

64 Winchester Drive Atherton, CA Arborist Report 2024



Prepared For:
Elizabeth Daschbach

Site: 64 Winchester Drive
Atherton, CA 94027



Submitted by:
David Beckham
Certified Arborist
WE#10724A
TRAQ Qualified



DAVID BECKHAM
WE#10724A



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KIELTY

ARBORISTS SERVICES LLC

Certified Arborist WE#10724A TRAQ Qualified
P.O. Box 6187 San Mateo, CA 94403
650- 532-4418

Date: August 19, 2024

Attn: Elizabeth Daschbach
Site: 64 Winchester Drive, Atherton, CA 94027

Subject Re: Letter for planning commission of trees #5 and #43

Dear Ms. Daschbach,

At your request, Kielty Arborists Services LLC has visited the property referenced above to evaluate the trees present with respect to the proposed construction project. The report below contains the analysis of the site visit. Also included are recommendations on the work shown within the tree protection zones of trees #5 and #43.

SUMMARY

The site itself has not been maintained for some time and too many trees are on the lot to support good forestry practices. The landscape is in disrepair. There are 37 trees located on the property, 14 of which are protected(#1, 7, 8, 12, 15, 16, 18, 20, 21, 28, 31, 32, 36 & 40). Eight additional trees listed on the survey are located on neighboring property, all of which are of a protected size (#5, 33, 39, & 41-45). 32 trees located on the proposed construction site are recommended for removal, as they are noted to be in fair to poor health, in decline, or in conflict with proposed construction project features. All other protected trees to be retained are in fair to good condition and should be retained and protected as detailed in the recommendations below. With proper protection and cultural practices, all retained trees, including those located on neighboring property, are expected to survive and thrive during and after construction.

ASSIGNMENT

At the request of Elizabeth Daschbach, Kielty Arborists Services LLC conducted a site visit on September 19th, 2023, to prepare a comprehensive Tree Inventory Report/Tree Protection Plan for the proposed construction project. This report is a requirement when submitting plans to the Town of Atherton. The analysis in this report is based on site plan A1.0, dated 7/10/24. These plans were drawn by Jonathan Jang Architect. Also reviewed are grading and drainage plans C-3 dated 8/1/24, drawn by MacLeod and Associates.

The primary focus of this report is as follows:

- Identification and assessment of trees on the construction site that may be affected by the proposed development.
- Determination of potential impacts on tree health and stability, considering factors such as root damage and crown damage.
- Provision of recommendations for tree protection and preservation measures during the construction process to mitigate potential impacts.

- Ensuring compliance with local regulations pertaining to tree preservation, protection, and removal within the construction plans.

Please note that the report will provide specific details regarding tree assessments, impacts, and preservation measures.

INTRODUCTION

According to our past communications with city staff, the Town of Atherton requires the following tree reporting elements for development projects:

1. Inventory of all trees measuring 10 inches or greater in diameter.
2. A map of tree locations.
3. Tree protection or removal recommendations for all trees measuring 15 inches or greater in diameter (protected trees).

LIMITS OF THE ASSIGNMENT

As part of this assessment, it is important to note that Kielty Arborists Services LLC did not conduct an aerial inspection of the upper crown, a detailed root crown inspection, or a plant tissue analysis on the subject trees. Therefore, the information presented in this report does not include data obtained from these specific methods.

Furthermore, it is essential to clarify that no tree risk assessments were completed as part of this report unless stated otherwise. The focus of this assessment primarily centers on tree identification, general health evaluation, and the potential impacts of the proposed construction.

While the absence of these specific assessments limits the scope of the analysis, the findings and recommendations provided within this report are based on available information and observations made during the site visit.

PURPOSE & USE OF THE REPORT

This report informs tree management decisions for the construction project and provides recommendations to maximize tree survival. It serves as a valuable resource for stakeholders, facilitating informed discussions and sustainable tree management practices.

TESTING & ANALYSIS

In order to assess the trees, a thorough examination was conducted using a variety of methods. For trees with accessible trunks, precise measurements of the Diameter at Breast Height (DBH) were taken using a specialized diameter tape measure. In cases where the trunks were not readily accessible, visual estimations were employed to determine the DBH. As part of the inventory process, all trees exceeding a specific DBH threshold of 10 inches were included.

To evaluate the health of the trees, multiple factors were considered, including their overall appearance and our team's extensive experiential knowledge of each species. This holistic approach ensured a comprehensive understanding of the tree's well-being.

To accurately document the location of each tree, a GPS smartphone application was utilized during the data collection process. This enabled us to create detailed maps that are included in this report. However, it is important to note that despite our efforts to minimize errors, inherent limitations of GPS data collection, coupled with slight discrepancies between GPS data and CAD drawings, may result in approximate tree locations depicted on the map.

To perform this assessment, a site visit was conducted on September 19th, 2023. During this visit, meticulous observations and high-quality photographs were obtained to provide a comprehensive analysis. The findings and recommendations presented in this report are based on a preliminary plan titled "Topographic Survey Plan" by MacLeod and Associates. These plans were electronically provided to us via email and are dated September 22, 2023. By thoroughly analyzing these plans in conjunction with our field observations, we have developed an accurate and reliable assessment of the tree conditions.

METHOD OF INSPECTION

The inspections were conducted from the ground without climbing the trees. No tissue samples or root crown inspections were performed. The trees under consideration were identified based on the provided site plan. To assess the trees, their diameter at 54 inches above ground level (DBH or diameter at breast height) was measured using a D-Tape. Additionally, the protected trees were evaluated for their health, structure, form, and suitability for preservation with the following explanation of the ratings:

Evaluation Fields:

Tree Tag #:

- Identification number for individual trees.

Protected Tree:

- Specifies whether the tree is protected by the city or county ordinance.

Preserve or Remove:

- Indicates the recommended action based on the tree's condition.

Common Name / Scientific Name:

- Specifies the name of the tree, both in common terms and scientific nomenclature.

Trunk (in.):

- Measures the primary trunk's diameter at the required height.

If more than 1 Trunks, Total Diameter:

- If the tree has multiple trunks, this field indicates the combined diameter of all trunks.

Six Times the Diameter (ft.), Eight Times the Diameter (ft.), Ten Times the Diameter (ft.):

- Provides calculations based on the diameter to assist in various tree protection requirements.

Height (ft.) / Canopy Spread (ft.):

- Measures both the height of the tree and the spread of its canopy.

Tree Health Ratings:

- Good: The tree displays vigorous growth with normal-sized, shaped, and colored foliage. The canopy density is between 90-100%, with minimal to no dead wood, minor or no pest infestation, and little to no decay. The tree is expected to have a natural lifespan.
- Fair: The new growth shoots may be shorter than expected, and the canopy density ranges from 60-90%. Some small branch dieback, noticeable pest infestation, and/or decay may be present. Although the tree is not currently in decline, external factors such as construction impacts, increased pest pressure, or drought may affect its health.
- Poor: The tree exhibits little to no new growth and significant dieback. The foliage may be undersized, distorted, yellowed, or display abnormal colors. The canopy density is 20-60% or less, with substantial dead wood, pest infestation, or decay. The tree is not expected to reach its natural lifespan.

Tree Structure Ratings:

- Good: Minor structural flaws can be addressed through pruning. The tree has an upright trunk with a single leader or can be easily trained to have one. Scaffold branches are smaller than the leader, attached to the trunk at angles approaching 45 degrees, and well-spaced vertically and radially. No included bark or signs of previous branch failures. Foliage is evenly distributed on the limbs, and the canopy is symmetrical or mostly symmetrical.
- Fair: Some structural flaws cannot be corrected through pruning. The tree may have multiple trunks or leaders, a slight lean, branches attached at angles less than 30 to 10 degrees, and/or crowding on the trunk. Included bark, previous branch failures, or end-heavy limbs may be present, and some asymmetry in the canopy may be observed.
- Poor: Significant structural flaws that cannot be addressed through pruning are evident. There may be significant dead wood or decay, multiple trunks or leaders, crowded branches on the trunk, significantly included bark, previous branch failures, and/or asymmetry. The tree may also exhibit a precipitous lean, indicating potential hazard.

Tree Form Ratings:

- Good: The tree's form is nearly ideal for its species, with minor asymmetries or deviations that do not compromise function or aesthetics. It aligns with the intended use and is consistent with the landscape.
- Fair: The tree's form displays major asymmetries or deviations from the species norm and/or intended use. This compromises function and/or aesthetics.
- Poor: The tree's form is largely asymmetric or abnormal, significantly detracting from the intended use and aesthetics. It is visually unappealing and provides little to no function in the landscape.

Suitability for Preservation (for protected trees only):

This rating is based solely on the tree itself, irrespective of potential construction impacts.

- Good: The tree is currently an asset to the landscape and can be expected to survive minor to moderate construction impacts with adequate protection.
- Fair: The tree contributes to the landscape and may benefit from pruning or other maintenance activities. It should survive minor construction impacts with adequate protection, and implementing protective measures is recommended unless construction impacts are extensive.
- Poor: The tree does not contribute to the landscape and is in poor health, potentially posing hazards. It is not expected to survive any construction impacts. Some trees with poor viability may be retained if they will not be impacted by construction.

Overall Condition Ratings:

The trees were assigned a condition rating based on a combination of existing tree health, tree structure, and tree form using the following scale:

- 1-29: Very Poor
- 30-49: Poor
- 50-69: Fair
- 70-89: Good
- 90-100: Excellent

Comments:

- Any additional notes or observations about the tree.

Tree Picture:









- A photograph of the tree for visual assessment and record-keeping.










Appraised Value:










- An unbiased estimate of the tree's worth is performed in accordance with the current edition of the Guide for Plant Appraisal by the Council of Tree and Landscape Appraisers.










It's important to note that not all fields may be provided for every tree. Some might be left blank due to various reasons, such as lack of accessibility to the tree, incomplete data, or the parameter not being applicable for a particular tree.





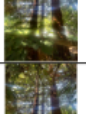




OBSERVATIONS

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Appraised Value	Trunk (in.)	If more than 1 Trunk, Total Diameter	Six Times the Diameter in (ft.)	Eight Times the Diameter in (ft.)	Ten Times the Diameter in (ft.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Comments	Tree Picture #1
1	Yes	(P)	valley oak <i>Quercus lobata</i>	\$16,800	32		16	21.3	26.7	50/40	Fair	Fair	Fair	Fair	60%	Cabled, deadwood in canopy, heavy lateral limbs, leans towards site.	
2	No	(R)	Southern magnolia <i>Magnolia grandiflora</i>	\$700	11.5		5.75	7.7	9.6	40/20	Good	Fair	Fair	Fair	65%	Codominant at 14 feet, suppressed by oak.	
3	No	(R)	Southern magnolia <i>Magnolia grandiflora</i>	\$700	13		6.5	8.7	10.8	40/25	Fair	Fair	Poor	Poor	50%	Suppressed by neighboring oak tree.	
4	No	(R)	Southern magnolia <i>Magnolia grandiflora</i>	\$700	10.2		5.1	6.8	8.5	35/15	Fair	Fair	Fair	Poor	55%	Suppressed by neighboring oak tree.	
5*	Yes	(P)	coast live oak <i>Quercus agrifolia</i>	\$42,000	36 est.	36	18	24	30.0	45/50	Fair	Fair	Fair	Fair	65%	Neighboring tree, minor deadwood in canopy, leans into site, limited visual inspection.	
6	No	(R)	coast live oak <i>Quercus agrifolia</i>	\$700	9.7		4.85	6.5	8.1	20/15	Fair-Poor	Poor	Poor	Poor	45%	Topped in past, one sided, deadwood.	
7	Yes	(R)	coast live oak <i>Quercus agrifolia</i>	\$4,900	16.3		8.15	10.9	13.6	30/15	Fair	Poor	Fair	Poor	45%	Codominant at 25 feet, leans towards existing home, one sided.	
8	Yes	(P)	coast live oak <i>Quercus agrifolia</i>	\$7,100	21.5		10.75	14.3	17.9	35/25	Fair	Poor	Poor	Poor	45%	Codominant at 5 feet, in contact with service drop, one sided, leans towards existing home, deadwood.	
9	No	(R)	coast live oak <i>Quercus agrifolia</i>	\$700	10.5		5.25	7.0	8.8	35/15	Fair	Poor	Fair	Fair	50%	Codominant at 10 feet, leaning, deadwood, suppressed.	

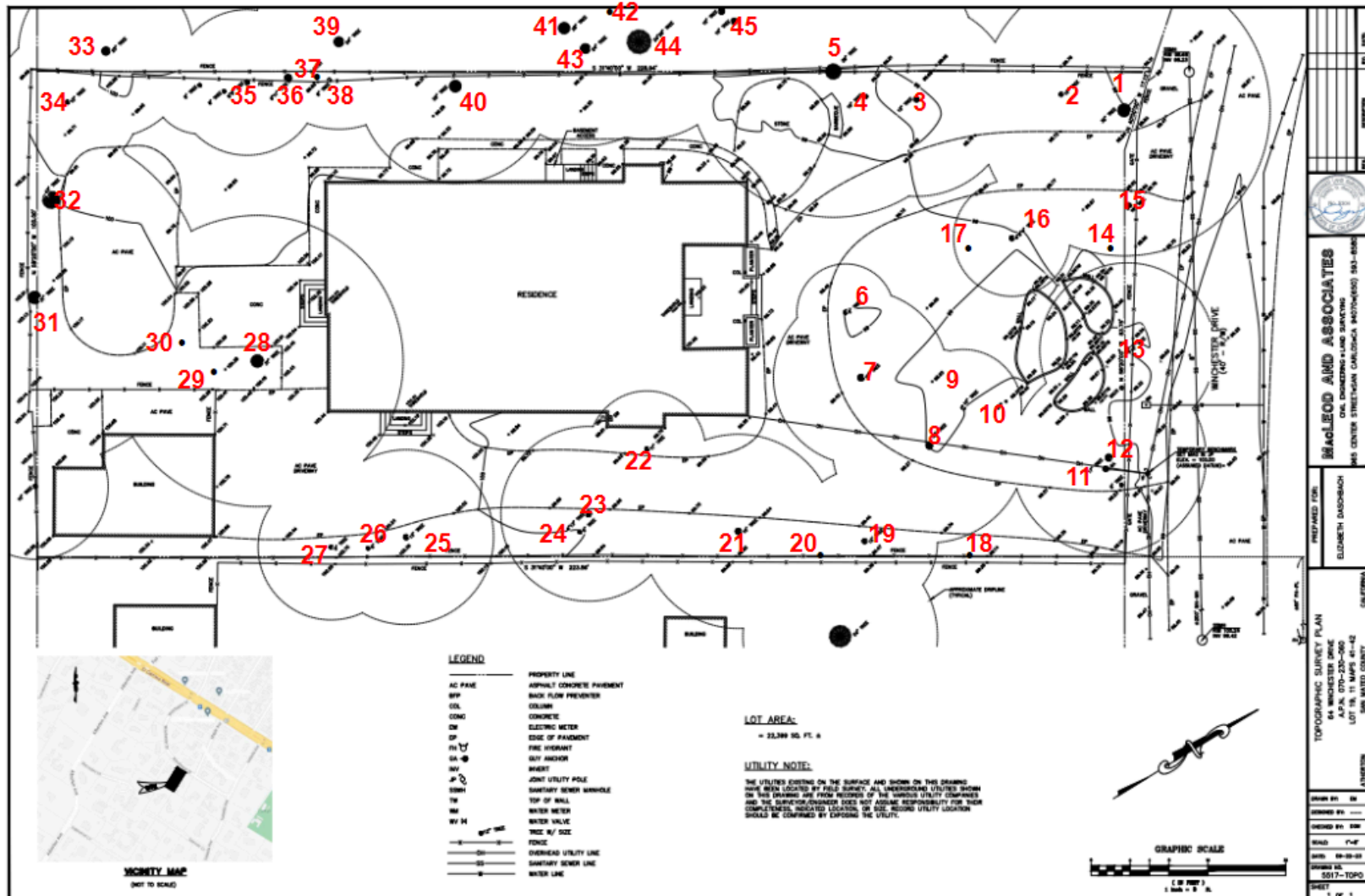
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10	No	(R)	California bay laurel <i>Umbellularia californica</i>	\$700	8,6,6	14	7	9.3	11.7	30/20	Fair-Poor	Fair	Fair	Fair	50%	Growing into utility service drop, suppressed.	
11	No	(R)	Japanese cryptomeria <i>Cryptomeria japonica</i>	\$700	9		4.5	6.0	7.5	25/5	Poor	Poor	Poor	Poor	0%	Dead tree	
12	Yes	(R)	podocarpus <i>Afrocarpus falcatus</i>	\$3,700	20.7		10.35	13.8	17.3	50/25	Fair	Poor	Poor	Poor	40%	Codominant at 25 feet, growing through utility service drop, invasive species, light fixture attached to trunk.	
13	No	(R)	blackwood acacia <i>Acacia melanoxylon</i>	\$700	16.2		8.1	10.8	13.5	45/20	Fair	Fair	Fair	Poor	45%	Invasive species.	
14	No	(R)	privet <i>Ligustrum japonicum</i>	\$700	8,6	11	5.5	7.3	9.2	40/12	Fair-Poor	Poor	Poor	Poor	40%	Suppressed, codominant at 1 foot, deadwood, one sided.	
15	Yes	(R)	Japanese cryptomeria <i>Cryptomeria japonica</i>	\$3,770	17		8.5	11.3	14.2	45/20	Fair-Poor	Fair	Fair	Fair	45%	Sparse canopy, deadwood.	
16	Yes	(R)	English laurel <i>Prunus laurocerasus</i>	\$4,760	9,3,6,6	15.3	7.65	10.2	12.8	20/20	Fair	Fair	Fair	Fair	55%	Codominant at 2 feet	
17	No	(R)	privet <i>Ligustrum japonicum</i>	\$700	6,6	11	5.5	7.3	9.2	35/10	Poor	Poor	Poor	Poor	35%	Codominant at 1 foot, heavily suppressed, deadwood, limb failure in past.	
18	No	(R)	Pacific yew <i>Taxus brevifolia</i>	\$2,690	6,5,7,2,2	14.5	7.25	9.7	12.1	30/15	Fair-Poor	Poor	Poor	Poor	30%	Hedge, not maintained, deadwood, codominant at grade.	

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Appraised Value	Trunk (in.)	If more than 1 Trunk, Total Diameter	Six Times the Diameter in (ft.)	Eight Times the Diameter in (ft.)	Ten Times the Diameter in (ft.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Comments	Tree Picture #1
19	No	(R)	fir <i>Abies sp.</i>	\$700	13		6.5	8.7	10.8	45/15	Fair-Poor	Fair	Fair	Fair	50%	Codominant at top, one sided, deadwood, previous limb failure, leans toward site.	
20	Yes	(R)	privet <i>Ligustrum japonicum</i>	\$4,960	4, 5, 10, 7, 2	19	9.5	12.7	15.8	25/12	Fair-Poor	Poor	Fair	Fair	40%	Hedge, not maintained, codominant at grade, suppressed.	
21	Yes	(R)	Spanish fir <i>Abies pinsapo</i>	\$3,430	17		8.5	11.3	14.2	40/20	Poor	Poor	Poor	Poor	30%	Significant deadwood in canopy, previous limb failure, one sided. Leans towards site and existing home, nearly dead.	
22	No	(R)	coast live oak <i>Quercus agrifolia</i>	\$700	11.5		5.75	7.7	9.6	35/20	Fair	Fair	Fair	Fair	55%	Codominant at 15 feet, leans towards home, 5 feet from foundation.	
23	No	(R)	coast live oak <i>Quercus agrifolia</i>	\$700	14.2		7.1	9.5	11.8	35/20	Fair	Fair	Fair	Fair	60%	Codominant at 15 feet, minor deadwood, suppressed.	
24	No	(R)	coast live oak <i>Quercus agrifolia</i>	\$700	9.6		4.8	6.4	8.0	30/15	Fair	Fair	Fair	Fair	55%	Leans towards neighboring property, suppressed, deadwood, codominant at 15 feet.	
25	No	(R)	Southern magnolia <i>Magnolia grandiflora</i>	\$4,500	13.8		6.9	9.2	11.5	30/30	Fair	Fair	Fair	Fair	50%	Suppressed, drought stressed.	
26	No	(R)	Japanese cheesewood <i>Pittosporum tobira</i>	\$700	7.2		3.6	4.8	6.0	15/10	Poor	Poor	Poor	Poor	40%	Suppressed, previously topped, deadwood.	
27	No	(R)	Chinese photinia <i>Photinia serrulata</i>	\$700	9.5		4.75	6.3	7.9	25/20	Fair	Fair	Fair	Fair	50%	One sided canopy, minor deadwood.	

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28	Yes	(P)	valley oak <i>Quercus lobata</i>	\$16,000	31.5		15.75	21.0	26.3	55/40	Fair	Fair	Fair	Fair	55%	Large lateral limbs, deadwood, codominant at 20 feet, leans over home and garage, surrounded by hardscape.	
29	No	(R)	loquat <i>Eriobotrya japonica</i>	\$700	6,6	10.4	5.2	6.9	8.7	20/20	Good	Fair	Fair	Fair	65%	Codominant at 1 foot.	
30	No	(R)	California bay laurel <i>Umbellularia californica</i>	\$700	6,2,2	8	4	5.3	6.7	35/10	Good	Fair	Fair	Fair	65%	Codominant at grade, suppressed by oak.	
31	Yes	(P)	coast live oak <i>Quercus agrifolia</i>	\$12,400	26		13	17.3	21.7	45/40	Fair	Poor	Fair	Fair	55%	At property line, leaning away from site. Large, heavy lateral limbs, and deadwood. Vine on trunk.	
32	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$29,800	41		20.5	27.3	34.2	65/40	Fair	Fair	Fair	Fair	55%	Deadwood in canopy, root crown buried.	
33*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$10,900	20		10	13.3	16.7	60/30	Fair	Fair	Fair	Fair	60%	Neighboring tree, limited visual inspection.	
34	No	(R)	redwood <i>Sequoia sempervirens</i>	\$700	9		4.5	6.0	7.5	30/20	Fair-Poor	Fair	Fair	Fair	45%	Heavily suppressed, deadwood, in decline.	
35	No	(R)	privet <i>Ligustrum japonicum</i>	\$700	8,2	12.8	6.4	8.5	10.7	35/10	Fair-Poor	Fair	Fair	Fair	50%	Hedge material, not maintained, suppressed, deadwood.	
36	Yes	(R)	privet <i>Ligustrum japonicum</i>	\$3,270	10,6,6	16	8	10.7	13.3	35/10	Fair-Poor	Poor	Fair	Poor	35%	Codominant at 1 foot and again at 4 feet, hedge, not maintained, deadwood.	

Tree Tag #	Protected Tree	Preserve or Remove	Common Name / Scientific Name	Appraised Value	Trunk (in.)	If more than 1 Trunk, Total Diameter	Six Times the Diameter in (ft.)	Eight Times the Diameter in (ft.)	Ten Times the Diameter in (ft.)	Height (ft.) / Canopy Spread (ft.)	Health Rating	Structural Rating	Form Rating	Suitability for Preservation	Overall Condition (0-100%)	Comments	Tree Picture #1
37	No	(R)	privet <i>Ligustrum japonicum</i>	\$700	8,8	12	6	8.0	10.0	35/10	Fair-Poor	Fair	Fair	Fair	50%	Hedge, not maintained, deadwood, vines growing through canopy.	
38	No	(R)	privet <i>Ligustrum japonicum</i>	\$700	8,8	14	7	9.3	11.7	35/10	Fair-Poor	Fair	Fair	Fair	50%	Hedge, not maintained, deadwood, vines growing through canopy.	
39*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$18,000	26		13	17.3	21.7	60/30	Fair	Fair	Fair	Fair	60%	Neighboring tree, limited visual inspection.	
40	Yes	(R)	Canary Island date palm <i>Phoenix canariensis</i>	\$4,000	31.5		15.75	21.0	26.3	30/30	Fair	Good	Good	Fair	70%	Deadwood in canopy, invasive.	
41*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$14,000	25		12.5	16.7	20.8	65/30	Fair	Fair	Fair	Fair	50%	Neighboring tree, limited visual inspection.	
42*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$9,200	20		10	13.3	16.7	65/30	Fair	Fair	Fair	Fair	50%	Neighboring tree, limited visual inspection.	
43*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$13,800	25		12.5	16.7	20.8	65/30	Fair	Fair	Fair	Fair	50%	Neighboring tree, limited visual inspection.	
44*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$36,100	24-28		20	26.6	33.3	65/30	Fair	Fair	Fair	Fair	50%	Neighboring tree, limited visual inspection, codominant at 2 feet.	
45*	Yes	(P)	redwood <i>Sequoia sempervirens</i>	\$36,100	45		22.5	30.0	37.5	65/30	Fair	Fair	Fair	Fair	50%	Neighboring tree, limited visual inspection, codominant at 2 feet.	

TREE MAP



Town of Atherton Ordinance Pertaining to Trees and Appropriate Distances

Distances to proposed construction:

The text below are multiple rules from the ordinance that are recommended to be followed where possible.

1. R1-A Zoning District for lots of more than 10,000 square feet:
 - a. The TPZ is 10x diameter away from buildings and structures.
 - b. The TPZ is 8x diameter away from any new driveway.
2. R1-B Zoning District and lots in the R1-A Zoning District that are 10,000 square feet or less:
 - a. The TPZ is 6x diameter away from all buildings, structures, and new driveways.
3. For all lots:
 - a. The TPZ is 6x diameter away from all CMU walls and 5x diameter away from all wood or metal fences that require a permit.
 - b. The TPZ is 3x diameter from all landscaping, Landscape Screening trees and bushes.
 - c. For replacement of existing driveways and/or new, proposed compacted surfaces, allow for replacement in the existing location, but in no cases less than 3 times the diameter (3x).

Town Arborist Exceptions:

A Town Arborist exception from the TPZ standards noted in 2.2 (A) can be considered under any of the following scenarios.

- A TPZ exception in the R1-A from 10x the diameter, down to a minimum of 8x the diameter, for all development types unless otherwise specified.
- A TPZ exception in the R1-A from 6x the diameter, down to a minimum of 3x the diameter, for lots in the R1-B, or lots in the R1-A 10,000 square feet or less.
- A TPZ exception for all walls or fences from 6x the diameter, down to 3x the diameter.

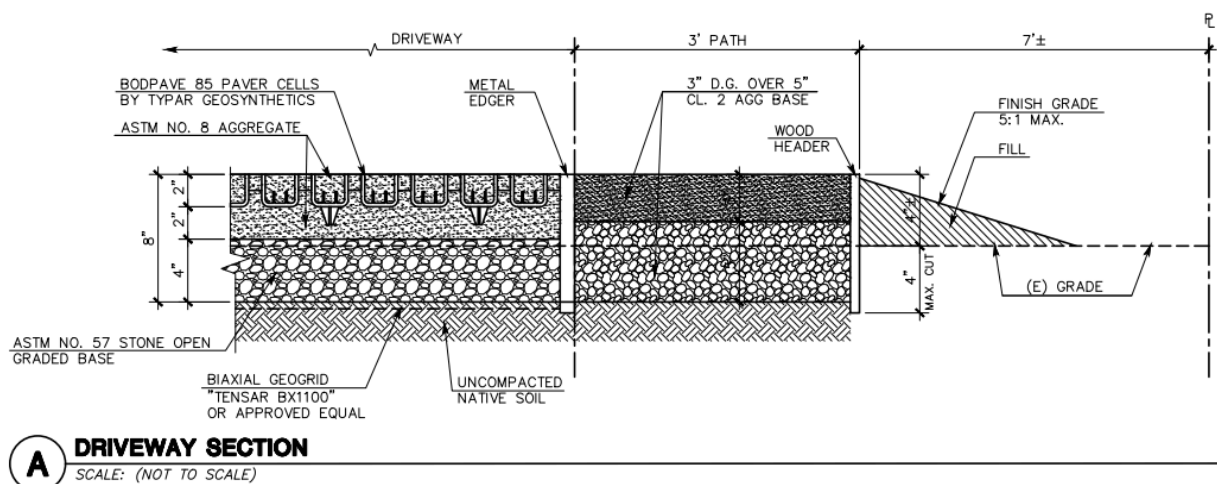
An application and fee are required to be completed prior to a Town Arborist TPZ exception review. Submitting and paying for the application does not guarantee approval to reduce the TPZ. If the Town Arborist denies an application submitted for a Town Arborist exception to the TPZ, the application can be appealed to the Planning Commission in accordance with the Atherton Municipal Code.

Exceptions needed

COAST LIVE OAK TREE #5- A new driveway is shown within the tree protection zone of the neighboring coast live oak tree #5. The driveway is shown at 3.33x the tree's diameter or at 10' from the tree. In order to construct the driveway with minimal impacts to the tree, It is recommended to construct the driveway using Biaxial Geogrid (Tensar BX-1100 or equivalent). Biaxial Geogrid can be used as a subgrade layer below aggregate for reinforcing the driveway. The Geogrid allows for pinning down of the surrounding soil and can be constructed over tree root zones. Using the Geogrid material will improve filtration, reduce the base thickness needed allow for compaction of underlying parent soil to be no greater than 85-90%, reduce incidents of tire ruts and soil migration, and relieve the roots from strain/compaction caused by vehicles. No more than 4" of excavation (mostly for rough grading and scarifying the soil) shall be allowed for the driveway

construction when working within 30 feet (10x diameter) from tree #5. The existing grade and proposed driveway grade will need to be nearly identical to allow for this work to take place with minimal impacts to the tree. The civil engineer has placed the driveway slightly above the existing grade by 4" so that the driveway allows for a slightly thicker base section. After minor grading and scarifying of the soil has been completed (4"), the Geogrid material shall be laid directly on top of the soil, and the driveway shall be constructed entirely on top of the root zone. Edging for the driveway construction is recommended to be supported by individual pins, as excavating for a continuous edge would nullify the use of Geogrid. By building the driveway using the techniques described above, the impact to tree #5 would be minor. Because the driveway work is to take place within the tree's tree protection zone, the work will require the direct supervision of the Project Arborist. Grading and scarifying the soil will need to be done by hand under the Project Arborist's supervision when working within 30 feet of tree #5. Any exposed roots during the driveway work will need to be kept moist by covering roots in layers of wetted-down burlap to help avoid root desiccation. Exposed roots will be required to be documented by the Project Arborist. Before the driveway work is to start, the tree protection zone is recommended to be deep water fertilized with 300 gallons of water mixed with Nutriroot. The top foot of the soil within the tree protection zone is recommended to be saturated.

A decomposed granite pathway is proposed to follow the edge of the driveway near oak tree #5. The pathway is recommended to be built with a minimal 4" cut into grade. This work will need to be done by hand under the project arborist supervision when working within 30' from the tree. No roots shall be cut for the pathway work. Any root encountered must be retained within the granite itself or base rock layer.



Showing provided detail of the driveway work and decomposed granite pathway work.

Coast live oak tree #5 is in fair condition. 24% of the tree's root zone will be impacted by the proposed work. Coast live oak trees have a good tolerance to construction impacts, as seen in the Matheny and Clark relative tree tolerance chart. The tree is expected to continue to thrive in the landscape. Impacts will be mitigated through deep water fertilizing the tree with Nutriroot. This

should take place before the work has started and again the following spring. The gravel driveway is a good choice as annual rainfall will still be able to percolate down into the tree's root zone.

TREE #5

TPZ AREA= 2,827 SF

ROOT INTRUSION AREA= 24%

(679 SF / 1,872 SF= 0.24

REQUESTING FOR PLANNING
COMMISSION EXCEPTION

REDWOOD TREE #43- The proposed garage is located at 7x the diameter of redwood tree #43 or at 14'8" from the tree. The tree is in fair condition. Redwood trees have a good tolerance to construction impacts, as seen in the Matheny and Clark relative tree tolerance chart. The percentage of the tree's root zone impacted is very low. The entire proposed foundation, when within 10x the diameter of the tree (20.8'), is recommended/required to be excavated by hand in combination with hand tools such as an air knife, rotary hammer with clay spade attachment, or shovels, while under the direct supervision of the Project Arborist. All roots encountered within the foundation area measuring 1.5" in diameter or larger are recommended to be retained for the Project Arborist to inspect before being cleanly cut. Once inspected and documented, the roots will need to be cleanly cut using a hand saw or loppers. It is recommended that the cut root ends on the tree side be covered by 3 layers of wetted-down burlap to help avoid root desiccation. The contractor shall wet down the burlap daily while exposed. The area between the tree and the foundation (tree protection zone) is recommended to be irrigated every other week during the dry season until the top foot of the soil is saturated. This tree is also to be deep water fertilized with Nutriroot. This will act as a mitigation measure for the minor impacts. This work will be required to be documented by the town of Atherton, and a letter will be sent to the town arborist.

TREE PROTECTION PLAN

Detailed Tree Protection Plan

For the aforementioned tree protection plan, this detailed guide has been designed by Kielty Arborists Services LLC. The following section offers an in-depth perspective on the recommended tree preservation guidelines. The aim is to ensure the conservation, vitality, and beauty of trees during construction and developmental endeavors, mitigating any potential detrimental effects. Adherence to these guidelines is essential to uphold both the ecological significance and visual allure of trees within the designated project vicinity. Effective tree protection during construction or development projects requires the use of fencing to demarcate and protect sensitive areas around trees. Should you have any questions or require further clarification, please contact Kielty Arborists Services directly.

Definitions And Distances:

TPZ-The Tree Protection Zone (TPZ) refers to a radius spanning from the external surface of the trunk measured at 48 inches above grade. It is possible to find many, but certainly not all, of the tree's roots in this area, which are essential for its biological functioning and structural stability. Any activity occurring in the TPZ or within the confines of the Tree Protective Zone (TPZ) needs to adhere to the work scheme endorsed by the Project Arborist as discussed in the plan review section of this report. Work within the TPZ is required to be done under the supervision of the project arborist. The TPZ is determined by multiplying the diameter of the trunk by ten ($10 \times \text{DBH} / 12$).

Tree roots predominantly grow in the top two feet of soil, with a small number of roots occasionally extending deeper. Establish Tree Protection Zones (TPZ) around each preserved tree to safeguard the root system from disturbance. Clearly mark the TPZ with weatherproof signage stating "Tree Protection Zone - Authorized Persons Only" to prevent unauthorized access. Prohibit the storage of equipment, materials, or any other activity that may damage the tree's root system within the TPZ. During construction, regularly inspect and maintain the TPZ to ensure its integrity and effectiveness.

Fencing Specifications:

The tree protection fencing should be established and maintained throughout the entire length of the project. It's essential that no equipment, materials, or debris are stored or cleaned inside these protection zones. The zones should remain free from human activity unless explicitly authorized. The choice of fencing type depends on the tree's location and the nature of the surrounding environment.

Type I Tree Protection:

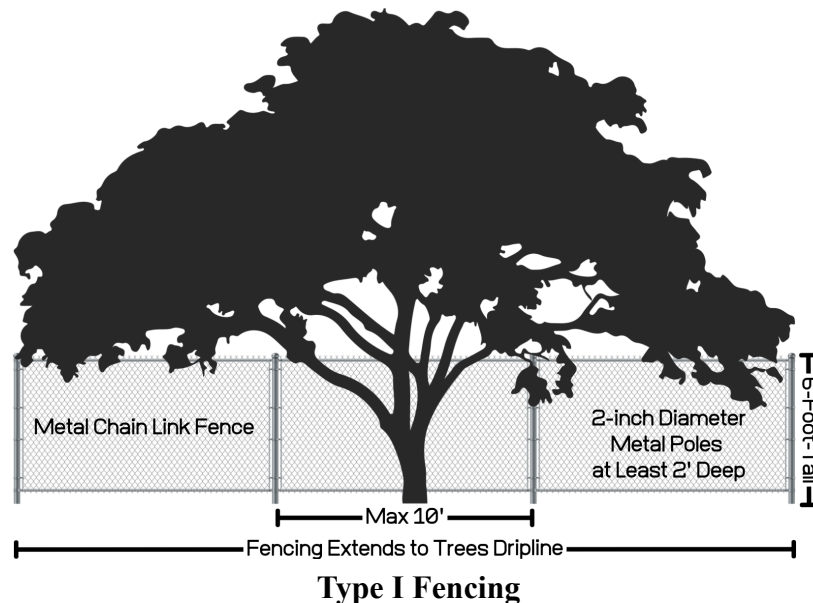
Description: This is the most comprehensive form of tree protection fencing. It encompasses the full canopy dripline or Tree Protection Zone (TPZ) of trees designated for preservation.

Application: Typically used in areas where trees are a significant distance away from construction activity or when trees have a large canopy spread.

Specifications:

The fencing shall remain intact throughout the duration of the project or until activities within the TPZ are finalized. Tree protection fencing should be a 6-foot-tall metal chain link type supported by 2-inch thick diameter metal posts pounded into the ground to a depth of no less than 2 feet, ensuring stability even in challenging conditions. Poles should be spaced no more than 10 feet apart from center to center, providing a consistent and strong barrier. For trees near existing hardscapes or structures, tree protection fencing shall be placed as close as possible while still allowing access. Sensitive areas may require a landscape barrier if fencing needs to be reduced for access reasons. The location for tree protection fencing for the protected trees on site should be placed at $10 \times$ the tree diameters where possible (TPZ). All other non-protected trees are recommended to be protected by fencing placed at the drip line. No equipment or materials should be stored or cleaned inside protection zones. Signs should be placed on fencing signifying "Tree Protection Zone - Keep Out". If fencing needs to be reduced for access or any other reasons, the non-protected areas must be protected by a landscape buffer. All tree protection and inspection schedule measures, design recommendations, watering, and construction schedules shall be implemented in full by the

owner and contractor. All retained trees on this site are to be protected by type 1 tree protection fencing.



Type II Tree Protection:

Description: This fencing type is specifically designed for trees located within narrow planting strips generally between a sidewalk and street.

Application: It is best suited for urban areas where trees are sandwiched between sidewalks and roads, allowing pedestrian and vehicular movement while protecting the tree.

Specifications: The fencing specifications shall be identical to that of Type I in terms of the material used and installation method. The 6-foot-tall metal chain link fence should be installed in a way that completely encloses the planting strip between the sidewalk and street when within the TPZ. This will keep the sidewalk and street open for public use.

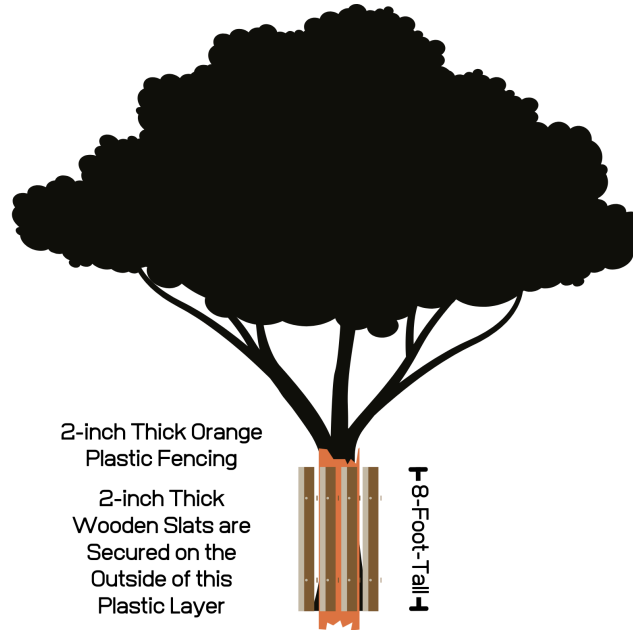
Type III Tree Protection:

Description: For trees situated in smaller enclosures like tree wells or sidewalk planter pits, a different approach is taken to ensure their protection.

Application: Often seen in dense urban settings where trees are integrated into pedestrian pathways.

Specifications: Tree trunks are shielded by wrapping them in 2-inch thick orange plastic fencing, from the base and extending to the first primary branch. The plastic fencing serves as padding to prevent damage from pedestrian traffic or minor construction activities. To add a layer of protection, 2-inch thick wooden slats are secured on the outside of this plastic layer. The installation of these slats requires care to ensure the tree bark and primary branches aren't inadvertently damaged. For trees with extended primary scaffold limbs located at lower heights, these limbs might also need the protective covering of the plastic fencing. In such cases, wooden slats might also be affixed to these limbs, ensuring they are safeguarded from potential impacts or abrasions. As with other types, all protective measures

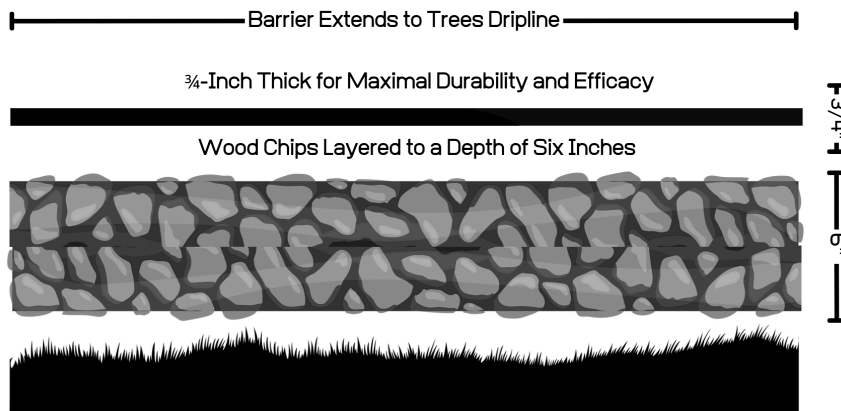
should be periodically inspected for wear or damage and replaced or repaired as necessary. Consultation with the City Arborist might be required to assess if additional protection or modifications are necessary, based on the specific environment and tree type.



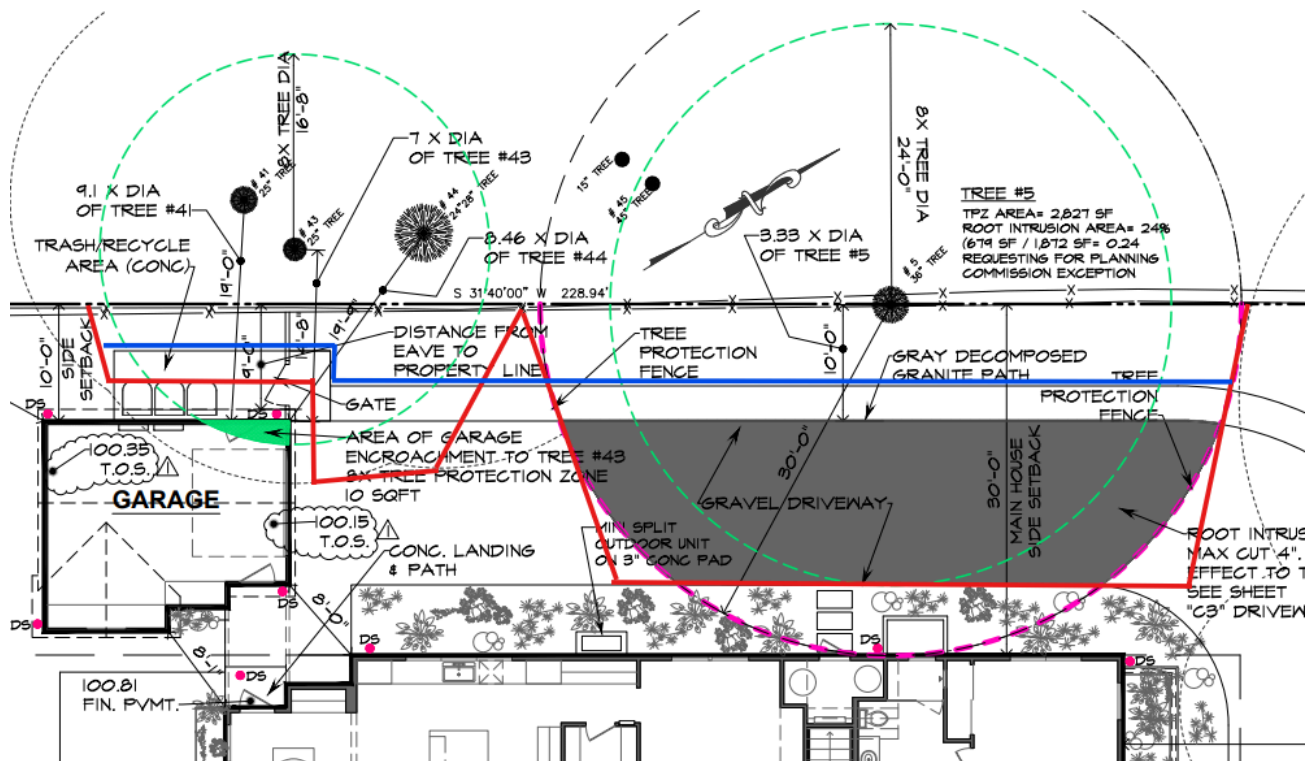
Type III Fencing

Landscape Barrier Zone

If for any reason a smaller tree protection zone is needed for access, a landscape buffer should be used, composed of wood chips layered to a depth of six inches, complemented by plywood atop the wood chips where tree protection fencing would typically be situated. The plywood should be $\frac{3}{4}$ -inch thick for maximal durability and efficacy. This landscape buffer plays a crucial role in mitigating soil compaction within the tree's vulnerable root zone. For optimum stability, it is advisable to securely join the plywood boards, thus preventing any unwanted shifts in the plywood or underlying wood chips.



Landscape Barrier Zone



Red line shows the recommended placement of tree protection fencing, and the blue line indicates the placement of tree protection fencing during the driveway work

Staging

All tree protection measures must be in place before the start of construction. An inspection prior to the start of construction is often required by the town. All vehicles must remain on paved surfaces if possible. Existing pavement should remain and should be used for staging. If vehicles are to stray from paved surfaces, 6 inches of chips shall be spread, and plywood laid over the mulch layer. This type of landscape buffer will help reduce the compaction of desired trees. Parking will not be allowed off the paved surfaces

Root Cutting

If for any reason roots are to be cut, the work shall be monitored and documented. Large roots (over 2 inches in diameter) or large masses of roots to be cut must be inspected by the site arborist. The site arborist, at this time, may recommend irrigation or fertilization of the root zone. All roots needing to be cut should be cut clean with a saw or lopper. Roots to be left exposed for a period of time should be covered with layers of burlap and kept moist.

Trenching/excavation

Trenching or excavation for irrigation, drainage, electrical, foundation, or any other reason shall be done by hand when inside the dripline of a protected tree. Hand digging and the careful placement of pipes below or besides protected roots will significantly reduce root loss, thus reducing trauma to the tree. All trenches shall be backfilled with native materials and compacted to near their original level, as soon as possible. Trenches to be left open for a period of time (24 hours), will require the

covering of all exposed roots with burlap and be kept moist. The trenches will also need to be covered with plywood to help protect the exposed roots.

Grading

All existing grades underneath the dripline of a protected tree shall remain as is where possible. Grading within the dripline of a protected tree is required to be done under the supervision of the project arborist.

Irrigation

Non native trees- Irrigating the retained mature trees in the landscape is important to ensure their health and vitality. Proper watering can help the trees continue to thrive. Deep irrigation is recommended to take place every other week during the dry season. During the dry season, trees typically need deep, infrequent watering. Watering every 2 weeks is sufficient for the retained trees on this site. Applying water slowly and consistently until it penetrates at least 12-18 inches into the soil is recommended. Avoid spraying water directly on the trunks, as this can lead to disease and decay. Mulch is recommended to be maintained with mulch added overtime as needed. Mulch helps retain soil moisture, regulates temperature, and prevents weeds, which can compete with the tree for water. The use of soaker hoses or an inline drip emitter system set up in a grid like manner to provide deep irrigation during the dry season is recommended. The irrigation system should be placed on top of grade and require no excavation. This will help to keep the trees healthy.

Native oak trees- Native oak trees are recommended to only be irrigated during the months of May and September or if their root zones are traumatized. Frequent irrigation during dry summer months can significantly raise the risk of oak trees developing oak root fungus disease and is the leading cause of oak tree death and failure in the urban landscape.

Tree Pruning

Tree pruning during construction is not just about aesthetics and safety; it's also about adhering to best practices and standards set by professional bodies like the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI A300 Pruning Standards) . The ISA sets rigorous standards to ensure trees are cared for sustainably and scientifically. Under these guidelines, and for the well-being of trees during construction, it's imperative to have an expert arborist oversee any pruning. Their knowledge guarantees that only the necessary branches are removed, ensuring both safety and tree health. The guideline to prune no more than 25% of the tree's total foliage is grounded in sound arboricultural practices. This safeguards the tree's photosynthetic capability, reduces undue stress, and preserves the balance between its roots and canopy. Homeowners should be aware of these standards and ensure they are being met, trusting in the expertise of their arborist and keeping open communication about their tree care decisions. This approach not only ensures the tree's compatibility with new construction aesthetics but also its long-term health and vitality.

Traffic Within TPZs

Strictly prohibit driving vehicles or heavy foot traffic on bare soil within the TPZs of protected trees. Such activities can crush roots directly and compact the soil, impeding oxygen and water infiltration. In areas without existing pavement, use temporary anti-compaction materials, such as wood chips covered with plywood, to prevent damage to tree roots (landscape barrier). Temporary pathways or boardwalks can be constructed to facilitate access while minimizing soil compaction within the TPZ.

Chemical and Material Handling

Store chemicals and construction materials away from TPZs to prevent accidental spills or exposure that may harm tree health. Follow proper handling and disposal procedures for chemicals to ensure compliance with environmental regulations. Minimize the use of toxic materials near trees and opt for environmentally friendly alternatives whenever possible.

Monitoring and Inspection

Regularly monitor and inspect the tree protection measures throughout the construction process to ensure their effectiveness and compliance with the Tree Preservation Plan. Assign a qualified individual, such as a project arborist or certified arborist, to conduct periodic inspections and provide recommendations for any necessary adjustments or improvements. Maintain detailed records of inspections, including dates, findings, and any actions taken.

Post-Construction Maintenance

After construction is completed, continue monitoring the health and condition of preserved trees to address any potential issues promptly. Implement post-construction maintenance practices such as watering, mulching, pruning, and fertilization as needed to support the recovery and long-term health of the trees. Regularly assess the trees for signs of stress, disease, or structural instability and take appropriate measures, including consulting with a certified arborist if necessary.

Compliance with Environmental Laws

Ensure full compliance with all applicable local, state, and federal environmental laws, regulations, and permit requirements pertaining to tree protection during construction. Familiarize yourself with specific regulations regarding tree preservation in your jurisdiction and consult with local authorities or arborists for guidance if needed.

Responsibility

Designate a responsible person or team within the project organization to oversee the implementation and enforcement of the Tree Preservation Plan. Clearly communicate the roles and responsibilities of all parties involved in the construction project regarding tree protection.

Emergency Procedures

Develop clear procedures to follow in the event of emergencies that may impact tree preservation, such as severe storms, accidents, or unexpected tree health issues. Ensure that emergency response plans address prompt actions to mitigate potential risks to trees and contact qualified professionals, such as arborists or tree care companies when needed.

Communication and Training

Facilitate effective communication among all project stakeholders, including contractors, subcontractors, architects, engineers, and landscape professionals, regarding the importance of tree preservation and the specific guidelines to follow. Conduct training sessions or workshops to educate personnel

TREE WORK STANDARDS AND QUALIFICATIONS

To ensure high-quality tree work, including removal, pruning, and planting, the following standards and qualifications will be adhered to:

- **Industry Standards:** All tree work will be performed in accordance with industry standards established by the International Society of Arboriculture (ISA). These standards encompass best practices and guidelines for tree care and maintenance.
- **Contractor Licensing and Insurance:** The contractor undertaking the tree work must possess a valid State of California Contractors License for Tree Service (C61-D49) or Landscaping (C-27). Additionally, they must have comprehensive general liability, worker's compensation, and commercial auto/equipment insurance coverage.
- **Workmanship Standards:** Contractors must adhere to the current Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI). These standards, including ANSI A300 and Z133.1, outline guidelines for tree pruning, fertilization, and safety. Compliance with these standards ensures the use of proper techniques and practices throughout the tree work process.

By adhering to these established standards and qualifications, we can ensure the provision of professional and safe tree services that meet the industry's best practices and promote the health and longevity of the trees.

SCHEDULE OF INSPECTIONS

Kielty Arborists Services LLC:

We will conduct the following inspections as needed for the project:

- **Pre-Equipment Mobilization, Delivery of Materials, Tree Removal, and Site Work:** Our project arborist will meet with the general contractor and owners to review tree protection measures. We will identify and mark tree-protection zone fencing, specify equipment access routes and storage areas, and assess the existing conditions of trees to determine any additional necessary protection measures.
- **Inspection after Installation of Tree-Protection Fencing:** Upon completion of tree-protection fencing installation, our project arborist will inspect the site to ensure that all protection measures are correctly implemented. We will also review any contractor requests for access within the tree protection zones and assess any changes in tree health since the previous inspection.
- **Inspection during Soil Excavation or Work Potentially Affecting Protected Trees:** During any work within non-intrusion zones of protected trees, our project arborist will inspect the site and document the implemented recommendations. We will assess any changes in tree health since the previous inspection to monitor the well-being of the trees.
- **Final Site Inspection:** Prior to project completion, our project arborist will conduct a final site inspection to evaluate tree health and provide necessary recommendations to promote their longevity. A comprehensive letter report summarizing our findings and conclusions will be provided to the town of Atherton.

Our inspections aim to ensure proper tree protection, health, and adherence to project requirements.

ASSUMPTIONS AND LIMITING CONDITIONS

- **Legal Descriptions and Titles:** The consultant/arborist assumes the accuracy of any legal description and titles provided. No responsibility is assumed for any legal due diligence. The consultant/arborist shall not be held liable for any discrepancies or issues arising from incorrect legal descriptions or faulty titles.
- **Compliance with Laws and Regulations:** The property is assumed to be in compliance with all applicable codes, ordinances, statutes, or other government regulations. The consultant/arborist is not responsible for identifying or rectifying any non-compliance.
- **Reliability of Information:** Though diligent efforts have been made to obtain and verify information, the consultant/arborist is not responsible for inaccuracies or incomplete data provided by external sources. The client accepts full responsibility for any decisions or actions taken based on this data.
- **Testimony or Court Attendance:** The consultant/arborist has no obligation to provide testimony or attend court regarding this report unless mutually agreed upon through separate written agreements, which may incur additional fees.
- **Report Integrity:** Unauthorized alteration, loss, or reproduction of this report renders it invalid. The consultant/arborist shall not be liable for any interpretations or conclusions made from altered reports.
- **Restricted Publication and Use:** This report is exclusively for the use of the original client. Any other use or dissemination, without prior written consent from the consultant/arborist, is strictly prohibited.
- **Non-disclosure to Public Media:** The client is prohibited from using any content of this report, including the consultant/arborist's identity, in any public communication without prior written consent.
- **Opinion-based Report:** The report represents the independent, professional judgment of the consultant/arborist. The fee is not contingent upon any predetermined outcomes, values, or events.
- **Visual Aids Limitation:** Visual aids are for illustrative purposes and should not be considered precise representations. They are not substitutes for formal engineering, architectural, or survey reports.
- **Inspection Limitations:** The consultant/arborist's inspection is limited to visible and accessible components. Non-invasive methods are used. There is no warranty or guarantee that problems will not develop in the future.

ARBORIST DISCLOSURE STATEMENT

Arborists specialize in the assessment and care of trees using their education, knowledge, training, and experience.

- **Limitations of Tree Assessment:** Arborists cannot guarantee the detection of all conditions that could compromise a tree's structure or health. The consultant/arborist makes no warranties regarding the future condition of trees and shall not be liable for any incidents or damages resulting from tree failures.
- **Remedial Treatments Uncertainty:** Remedial treatments for trees have variable outcomes and cannot be guaranteed.
- **Considerations Beyond Scope:** The consultant/arborist's services are confined to tree assessment and care. The client assumes responsibility for matters involving property boundaries, ownership, disputes, and other non-arboricultural considerations.
- **Inherent Risks:** Living near trees inherently involves risks. The consultant/arborist is not responsible for any incidents or damages arising from such risks.
- **Client's Responsibility:** The client is responsible for considering the information and recommendations provided by the consultant/arborist and for any decisions made or actions taken.

The client acknowledges and accepts these Assumptions and Limiting Conditions and Arborist Disclosure Statement, recognizing that reliance upon this report is at their own risk. The consultant/arborist disclaims all warranties, express or implied.

CERTIFICATION

I hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

David Beckham

David Beckham - August 19, 2024

Signature of Consultant

