

3907 AURORA AVE N, SEATTLE WA 98103
May 29, 2025



Dear David,

Thank you for contracting with us to assess the trees at 7448 W Mercer Way, Mercer Island, WA. During our field investigation, we evaluated eight onsite trees and nine offsite trees in relation to your plans to construct a 20-foot northward addition to the existing home. Our assessment included an inventory of regulated trees, Tree Protection Zone (TPZ) calculations, a review of potential construction impacts, and an evaluation of applicable municipal tree retention and replacement requirements.

This report outlines our findings and recommendations and can be submitted to the City as part of your building permit application to demonstrate compliance with local tree protection regulations. Our analysis indicates that the proposed development will remain outside the TPZs of all relevant trees, and that the site currently meets tree credit and retention requirements.

Please don't hesitate to reach out if you have any questions or need further assistance as you move forward with your project.

Respectfully submitted,

Jordan Rengo

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Pre-construction Arborist Report

May 29, 2025

Prepared for David Garvida

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Report narrative

Site information

Address: 7448 W Mercer Way, Mercer Island, 98040

Zoning: R-15

KC parcel: 926640-0040

Parcel size: 15195

Site visit date: 05/29/2025

Time of site visit: 9:30am

Introduction and assignment

This arborist report was prepared to support early-stage planning for a proposed building addition at the north side of the residential property. The client is planning to extend the existing house 20 feet northward into the backyard and has requested an arborist assessment to identify existing trees, evaluate their condition, and establish appropriate Tree Protection Zones (TPZs). This report may be submitted to the City as part of the construction permitting process to demonstrate that tree protection measures are in place and that long-term tree health will be maintained.

Observation and discussion

Environmental Critical Area Review

A desktop review using King County iMap confirmed that **no Environmentally Critical Areas (ECAs)** are present on the parcel. No mapped wetlands, steep slopes, riparian corridors, or known landslide hazard areas were identified within or adjacent to the project area.

Onsite tree observations

A total of eight onsite trees were evaluated. Two mature Norway maples (*Acer platanoides*) were located near the front of the property at the south end, adjacent to the lawn and a gravel pull-off used for parking. Both trees appeared to be in good condition, with healthy canopies and no structural defects noted.

A *Styrax* (*Styrax japonicus*) was located just west of the driveway near the garage. This tree also appeared vigorous and healthy at the time of inspection.

The trees most relevant to the proposed addition were located at the north edge of the property in the backyard. This group of trees consisted of Douglas-fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*). The new structure will extend 20 feet closer to these trees, placing it approximately 30 to 35 feet away from their trunks. Based on the species and size of these conifers, all observed trees remain outside their respective TPZs. Each tree appeared vigorous and structurally sound. No construction-related impact is anticipated, provided standard tree protection protocols are followed.

Offsite tree observations

Nine offsite trees were also observed along the eastern property boundary. These consisted primarily of western red cedar, Douglas fir, and Leyland cypress (*Cupressus × leylandii*). All of the proposed construction activities will occur well outside the TPZs for these offsite trees. No impact is expected.

Code considerations

Tree retention on this property is governed by Mercer Island City Code (MICC) 19.10.060, which applies to additions over 500 SF on lots larger than 6,000 SF in R-15 zones. The proposed 20-foot northward addition qualifies under this rule.

Per MICC 19.10.060(A), the project must retain at least 30% of large trees (≥10 inches diameter) over a rolling five-year period. Development should also prioritize preserving:

- Exceptional trees (≥24 inches diameter),
- Long-lived and healthy trees,
- Groves of trees.

Tree removal is only permitted within disturbance areas necessary for site improvements, and any removal must be mitigated per MICC 19.10.070.

All eight onsite trees are outside the proposed work area and will be retained. Based on current plans, the project appears to meet Mercer Island's tree retention requirements.

Conclusions

The trees on and around the property appear to be in good health and structurally stable. The proposed 20-foot northward addition will remain outside the Tree Protection Zones of all relevant trees. If TPZs are maintained and no excavation occurs within them, long-term tree health and stability should remain unaffected by the construction. A tree inventory table is included with this report detailing species, diameter, condition ratings, and TPZ requirements for all relevant trees.

Recommendations

- 1) Do not remove or relocate any trees over 6" diameter without a permit.
- 2) Retain and protect existing onsite and offsite trees to maximize ecosystem services and home value. As a general rule, we recommend retaining all trees with condition 4 or better unless development plans preclude retention. Trees with condition 2 and lower should be removed and replaced with more vigorous species/specimen. Trees with condition 3 may require removal based on other factors, or should have mulch (4-6" of arborist chips) and deep irrigation monthly during the dry season, which has been shown to improve such trees to condition 4 or better.
- 3) Update the site plan to show all current trees and their TPZ's per our inventory. Place an X over all trees that will be removed. Confirm and ensure that there will be no disturbance to inner TPZ of retained trees.
- 4) Provide a 1:1 replacement plan for any removed Tier 2 or 3 trees and include the quantity, genus, species and mature canopy size of any replacement trees. Replacement trees must have the same or larger mature canopy compared to the removed tree(s).
- 5) Designate staging and access paths on your site plan that avoid TPZs of existing and future trees. Use existing paved areas for staging materials in order to minimize impact to the critical root zones (CRZs).
- 6) Include tree protection requirements on all site-related construction documents. Root damage or soil compaction within the TPZ may cause irreparable harm to trees whose root zones are in the path of construction, staging and access areas.
- 7) Create a planting plan to show future planting including quantity, location, caliper, genus and species of new trees.
- 8) Any clearance pruning must be provided by an SDCI registered tree service provider (TSP) to ANSI A300 tree pruning standards.
- 9) Notify landscape planner and installer not to disturb soils within the TPZ of any tree using a rototiller or with other mechanical soil turning tool. This can destroy a large volume of feeder roots and harm the tree. When placing new plants, do not remove roots larger than 1" and adjust planting locations around larger roots. Adding soils above the tree roots can smother the roots, however adding mulch (especially arborist chips) up to 6" can augment soil quality, aeration, and water retention, benefitting the tree's roots.
- 10) Remove all invasive vegetation and roots thereof including English holly, English laurel, English ivy and Himalayan blackberry.

Thank you and please reach out if you have any questions.

Douglas Smith

Resources

Tree protection guidebook: https://www.dnr.wa.gov/Publications/rp_urban_treeprtctnguidbk.pdf

Tree risk assessment: https://www.isa-arbor.com/education/resources/educ_Portal_Risk_AN.pdf

Seattle Hazard Tree Tip 331B: <https://www.seattle.gov/DPD/Publications/CAM/cam331b.pdf>

Seattle Trees and Development Tip 242A: <https://www.seattle.gov/DPD/Publications/CAM/Tip242A.pdf>

Seattle Street Trees DOT: <https://www.seattle.gov/trees/planting-and-care/street-trees>

Arborist chips / wood chip mulch: <https://s3.wp.wsu.edu/uploads/sites/403/2015/03/wood-chips.pdf>

Chip drop for free wood chips: <https://getchipdrop.com>

Seattle green factor plant list: <https://www.seattle.gov/documents/Departments/SDCI/Codes/GreenFactorPlantList2010.pdf>

Seattle street tree selector: <https://public.tableau.com/app/profile/city.of.seattle.transportation/viz/SDOTTreeSelector/Dashboard>

ISA planting recommendations full content: <https://www.isa-arbor.com/education/onlineresources/cadplanningspecifications#Irrigation>

Planting on level ground: https://www.isa-arbor.com/education/onlineresources/cad/drawings/Planting/L_tree%20planting_24inch%20to%2036inch%20box_single%20berm_modified_D.pdf

Planting on a slope: https://www.isa-arbor.com/education/onlineresources/cad/drawings/Planting/L_tree%20planting_24inch%20to%2036inch%20box_slope_unmodified_D.pdf

Director's Rule 7-2023 Tree tier designations: <https://www.seattle.gov/dpd/codes/dr/7-2023.pdf>

Tree Inventory Table

Tree Inventory Table for Garvida 7448 W Mercer Way, Mercer Island, Wa-1

Number	Common name	Species	DSH	DLR	Credits	Cond	TPZ	ITPZ
268	Norway maple	<i>Acer platanoides</i>	24	24	10	5	24	12
269	Norway maple	<i>Acer platanoides</i>	26	25	10	5	25.5	12.75
270	Styrax	<i>Styrax japonicus</i>	9	14	2	5	11.5	5.75
271	Western red cedar	<i>Thuja plicata</i>	24	16	10	4	20	10
272	Douglas fir	<i>Pseudotsuga menziesii</i>	34	20	10	5	27	13.5
273	Douglas fir	<i>Pseudotsuga menziesii</i>	14	12	4	4	13	6.5
274	Western red cedar	<i>Thuja plicata</i>	34	17	10	5	25.5	12.75
275	Western red cedar	<i>Thuja plicata</i>	30	20	10	5	25	12.5
Off Site								
A	Western red cedar	<i>Thuja plicata</i>	17	14	0	5	15.5	7.75
B	Western red cedar	<i>Thuja plicata</i>	10	10	0	4	10	5
C	Western red cedar	<i>Thuja plicata</i>	19	14	0	5	16.5	8.25

Number	Common name	Species	DSH	DLR	Credits	Cond	TPZ	ITPZ
D	Douglas fir	<i>Pseudotsuga menziesii</i>	18	13	0	5	15.5	7.75
E	Douglas fir	<i>Pseudotsuga menziesii</i>	12	10	0	5	11	5.5
F	Leyland cypress	<i>Cupressus × leylandii</i>	20	15	0	5	17.5	8.75
G	Leyland cypress	<i>Cupressus × leylandii</i>	16	13	0	5	14.5	7.25
H	Western red cedar	<i>Thuja plicata</i>	18	12	0	5	15	7.5
I	Douglas fir	<i>Pseudotsuga menziesii</i>	13	11	0	5	12	6

Refer to **Site Map** below to see tree locations.

Tree Inventory Key and Definitions

DSH = Diameter at Standard Height of 4.5', measured in inches.

Multi-stem DSH = DSH of multi-stemmed trees is calculated using the square root of the sum of the squares of the individual stems.

DLR = Drip Line Radius is assessed on site by measuring from the center of the tree to the outermost tips of the branches measured in feet.

TPZ = Tree Protection Zone radius is calculated as an average of DSH and DLR values and converted to feet, with some noted exceptions.

ITPZ = Inner Tree Protection Zone. The radius for the ITPZ is calculated as 50% of the outer TPZ radius, and shall not be disturbed.

Condition Ratings: 6 = Excellent condition, 5 = Good, 4 = Fair, 3 = Poor, 2 = Very Poor, 1 = Dying/Dead

Tree Protection Requirements

1. For the trees being retained, tree protection fencing should be installed at the outer edge of the drip line or as close to it as is practically possible.
2. Fencing should be installed prior to construction activities and remain in place for the duration of the project. Fencing should only be moved temporarily if minor disturbances must occur within the drip line and the fencing should be replaced immediately once that portion of the work is completed.
3. The tree protection area is designated to be an area of no impact, no storing of materials, no encroachment and no staging of debris.
4. The tree protection fencing should have signs every 8' facing access that indicate the area is a tree protection zone.
5. Trenching through the TPZ for utilities is not permitted (tunneling is the preferred method).
6. Grade changes in the TPZ are not permitted.
7. Vehicle maintenance and washing of equipment (especially concrete), is not permitted.
8. No attaching anything to the tree with cinching knots or hardware.
9. Root flare should be protected with chips so that lawn maintenance equipment does not have to work close to the system.
10. Proper clearances should be maintained.
11. The TPZ or critical root zone needs to be protected. The Inner TPZ is 50% of the radius of the TPZ and there should be zero disturbance in this zone. The Outer TPZ surrounds the ITPZ. A disturbance of up to 33% of the Outer TPZ is sometimes permissible provided that any heavy digging equipment works toward the tree, and that any roots encountered that are over 1" in diameter are excavated around with hand tools and cut clean with a sharp saw behind the excavation zone so that the root can bifurcate and continue to grow. In some cases, if excessive pruning has been done, the TPZ can be larger than the Drip Line Radius.
12. Add a 4-6" layer of arborist wood chips to the TPZ of all trees in or adjacent to the path of construction for root and soil protection and health.

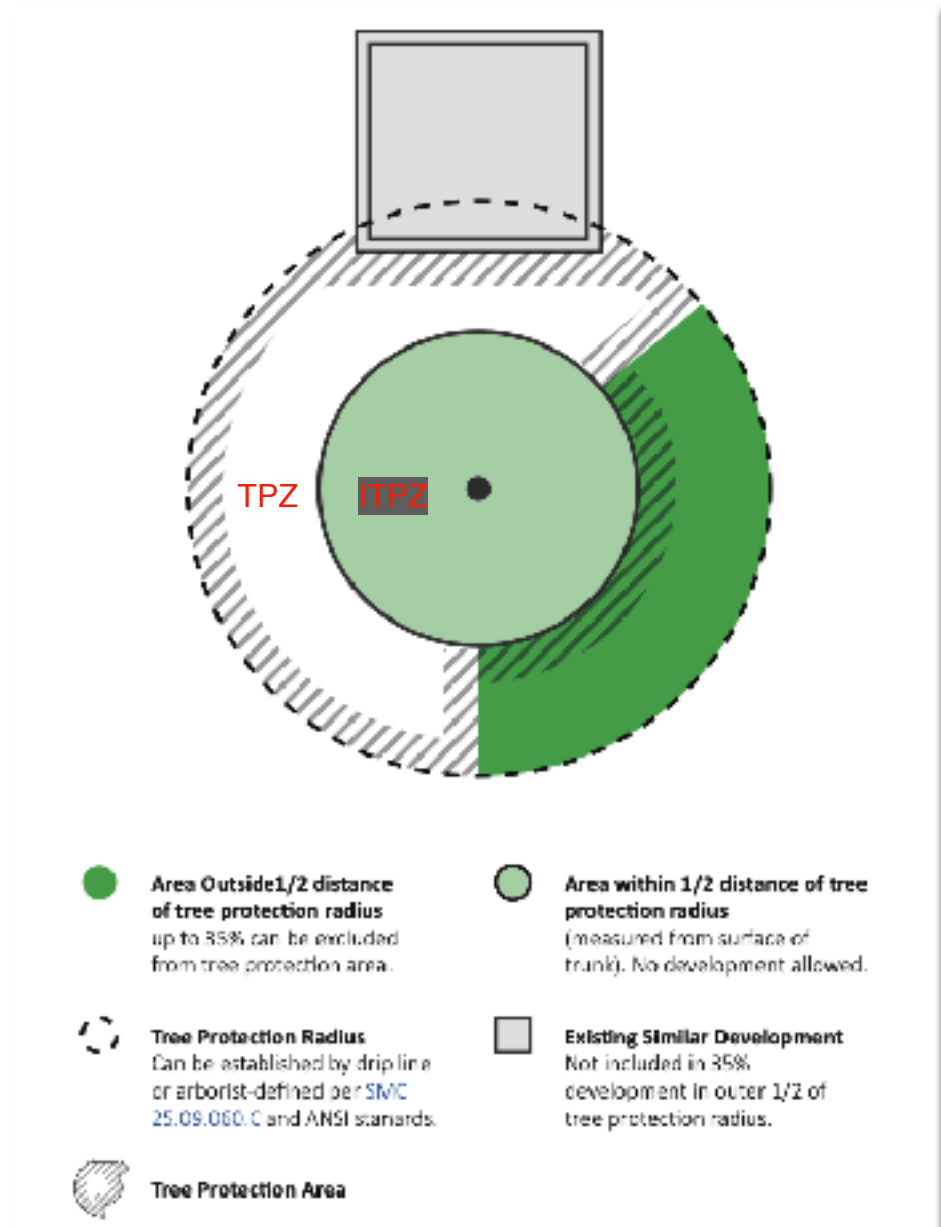
Tree protection zone (TPZ) and inner tree protection zone (ITPZ)

This illustration is taken from Seattle Tip 242A, and is helpful for understanding generally accepted protection zones for the critical root areas of an urban tree.

The TPZ for each tree is listed in the **Tree Inventory Table** (above) and represents only a portion (30-50%) of a typical tree's root area. However, a tree can sustain disturbance of up to 35% of the outer TPZ, shown in dark green, and still sustain itself good health.

The ITPZ represents the structural root zone of the tree, and is equal to an area with a radius of 50% of the TPZ radius. No grade change or disturbance in this area is allowed or the tree will need to be removed for safety reasons.

In this example, the gray hashed area represents the tree protection area for this tree during construction.



Site Map

Red chalk lines indicate proposed tree protection zone fencing plan for retained trees. Not to scale. Use TPZ data from enclosed tree table to determine actual TPZ dimensions.


Green shaded area represents recommended limited construction, staging and access zone.



King County Parcel Data

PARCEL	
Parcel Number	926640-0040
Name	ALDRICH JAMES III+BROOKE
Site Address	7448 W MERCER WAY 98040
Legal	WEST FIRS ADD TGW UND INT PRIVATE ROAD

BUILDING	
Year Built	1978
Total Square Footage	2760
Number Of Bedrooms	4
Number Of Baths	2.25
Grade	9 Better
Condition	Very Good
Lot Size	15195
Views	No
Waterfront	

A photograph of a two-story house with light-colored siding and a dark roof. The house features a prominent chimney on the left side and a covered porch area on the right. The property is surrounded by mature trees and a well-maintained lawn. In the foreground, there is a gravel driveway or parking area.

Aerial View from 2023



Street View from July 2018



Site Photos from 05/29/2025

Description: View looking east from the west side of the property. A red line delineates the furthest extent of the proposed construction. On the left side of the image, Trees 271 through 275 are visible near the northern property boundary. The existing house is seen on the right. Distances between trees and the proposed structure are indicated by directional arrows for reference.





Description: View looking south from the northern edge of the front yard. Trees 268 through 270 are visible in this image. These trees are located near the road and driveway and are not expected to be impacted by the proposed construction.



Description: View looking north from the southern portion of the backyard. Trees 271 through 275, which are closest to the proposed building footprint, are shown here. The proposed addition is anticipated to remain outside of the Tree Protection Zones for these trees.



Description: View looking east toward the eastern property boundary. The neighboring trees can be seen along the opposite side of the fence, with portions of their canopies overhanging the property line. These offsite trees are located well outside the proposed work zone and are not expected to be impacted by construction.

Assumptions and Limiting Conditions

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters of legal character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other government regulations.

Care has been taken to obtain all information from reliable sources. All data has been verified so far as possible, however, the consultant/appraiser can neither guarantee nor be responsible for accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payments of additional fees for such services as described in the fee schedule and contract engagement.

Loss or alteration of any of this report invalidates the entire report.

Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any person other than to whom it is addressed, without prior written consent of the consultant/appraiser.

Neither all nor any part of the content in this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written consent of the consultant/appraiser--particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualification.

Addendum A: Trees and Home Value

Research has shown that retaining or planting large trees can increase property values anywhere from 3% to 15%. Additionally, properly selected and located trees can reduce heating and cooling costs by up to 25% annually. Trees take decades to reach optimal value for homeowners, making tree retention a high priority if the trees on a building site are healthy and thoughtfully located. On the left is a chart of additional benefits of mature trees.

Aspect	Commercial Benefits	Residential Benefits
Aesthetic Appeal	Enhance the overall look and visual appeal of the property	Beautifully the landscape and create a welcoming atmosphere
curb Appeal	Increases curb appeal to potential customers and clients	Boost curb appeal for potential buyers or renters
Outdoor Spaces	Provides shaded areas for outdoor seating and relaxation for people to gather.	Create private outdoor spaces for residents to enjoy
Cooling Effect	Shade and transpiration reduce energy costs for cooling systems	Lower cooling costs by providing natural shade to homes
Air Quality	Improves air quality by absorbing pollutants and releasing oxygen	Enhance indoor air quality and create healthier living environments
Noise Reduction	Act as natural sound barriers, reducing noise from both commercial areas	Helps reduce noise pollution and create a more peaceful environment
Community Benefit	Contribute to a greener urban environment, attracting businesses and customers. Also shown to increase worker efficiency.	Foster a sense of community and promote neighborhood appeal
Property Value	Increases property value and demand for commercial spaces	Enhance property value and demand for residential homes. Trees are shown to reduce crime by up to 12%
Rent and Lease Rates	Allow for higher rental rates due to improved surroundings	Enable landlords to charge premium rents for homes with scenic views
ROI for Landlords	Yield higher returns on investment for property owners	Attract higher-paying tenants and increase rental income
Long-Term Investment	Mature trees appreciate in value, enhancing the property's worth	Trees mature over time, boosting property value over the years
Increased Health Outcomes	Trees increase the physical and mental health outcomes for workers.	Trees increase the physical and mental health outcomes for families.
Reduced Erosion	Tree root systems help prevent soil erosion on properties by absorbing urban pollutants and particulate matter.	Protect against soil erosion and contribute to landscape stability
Enhanced Privacy	Creates natural barriers that enhance privacy for businesses	Provides privacy screens for homeowners and shields properties from view
Biodiversity Benefits	Support local ecosystems and promote biodiversity	Attract birds and wildlife, creating a diverse and vibrant environment
Marketing Advantages	Use green features to market commercial spaces effectively	Highlight green features to attract eco-conscious buyers and renters
Stormwater Management	Trees combined with WSUD principles can help mitigate flooding in commercial areas.	Trees absorb excess water in high rain events reducing flooding