ARBORIST REPORT

October 20, 2022
5559.00

PROJECT
1957 Pruneridge Avenue
Santa Clara, CA

PREPARED FOR
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PREPARED BY
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INTRODUCTION AND OVERVIEW

HMH was contracted to complete a survey, assessment and arborist report for trees located within the limit of work illustrated on Exhibit A. The project site encompasses approximately 2.55 acres. The site is currently St. Mark's Episcopal Church, which is closed, and is made up of a main church building, school and office buildings, and a parking lot wrapping the north, east and west sides of the site. Pruneridge Avenue is to the south of the site. There are commercial parcels to the east and west of the site, and primarily residential lots to the north and south. It appears that the trees have not been irrigated and most are showing signs of stress and dieback.

Our scope of services includes locating, measuring DBH, assessing, and photographing the condition of all trees within the limit of work. Disposition and health recommendations are based on current site conditions. Site development/design may affect the preservation suitability. In addition, trees located outside the limit of work may be included if they may potentially be impacted by development of the site. These trees will not be measured, nor health assessed due to limited access. Tree locations are approximate, and their exact location should be determined by a licensed land surveyor. It should not be assumed that all trees inventoried are owned by the property owner. Check city and/or county codes for regulations regarding trees in the public right of way, setbacks, and/or easements.

METHODOLOGY

Our tree survey work is a deliberate and systematic methodology for cataloging trees on site:

1. Identify each tree species.
2. Note each tree's location on a site map.
3. Measure each trunk circumference at 4.5' above grade per ISA standards.
4. Evaluate the health and structure of each tree using the following numerical standard:
   5 *- A healthy, vigorous tree, reasonably free of disease, with good structure and form typical of the species.*
   4 *- A tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.*
   3 *- A tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that may be mitigated with care.*
   2 *- A tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.*
   1 *- A tree in severe decline, dieback of scaffold branches and or trunk, mostly epicormic growth; extensive structural defects that cannot be abated.*
   0 - Tree is dead.

SUMMARY OF FINDINGS

HMH conducted a tree inventory of 50 trees located within the limit of work outlined in Exhibit A. Twelve (12) of the trees inventoried are classified as protected trees under the City of Santa Clara Municipal Code.

A protected tree is:

1. Heritage Trees in all zoning districts.
2. All specimen trees with a diameter of twelve (12) inches or more when measured at fifty-four (54) inches above natural grade of the following species on private property:
   a. Aesculus californica (California Buckeye);
   b. Acer macrophyllum (Big Leaf Maple);

c. Cedrus deodara (Deodar Cedar);
d. Cedrus atlantica 'Glauca' (Blue Atlas Cedar);
e. Cinnamomum camphora (Camphor Tree);
f. Platanus racemosa (Western Sycamore).
g. Quercus (native oak tree species), including:
    i. Quercus agrifolia (Coast Live Oak);
    ii. Quercus lobata (Valley Oak);
    iii. Quercus kelloggii (Black Oak);
    iv. Quercus douglasii (Blue Oak);
    v. Quercus wislizeni (Interior Live Oak);
h. Sequoia sempervirens (Coast Redwood); and
i. Umbellularia californica (Bay Laurel or California Bay);

3. Approved development trees.
4. A private tree which has a trunk with a diameter of thirty-eight (38) inches or more measured at fifty-four (54) inches above natural grade.
5. A multi-branched private tree which has major branches below fifty-four (54) inches above the natural grade with a diameter of thirty-eight (38) inches or more measured just below the first major trunk fork.

Table 1 - Tree Quantity Summary summarizes tree quantities by both species and size. Each species that was inventoried as part of this scope is included. This is a useful tool for analyzing the mixture of trees as part of the project. The size table is useful when calculating mitigation requirements in the case of tree removal as well as aiding in determining tree maturity.

Table 2 - Tree Evaluation Summary lists each tree number, botanical name, common name, DBH, circumference, ordinance trees, health rating, preservation suitability, general notes and observations and recommendations.

See Exhibit A for Existing Tree Locations
See Table 1 for Tree Quantity Summary by species and size.
See Table 2 for Tree Evaluation Summary for sizes, notes and recommendations regarding each tree.

GENERAL OBSERVATIONS AND RECOMMENDATIONS

Species: *Acer palmatum* (Japanese Maple)
Quantity: 2
Tree Numbers: 21, 22
Observations / Recommendations:
There are 2 Japanese Maples in front of the church building that are in moderate shape and condition. They are growing underneath the front arch/overhang of the building, so if the building is being removed, it would be too difficult to retain these trees. They have signs of stress like crown die back and don't seem to be getting irrigated.

Species: *Albizia julibrissin* (Silk Tree)
Quantity: 1
Tree Numbers: 40
Observations / Recommendations:
This Silk Tree is in good shape and condition. It is growing on the perimeter of the property and on a pile of dirt. It is not an ideal growing area and if the area is regraded, this tree will need to be removed.

Species: *Cedrus atlantica 'Glauca'* (Blue Atlas Cedar)
Quantity: 1
Tree Numbers: 7
Observations / Recommendations:
There is one Blue Atlas Cedar near Pruneridge Avenue that is in good shape and condition. If it is to be retained it would benefit from supplemental irrigation and some structural pruning.

Species: *Cedrus deodara* (Deodar Cedar)
Quantity: 3
Tree Numbers: 30, 44, 45
Observations / Recommendations:
There are 3 Deodar Cedars on the property. Tree 30 is in an area with several other tall mature trees. It has been limbed up fairly high and is leaning. Tree 44 is a small tree that may be a volunteer from tree 45. It is being crowded and is not an ideal location for a tree that large to grow. This tree is recommended for removal. Tree 45 is a very large specimen. It is in good condition other than having some unusual branching patterns.

Species: *Fraxinus angustifolia 'Raywood'* (Raywood Ash)
Quantity: 1
Tree Numbers: 49
Observations / Recommendations:
There is a Raywood Ash in the playground area that is in moderate shape and condition. It has signs of stress such as crown dieback and exposed heartwood. It also has quite a bit of included bark at the limb attachments which increases the chance of failure.

Species: *Juniperus chinensis* (Chinese Juniper)
Quantity: 2
Tree Numbers: 2, 13
Observations / Recommendations:
There are 2 Chinese Junipers on the property that are in moderate shape and condition. Both of these trees are growing very close to the existing building. If the building is being removed, these trees are recommended for removal. Tree 2 is leaning very dramatically away from the building and tree 13 is growing at angle away from the building as well.

Species: *Maytenus boaria* (Mayten Tree)
Quantity: 3
Tree Numbers: 23, 24, 25
Observations / Recommendations:
There are 3 Mayten trees growing toward the front of the property. They are all in poor shape and condition. They are showing signs of stress from the lack of irrigation. They all have branch tip dieback and are thinning. Mayten trees are on the watch list for the California Invasive Plant Council due to root suckers and prolific seeding. These trees are recommended for removal.

Species: *Olea europaea* (Olive)
Quantity: 2
Tree Numbers: 1, 39
Observations / Recommendations:
There are 2 Olive trees on the property. Tree 1 is at the southwest corner of the property surrounded by driveways. It is in good shape and condition. If this tree is to be retained, it would benefit from supplemental irrigation and structural pruning. Tree 39 has been pruned into a round shape. Olive trees have a much better appearance when they are allowed to keep a natural form.

Species: *Picea sp.* (Spruce)
Quantity: 6
Tree Numbers: 28, 29, 31, 32, 33, 34
Observations / Recommendations:
There are 6 very large trees I believe are Spruce on the east side of the property. They are all in moderate shape and condition. They have all been limbed up very high. Some of them have unusual branching patterns or a slight lean. If these trees are retained they would benefit from supplemental irrigation.

Species: *Pinus canariensis* (Canary Island Pine)
Quantity: 6
Tree Numbers: 8, 9, 10, 11, 14, 26
Observations / Recommendations:
There are 6 Canary Island Pine trees on the property. Trees 8 – 11 are planted adjacent to each other and are crowded by each other. Tree 8 and 10 are in poor shape and condition and appear to be in decline. Trees 9 and 11 are doing a bit better, but are thinning and will continue to decline if supplemental irrigation is not supplied. Tree 14 is in moderate shape and condition but is showing signs of stress with sap leaking and insect boring, which is generally a sign of stress and internal problems. Tree 26 is completely dead and should be removed.

Species: *Pinus jeffreyi* (Jeffrey Pine)
Quantity: 1
Tree Numbers: 12
Observations / Recommendations:
There is one Jeffrey Pine that is in moderate shape and condition. This tree is showing signs of stress with branch tip dieback. If this tree is to be retained supplemental irrigation is recommended.

Species: *Pinus pinea* (Italian Stone Pine)
Quantity: 1
Tree Numbers: 50
Observations / Recommendations:
There is a very large Italian Stone pine at the rear of the property. It is unclear whether the tree is on site or on the adjacent property because the fence wraps around the tree. It is recommended that the fence be relocated a little further from the trunk. There are signs of stress with some sap leak and some decay. If this tree is on the property and is to be retained, supplemental irrigation and structural pruning is recommended.

Species: *Prunus serrulata* (Flowering Cherry)
Quantity: 6
Tree Numbers: 15, 16, 17, 18, 19, 20
Observations / Recommendations:
There are six flowering cherry trees that are dead or mostly dead. They are all recommended for removal.

Species: *Prunus sp.* (Plum)
Quantity: 1
Tree Numbers: 47
Observations / Recommendations:
There is one plum tree in the playground area that is in moderate shape and condition. It is showing signs of stress with exposed heartwood and cracks in the trunk. If this tree is to be retained supplemental irrigation is recommended.

Species: *Pseudotsuga menziesii* (Douglas Fir)
Quantity: 1
Tree Numbers: 27
Observations / Recommendations:
There is a Douglas Fir that is in poor shape and condition. It has not grown a proper canopy because of the crowding by tree 26. It is showing signs of stress with branch tip dieback and sap leak. This tree is a candidate for removal.

Species: *Sequoia sempervirens* (Coast Redwood)
Quantity: 5
Tree Numbers: 3, 4, 5, 6, 46
Observations / Recommendations:
There are five Coast Redwoods in the property. Trees 3-6 are at the front of the property and are in moderate to poor condition. These trees have been affected by the lack of irrigation and all appear to be in a state of decline. Coast Redwoods require large amounts of water and are greatly affected by the lack of water. It is possible that trees 3-4 may be able to recover with regular irrigation. Tree 5 has been headed and therefore will never grow a proper structure. Tree 6 is in decline. Trees 5-6 are candidates for removal. It is unclear whether tree 46 was a volunteer or planted. It is greatly crowded by the surrounding shrubs and the adjacent playground fence. It is showing signs of stress with branch tip dieback. If this tree is to be retained, clearing the surrounding shrubs and regular irrigation is recommended.

Species: *Triadica sebifera* (Chinese Tallow Tree)
Quantity: 1
Tree Numbers: 48
Observations / Recommendations:
There is a Chinese Tallow Tree in the playground area in moderate shape and condition. It is showing signs of stress with epicormic growth and branch tip dieback. This species is considered invasive by the California Invasive Plant Council so removal is recommended.

Species: *Washingtonia filifera* (California Fan Palm)
Quantity: 4
Tree Numbers: 35, 36, 37, 38
Observations / Recommendations:
There are 4 California Fan Palms that re in moderate shape and condition. Tree 36 may be a volunteer of the others.

Species: *Yucca elephantipes* (Giant Yucca)
Quantity: 3
Tree Numbers: 41, 42, 43
Observations / Recommendations:
There are 3 very large Giant Yuccas along the back fence that are all in moderate shape and condition. All plants have signs of decay. These plants can pose a danger with their toxic saponins and sharp leaves. Because of their location close to the perimeter fence, they could cause problems with crowding.

Offsite trees:
The offsite trees are noted on the tree map and tree evaluation table. These trees are identified and the amount of overhang is noted. They are not evaluated, measured or assessed.

RECOMMENDATIONS FOR TREE PROTECTION DURING CONSTRUCTION

Site preparation: All existing trees shall be fenced within or at the drip line (foliar spread) of the tree. Depending on the location of the tree the fencing may not be able to be at the dripline. Examples of this would be public right of way, near property lines or around existing structures to remain. Where complete drip line fencing is not possible, the addition of straw waddles and orange snow fencing wrapping the trunk shall be installed per the tree protection detail. The fence should be a minimum of six feet high, made of galvanized 11-gauge wire mesh with galvanized posts or any material superior in quality. A tree protection zone (TPZ) sign shall be affixed to fencing at appropriate intervals as determined by the arborist on site. See tree protection detail for additional information, including tree protection zone sign. If the fence is within the drip line of the trees, the foliar fringe shall be raised to offset the chance of limb damage from active construction.

Active Construction: All contractors, subcontractors and other personnel shall be warned that encroachment within the fenced area and dripline is prohibited without the consent of the certified arborist on the job. This includes, but is not limited to, storage of lumber and other materials, disposal of paints, solvents or other noxious materials, parked cars, grading equipment or other heavy equipment. If construction activity needs to happen in the TPZ the fence can be moved temporarily for delivery of construction materials. The contractor should make accommodations to off load items such as trusses, timber, plasterboard, wallboard, concrete, gypsum board, flooring, roofing or any other heavy construction material outside the foliar spread of the tree so there is no heavy equipment needed that could cause damage to the canopy of the tree or compact the root zone. The tree protection fencing should be reestablished per the plans and details immediately after any activity through the TPZ. Penalties, based on the cost of remedial repairs and the evaluation guide published by the international society of arboriculture, shall be assessed for damages to the trees.

Grading/excavating: All grading plans that specify grading within the drip line of any tree, or within the distance from the trunk as outlined in the site preparation section above when said distance is outside the drip line, shall first be reviewed by a certified arborist. Provisions for aeration, drainage, pruning, tunneling beneath roots, root pruning or other necessary actions to protect the trees shall be outlined by an arborist. If trenching is necessary within the area as described above, said trenching shall be undertaken by hand labor and dug directly beneath the trunk of the tree. All roots 2 inches or larger shall be tunneled under and other roots shall be cut smoothly to the trunk side of the trench. The trunk side should be draped immediately with two layers of untreated burlap to a depth of 3 feet from the surface. The burlap shall be soaked nightly and left in place until the trench is back filled to the original level. An arborist shall examine the trench prior to back filling to ascertain the number and size of roots cut, so as to suggest the necessary remedial repairs.

Remedial repairs: An arborist shall have the responsibility of observing all ongoing activities that may affect the trees and prescribing necessary remedial work to ensure the health and stability of the trees. This includes, but is not limited to, all arborist activities brought out in the previous sections. In addition, pruning, as outlined in International Society of Arboriculture Best Management Practices: Pruning and ANSI A300 Part 1 Standard Practices: Pruning, shall be prescribed as necessary. Fertilizing, aeration, irrigation, pest control and other activities shall be prescribed according to the tree needs, local site requirements, and state agricultural pest control laws. All specifications shall be in writing. For pest control operations, consult the local county

agricultural commissioner's office for individuals licensed as pest control advisors or pest control operators.

Final inspection: Upon completion of the project, the arborist shall review all work undertaken that may impact the existing trees. Special attention shall be given to cuts and fills, compacting, drainage, pruning and future remedial work. An arborist should submit a final report in writing outlining the ongoing remedial care following the final inspection.

MAINTENANCE RECOMMENDATIONS FOR TREES TO REMAIN

Regular maintenance, designed to promote plant health and vigor, ensures longevity of existing trees. Regular inspections and the necessary follow-up care of mulching, fertilizing, and pruning, can detect problems and correct them before they become damaging or fatal.

Tree Inspection: Regular inspections of mature trees at least once a year can prevent or reduce the severity of future disease, insect, and environmental problems. During tree inspection, four characteristics of tree vigor should be examined: new leaves or buds, leaf size, twig growth, and absence of crown dieback (gradual death of the upper part of the tree). A reduction in the extension of shoots (new growing parts), such as buds or new leaves, is a fairly reliable cue that the tree's health has recently changed. Growth of the shoots over the past three years may be compared to determine whether there is a reduction in the tree's typical growth pattern. Further signs of poor tree health are trunk decay, crown dieback, or both. These symptoms often indicate problems that began several years before. Loose bark or deformed growths, such as trunk conks (mushrooms), are common signs of stem decay. Any abnormalities found during these inspections, including insect activity and spotted, deformed, discolored, or dead leaves and twigs, should be noted and observed closely.

Mulching: Mulch, or decomposed organic material, placed over the root zone of a tree reduces environmental stress by providing a root environment that is cooler and contains more moisture than the surrounding soil. Mulch can also prevent mechanical damage by keeping machines such as lawn mowers and string trimmers away from the tree's base. Furthermore, mulch reduces competition from surrounding weeds and turf. To be most effective, mulch should be placed 2 to 4 inches deep and cover the entire root system, which may be as far as 2 or 3 times the diameter of the branch spread of the tree. If the area and activities happening around the tree do not permit the entire area to be mulched, it is recommended that as much of the area under the drip line of the tree is mulched as possible. When placing mulch, care should be taken not to cover the actual trunk of the tree. This mulch-free area, 1 to 2 inches wide at the base, is sufficient to avoid moist bark conditions and prevent trunk decay. An organic mulch layer 2 to 4 inches deep of loosely packed shredded leaves, pine straw, peat moss, or composted wood chips is adequate. Plastic should not be used as it interferes with the exchange of gases between soil and air, which inhibits root growth. Thicker mulch layers, 5 to 6 inches deep or greater, may also inhibit gas exchange.

Fertilization: Trees require certain nutrients (essential elements) to function and grow. Urban landscape trees may be growing in soils that do not contain sufficient available nutrients for satisfactory growth and development. In certain situations, it may be necessary to fertilize to improve plant vigor. Fertilizing a tree can improve growth; however, if fertilizer is not applied wisely, it may not benefit the tree at all and may even adversely affect the tree. Mature trees making satisfactory growth may not require fertilization. When considering supplemental fertilizer, it is important to consider nutrients deficiencies and how and when to amend the deficiencies. Soil conditions, especially pH and organic matter content, vary greatly, making the proper selection and use of fertilizer a somewhat complex process. To that end, it is recommended that

the soil be tested for nutrient content. A soil testing laboratory and can give advice on application rates, timing, and the best blend of fertilizer for each tree and other landscape plants on site. Mature trees have expansive root systems that extend from 2 to 3 times the size of the leaf canopy. A major portion of actively growing roots is located outside the tree's drip line. Understanding the actual size and extent of a tree's root system before applying fertilizer is paramount to determine quantity, type and rate at which to best apply fertilizer. Always follow manufacturer recommendations for use and application.

Pruning: Pruning is often desirable or necessary to remove dead, diseased, or insect-infested branches and to improve tree structure, enhance vigor, or maintain safety. Because each cut has the potential to change the growth of (or cause damage to) a tree, no branch should be removed without reason. Removing foliage from a tree has two distinct effects on growth: (1) it reduces photosynthesis and, (2) it may reduce overall growth. Pruning should always be performed sparingly. Caution must be taken not to over-prune as a tree may not be able to gather and process enough sunlight to survive. Pruning mature trees may require special equipment, training, and experience. Licensed and insured tree maintenance companies are equipped to provide a variety of services to assist in performing the job safely and reducing risk of personal injury and property damage and should be consulted for this type of work. *(See also ANSI A300 Part 1 Pruning Standards- https://www.tcia.org).*

Planting and Irrigation: Any new planting and irrigation that is to occur under the drip line of an existing tree should be conducted with care to avoid the root system. Generally installation of an irrigation mainline should be avoided under the dripline of the existing tree. Refer to the Grading/Excavating section for installation of any irrigation lines to be installed under the drip line of an existing tree. Any new planting should match the water use of the existing tree (as defined by WUCOLS). The irrigation hydro zone for the new planting should also match the requirements of the existing tree.

Removal: There are circumstances when removal is necessary. An arborist can help decide whether or not a tree should be removed. Professionally trained arborists have the skills and equipment to safely and efficiently remove trees. Removal is recommended when a tree: (1) is dead, dying, or considered irreparably hazardous; (2) is causing an obstruction or is crowding and causing harm to other trees and the situation is impossible to correct through pruning; (3) is to be replaced by a more suitable specimen, and; (4) should be removed to allow for construction. Pruning or removing trees, especially large trees, can be dangerous work. It should be performed only by those trained and equipped to work safely in trees.

TERMS AND CONDITIONS

The following terms and conditions apply to all oral and written reports and correspondence pertaining to consultations, inspections and activities of HMH.

1. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. HMH assumes no liability for the failure of trees or parts of trees, either inspected or otherwise. HMH assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.
2. No tree described in this report was climbed, unless otherwise stated. HMH does not take responsibility for any defects, which could have only been discovered by climbing. A full root collar inspection, consisting of excavating the soil around the tree to uncover the root collar and major buttress roots was not performed unless otherwise stated. HMH does not take responsibility for any root defects, which could only have been discovered by such an inspection.
3. HMH shall not be required to provide further documentation, give testimony, be deposed, or attend court by reason of this appraisal or report unless subsequent contractual arrangements are made, including payment of additional fees for such services as described by HMH or in the schedule of fees or contract.
4. HMH guarantees no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any reason. It is the responsibility of the client to determine applicability to his/her case.
5. Any report and the values, observations and recommendations expressed therein represent the professional opinion of HMH, and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.
6. Any photographs, diagrams, graphs, sketches or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphic material or the work produced by other persons, is intended solely for clarification and ease of reference. Inclusion of said information does not constitute a representation by HMH as to the sufficiency or accuracy of that information.
7. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Existing Tree Map
Exhibit A

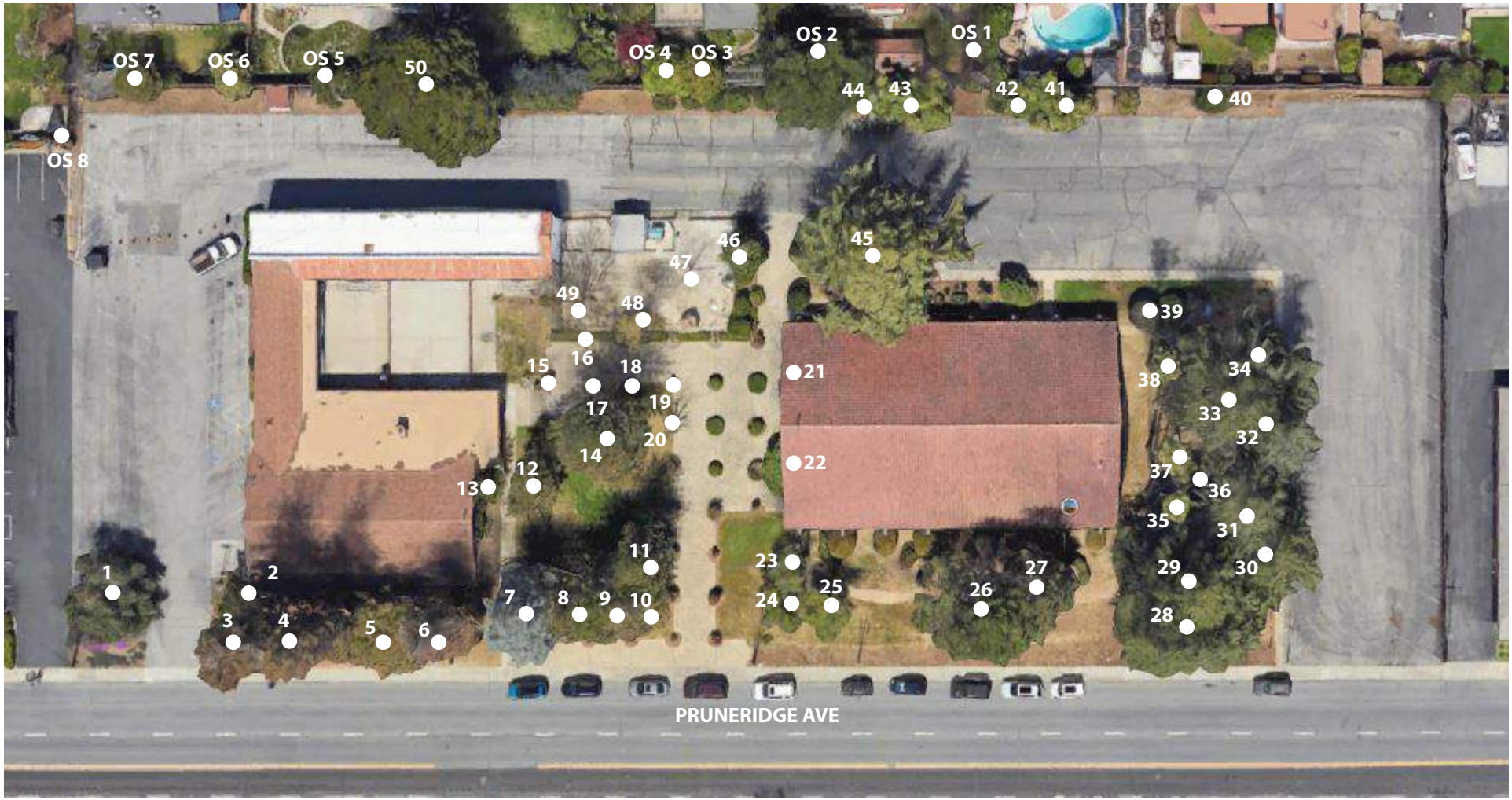


TABLE 1 - TREE QUANTITY SUMMARY

Tree Quantity by Species		
Species	**Quantity**	**% of Site**
Acer palmatum	2	4%
Albizia julibrissin	1	2%
Cedrus atlantica 'Glauca'	1	2%
Cedrus deodara	3	6%
Fraxinus angustifolia 'Raywood'	1	2%
Juniperus chinensis	2	4%
Maytenus boaria	3	6%
Olea europaea	2	4%
Picea sp.	6	12%
Pinus canariensis	6	12%
Pinus jeffreyi	1	2%
Pinus pinea	1	2%
Prunus serrulata	6	12%
Prunus sp.	1	2%
Pseudotsuga menziesii	1	2%
Sequoia sempervirens	5	10%
Triadica sebifera	1	2%
Washingtonia filifera	4	8%
Yucca elephantipes	3	6%
Total Trees	**50**	**100%**

TABLE 2 - TREE EVALUATION SUMMARY

Prepared By: William Sowa ISA Certified Arborist WE-12270A

DBH MEASUREMENT HEIGHT: 54"

Date of Evaluation: 10/27/2022

Suitability for Preservation is based on the following
Good - Trees with good health and structural stability that have the potential for longevity at the site.
Moderate - Trees in somewhat declining health and/or exhibits structural defects that cannot be abated with treatment. Trees will require more intense management and will have a shorter lifespan than those in the 'Good' category.
Poor - Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to decline, regardless of treatment.

Health Rating	
5	A healthy, vigorous tree, reasonably free of disease, with good structure and form typical of the species.
4	A tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
3	A tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that may that might be mitigated with care.
2	A tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
1	A tree in severe decline, dieback of scaffold branches and or trunk, mostly epicormic growth; extensive structural defects that cannot be abated.
0	Tree is dead.

Abbreviations and Definitions		
CD	Codominant branches	Forked branches nearly the same size in diameter, arising from a common junction an lacking a normal branch union.
CDB	Dieback in Crown	Condition where branches in the tree crown die from the tips toward the center.
CR	Crowded	Tree is bounded closely by one or more of the following: structure, tree, Etc.
D	Decline	Tree shows obvious signs of decline, which may be indicative of the presence of multiple biotic and abiotic disorders.
DBH	Diameter at Breast Height	Measurement of tree diameter in inches. Measurement height varies by City and is noted above.
EG	Epicormic Growth	Watersprouting on trunk and main leaders. Typically indicative of tree stress.
EH	Exposed Heartwood	Exposure of the tree's heartwood is typically seen as an open wound that leaves a tree more susceptible to pathogens, disease or infection.
H	Hazardous	A tree that in it's current condition, presents a hazard.
HD	Headed	Poor pruning practice of cutting back branches. Often practiced under utility lines to limit tree height.
IB	Included Bark	Structural defect where bark is included between the branch attachment so the wood can't join. Such defect can have a higher probability of failure.
LN	Leaning Tree	Tree leaning, see notes for severity.
MT	Multi Trunk	Multiple central leaders originating below the DBH measurement.
PT	Phototropism	Tree exhibits phototropic growth habits. Reduced trunk taper, misshapen trunk and canopy growth are examples of this growth habit.
S	Suckers	Shoot arising from the roots.
SD	Structural Defects	Naturally or secondary conditions including cavities, poor branch attachments, cracks, or decayed wood in any part of the tree that may contribute to structural failure.
SE	Severe	Indicates the severity of the following term.
SL	Slight	Indicates the mildness of the following term.
SR	Surface Roots	Roots visible at finished grade.
ST	Stress	Environmental factor inhibiting regular tree growth. Includes drought, salty soils, nitrogen and other nutrient deficiencies in the soil.
WU	Weak Union	Weak union or fork in tree branching structure.

	Protected Tree	Protected Trees. The following trees shall not be removed without first obtaining a permit from the City: 1.Heritage Trees in all zoning districts. 2.All specimen trees with a diameter of twelve (12) inches or more when measured at fifty-four (54) inches above natural grade of the following species on private property: a.Aesculus californica (California Buckeye); b.Acer macrophyllum (Big Leaf Maple); c.Cedrus deodara (Deodar Cedar); d.Cedrus atlantica 'Glauca' (Blue Atlas Cedar); e.Cinnamomum camphora (Camphor Tree); f.Platanus racemosa (Western Sycamore). g.Quercus (native oak tree species), including: i.Quercus agrifolia (Coast Live Oak); ii.Quercus lobata (Valley Oak); iii.Quercus kelloggii (Black Oak); iv.Quercus douglasii (Blue Oak); v.Quercus wislizeni (Interior Live Oak); h.Sequoia sempervirens (Coast Redwood); and i.Umbellularia californica (Bay Laurel or California Bay); 3.Approved development trees. 4.A private tree which has a trunk with a diameter of thirty-eight (38) inches or more measured at fifty-four (54) inches above natural grade. 5.A multi-branched private tree which has major branches below fifty-four (54) inches above the natural grade with a diameter of thirty-eight (38) inches or more measured just below the first major trunk fork.

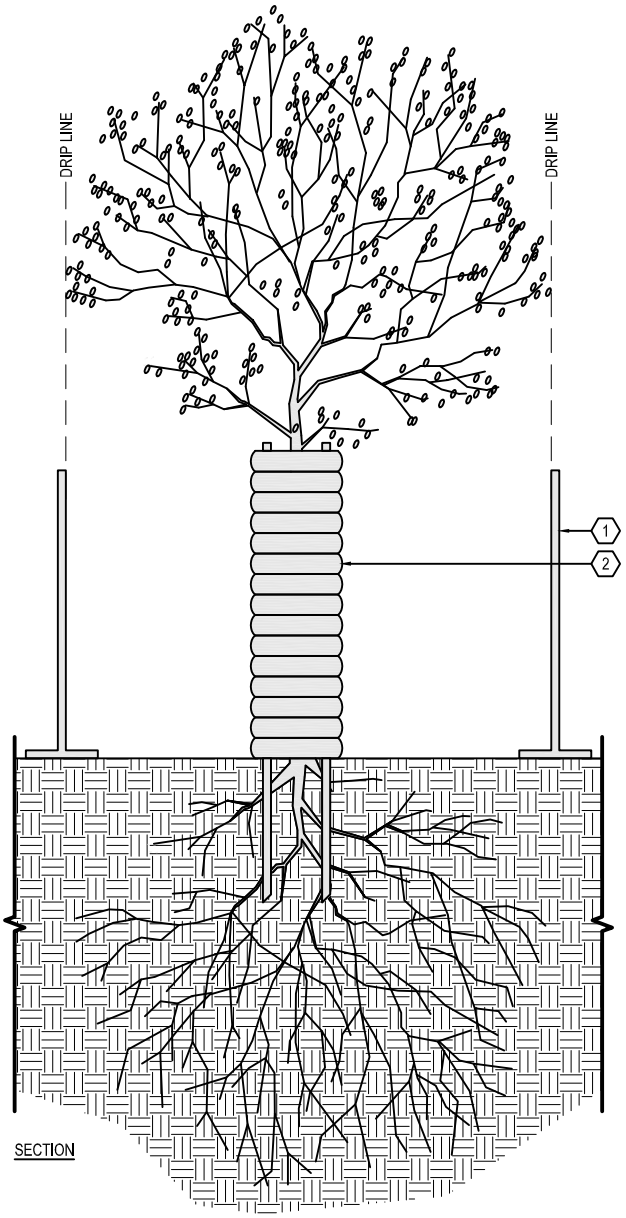
TREE #	BOTANICAL NAME	COMMON NAME	DBH (INCHES)	CIRCUMF-ERENCE (INCHES)	PROTECTED TREE	HEALTH	PRESERVATION SUITABILITY	NOTES
1	*Olea europaea*	Olive	35.2	111	NO	4	Good	SD, MT
2	*Juniperus chinensis*	Chinese Juniper	31.8	100	NO	3	Moderate	SE LN, CR building, MT
3	*Sequoia sempervirens*	Coast Redwood	39.1	123	YES	3	Moderate	ST, branch tip dieback
4	*Sequoia sempervirens*	Coast Redwood	40.2	126	YES	3	Moderate	ST, branch tip dieback
5	*Sequoia sempervirens*	Coast Redwood	30.7	96	YES	2	Poor	ST, branch tip dieback, HD
6	*Sequoia sempervirens*	Coast Redwood	35.8	112	YES	1	Poor	D, ST
7	*Cedrus atlantica 'Glauca'*	Blue Atlas Cedar	17.2	54	YES	4	Good	
8	*Pinus canariensis*	Canary Island Pine	12.6	40	NO	2	Poor	D, CR by 7 &8
9	*Pinus canariensis*	Canary Island Pine	19.8	62	NO	3	Moderate	Thinning, CR by 8 & 10
10	*Pinus canariensis*	Canary Island Pine	168.0	528	YES	2	Poor	D, CR by 9 & 11, thinning
11	*Pinus canariensis*	Canary Island Pine	22.1	69	NO	3	Moderate	CR by 10, thinning, CD
12	*Pinus jeffreyi*	Jeffrey Pine	15.0	47	NO	3	Moderate	branch tip dieback, ST
13	*Juniperus chinensis*	Chinese Juniper	8.3	26	NO	3	Moderate	CR building, LN
14	*Pinus canariensis*	Canary Island Pine	27.8	87	NO	3	Moderate	ST, sap leak, insect boring
15	*Prunus serrulata*	Flowering Cherry	9.4	30	NO	0	Poor	Dead
16	*Prunus serrulata*	Flowering Cherry	3.8	12	NO	0	Poor	Dead
17	*Prunus serrulata*	Flowering Cherry	7.5	24	NO	0	Poor	Dead
18	*Prunus serrulata*	Flowering Cherry	4.5	14	NO	0	Poor	Dead
19	*Prunus serrulata*	Flowering Cherry	16.7	52	NO	0	Poor	Stump
20	*Prunus serrulata*	Flowering Cherry	14.3	45	NO	1	Poor	D, Mostly dead
21	*Acer palmatum*	Japanese Maple	4.8	15	NO	3	Moderate	SE CR building, CDB, ST, IB

TREE #	BOTANICAL NAME	COMMON NAME	DBH (INCHES)	CIRCUMF-ERENCE (INCHES)	PROTECTED TREE	HEALTH	PRESERVATION SUITABILITY	NOTES
22	*Acer palmatum*	Japanese Maple	6.0	19	NO	3	Moderate	SE CR building, CDB, ST, IB
23	*Maytenus boaria*	Mayten Tree	12.2	38	NO	2	Poor	ST, thinning
24	*Maytenus boaria*	Mayten Tree	8.4	26	NO	2	Poor	branch tip dieback, ST
25	*Maytenus boaria*	Mayten Tree	10.7	34	NO	2	Poor	branch tip dieback, ST, LN
26	*Pinus canariensis*	Canary Island Pine	25.8	81	NO	0	Poor	Dead
27	*Pseudotsuga menziesii*	Douglas Fir	18.6	58	NO	2	Poor	ST, Branch tip dieback, CR by 26 - uneven canopy, sap leak
28	*Picea sp.*	Spruce	33.0	104	NO	3	Moderate	SD
29	*Picea sp.*	Spruce	31.7	100	NO	3	Moderate	SD
30	*Cedrus deodara*	Deodar Cedar	25.2	79	YES	3	Moderate	LN
31	*Picea sp.*	Spruce	25.0	79	NO	3	Moderate	
32	*Picea sp.*	Spruce	19.6	62	NO	3	Moderate	Damage to trunk, SL LN
33	*Picea sp.*	Spruce	28.8	90	NO	3	Moderate	SD
34	*Picea sp.*	Spruce	22.3	70	NO	3	Moderate	SL LN
35	*Washingtonia filifera*	California Fan Palm	19.9	62	NO	3	Moderate	
36	*Washingtonia filifera*	California Fan Palm	7.1	22	NO	3	Moderate	Volunteer
37	*Washingtonia filifera*	California Fan Palm	21.4	67	NO	3	Moderate	
38	*Washingtonia filifera*	California Fan Palm	22.0	69	NO	3	Moderate	
39	*Olea europaea*	Olive	21.3	67	NO	3	Moderate	MT, pruned into shape
40	*Albizia julibrissin*	Silk Tree	9.3	29	NO	4	Good	MT, CR mount of dirt, ST
41	*Yucca elephantipes*	Giant Yucca	100.0	314	YES	3	Moderate	SD, decay at base
42	*Yucca elephantipes*	Giant Yucca	100.0	314	YES	3	Moderate	CR by oleander, SD, Decay

TREE #	BOTANICAL NAME	COMMON NAME	DBH (INCHES)	CIRCUMF-ERENCE (INCHES)	PROTECTED TREE	HEALTH	PRESERVATION SUITABILITY	NOTES
43	*Yucca elephantipes*	Giant Yucca	110.0	345	YES	3	Moderate	Decay, large branch fallen
44	*Cedrus deodara*	Deodar Cedar	4.3	14	NO	4	Good	Volunteer, CR by 43 & OS 2
45	*Cedrus deodara*	Deodar Cedar	76.0	239	YES	4	Good	SD
46	*Sequoia sempervirens*	Coast Redwood	12.4	39	YES	4	Good	CR shrubs & fence, branch tip dieback, ST
47	*Prunus sp.*	Plum	9.0	28	NO	3	Moderate	Not tagged, EHW, ST, cracks in trunk
48	*Triadica sebifera*	Chinese Tallow Tree	8.0	25	NO	3	Moderate	Not tagged, EG, ST, Branch tip dieback
49	*Fraxinus angustifolia 'Raywood'*	Raywood Ash	24.0	75	NO	3	Moderate	Not tagged, CDB, IB, ST, EHW
50	*Pinus pinea*	Italian Stone Pine	36.0	113	NO	3	Moderate	CR by fence, sap leak, Decay, ST, verify location - might be offsite

Offsite trees

OS 1	*Lagerstroemia indica*	Crape Myrtle						Overhangs fence by 6'
OS 2	*Quercus agrifolia*	Coast Live Oak						Overhangs fence by 10'
OS 3	*Citrus sp.*	Citrus						Overhangs fence by 3'
OS 4	*Citrus sp.*	Citrus						Overhangs fence by 2'
OS 5	*Cinnamomum camphora*	Camphor						Overhangs fence by 5'
OS 6	*Pittosporum tobira*	Japanese Cheesewood						Overhangs fence by 4'
OS 7	*Ligustrum lucidum*	Glossy Privet						Overhangs fence by 5'
OS 8	*Ficus carica*	Fig						Overhangs fence by 3'



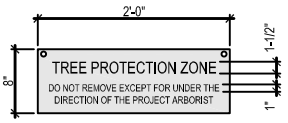
SECTION

NOTES:

1. REFER TO THE TREE PROTECTION NOTES.
2. TREE PROTECTION MEASURES SHALL BE INSTALLED BEFORE GRADING OR EQUIPMENT IS ALLOWED ON SITE.
3. PRIOR TO CONSTRUCTION, SEE THE REMEDIAL REPAIRS SECTION TO DETERMINE FERTILIZING AND WATERING SCHEDULES FOR EXISTING TREES.
4. WHEN CONSTRUCTION IS TO TAKE PLACE WITHIN A TREE'S DRIP LINE, SEE SITE PREPARATION SECTION.
5. NO CONSTRUCTION WASTE, EITHER LIQUID, SOLID, OR ANY OTHER SUBSTANCE WHICH COULD ENTER INTO THE ROOT SYSTEM (OIL, GASOLINE, CHEMICALS, OR OTHER HARMFUL MATERIALS) SHALL BE DEPOSITED, DISPOSED OF, OR STORED WITHIN OR NEAR A TREE'S DRIP LINE.
6. WIRE, SIGNS, ROPES, PULLEYS, ETC., SHALL NOT BE ATTACHED TO ANY TREE.
7. IF TRENCHING WITHIN A TREE'S DRIP LINE IS NECESSARY, SEE GRADING/EXCAVATION SECTION.
8. IF TREE PRUNING IS NECESSARY, SEE REMEDIAL REPAIRS SECTION.
9. INSTALL ONE SIGN TO DRIP LINE FENCING PER AREA.
10. SEE TREE PROTECTION ZONE (TPZ) INSTRUCTIONS UNDER SITE PREPARATION SECTION.

(1) 6'-0" HIGH TEMPORARY CHAIN LINK FENCE, INSTALLED AT DRIP LINE. SEE TREE PROTECTION PLAN FOR LOCATIONS. PREFERENCE WOULD BE AT DRIP LINE OR FOLLOW LOCAL CODES.

(2) INSTALL TRUNK WRAP IF DRIP LINE FENCE IS NOT PRACTICAL, INSTALL FOUR (4) LODGE POLES AROUND EACH TREE, WRAP TRUNK IN STRAW WADDLE, THEN WRAP IN ORANGE SNOW FENCING UP TO BRANCHING STRUCTURE



SIGN
SCALE: 1" = 1'-0"

TREE PROTECTION

SCALE: 1/2" = 1'-0"

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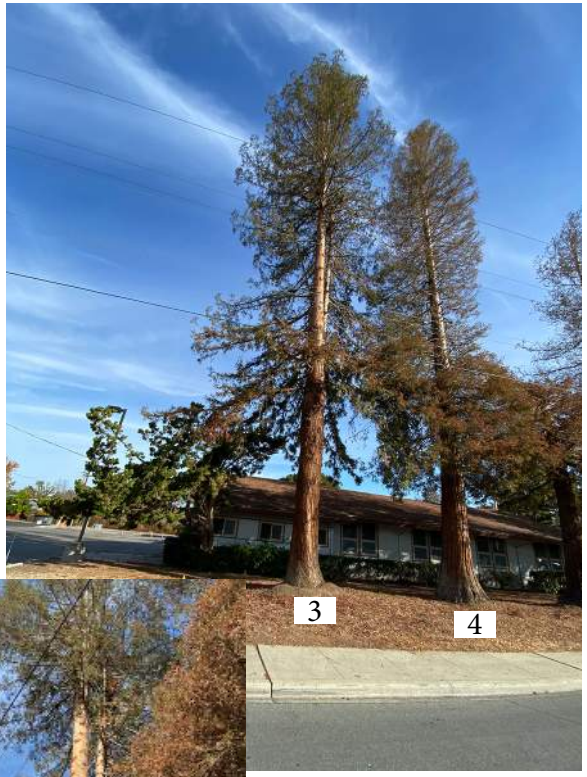
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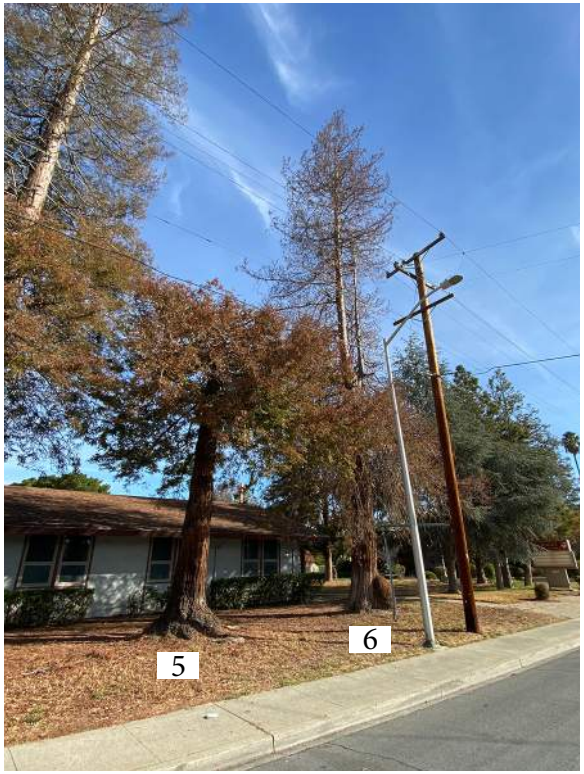
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ST. MARK'S
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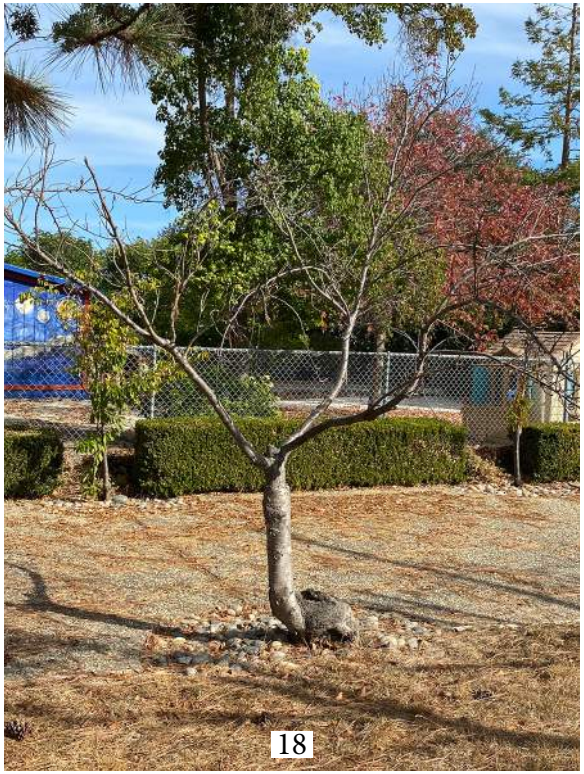

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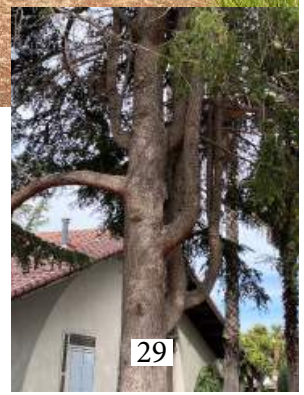
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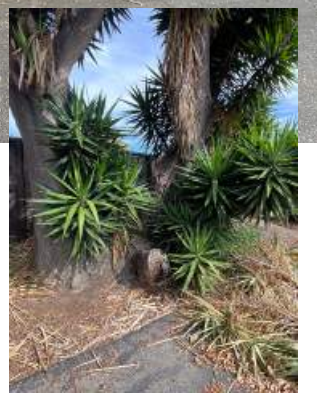

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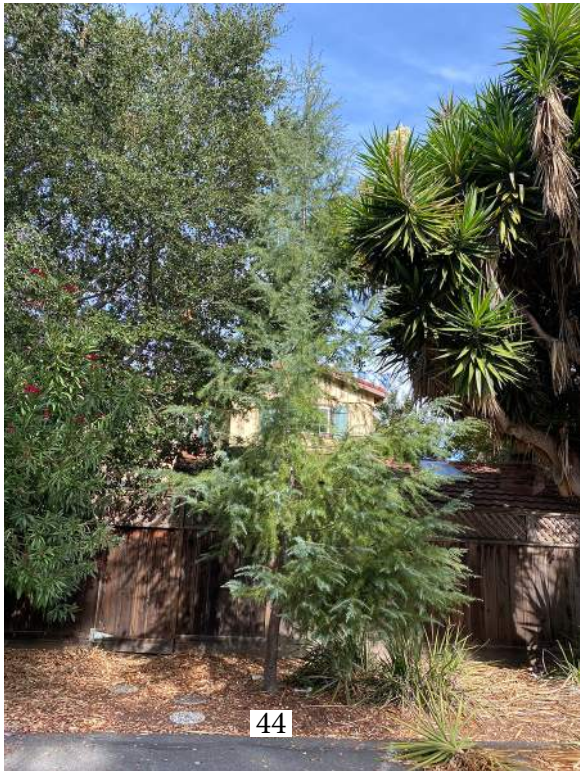
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OFF SITE 1

OFF SITE 2

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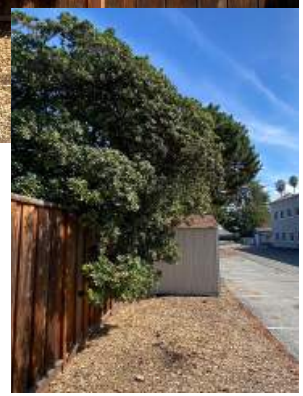

OFF SITE 7

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