	50	Good	Good	Fair
791	Oregon ash	*Fraxinus latifolia*	Remaining	No	7.3	No	18	45	Good	Good	Good
792	Silver Wattle	*Acacia dealbata*	Remaining	No	19.1	No	30	60	Fair	Fair	Fair
793	Oregon ash	*Fraxinus latifolia*	Remaining	No	24.1	Yes	25	50	Fair	Good	Fair
794	Coast live oak	*Quercus agrifolia*	Remaining	Yes	37.7	Yes	26	50	Good	Good	Good
795	Silver Wattle	*Acacia dealbata*	Remaining	No	17.4	Yes	18	30	Fair	Fair	Fair

Tag ID	Common Name	Species	Potential Project Impact	Napa City Protected Tree on Private Property	Total DBH (Inches)	Multi-Trunk	Estimated Dripline Radius (Feet)	Estimated Height (Feet)	Condition	Health	Structure
796	Red willow	*Salix laevigata*	Remaining	No	13.4	No	30	20	Fair	Fair	Poor
797	Coast live oak	*Quercus agrifolia*	Remaining	Yes	20.0	No	19	45	Fair	Fair	Fair
798	Oregon ash	*Fraxinus latifolia*	Remaining	No	10.5	No	25	40	Good	Good	Good
799	Coast live oak	*Quercus agrifolia*	Remaining	No	11.0	No	15	30	Fair	Fair	Fair
800	Coast live oak	*Quercus agrifolia*	Remaining	Yes	12.2	No	18	30	Fair	Good	Fair
801	Valley Oak	*Quercus lobata*	Remaining	Yes	32.1	No	40	65	Fair	Fair	Good
802	Coast live oak	*Quercus agrifolia*	Remaining	Yes	13.0	No	12	35	Fair	Fair	Fair
803	Oregon ash	*Fraxinus latifolia*	Remaining	No	32.5	Yes	20	20	Poor	Fair	Poor
804	Oregon ash	*Fraxinus latifolia*	Remaining	No	6.6	No	8	20	Fair	Fair	Fair
805	Lombardy poplar	*Populus nigra*	Remaining	No	9.7	No	12	30	Fair	Fair	Fair
806	Lombardy poplar	*Populus nigra*	Remaining	No	64.7	Yes	30	70	Good	Good	Fair
807	Silver Wattle	*Acacia dealbata*	Remaining	No	6.3	No	10	12	Poor	Fair	Poor
808	Silver Wattle	*Acacia dealbata*	Remaining	No	11.0	No	15	18	Poor	Fair	Poor
809	Oregon ash	*Fraxinus latifolia*	Removal	No	19.1	No	20	40	Fair	Fair	Good
810	Red willow	*Salix laevigata*	Removal	No	43.3	Yes	25	25	Good	Good	Fair
811	Silver Wattle	*Acacia dealbata*	Remaining	No	9.1	No	8	15	Poor	Poor	Poor
812	Silver Wattle	*Acacia dealbata*	Remaining	No	29.4	Yes	30	45	Good	Good	Fair
813	Silver Wattle	*Acacia dealbata*	Remaining	No	26.1	Yes	25	25	Poor	Fair	Poor
814	Coast live oak	*Quercus agrifolia*	Remaining	Yes	14.9	No	19	30	Fair	Good	Fair
815	Coast live oak	*Quercus agrifolia*	Removal	No	8.9	No	12	25	Good	Good	Good
816	Coast live oak	*Quercus agrifolia*	Remaining	Yes	33.0	No	37	35	Fair	Fair	Fair
817	California black walnu	*Juglans hindsii*	Remaining	No	10.0	No	12	30	Fair	Fair	Fair
818	Silver Wattle	*Acacia dealbata*	Remaining	No	6.6	No	18	25	Fair	Fair	Fair
819	Coast live oak	*Quercus agrifolia*	Remaining	No	8.5	No	18	20	Fair	Good	Fair
820	Arroyo willow	*Salix lasiolepis*	Removal	No	19.0	Yes	12	15	Poor	Poor	Poor
821	Cherry plum	*Prunus cerasifera*	Removal	No	16.1	Yes	10	15	Fair	Fair	Fair
822	Coast live oak	*Quercus agrifolia*	Remaining	No	11.1	No	12	25	Fair	Fair	Fair
823	Coast live oak	*Quercus agrifolia*	Remaining	Yes	19.3	No	21	30	Good	Good	Good
824	Coast live oak	*Quercus agrifolia*	Remaining	Yes	21.0	No	20	40	Good	Good	Good
825	Coast live oak	*Quercus agrifolia*	Remaining	Yes	13.1	No	10	30	Fair	Fair	Good
826	Crape Myrtle	*Lagerstroemia indica*	Remaining	No	6.0	No	10	18	Good	Good	Good
827	Crape Myrtle	*Lagerstroemia indica*	Remaining	No	6.0	No	9	18	Good	Good	Good
828	Crape Myrtle	*Lagerstroemia indica*	Remaining	No	12.4	Yes	10	15	Good	Good	Good
829	Crape Myrtle	*Lagerstroemia indica*	Remaining	No	6.0	Yes	6	12	Good	Good	Good
830	Crape Myrtle	*Lagerstroemia indica*	Remaining	No	7.0	Yes	8	15	Good	Good	Good
831	Callery Pear	*Pyrus calleryana*	Removal	No	6.0	No	9	11	Fair	Fair	Fair
832	Raywood ash	*Fraxinus angustifolia*	Removal	No	7.3	No	12	28	Fair	Fair	Fair
833	Callery Pear	*Pyrus calleryana*	Removal	No	7.7	No	10	15	Good	Good	Good
834	Callery Pear	*Pyrus calleryana*	Removal	No	6.2	No	8	14	Fair	Fair	Fair
835	Valley Oak	*Quercus lobata*	Removal	No	6.4	No	6	12	Good	Good	Fair
836	Valley Oak	*Quercus lobata*	Remaining	No	7.5	No	8	22	Good	Good	Good

Tag ID	Common Name	Species	Potential Project Impact	Napa City Protected Tree on Private Property	Total DBH (Inches)	Multi-Trunk	Estimated Dripline Radius (Feet)	Estimated Height (Feet)	Condition	Health	Structure
837	Chinese pistache	*Pistacia chinensis*	Remaining	No	11.0	No	12	25	Good	Good	Good
838	Raywood ash	*Fraxinus angustifolia*	Remaining	No	8.8	No	11	22	Good	Good	Good
839	Raywood ash	*Fraxinus angustifolia*	Remaining	No	7.5	No	12	22	Good	Good	Good
840	Raywood ash	*Fraxinus angustifolia*	Remaining	No	7.6	No	12	22	Good	Good	Good
841	red iron bark	*Eucalyptus sideroxylon*	Remaining	No	12.8	No	15	25	Fair	Fair	Fair
842	Coast live oak	*Quercus agrifolia*	Removal	No	6.0	Yes	4	10	Good	Good	Good
843	Valley Oak	*Quercus lobata*	Remaining	No	11.0	No	15	18	Fair	Fair	Fair
844	Valley Oak	*Quercus lobata*	Remaining	No	8.8	No	9	18	Fair	Fair	Fair
845	Valley Oak	*Quercus lobata*	Remaining	Yes	16.4	Yes	10	16	Fair	Fair	Fair
846	Valley Oak	*Quercus lobata*	Remaining	No	10.3	Yes	10	15	Poor	Fair	Poor
847	Valley Oak	*Quercus lobata*	Remaining	No	10.4	No	18	20	Fair	Good	Fair
848	Silver Wattle	*Acacia dealbata*	Remaining	No	13.2	Yes	25	30	Fair	Fair	Fair
361	Callery Pear	*Pyrus calleryana*	Removal	No	7.2	No	7	15	Fair	Fair	Fair
362	Callery Pear	*Pyrus calleryana*	Removal	No	7.1	No	10	16	Fair	Fair	Fair
363	Raywood ash	*Fraxinus angustifolia*	Removal	No	13.2	No	14	27	Good	Fair	Good
364	Coast live oak	*Quercus agrifolia*	Removal	Yes	12.7	No	17	28	Fair	Fair	Fair
365	Coast live oak	*Quercus agrifolia*	Removal	No	9.8	No	12	21	Good	Fair	Fair
366	Coast live oak	*Quercus agrifolia*	Removal	No	11.1	No	19	28	Fair	Fair	Poor
367	Valley Oak	*Quercus lobata*	Removal	Yes	51.5	Yes	25	35	Good	Good	Fair
368	Oregon ash	*Fraxinus latifolia*	Removal	No	14.1	No	10	22	Fair	Fair	Fair
369	Coast live oak	*Quercus agrifolia*	Removal	No	7.2	No	5	16	Fair	Fair	Fair
370	Coast live oak	*Quercus agrifolia*	Removal	No	10.1	No	8	20	Fair	Fair	Fair
371	Valley Oak	*Quercus lobata*	Removal	Yes	22.0	No	22	32	Good	Good	Good
372	Oregon ash	*Fraxinus latifolia*	Removal	No	13.1	No	15	20	Fair	Fair	Fair
373	Coast live oak	*Quercus agrifolia*	Removal	Yes	14.0	No	15	31	Good	Good	Good
374	Coast live oak	*Quercus agrifolia*	Removal	Yes	14.4	No	19	28	Good	Good	Good
375	Coast live oak	*Quercus agrifolia*	Removal	Yes	13.4	No	15	27	Fair	Fair	Poor
376	Coast live oak	*Quercus agrifolia*	Removal	No	10.5	No	11	28	Good	Good	Good
377	Coast live oak	*Quercus agrifolia*	Removal	Yes	13.1	No	8	30	Good	Good	Good
360	Coast live oak	*Quercus agrifolia*	Removal	Yes	29.0	Yes	17	28	Good	Good	Fair
359	Monterey pine	*Pinus radiata*	Removal	No	16.6	No	35	25	Fair	Fair	Poor

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APPENDIX B

TREE SURVEY MAP

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Figure X.
Tree Survey

David J. Powers
Napa Arborist Survey
Napa County, California

Study Area - 3.27 ac.

Approximate Limit of Work - 2.71 ac.

Tree Survey

N

0 50 100

Feet

wra
ENVIRONMENTAL CONSULTANTS

Path: L:\Acad 2000 Files\27000\27365\GIS\ArcMap\Tree Survey.mxd

Sources: Google Earth 2018 Aerial, WRA | Prepared By: njander, 7/2/2019

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APPENDIX C

REPRESENTATIVE PHOTOS

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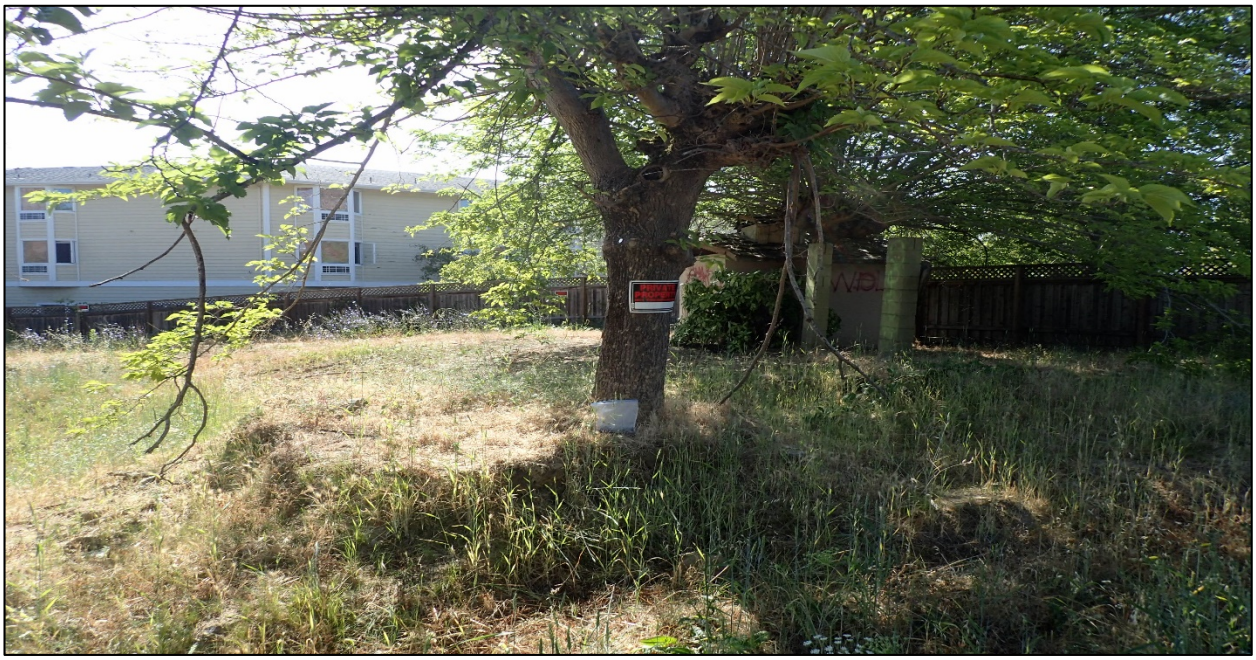
Photograph #1. Tree #765. 34” DBH Deodar cedar (*Cedrus deodara*) in the western portion of the Study Area proposed for removal.

Photograph #2. Tree #816. 33” DBH coast live oak (*Quercus agrifolia*) protected tree in the eastern portion of the Study Area that will be retained.



Photograph #3. Tree #769. 13.9” DBH white mulberry (*Morus alba)* in the center of the Study Area proposed for removal.

Photograph #4. Tree #836. 7.5” DBH valley oak (*Quercus lobata)* in the southern portion of the Study Area adjacent to an existing fence that will be retained.

Photograph #5. Tree #367. 51.5” DBH valley oak (*Quercus lobata)* protected tree in the western portion of the Study Area proposed for removal.

Photograph #6. Tree #761. 69.1” DBH valley oak (*Quercus lobata)* protected tree in the northern portion of the Study Area that will be retained.

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APPENDIX D

EXISTING TREE PLAN

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EXISTING TREE LEGEND

TREES	BOTANICAL NAME	COMMON NAME	QTY
	EXISTING TREE TO BE REMOVED		46
	EXISTING TREE TO REMAIN		59
787	REFERENCE NUMBER PER ARBORIST REPORT		

#815 TREE WILL NEED TO BE REMOVED

TREES MAY NEED TO BE REMOVED #820 & #821

BURBANK HOUSING
790 SONOMA AVE, SANTA ROSA, CA 95404

HERITAGE HOUSE & VALLE VERDE

Napa, California

EXISTING TREE PLAN

CONCEPTUAL LANDSCAPE PLAN
JANUARY 23, 2019

VTA

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