Oliver Terrace Subdivision
Preliminary Tree Report

Date: August 2025

Prepared For: HSR Capital LLC
19120 SE 34th St. #103
Vancouver, WA 98663

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Site Information: 1004 SE Everett Road
Camas, WA 98607
Parcel #178221-000

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OLIVER TERRACE SUBDIVISION
CAMAS, WASHINGTON

Location

The project site is located at 1004 SE Everett Road, (Parcel Serial No. 178221-000) in the City of Camas, Clark County, Washington.

General Site Notes

This Tree Plan consists of a written report with tree density calculations, Site Plan, Tree Protection Plan, and Landscape Plan.

This report is for the net developable area (3.77 acres) of the proposed residential subdivision. The existing site slopes moderately to aggressively to the east with various native trees, under brush, and invasive vegetation. Open fields, existing structures, and a driveway occupy the eastern half of the site. The proposed development will result in 12 single-family residential lots with tracts set aside for a stormwater facility and open space. Tree protection will be established at the beginning of development and be maintained through the entire length of the development. See Appendix A for additional information regarding the described trees in the detailed tree inventory table. The site consists of 432 surveyed trees over 6 inches in diameter, 203 of these trees were evaluated and inventoried for this report. Due to the planned site development and high potential for extensive root impacts from site grading, 83 on-site and 3 off-site trees are proposed for removal & 117 on-site inventoried trees are planned for retention.

On-Site Tree Condition

Only trees numbered on the attached plan were included in this inventory; other trees on-site were not evaluated as they were not required for tree unit calculations and are located within critical areas and their respective buffers. Most trees on-site are concentrated within the western half of the property. The northern portion is characterized by a dense stand of Douglas-fir. Along the upper slope, a mix of Douglas-fir, Cherry, and European White Birch, was observed; many of the deciduous trees in this area are dead or in advanced decline. A wetland at the base of the slope supports a variety of native tree and shrub species. One Oregon White Oak was identified along the southern slope. The health and structure of on-site trees range from poor to good based on conditions observed during a site visit on August 7th, 2025. Tree removal was recommended based on location, root impact from development activities and higher likelihood of failure due to windthrow. Review of on-site trees was based on the site being fully developed and impacts to future site improvements.

Off-Site Trees

No trees are present to the west of the project site due to existing development. The southern and eastern site boundaries are located well outside the limits of proposed work. A stand of trees exists to the north; however, these trees were not included in the provided survey and are not expected to be impacted by the proposed improvements. The eastern portion of the site (Phase II) was not reviewed at this time except for potential tree impacts near the proposed sewer line. Several mature trees are also present along the driveway near the existing barn. While these trees were not surveyed, three were mapped using GPS coordinates due to their proximity to the proposed utility installation. Phase II will be evaluated and a separate tree plan and report prepared concurrently when applicable.

Tree Density Calculations

The total site area is 9.93 acres with 6.16 acres of open space tracts and critical areas for a net site area of 3.77 acres. Per Chapter 18.13.051 of the City of Camas municipal code, the City requires 30 tree units per acre for the North Shore Subarea, or a total of 113 tree units (30*3.77 acres) for this site. Table 1 summarizes the tree units required, removed, retained, and proposed for the entire site. All trees, both retained and removed, are

detailed on the Preliminary Tree Preservation and Removal Plans found in Appendix B and in the Detailed Tree Inventory found in Appendix A. The proposed trees are detailed within the Tree Planting Plan in Appendix C.

	Net Site Area (Acres)	Tree Units Required	Tree Units Existing	Tree Units Removed	Tree Units Retained	Proposed Tree Units	Total Tree Units
Overall	3.77	113	1071*	479	592*	12	604

Table 1: Summary of Tree Units
**Only includes trees that were inventoried and evaluated.*

Designing for Tree Preservation

Designing for tree preservation means that trees are considered an important project feature. The goal of tree preservation is to have trees remain safe assets to the site for years to come. Trees that are preserved must be carefully selected to make sure that they will survive the construction impacts, adapt to the new environment, and perform well in the new landscape. An assessment of suitability for preservation evaluates tree health, structure, age, and species factors. The consultant gathers information on the individual trees and makes recommendations as to which trees are suitable for preservation, and how much undisturbed space they will require. The consultant also provides specific guidelines regarding grading, drainage, trenching, protected areas, root pruning, etc.

Tree Characteristics and Their Suitability for Preservation:
Trees vary in their suitability for preservation both based on their inherent characteristics and their future response to construction impacts. Trees that are structurally unstable, in poor health, or are unlikely to survive construction impacts could be a dangerous liability to future neighborhoods. A good tree preservation plan will call for the pre-construction removal of trees likely to die or to become a tree with a higher than acceptable risk of failure after construction. The factors to be evaluated are:

Tree Health-Healthy, vigorous trees are more adaptable than non-vigorous trees to tolerate construction related stresses such as root removal, changes in grade, changes in soil moisture, and soil compaction. These healthy trees are also better able to adapt to the changed site conditions that occur after development.

Tree Structure-Trees with defects such as decayed wood, poor crown structure from past manual "topping" or natural broken tops, and co-dominant trunks with poor attachments are not suitable for preservation in areas where people or property could be injured or damaged. Such defects cannot be treated and may lead to failure.

Species-Although trees require protection to avoid injury, species vary widely in their ability to withstand damage and changes in their environment.

Tree Age-As a tree ages, its capacity to overcome injury, adapt to changes in its site environment, and to resist pests declines. For these reasons, mature and over-mature trees are less adaptable to tolerate construction impacts and remain assets than are young and semi-mature trees. Young vigorous trees are able to generate new tissue and adapt to a new environment better than old trees.

Tree Size/Height-Larger, taller trees are capable of hitting targets a greater distance away from the tree and cause greater damage. Taller trees also provide a larger wind "sail", catching more wind and being more prone to blowing down in a large storm. Coupling this "sail" effect with the structural weakening of root removal/disturbance can lead to a higher than acceptable windthrow risk.

Tree Location-The best candidates for preservation are single trees that developed as individual specimens, as they typically have uniform canopies and well tapered trunks. Trees that grow in groups do not function well as

individuals. They often have tall, poorly shaped trunks, irregularly shaped crowns, and are prone to failure and decline when their neighbors are removed.

The arboricultural consultant weighs each of the above factors and makes recommendations as to which trees are likely to thrive and be a long-term asset to the new development, as well as recommendations to remove those trees that will likely have an unacceptable risk of failure and become a liability in the new development.

Guidelines for the Area Required to Preserve a Tree:
In order to preserve a tree, an area around that tree must be protected to ensure that the tree is not physically damaged and that the roots are protected. A method to calculate this area, utilizes the diameter at breast height (DBH), species, and age. The DBH is multiplied by a factor (the factor is based on the tree age and the species tolerance for disturbance) from 0.5 feet radius to 1.5 feet radius (from the trunk-often 1 foot radius per inch DBH is used for an average), and this area is called the "Optimal Tree Protection Zone". The general guidelines for preservation are that you do not want to disturb more than 1/3 of this area, but that with healthy vigorous trees, up to 50% of the area could be disturbed. In addition to these percentages, excavation should not take place within 10 feet of the base of a tree to avoid the loss of structural roots.

How to Preserve Trees During Construction:
The portion of the "Optimal Tree Protection Zone" that is being protected must be fenced off (with a "substantial" fence). Within this area, no soil disturbance, including stripping is permitted. The natural grade is to be maintained, and no storage or dumping of materials, parking, etc. will be allowed within this zone without the approval of the arboricultural consultant. This tree protection fence should remain in place through the construction of the dwellings.

Excavation Within the "Optimal Tree Protection Zone":
Where there is excavation proposed within an "Optimal Tree Protection Zone" (outside of the protected zone fenced off above), it will be important for the contractor to prune the roots along the excavation lines. These roots should be pruned in the following manner:

- Excavation in the top 24" of the soil in the critical root zone area should begin at the excavation line that is closest to the tree.
- The excavation should be done by hand/shovel or with a backhoe and a man with a shovel, pruning shears and a pruning saw.
- If done by hand all roots 1" or larger should be pruned at the excavation line.
- If done with a backhoe (most likely scenario) then the operator needs to start the cut at the excavation line and carefully "feel" for roots/resistance. When there is resistance, the man with the shovel hand digs around the roots and prunes the roots larger than 1" diameter.
- The backhoe is to remain off of the tree roots to be saved at all times.
- The work will be done under the supervision of the Project Consulting Arborist.

The above system works well and can be done quickly. The key is to avoid pulling on the roots larger than 1" diameter, potentially resulting in damage to roots between the excavation line and the tree.

How Trees Die:
Natural tree death is frequently a slow and complex process generally with a gradual decline involving a number of factors. Most trees die from one of three causes: (1) structural failure, (2) environmental degradation, or (3) pest infestation. Generally, trees die from a combination of factors. Trees weakened by changes in their environment (such as construction impacts) become more susceptible to infestation by disease and insects. Most individual trees survive for only a fraction of the potential lifespan of the species. Soil compaction, changes in grade, mechanical injury, changes in the environment around the tree, and changes in drainage may not kill

the tree themselves, but they may weaken the tree to a point that death occurs by another cause. Prevention of stress and the maintenance of health are the key elements of tree longevity.

What is "Tree Topping" and How Does It Damage a Tree?
Tree Topping is a pruning technique to reduce the height by cutting the central leader. This method of pruning is very detrimental to trees and not considered a good practice. Trees are generally topped by unknowledgeable pruners in order to lower the height of the tree and minimize the chance of windthrow by reducing the tree's wind profile. The large stub of a topped tree has a difficult time forming callus over the wound. The terminal location of these cuts, as well as their large diameter, prevents the tree's chemically based natural defense system from doing its job. The stubs are highly vulnerable to both insect invasion and the spores of decay fungi. If decay is already present, topping will speed the spread of the disease. The tree reacts to the topping cut by producing multiple shoots below the cut. These shoots develop from buds near the surface of the topping cut. Unlike normal branches that develop in a socket of overlapping wood tissues, these new shoots are anchored only in the outermost layers of the bole. These new shoots grow quickly, and are prone to breaking, especially during windy conditions. For all of these reasons, trees that have been topped pose a danger to life and safety and are recommended for removal.

Development Impacts Affecting Preserved Trees:
Construction of the site improvements generally consists of cut and fills (grading), construction of retaining walls, trenching for the wet and dry utilities, coring of roads and placement of aggregate and pavement. During this work, adjacent soil areas outside of the grading can be compacted by heavy equipment driving over it. The grading and placement of utility trenches (and subsequent pipe bedding), and retaining walls can also affect the local water table.

Construction of the buildings and landscaping requires foundation placement, pruning of trees near the buildings under construction, and the installation of lawn irrigation systems. During this work, adjacent soil areas outside of the work area can be compacted by equipment driving over it.

Impacts during development may require the removal of additional trees shown to be preserved on the Tree Protection Plan (Appendix B).

Future Condition of Trees on the Site:
The characteristics of the individual tree are a guide to how well that tree will respond to site disturbance. Larger trees have correspondingly larger root zones. Older trees are less resilient to disturbance. Unhealthy trees are less resilient to disturbance than healthy trees.

Development of this site will result in a large area of disturbance. The disturbance to the on-site trees will occur during the site grading. The trees planned for retention are relatively healthy, but proper protection methods should be followed per this document to provide the greatest opportunity for survival following development.

Windthrow Potential

The trees on-site have been evaluated for windthrow based on factors including, but not limited to soil conditions, tree health, tree structure, prevailing wind direction, and past evidence of wind damage. Windthrow is defined as full tree failure in the form of trunk breakage or root ball overturning. It should be understood that proposed retained trees are still susceptible to partial tree failure from wind exposure. Refer to the tree inventory table in Appendix A for specific tree conditions at risk of single part failure and recommendations for risk reduction as well as a windthrow rating. A windthrow rating of A, B or C was assigned to each tree that was evaluated; with A being the least windthrow resistant, B being more

windthrow resistant than A, and C being the most windthrow resistant. The trees planned for retention have been selected because of their good taper, overall structure, health, and location to site impacts. Existing wind conditions of the site are relatively high with prevailing winds coming from the south and southwest. The windthrow potential of the site, post construction, should remain similar to the existing site conditions.

Soils

Soils on-site are primarily comprised of Hesson Clay Loam with slopes ranging from 0 to 30 percent, Vader Silt Loam with slopes ranging from 3 to 15 percent, and Lauren Very Gravelly Loam with slopes ranging from 0 to 8 percent. These soils are described as deep, well-drained soils per the USDA Natural Resources Conservation Service's Web Soil Survey. However, from previous work in the surrounding vicinity, shallow bedrock is known to exist in the area; therefore, it is recommended to involve the project arborist during site construction to observe soil depths near preserved trees adjacent to the development area. Further recommendations for removals or protection measures may be recommended based on site conditions.

Tree Protection Plan

See the plans found in Appendix B.

Planting Plan

12 street trees are proposed to be planted to meet landscape requirements, which, when added to the 592 tree units being retained, results in 604 tree units and meets the tree density requirement of 113 tree units. If later determined necessary, Per Section 18.13.050 of Chapter 18 of the City of Camas Municipal Code, replacement trees shall optimize tree diversity by including a minimum of 60% native species and at least 50% evergreen. For this site, the required deciduous tree needs to be 2" or greater while a conifer tree needs to be a minimum of 5' tall. See Appendix C for the Tree Planting Plan.

Hazard Assessment

Hazard assessment of on-site trees was not performed for each tree during the initial arborist site assessment. However, general hazards may have been identified and reported in the Tree Inventory Table (Appendix A) as they were encountered during the site visit. Once development activities are complete, a hazard assessment is recommended on retained trees to review previously unseen defects or damages done to retained trees during land clearing and development activities. At that time, additional tree removal may be necessary for hazard abatement. If additional tree removal is necessary, an analysis will be submitted to the city to show that code will be met with any additional tree removal.

Conclusion

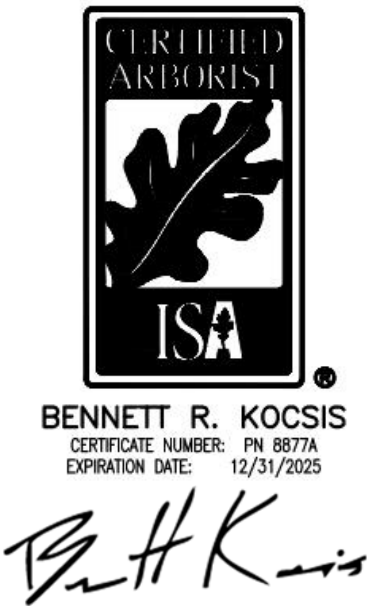
The development of the 3.77-acre site proposes to remove 83 on-site trees and 3 off-site trees. Of the existing trees, 117 will be retained. 12 street trees will be planted to meet landscape requirements. This tree report is only for the overall site development activities and tree protection measures outlined on the Tree Preservation Plan and for the protection of the existing trees from the overall proposed development. This does not include the construction of building foundations for each lot. This project reserves the right to remove additional trees, as deemed necessary/recommended by the Project Certified Arborist, for hazard abatement purposes. This cannot be evaluated until after construction as previously discussed and noted in the plans. The city will be notified of such removals and will be consulted with if a significant number of trees are recommended for removal post-construction.

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

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.



Appendix A: Detailed Tree Inventory Table

Detailed Tree Inventory for Oliver Terrace

AKS Job No. 8397 - Evaluation Date: 8/7/2025 - Evaluated By: BRK

Tree #	DBH (in.)	Tree Species Common Name (*Scientific name*)	Tree Units Initial	Condition/Comments	Windthrow Rating	Reason for Removal	Tree Units Retained
10000	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Codominant with included bark @20'	B	Preserve	9
10001	8	Douglas-fir (*Pseudotsuga menziesii*)	2	Suppressed	B	Preserve	2
10002	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10003	23	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
10004	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Cavity in base; Lean (W)	B	Preserve	5
10005	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10006	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10007	7	Douglas-fir (*Pseudotsuga menziesii*)	2	Mechanical damage at base; Sluffing bark; Sap flow	A	Preserve	2
10008	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10010	34	Douglas-fir (*Pseudotsuga menziesii*)	13	Good condition	C	Preserve	13
10011	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Preserve	6
10012	11	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±30')	A	Preserve	0
10013	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10014	8	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
10016	32	Douglas-fir (*Pseudotsuga menziesii*)	12	Good condition	C	Preserve	12
10017	32	Douglas-fir (*Pseudotsuga menziesii*)	12	Good condition	C	Preserve	12
10018	6	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±30')	A	Preserve	0
10019	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10020	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10021	24	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
10022	22	Douglas-fir (*Pseudotsuga menziesii*)	7	Good condition	C	Preserve	7
10023	28	Douglas-fir (*Pseudotsuga menziesii*)	10	Good condition	C	Preserve	10
10024	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Some mechanical damage at base; Torsion seam	B	Preserve	5
10025	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10050	11	Douglas-fir (*Pseudotsuga menziesii*)	2	Dead branches; Sparse canopy; Epicormic sprouting	B	Impacts from utility installation	0
10052	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Dead branches; Sparse canopy; Epicormic sprouting	B	Impacts from utility installation	0
10054	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Preserve	6
10056	21	Douglas-fir (*Pseudotsuga menziesii*)	7	Dead branches; Sparse canopy; Epicormic sprouting	B	Preserve	7
10058	9	Douglas-fir (*Pseudotsuga menziesii*)	2	Suppressed; Some dead limbs	B	Preserve	2
10059	29	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Preserve	11
10061	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Mechanical damage at base; Some dieback	B	Preserve	9
10063	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10066	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Dead top; Sparse canopy; In decline	A	Preserve	6
10068	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Sparse canopy; Some epicormic sprouting	B	Preserve	6
10069	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10074	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Dead top; In decline	A	Impacts from utility installation	0
10075	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Sweep (W)	B	Preserve	5
10077	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Some dieback; Some dead branches	B	Impacts from utility installation	0
10079	9	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±40')	A	Impacts from utility installation	0
10093	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Suppressed; Dead top; Lean (W)	A	Preserve	2
10094	29	Oregon Ash (*Fraxinus latifolia*)	11	High canopy; Good condition	C	Preserve	11
10095	22,22,20	Bigleaf Maple (*Acer macrophyllum*)	15	Good condition	C	Preserve	15
10096	23,9	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
10098	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10099	13	Red Alder (*Alnus rubra*)	0	Dead (±60')	A	Preserve	0
10100	23	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
10101	21	Oregon Ash (*Fraxinus latifolia*)	7	High canopy; Good condition	C	Impacts from utility installation	0
10102	30	Oregon Ash (*Fraxinus latifolia*)	11	Stump with some epicormic stems	A	Impacts from utility installation	0

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Tree #	DBH (in.)	Tree Species Common Name (*Scientific name*)	Tree Units Initial	Condition/Comments	Windthrow Rating	Reason for Removal	Tree Units Retained
10103	20,20,25,13	Bigleaf Maple (*Acer macrophyllum*)	16	Codominant base with included bark	B	Impacts from utility installation	0
10104	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10105	26	Douglas-fir (*Pseudotsuga menziesii*)	9	Good condition	C	Impacts from utility installation	0
10106	33	Bigleaf Maple (*Acer macrophyllum*)	13	Good condition	C	Preserve	13
10108	11	Red Alder (*Alnus rubra*)	0	Dead (±70')	A	Preserve	0
10109	12,12	Red Alder (*Alnus rubra*)	5	Dead top half	A	Preserve	5
10110	7	Red Alder (*Alnus rubra*)	2	Broken top; Large cavity with decay	A	Preserve	2
10111	8	Red Alder (*Alnus rubra*)	0	Dead (±50')	A	Preserve	0
10113	6	Pacific Yew (*Taxus brevifolia*)	2	Mechanical damage on bole, tree fallen on top	B	Preserve	2
10114	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Preserve	11
10115	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Deformed bole @ ±30'	B	Preserve	4
10116	24	Bigleaf Maple (*Acer macrophyllum*)	8	Good condition	C	Preserve	8
10117	19.16	Bigleaf Maple (*Acer macrophyllum*)	6	Dead codominant stem at base; Dieback; Many dead limbs; In decline	A	Direct conflict with storm water facility	0
10118	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Direct conflict with storm water facility	0
10119	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Sparse canopy	B	Direct conflict with storm water facility	0
10120	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Sparse canopy; Dead at very top	B	Direct conflict with storm water facility	0
10121	28	Douglas-fir (*Pseudotsuga menziesii*)	10	Good condition	C	Direct conflict with storm water facility	0
10122	24	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Direct conflict with storm water facility	0
10123	31	Bigleaf Maple (*Acer macrophyllum*)	12	Some scars; Sime dieback	B	Direct conflict with storm water facility	0
10124	24,24	Bigleaf Maple (*Acer macrophyllum*)	13	Large cavity with decay in base; Large dead limbs; Codominant base with included bark	A	Direct conflict with site construction	0
10125	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Direct conflict with storm water facility	0
10126	24	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Direct conflict with storm water facility	0
10127	8	Bigleaf Maple (*Acer macrophyllum*)	2	Good condition	C	Direct conflict with storm water facility	0
10128	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Direct conflict with storm water facility	0
10129	35	Bigleaf Maple (*Acer macrophyllum*)	14	Large cavity with decay in bole; Dead and broken top on one fork	B	Direct conflict with storm water facility	0
10130	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Direct conflict with storm water facility	0
10131	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Direct conflict with site construction	0
10132	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Direct conflict with site construction	0
10133	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Direct conflict with site construction	0
10134	11	Red Alder (*Alnus rubra*)	0	Dead (±50')	A	Direct conflict with site construction	0
10135	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Within building setback	0
10136	26	Douglas-fir (*Pseudotsuga menziesii*)	9	Low vigor; Some dieback	B	Within building setback	0
10137	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Within building setback	0
10138	16	Bigleaf Maple (*Acer macrophyllum*)	4	Asymmetrical canopy (N)	B	Direct conflict with site construction	0
10139	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Direct conflict with site construction	0
10140	15,14	Bigleaf Maple (*Acer macrophyllum*)	6	Good condition	C	Within building setback	0
10141	18	Sweet Cherry (*Prunus avium*)	5	Good condition	C	Within building setback	0
10142	19	Bigleaf Maple (*Acer macrophyllum*)	6	Asymmetrical canopy (S)	B	Within building setback	0
10143	32	Douglas-fir (*Pseudotsuga menziesii*)	12	Good condition	C	Direct conflict with site construction	0
10144	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Preserve	6
10145	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10146	40	Douglas-fir (*Pseudotsuga menziesii*)	16	Good condition	C	Preserve	16
10147	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Within building setback	0
10148	14	European White Birch (*Betula pendula*)	0	Dead (±10')	A	Direct conflict with site construction	0
10149	25,25,25	Bigleaf Maple (*Acer macrophyllum*)	18	Good condition	C	Within building setback	0

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Tree #	DBH (in.)	Tree Species Common Name (*Scientific name*)	Tree Units Initial	Condition/Comments	Windthrow Rating	Reason for Removal	Tree Units Retained
10150	24,17	Bigleaf Maple (*Acer macrophyllum*)	11	Dead top; In decline	A	Within building setback	0
10151	16	European White Birch (*Betula pendula*)	4	Dead top; In decline	A	Direct conflict with site construction	0
10152	26	Douglas-fir (*Pseudotsuga menziesii*)	9	Very low vigor; In decline	A	Within building setback	0
10153	6	English Holly (*Ilex aquifolium*)	2	Dead top half	A	Within building setback	0
10154	6,6,6	English Holly (*Ilex aquifolium*)	2	Some dieback	B	Within building setback	0
10155	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Significant dieback; In decline	A	Within building setback	0
10156	16	European White Birch (*Betula pendula*)	0	Dead (±40')	A	Impacts from site construction	0
10157	9	Willow (*Salix spp.*)	2	Dead with some epicormic stems at base	A	Direct conflict with public road construction	0
10158	7	Dogwood (*Cornus florida*)	2	Dead and broken top; Dieback; In decline	A	Direct conflict with public road construction	0
10159	6,6,6,6	English Holly (*Ilex aquifolium*)	2	Dead top; In decline	A	Direct conflict with public road construction	0
10160	7,7	Sweet Cherry (*Prunus avium*)	2	Dead	A	Direct conflict with public road construction	0
10161	12	European White Birch (*Betula pendula*)	0	Dead (±10')	C	Direct conflict with site construction	0
10162	12	Bigleaf Maple (*Acer macrophyllum*)	2	Asymmetrical canopy (E); Good condition	C	Direct conflict with site construction	0
10163	9	Sweet Cherry (*Prunus avium*)	2	Dead top; In decline	A	Direct conflict with site construction	0
10164	12	European White Birch (*Betula pendula*)	2	Dead (±30')	A	Within building setback	0
10165	28	Douglas-fir (*Pseudotsuga menziesii*)	10	Low vigor in upper canopy; Some dieback	B	Direct conflict with site construction	0
10166	15	European White Birch (*Betula pendula*)	0	Dead (±20')	A	Within building setback	0
10167	15	Red Alder (*Alnus rubra*)	0	Dead (±20')	A	Within building setback	0
10168	20	Douglas-fir (*Pseudotsuga menziesii*)	6	Significant dieback; In decline	A	Within building setback	0
10169	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Dieback; Low vigor	B	Impacts from site construction	0
10170	23	Douglas-fir (*Pseudotsuga menziesii*)	8	Epicormic sprouting; Low vigor	B	Impacts from site construction	0
10171	24	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Within building setback	0
10172	19	Bigleaf Maple (*Acer macrophyllum*)	6	Some dieback; Some epicormic sprouting	B	Impacts from site construction	0
10173	13	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±70')	A	Preserve	0
10174	17	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±70')	A	Preserve	0
10175	27	Douglas-fir (*Pseudotsuga menziesii*)	10	Good condition	C	Preserve	10
10176	16,16	Bigleaf Maple (*Acer macrophyllum*)	7	One stem dead top	A	Poor condition	0
10177	19	Bigleaf Maple (*Acer macrophyllum*)	6	Broken at ±20'; Significant decay	A	Poor condition	0
10178	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Good condition	C	Preserve	9
10179	7	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±20')	A	Preserve	0
10180	29	Douglas-fir (*Pseudotsuga menziesii*)	11	Some dieback; Low vigor	B	Preserve	11
10181	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Dead top; In decline	A	Preserve	2
10182	17	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10183	24,24,24,24	Bigleaf Maple (*Acer macrophyllum*)	20	One stem dead; Others low vigor	B	Preserve	20
10184	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
10185	5	Oregon Ash (*Fraxinus latifolia*)	1	Good condition	C	Preserve	1
10186	8	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
10187	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
10188	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10189	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
10190	10	Cherry (*Prunus spp.*)	2	Good condition	C	Preserve	2
10192	10,11	Bigleaf Maple (*Acer macrophyllum*)	7	Asymmetrical canopy (S)	B	Preserve	7
10193	15,6	Bigleaf Maple (*Acer macrophyllum*)	4	Lean (W)	B	Preserve	4
10194	24	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
10195	21	Douglas-fir (*Pseudotsuga menziesii*)	7	Good condition	C	Direct conflict with alley construction	0
10196	19	Bigleaf Maple (*Acer macrophyllum*)	6	Good condition	C	Preserve	6
10197	17,13	Oregon White Oak (*Quercus garryana*)	7	Asymmetrical canopy (N); Good condition	C	Preserve	7
10198	32	Douglas-fir (*Pseudotsuga menziesii*)	12	Good condition	C	Preserve	12

Detailed Tree Inventory for Oliver Terrace

AKS Job No. 8397 - Evaluation Date: 8/7/2025 - Evaluated By: BRK

Tree #	DBH (in.)	Tree Species Common Name (*Scientific name*)	Tree Units Initial	Condition/Comments	Windthrow Rating	Reason for Removal	Tree Units Retained
10199	17	Bigleaf Maple (*Acer macrophyllum*)	5	Significant dieback; In decline	A	Preserve	5
10200	9	Bigleaf Maple (*Acer macrophyllum*)	2	Lean (S)	B	Preserve	2
10201	12	Bigleaf Maple (*Acer macrophyllum*)	2	Lean (S)	B	Preserve	2
10202	6	Bigleaf Maple (*Acer macrophyllum*)	2	Lean (S)	B	Preserve	2
10203	10	Bigleaf Maple (*Acer macrophyllum*)	2	Good condition	C	Preserve	2
10204	28	Douglas-fir (*Pseudotsuga menziesii*)	10	Sweep (S)	B	Preserve	10
10205	15	European White Birch (*Betula pendula*)	0	Dead (±40')	A	Poor condition	0
10206	16	European White Birch (*Betula pendula*)	4	Dead top; Significant dieback	A	Poor condition	0
10207	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10208	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10209	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10210	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Good condition	C	Preserve	9
10211	25	Douglas-fir (*Pseudotsuga menziesii*)	9	Good condition	C	Preserve	9
10212	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
10213	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Dead and broken top	A	Preserve	2
10214	8	European White Birch (*Betula pendula*)	2	Dieback; dead limbs	B	Preserve	2
10215	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
10216	5	Douglas-fir (*Pseudotsuga menziesii*)	1	Good condition	C	Preserve	1
10217	22	Douglas-fir (*Pseudotsuga menziesii*)	7	Codominant top with included bark	B	Preserve	7
10218	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
10219	29	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Within building setback	0
10220	27	Douglas-fir (*Pseudotsuga menziesii*)	10	Good condition	C	Within building setback	0
10221	16,12	European White Birch (*Betula pendula*)	6	Dead top half	A	Direct conflict with site construction	0
10222	20,15	European White Birch (*Betula pendula*)	9	Some dieback; Codominant base with included bark	B	Within building setback	0
10223	15	European White Birch (*Betula pendula*)	0	Dead (±40')	A	Direct conflict with public road construction	0
10224	23	Bigleaf Maple (*Acer macrophyllum*)	8	Good condition	C	Within building setback	0
10225	18	European White Birch (*Betula pendula*)	5	Dead top half	A	Within building setback	0
10226	6	English Holly (*Ilex aquifolium*)	2	Good condition	C	Within building setback	0
10227	12	Sweet Cherry (*Prunus avium*)	2	Significant dieback; In decline	A	Within building setback	0
10228	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Within building setback	0
10229	17	Bigleaf Maple (*Acer macrophyllum*)	5	Good condition	C	Within building setback	0
10230	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Within building setback	0
10231	6	Sweet Cherry (*Prunus avium*)	2	Significant dieback; In decline	A	Within building setback	0
10232	10	Sweet Cherry (*Prunus avium*)	2	Significant dieback; In decline	A	Within building setback	0
10233	29	Douglas-fir (*Pseudotsuga menziesii*)	11	Good condition	C	Direct conflict with public road construction	0
10234	13,11	European White Birch (*Betula pendula*)	5	11" broken top half; 13" dieback throughout crown	A	Direct conflict with site construction	0
20000	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20001	20	Douglas-fir (*Pseudotsuga menziesii*)	6	Some dead branches	B	Preserve	6
20002	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20003	9	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20004	7	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20005	12	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20006	13	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
20007	13	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±60')	A	Preserve	0
20008	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Some dead branches; Sparse canopy	B	Preserve	4
20009	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Some dead branches; Sparse canopy	B	Preserve	3
20010	9	Douglas-fir (*Pseudotsuga menziesii*)	0	Dead (±30')	A	Preserve	0
20011	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3

Detailed Tree Inventory for Oliver Terrace

AKS Job No. 8397 - Evaluation Date: 8/7/2025 - Evaluated By: BRK

Tree #	DBH (in.)	Tree Species Common Name (*Scientific name*)	Tree Units Initial	Condition/Comments	Windthrow Rating	Reason for Removal	Tree Units Retained
20012	14	Douglas-fir (*Pseudotsuga menziesii*)	3	Good condition	C	Preserve	3
20013	23	Douglas-fir (*Pseudotsuga menziesii*)	8	Good condition	C	Preserve	8
20014	15	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
20015	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Some epicormic sprouting; Some dead branches	B	Preserve	6
20016	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
20017	19	Douglas-fir (*Pseudotsuga menziesii*)	6	Good condition	C	Preserve	6
20018	30	Douglas-fir (*Pseudotsuga menziesii*)	11	Codominant with included bark	B	Preserve	11
20019	10,12	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
20020	16	Douglas-fir (*Pseudotsuga menziesii*)	4	Good condition	C	Preserve	4
20021	18	Douglas-fir (*Pseudotsuga menziesii*)	5	Good condition	C	Preserve	5
20022	10	Douglas-fir (*Pseudotsuga menziesii*)	2	Good condition	C	Preserve	2
20023	40	Douglas-fir (*Pseudotsuga menziesii*)	0	OFFSITE; Low vigor	B	Impacts from utility installation	0
20024	29	Bigleaf Maple (*Acer macrophyllum*)	0	OFFSITE; Dead and broken top on one codominant stem	B	Impacts from utility installation	0
20025	28	Bigleaf Maple (*Acer macrophyllum*)	0	OFFSITE; Good condition	C	Impacts from utility installation	0

Total # of Existing Trees Inventoried = 203

Site Area = 3.77

Total # of Existing Onsite Trees = 200
- **Total Onsite Existing Tree Units = 1071**
- **Total # of Onsite Trees Retained = 117**
- **Total # of Tree Units Retained = 592**

Minimum Tree Units Required per City Code = 113
- *(3.77 acres * 30 trees/acre)*
- **Minimum # Trees to Replant = -479**

Total # of Existing Trees Removed = 86
- **Total Existing Tree Units Removed = 479**

Windthrow Rating

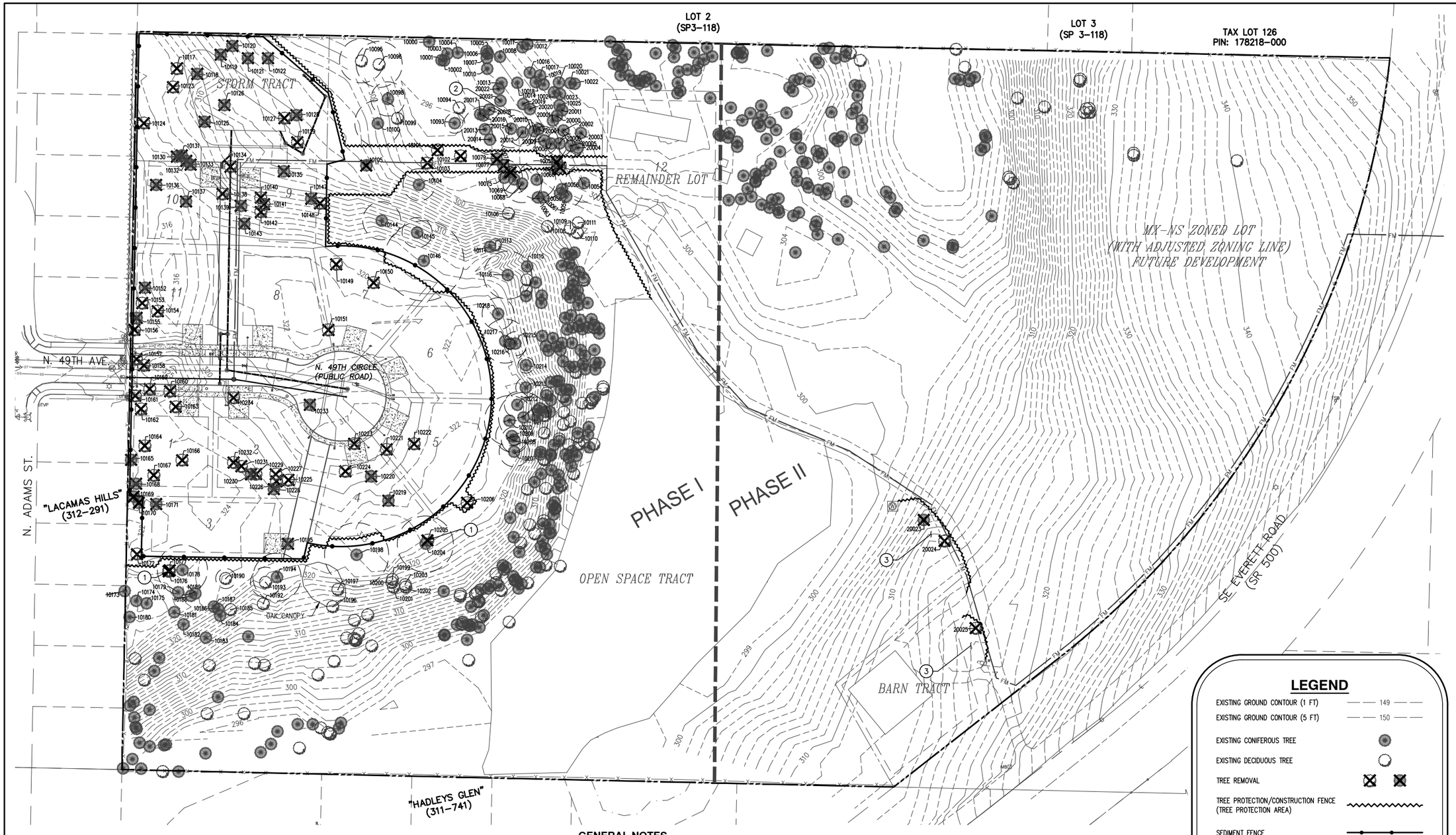
A=Least windthrow resistant
B=Moderate windthrow resistant
C=Most windthrow resistant

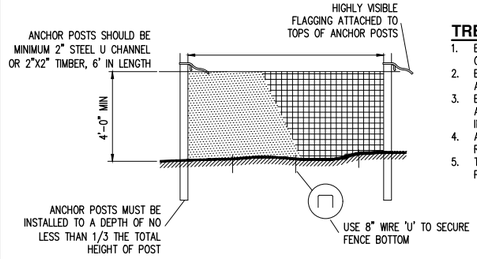
Arborist Disclosure Statement:

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed. 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. Neither this author nor AKS Engineering & Forestry, LLC have assumed any responsibility for liability associated with the trees on or adjacent to this site.

At the completion of construction, all trees should once again be reviewed. Land clearing and removal of adjacent trees can expose previously unseen defects and otherwise healthy trees can be damaged during construction.

Appendix B: Tree Preservation and Removal Plan





PLASTIC MESH TREE PROTECTION FENCE
NOT TO SCALE

TREE PROTECTION FENCE NOTES

1. BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR TREE PROTECTION DEVICE, ONLY.
2. BOUNDARIES OF PROTECTION AREA WILL BE ESTABLISHED IN THE FIELD BY THE ARBORIST PRIOR TO CONSTRUCTION
3. BOUNDARIES OF PROTECTION AREA SHOULD BE STAKED AND FLAGGED BY THE ARBORIST, OR UNDER THE SUPERVISION OF THE ARBORIST, PRIOR TO INSTALLING DEVICES.
4. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
5. TREE PROTECTION TO BE INSTALLED PRIOR TO CONSTRUCTION AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

GENERAL NOTES

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO DEMOLITION AND SITE GRADING ACTIVITIES. SEE DETAIL ON THIS SHEET.
2. SEE PROJECT SUPPLEMENTAL ARBORIST REPORT FOR THE DETAILED TREE INVENTORY (DATED AUGUST 2025).
3. SEE SHEET TP2 FOR TREE PROTECTION NOTES.
4. ONLY TREES WITH ASSIGNED NUMBERS WERE EVALUATED AND USED FOR TREE UNIT CALCULATIONS.
5. SOIL MITIGATION AND ENHANCEMENT MAY BE NECESSARY POST CONSTRUCTION TO ENHANCE COMPACTED SOILS AROUND TREE BASE AND ENCOURAGE TREE HEALTH.
6. THE PROJECT ARBORIST MAY REQUIRE ALTERNATIVE CONSTRUCTION MATERIALS OR METHODS DURING CONSTRUCTION TO PROTECT AND AVOID REMOVAL OF SOME ROOT SYSTEMS.
7. VARIOUS TREES EXHIBIT FORMS OF HEALTH CONCERNS OR STRUCTURAL DEFECTS, AS NOTED IN THE TREE TABLE (SEE SUPPLEMENTAL ARBORIST REPORT), THAT CURRENTLY PRESENT MINIMAL CONCERNS; HOWEVER, IT IS RECOMMENDED TO MONITOR THESE TREES OVER TIME AS ADDITIONAL MITIGATION OPTIONS MAY BE WARRANTED IF THE HEALTH AND/OR STRUCTURAL CONDITIONS WORSEN. WE RECOMMEND USING A CERTIFIED ARBORIST FOR FUTURE MONITORING.
8. SURVEYED TREE LOCATIONS AND PROJECT DEVELOPMENT PROVIDED BY OTHERS. AKS ARBORISTS PROVIDED VISUAL INSPECTION TO VERIFY APPROXIMATE LOCATION OF ON-SITE TREES.

TREE PLAN

SITE AREA:	9.93 AC
SITE AREA EXCLUDING OPEN SPACE:	3.77 AC
TOTAL TREE UNITS REQUIRED (3.77AC X 30):	113
EXISTING TREES RETAINED/(TREE UNITS):	117/(592)
PROPOSED SITE TREES/(TREE UNITS):	12/(12)
TOTAL TREE UNITS: (RETAINED AND PROPOSED)	604

NOTE: SEE LANDSCAPING PLAN (PRE5.0) FOR PROPOSED TREE PLANTING PLAN

LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 149
- EXISTING GROUND CONTOUR (5 FT) — 150
- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- TREE REMOVAL
- TREE PROTECTION/CONSTRUCTION FENCE (TREE PROTECTION AREA)
- SEDIMENT FENCE
- ASSUMED TREE ROOT ZONE (1–FT RADIUS PER 1–IN OF DBH)

TREE PROTECTION KEYED NOTES:

1. ARBORIST OBSERVATION REQUIRED DURING TREE REMOVAL BEHIND TREE PROTECTION FENCE.
2. SOME DEAD TREES IN THIS AREA NOT SHOWN ON THE SURVEY. ADDITIONAL ARBORIST REVIEW IS RECOMMENDED DURING FINAL ENGINEERING DESIGN.
3. ARBORIST OBSERVATION RECOMMENDED DURING UTILITY TRENCHING IN THIS AREA. TREE PRESERVATION OR REMOVAL TO BE DETERMINED BY THE PROJECT ARBORIST BASED ON ROOT IMPACTS OBSERVED DURING CONSTRUCTION. TREE REMOVAL IS LIKELY BASED ON PROPOSED DESIGN.

PRELIMINARY NOT FOR CONSTRUCTION

BENNETT R. KOCSIS
CERTIFICATE NUMBER: PN 8877A
EXPIRATION DATE: 12/31/2025

AKS ENGINEERING & FORESTRY, LLC
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ENGINEERING · SURVEYING · NATURAL RESOURCES
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

OLIVER TERRACE SUBDIVISION

CAMAS WASHINGTON
SE 1/4, SEC 35, T2N, R5E, WM
178221-000

TREE PRESERVATION AND REMOVAL PLAN

DESIGNED BY:	BRK
DRAWN BY:	BRK
MANAGED BY:	BDH
CHECKED BY:	BDH
DATE: 08/27/2025	

REVISIONS

JOB NUMBER
8397

SHEET
TP1

AKS DRAWING FILE: 8397 OLIVER TERRACE TREE PLANDWG | LAYOUT: LAYOUT1

TREE PROTECTION NOTES

A. PLACING MATERIALS NEAR TREES – NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE PROTECTED AREA OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PARKING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIALS AND SOIL DEPOSITS, DUMPING CONCRETE WASHOUT, ETC.

B. ATTACHMENTS TO TREES – DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY OBJECT TO ANY TREE DESIGNATED FOR PROTECTION.

C. PROTECTIVE BARRIER – BEFORE DEVELOPMENT, LAND CLEARING, FILLING OR ANY LAND ALTERATION FOR WHICH A TREE REMOVAL PERMIT IS REQUIRED, THE CONTRACTOR:

C.A. SHALL ERECT AND MAINTAIN READILY VISIBLE PROTECTIVE TREE FENCING ALONG THE OUTER EDGE AND COMPLETELY SURROUNDING THE PROTECTED AREA OF ALL PROTECTED TREES OR GROUP OF TREES. FENCES SHALL BE CONSTRUCTED PER THE DETAIL ON THIS SHEET.

C.B. MAY BE REQUIRED TO COVER WITH MULCH TO A DEPTH OF AT LEAST SIX (6) INCHES OR WITH PLYWOOD OR SIMILAR MATERIAL IN THE AREAS ADJOINING THE CRITICAL ROOT ZONE OF A TREE IN ORDER TO PROTECT ROOTS FROM DAMAGE CAUSED BY HEAVY EQUIPMENT.

C.C. SHALL PROHIBIT EXCAVATION OR COMPACTING OF EARTH OR OTHER POTENTIALLY DAMAGING ACTIVITIES WITHIN THE BARRIERS.

C.D. MAY BE REQUIRED TO MINIMIZE ROOT DAMAGE BY EXCAVATING A TWO (2) FOOT DEEP TRENCH, AT EDGE OF CRITICAL ROOT ZONE, TO CLEANLY SEVER THE ROOTS OF TREES TO BE RETAINED. ROOTS ONE (1) INCH DIAMETER OR GREATER SHALL BE CLEANLY CUT WITH A SAW OR PRUNERS.

C.E. MAY BE REQUIRED TO HAVE CORRECTIVE PRUNING PERFORMED ON PROTECTED TREES IN ORDER TO AVOID DAMAGE FROM MACHINERY OR BUILDING ACTIVITY. MAY BE REQUIRED TO MAINTAIN TREES THROUGHOUT THE CONSTRUCTION PERIOD BY WATERING AND FERTILIZING.

C.F. SHALL MAINTAIN THE PROTECTIVE BARRIERS IN PLACE UNTIL THE PROJECT ARBORIST AUTHORIZES THEIR REMOVAL OR A FINAL CERTIFICATE OF OCCUPANCY IS ISSUED, WHICHEVER OCCURS FIRST.

C.G. SHALL ENSURE THAT ANY LANDSCAPING DONE IN THE PROTECTED ZONE SUBSEQUENT TO THE REMOVAL OF THE BARRIERS SHALL BE ACCOMPLISHED WITH LIGHT MACHINERY OR HAND LABOR.

D. GRADE

D.A. THE GRADE SHALL NOT BE ELEVATED OR REDUCED WITHIN THE CRITICAL ROOT ZONE OF TREES TO BE PRESERVED WITHOUT THE PROJECT ARBORISTS'S AUTHORIZATION. THE PROJECT ARBORIST MAY ALLOW COVERAGE OF UP TO ONE HALF OF THE AREA OF THE TREE'S CRITICAL ROOT ZONE WITH LIGHT SOILS (NO CLAY) TO THE MINIMUM DEPTH NECESSARY TO CARRY OUT GRADING OR LANDSCAPING PLANS, IF IT WILL NOT IMPERIL THE SURVIVAL OF THE TREE. AERATION DEVICES MAY BE REQUIRED TO ENSURE THE TREE'S SURVIVAL.

D.B. IF THE GRADE ADJACENT TO A PRESERVED TREE IS RAISED SUCH THAT IT COULD SLOUGH OR ERODE INTO THE TREES CRITICAL ROOT ZONE, IT SHALL BE PERMANENTLY STABILIZED TO PREVENT SUFFOCATION OF THE ROOTS.

D.C. THE APPLICANT SHALL NOT INSTALL AN IMPERVIOUS SURFACE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE TO BE RETAINED WITHOUT THE AUTHORIZATION OF THE PROJECT ARBORIST. THE PROJECT ARBORIST MAY REQUIRE SPECIFIC CONSTRUCTION METHODS AND/OR USE OF AERATION DEVICES TO ENSURE THE TREE'S SURVIVAL AND TO MINIMIZE THE POTENTIAL FOR ROOT INDUCED DAMAGE TO THE IMPERVIOUS SURFACE.

D.D. TO THE GREATEST EXTENT PRACTICAL, UTILITY TRENCHES SHALL BE LOCATED OUTSIDE OF THE CRITICAL ROOT ZONE OF TREES TO BE RETAINED. THE PROJECT ARBORIST MAY REQUIRE THAT UTILITIES BE TUNNELED UNDER THE ROOTS OF TREES TO BE RETAINED IF THE PROJECT ARBORIST DETERMINES THAT TRENCHING WOULD SIGNIFICANTLY REDUCE THE CHANCES OF THE TREE'S SURVIVAL.

D.E. TREE AND OTHER VEGETATION TO BE RETAINED SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL TO EROSION FOR THE LEAST POSSIBLE TIME. TO CONTROL EROSION, SHRUBS, GROUND COVER, AND STUMPS SHALL BE MAINTAINED ON THE INDIVIDUAL LOTS, WHERE FEASIBLE. WHERE NOT FEASIBLE, APPROPRIATE EROSION CONTROL PRACTICES SHALL BE IMPLEMENTED PURSUANT TO CMC CHAPTER 14.06.

E. DIRECTIONAL FELLING OF TREES SHALL BE USED TO AVOID DAMAGE TO TREES DESIGNATED FOR RETENTION.

F. ADDITIONAL REQUIREMENTS – THE PROJECT ARBORIST MAY REQUIRE ADDITIONAL TREE PROTECTION MEASURES WHICH ARE CONSISTENT WITH ACCEPTED URBAN FORESTRY PRACTICES.

G. ENCROACHMENT INTO THE ROOT PROTECTION ZONE IS ALLOWED WITH PROJECT ARBORIST APPROVAL AS DESCRIBED IN THE FOLLOWING NOTES:

G.A. EXCAVATION IN THE TOP 24 INCHES OF THE SOIL IN THE CRITICAL ROOT ZONE AREA SHOULD BEGIN AT THE EXCAVATION LINE THAT IS CLOSEST TO THE TREE.

G.B. THE EXCAVATION SHOULD BE DONE BY HAND/SHOVEL OR WITH A BACKHOE AND A MAN WITH A SHOVEL, PRUNING SHEARS, AND A PRUNING SAW.

G.C. IF DONE BY HAND, ALL ROOTS 1 INCH OR LARGER SHOULD BE PRUNED AT THE EXCAVATION LINE.

G.D. IF DONE WITH BACKHOE (MOST LIKELY SCENARIO), THEN THE OPERATOR SHALL START THE CUT AT THE EXCAVATION LINE AND CAREFULLY "FEEL" FOR ROOT/RESISTANCE. WHEN THERE IS RESISTANCE, THE MAN WITH THE SHOVEL HAND DIGS AROUND THE ROOTS AND PRUNES THE ROOTS LARGER THAN 1 INCH DIAMETER.

G.E. THE BACKHOE IS TO REMAIN OFF OF THE TREE ROOTS TO BE PRESERVED AT ALL TIMES.

G.F. ALL ROOTS SHALL BE CUT CLEANLY WITH PRUNING SHEARS OR A PRUNING SAW.

G.G. PROJECT ARBORIST MUST BE ONSITE DURING ANY WORK WITHIN THE TREE ROOT PROTECTION ZONE.

G.H. CITY OFFICIAL MUST BE CONTACTED 24 HOURS PRIOR TO WORKING WITHIN THE TREE ROOT PROTECTION ZONE.

H. TREE PROTECTION ZONE IS DEFINED AS ALL AREAS BOUND AND PROTECTING THE OPTIMAL TREE PROTECTION ZONE.

I. TIMELINE FOR CLEARING, GRADING, AND INSTALLATION OF TREE PROTECTION MEASURES: WORK WILL BEGIN IMMEDIATELY FOLLOWING FINAL APPROVAL BY THE CITY. TREE PROTECTION MEASURES WILL BE DONE DURING CLEARING AND ANY GRADING WILL FOLLOW.

J. PRUNING/TREE REMOVAL NOTES: THE WORK TO BE COMPLETED UNDER THIS PROJECT SHALL CONSIST OF TREE REMOVAL AND TREE TRIMMING AS LISTED.

J.A. THE CONTRACTOR SHALL PROVIDE ADEQUATE CREW OF MEN, EQUIPMENT AND MATERIALS TO SAFELY AND EFFICIENTLY COMPLETE THE ASSIGNED WORK. EACH SUCH CREW SHALL INCLUDE AN INDIVIDUAL WHO SHALL BE DESIGNATED AS THE CREW SUPERVISOR AND WHO SHALL BE RESPONSIBLE FOR THE CREW'S ACTIVITIES AND WHO SHALL RECEIVE INSTRUCTION FROM THE OWNER OR THE OWNER'S REPRESENTATIVE AND DIRECT THE CREW TO ACCOMPLISH SUCH WORK.

J.B. WHENEVER A TREE, WHICH IS NOT SCHEDULED TO BE REMOVED, MUST BE TRIMMED OR PRUNED, THE CONTRACTOR SHALL INSURE THAT SUCH TRIMMING AND PRUNING IS CARRIED OUT UNDER THE DIRECT SUPERVISION OF A LICENSED ARBORIST. ALL PRUNING AND TRIMMING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF ANSI A 300 "STANDARD PRACTICES FOR TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE".

J.C. THE CONTRACTOR SHALL BE REQUIRED TO CUT TREES TO A HEIGHT OF APPROXIMATELY 12". THE STUMPS AND ROOTS SHALL BE GROUND DOWN A MINIMUM OF TWELVE (12) INCHES BELOW NORMAL GROUND LEVEL.

J.D. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST GOVERNMENTAL SAFETY REGULATIONS. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ANSI Z133.1 "PRUNING, TRIMMING, REPAIRING, MAINTAINING AND REMOVING TREES AND CUTTING BRUSH–SAFETY REQUIREMENTS" WITH SPECIAL EMPHASIS GIVEN TO THE REQUIREMENT THAT ONLY QUALIFIED LINE–CLEARANCE TREE TRIMMERS BE ASSIGNED TO WORK WHERE A POTENTIAL ELECTRICAL HAZARD EXISTS.

J.E. THE CONTRACTOR SHALL MAKE ALL THE NECESSARY ARRANGEMENTS WITH ANY UTILITY THAT MUST BE PROTECTED OR RELOCATED IN ORDER TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF THE OPERATING CONDITION OF ALL ACTIVE UTILITIES WITHIN THE AREA OF CONSTRUCTION AND THEY SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.

J.F. ANY MATERIAL RESULTING FROM THE TRIMMING OR REMOVAL OF ANY TREES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.

J.G. HAZARDOUS TREES–REPORTING – ANY PERSON ENGAGED IN TRIMMING OR PRUNING WHO BECOMES AWARE OF A TREE OF DOUBTFUL STRENGTH, THAT COULD BE DANGEROUS TO PERSONS AND PROPERTY, SHALL REPORT SUCH TREE(S) TO THE OWNER OR THE OWNERS REPRESENTATIVE. SUCH TREES SHALL INCLUDE THOSE THAT ARE OVER MATURE, DISEASED, OR SHOWING SIGNS OF DECAY OR OTHER STRUCTURAL WEAKNESS.

J.H. DAMAGES–ANY DAMAGE CAUSED BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, BROKEN SIDEWALK, CURB, RUTTED LAWN, BROKEN WATER SHUT–OFFS, WIRE DAMAGE, BUILDING DAMAGE, STREET DAMAGE, ETC., WILL BE REPAIRED OR REPLACED IN A TIMELY MANNER, TO THE OWNER'S SATISFACTION, AND ALL COSTS PAID BY THE CONTRACTOR.

J.I. ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE ACCOMPLISHED WITH HAND OPERATED EQUIPMENT.

J.J. TREES TO BE REMOVED SHALL BE FELLED SO AS TO FALL AWAY FROM TREE ROOT PROTECTION ZONES AND TO AVOID PULLING AND BREAKING OF ROOTS TO REMAIN.

J.K. ALL DOWNED BRUSH AND TREES SHALL BE REMOVED FROM THE TREE PROTECTION ZONE EITHER BY HAND OR WITH EQUIPMENT SITTING OUTSIDE THE TREE ROOT PROTECTION ZONE. EXTRACTION SHALL OCCUR BY LIFTING THE MATERIAL OUT, NOT BY SKIDDING IT ACROSS THE GROUND.

J.L. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE ROOT AREA OF TREES TO BE RETAINED A ROADBED OF 6 INCHES OF MULCH OR GRAVEL SHALL BE CREATED TO PROTECT THE SOIL. THE ROADBED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A 6–INCH DEPTH.

J.M. PRUNING. TREES SHALL BE PRUNED PRIOR TO THE START OF CONSTRUCTION. TREES SHALL BE CROWN CLEANED TO REMOVE THE DEADWOOD 2 INCHES IN DIAMETER AND OVER. TREES SHALL BE CROWN THINNED BY 10–20%. CROWNS MAY BE RAISED BY REMOVING BOTTOM BRANCHES AS NECESSARY UP TO 14 FEET HIGH TO GIVE CLEARANCE FOR ANY CONSTRUCTION TRAFFIC, ACTIVITIES, ETC. ALL WORK TO BE DONE IN ACCORDANCE WITH ANSI A300 PRUNING STANDARDS. REMOVE ANY LIMBS OF DOUBTFUL STRENGTH THAT COULD BE DANGEROUS TO PERSONS AND PROPERTY.

PRELIMINARY NOT FOR CONSTRUCTION

BENNETT R. KOCSIS
CERTIFICATE NUMBER: PN 8877A
EXPIRATION DATE: 12/31/2025

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OLIVER TERRACE SUBDIVISION

CAMAS WASHINGTON
SE 1/4, SEC 35, T2N, R5E, WM
17821-000

TREE PRESERVATION AND REMOVAL NOTES

DESIGNED BY:	BRK
DRAWN BY:	BRK
MANAGED BY:	BDH
CHECKED BY:	BDH

DATE: 08/27/2025

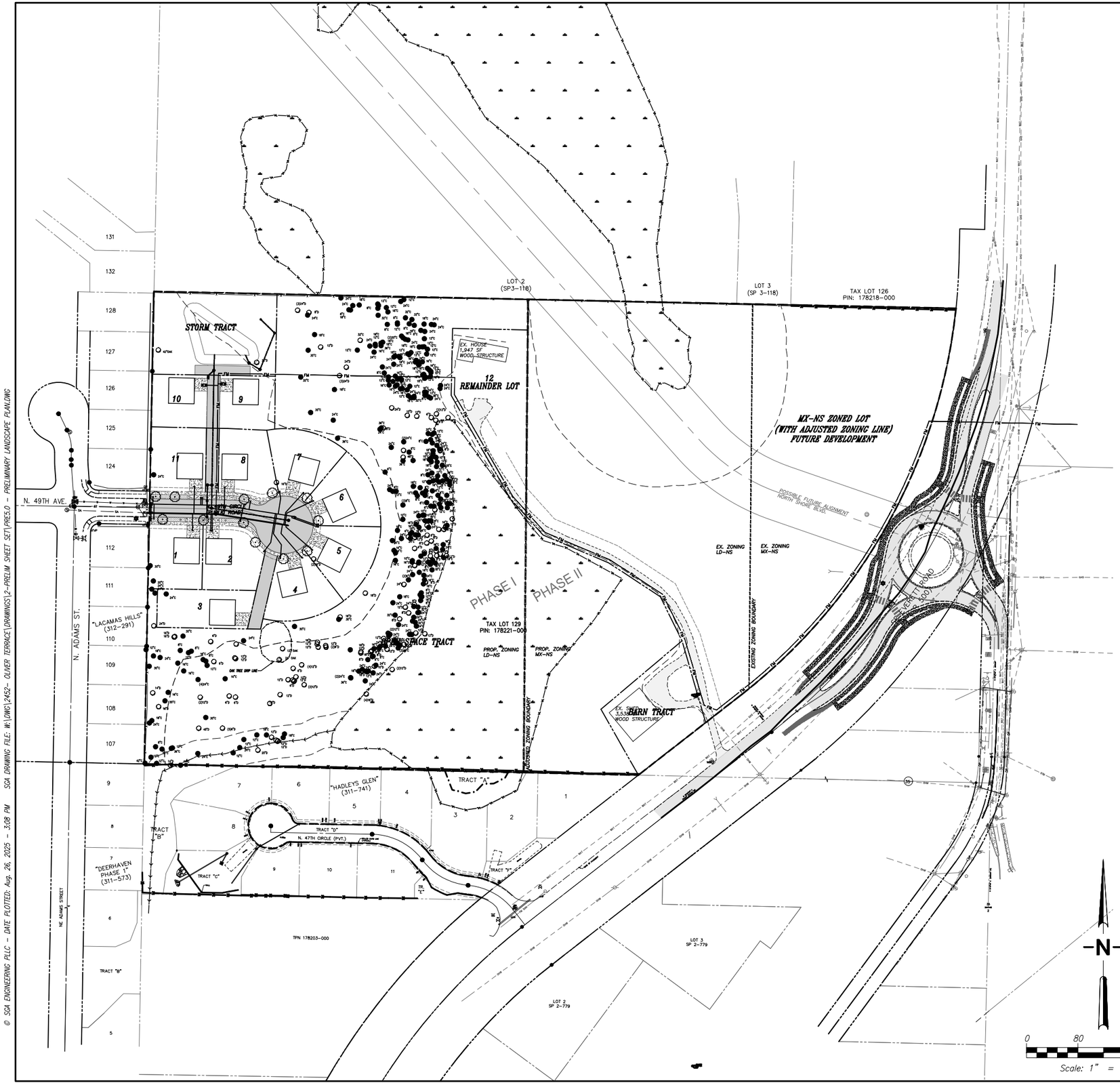
REVISIONS

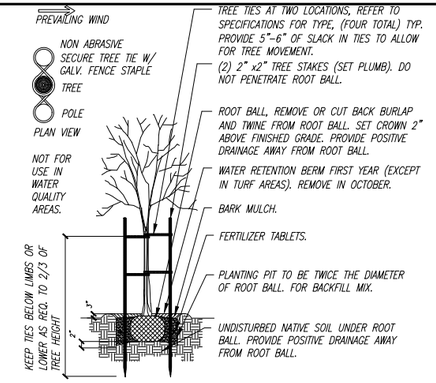
JOB NUMBER
8397

SHEET
TP2

AKS DRAWING FILE: 8397 OLIVER TERRACE TREE PLAN.DWG | LAYOUT: LAYOUT1 (2)

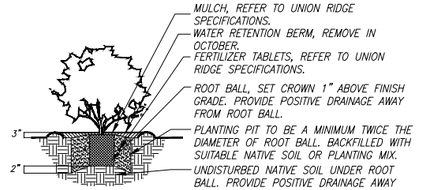
Appendix C: Tree Planting Plan





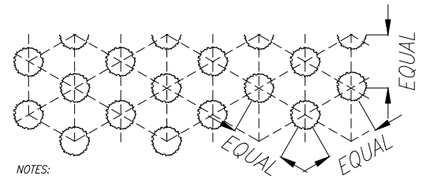
B&B Deciduous Tree Planting Details

NO SCALE



Shrub Planting Details

NO SCALE



NOTES:

ALL GROUND COVER SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING AS SPECIFIED IN PLANTING LEGEND. GROUND COVER TO BE LOCATED ONE HALF OF SPECIFIED SPACING DISTANCE FROM ANY HARD SURFACE, UNLESS OTHERWISE SPECIFIED. SPECIFICATIONS ARE INCLUDED WITHIN PLAN SHEETS, LANDSCAPE NOTES AND SPECIFICATIONS. REFER TO ALL PRIOR TO BIDDING AND CONSTRUCTION.

TIMELINE & NARRATIVE

TREES IN THE PUBLIC RIGHT OF WAY SHALL BE INSTALLED BY DEVELOPER OR BUILDER PRIOR TO ISSUING OF OCCUPANCY PERMIT FOR LOT ADJACENT TO RIGHT OF WAY IN QUESTION.

TREES ON INDIVIDUAL LOTS SHALL BE INSTALLED BY DEVELOPER OR BUILDER PRIOR TO ISSUING OF OCCUPANCY PERMIT FOR SAID LOT. TREES ARE EASILY DAMAGED DURING CONSTRUCTION AND SHOULD NOT BE INSTALLED UNTIL AFTER ALL DRIVEWAYS, SIDEWALKS AND HEAVY CONSTRUCTION ACTIVITIES ARE COMPLETED.

TREES SHALL BE WATERED AND MAINTAINED IN A HEALTHY CONDITION YEAR ROUND. EXISTING TREES SHALL BE PROTECTED FROM DAMAGE DURING AND FOLLOWING CONSTRUCTION. PRUNING AND OTHER MAINTENANCE SHALL BE PERFORMED BY INDIVIDUAL HOMEOWNERS OR THE HOMEOWNER'S ASSOCIATION.

LANDSCAPE NOTES

LANDSCAPING SHALL BE WATERED WITH AN IRRIGATION SYSTEM CAPABLE OF SUSTAINING THE PLANTINGS IN A HEALTHY CONDITION YEAR AROUND.

TREES AND OTHER PLANTINGS SHALL BE PRUNED, WATERED, FERTILIZED AND MAINTAINED IN A HEALTHY CONDITION.

APPROXIMATE LOCATIONS FOR TREES ARE SHOWN ON THE PLAN. EXACT LOCATIONS TO BE DETERMINED BY DEVELOPER OR BUILDER AFTER CONSTRUCTION OF DRIVEWAYS, SIDEWALKS AND BUILDINGS.

PLANT LEGEND

SYMBOL	PLANT NAME (SCIENTIFIC)	PLANT NAME (COMMON)	SIZE	SPACING	QUANTITY
TREES					
	Acer rubrum 'Autumn Flame'	Autumn Flame Maple	2" cal.	30' o.c. or as shown	12
MISCELLANEOUS					
	LANDSCAPE AREA: WOOD MULCH, ROCK, TURF GRASS				1,432 SF

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LICENSE NO. 1247
EXPIRES ON

PRELIMINARY LANDSCAPE PLAN

OLIVER TERRACE SUBDIVISION

CITY OF CAMAS WASHINGTON

PRELIMINARY

REVISIONS

DESIGNED BY:	NDM
DRAWN BY:	NDM
CHECKED BY:	JAI
SCALE:	########

JOB NUMBER	SHEET
2452	PRE5.0

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