



LAYTON TREE CONSULTING, LLC

ARBORIST REPORT

4103 78th Avenue SE
Mercer Island, WA



Report Prepared by:

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July 31, 2025
Updated September 18, 2025

It's all about trees.....

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Tree Summary Table

Tree Plan Map

Tree Inventory and Replacement Worksheet

Assignment

Layton Tree Consulting, LLC was asked to compile an Arborist Report for a property on Mercer Island. The subject property is located at 4103 78th Avenue SE. My assignment is to prepare a written report on present tree conditions, and to provide appropriate recommendations for the protection of retained trees during re-development (remodel/addition project) of the property.

This report encompasses all of the criteria set forth under the City of Mercer Island's tree regulations, particularly Chapter 19.10 Trees, of the Unified Development Code Title 19. A 'Regulated' tree is any tree with a diameter of more than 10-inches or any tree that meets the definition of an 'Exceptional' tree.

Date of Field Examination: July 29, 2025

Description

The proposed project is to add a second story to the existing house. No trees are proposed for removal as part of this project. The property is heavily treed. Trees within a proximity of the house were assessed, which included some boundary or off-site trees.

Subject trees have been identified with a numbered aluminum tag attached to the lower trunk. Tree tag numbers correspond with the numbers on the attached Tree Summary Table and map.

Methodology

Each tree in this report was visited. Tree diameters were measured by tape. The tree heights were measured using a Spiegel Relaskop. Each tree was visually examined for defects and vigor. The tree assessment procedure involves the examination of many factors:

- The crown or canopy of the tree is examined for current vigor/health by examining the foliage for appropriate color and density, the vegetative buds for color and size, and the branches for structural form and annual shoot growth; and the overall presence of limb dieback and/or any disease issues.
- The trunk or main stem of the tree is inspected for decay, which includes cavities, wounds, fruiting bodies of decay (conks or mushrooms), seams, insect pests, bleeding or exudation of sap, callus development, broken or dead tops, structural defects and unnatural leans. Structural defects can include but are not limited to excessive or unnatural leans, crooks, forks with V-shaped crotches, multiple attachments.
- The root collar and exposed surface roots are inspected for the presence of decay, insect damage, as well as if they have been injured or wounded, undermined or exposed, or the original grade has been altered.

Based on these factors a determination of condition is made.

Judging Condition

The three condition categories are described as follows:

Good – free of significant structural defects, no disease concerns, minor pest issues, no significant root issues, good structure/form with uniform crown or canopy, foliage of normal color and density, average or normal vigor, will be wind firm if isolated or left as part of a grouping or grove of trees, suitable for its location

Fair – minor to moderate structural defects not expected to contribute to a failure in near future, no disease concerns, moderate pest issues, no significant root issues, asymmetric or unbalanced crown or canopy, average or normal vigor, foliage of normal color, moderate foliage density, will be wind firm if left as part of a grouping or grove of trees, cannot be isolated, suitable for its location

Poor – major structural defects expected to cause fail in near future, disease or significant pest concerns, decline due to old age, significant root issues, asymmetric or unbalanced crown or canopy, sparse or abnormally small foliage, poor vigor, not suitable for its location

Observations

The trees closest to the house were assessed. No concerning issues were observed. See pictures below.

Trees north of the garage are comprised of a mix of Douglas fir, incense cedar and Western red cedar. All are of good vigor, with foliage of normal color and density. All are structurally sound with no concerning defects. Tree #5 is situated closest to the house, at 9 ½-feet from the house corner to the trunk face.

Tree #15 semi-mature Japanese flowering cherry variety in the front yard. It has developed poor form from lack of sunlight. Overall condition is rated as fair.

Trees south of the house are situated far from the proposed work and will not be impacted by the proposal.

Tree #25 is a semi-mature native bitter cherry located near the south parking area. The top half of the tree is dead. It is in an ultimate state of decline. It is in poor condition and non-viable.

Discussion/Recommendations

No trees are proposed for removal as part of this project. Trees #5 and #6 may require some minor pruning for adequate construction clearance. Only remove those lower limbs that are interfering with the required work.

Position tree protection fencing around the trees as shown on the attached tree plan map. To adequately protect the trees during construction, the ground around the house will need be covered with a protective barrier to avoid damaging soil and surface roots. This is best accomplished by applying a +/- 6-inch layer of coarse tree service wood chips/mulch or hog fuel.

Tree #25 is mostly dead, and expected to be dead within a year. Dead top sections are likely to fall toward or onto the adjacent parking area. Removal is recommended to abate its hazard potential. Replacement will be required per MICC 19.07.10. The planting of two Western red cedar trees within a

proximity of it is recommended. See the attached tree plan map. Replacement trees shall be a minimum of 6-feet in height.

Tree Protection Guidelines

Tree protection fencing shall be positioned around any retained trees or off-site protected trees prior to the start of work or bringing any heavy equipment onto the site. This will help to define clearing limits and protect soils and surface roots. Existing grades within the tree protection fenced area shall not be altered.

Any excavation within the driplines of retained trees and/or the neighboring trees shall be monitored by the project arborist so necessary precautions can be taken to minimize overall impacts. Any roots damaged during site work outside of the tree protection area shall be pruned clean at sound tissue prior to backfilling or finishing areas. Sound tissue is where the root is undamaged and the bark is completely intact with the root. This will help roots to seal off potential decay and allow them to sprout new growth. Any disturbed areas near protected trees shall be watered weekly during the dry season of June through September. This will help to create a favorable environment for new root growth and reduce the overall stress associated with root loss and disturbance.

Care shall be taken to continue to protect trees during finish landscape work. Any landscape work within the protection areas shall be accomplished using hand-labor only. Simply finish the landscape within the tree protection areas by cutting/hand-pulling any unwanted vegetation and applying a 2 to 4-inch covering of organic mulch/beauty bark. Avoid large plantings, irrigation trenches and the construction of hardscapes within the driplines of retained trees.

Tree Protection Measures

The following guidelines are recommended to ensure that the designated space set aside for the preserved trees are protected and construction impacts are kept to a minimum.

- Tree protection fencing shall be erected per attached tree plan prior to moving any heavy equipment on site. Doing this will set clearing limits and avoid compaction of soils within root zones of retained trees.
- Excavation limits shall be laid out in paint on the ground to avoid over excavating.
- Excavations within the driplines shall be monitored by a qualified tree professional so necessary precautions can be taken to decrease impacts to tree parts. A qualified tree professional shall monitor excavations when work has been authorized or approved within the dripline or critical root zone.
- To establish sub grade for foundations, curbs and pavement sections near the trees, soil shall be removed parallel to the roots and not at 90-degree angles to avoid breaking and tearing roots that lead back to the trunk within the dripline. Any roots damaged during these excavations shall be hand-excavated and exposed to sound tissue and cut cleanly with a saw prior to backfilling or finishing areas.

- Areas excavated within the dripline of retained trees shall be thoroughly irrigated weekly during dry periods.
- Preparations for final landscaping shall be accomplished by hand within the driplines of retained trees. Large equipment shall be kept outside of the tree protection zones at all times.

Arborist Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine and assess trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risks associated with living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that grow, respond to their environment, mature, decline and sometimes 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 and/or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed. Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

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.

Photo Documentation

Tree #15



Trees #5 and #6 north of driveway



Trees #3 and #5 on right, located +/- 10-feet from house



Tree #3 on right, #7, #8 and #9 in background



Trees #8 and #9 on right, neighboring cedar trees in background



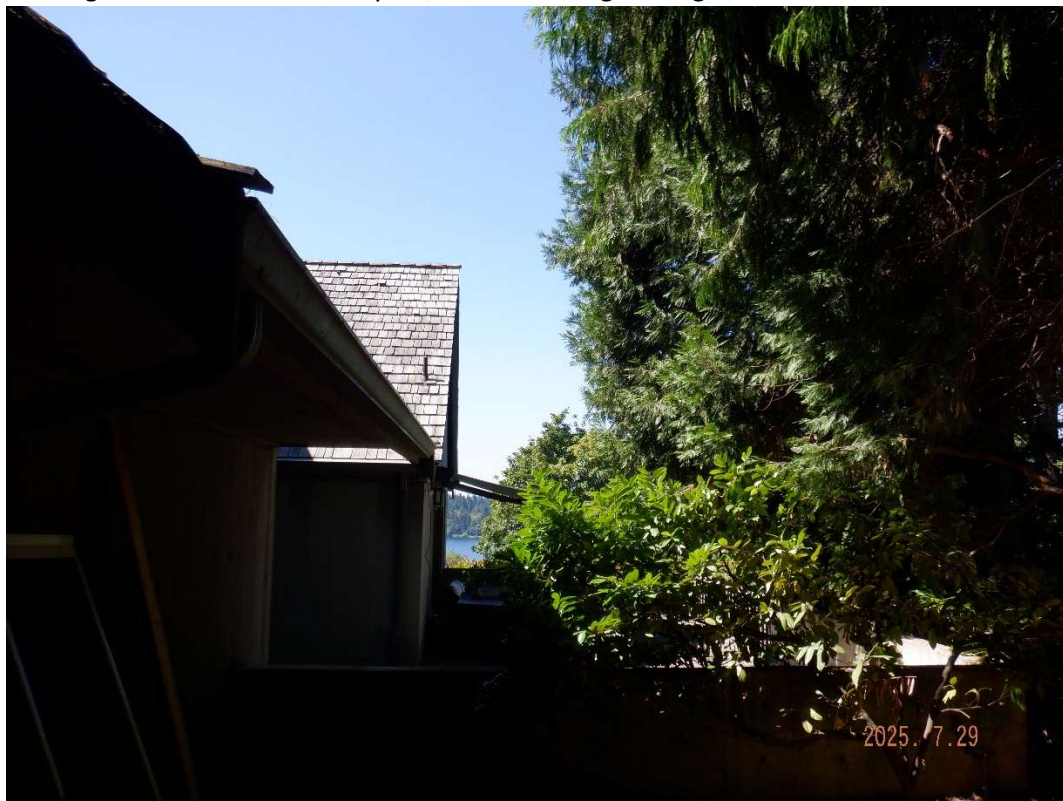
Upper crowns of trees pictured above



Back of house, neighboring cedar trees



Looking southwest across backyard, crowns of neighboring cedar trees



Looking southwest across front yard, Tree #15 in foreground



Trees #5 and #6 may require some minor crown-raising/pruning for new addition



Mature photinia shrubs adjacent to concrete wall below deck



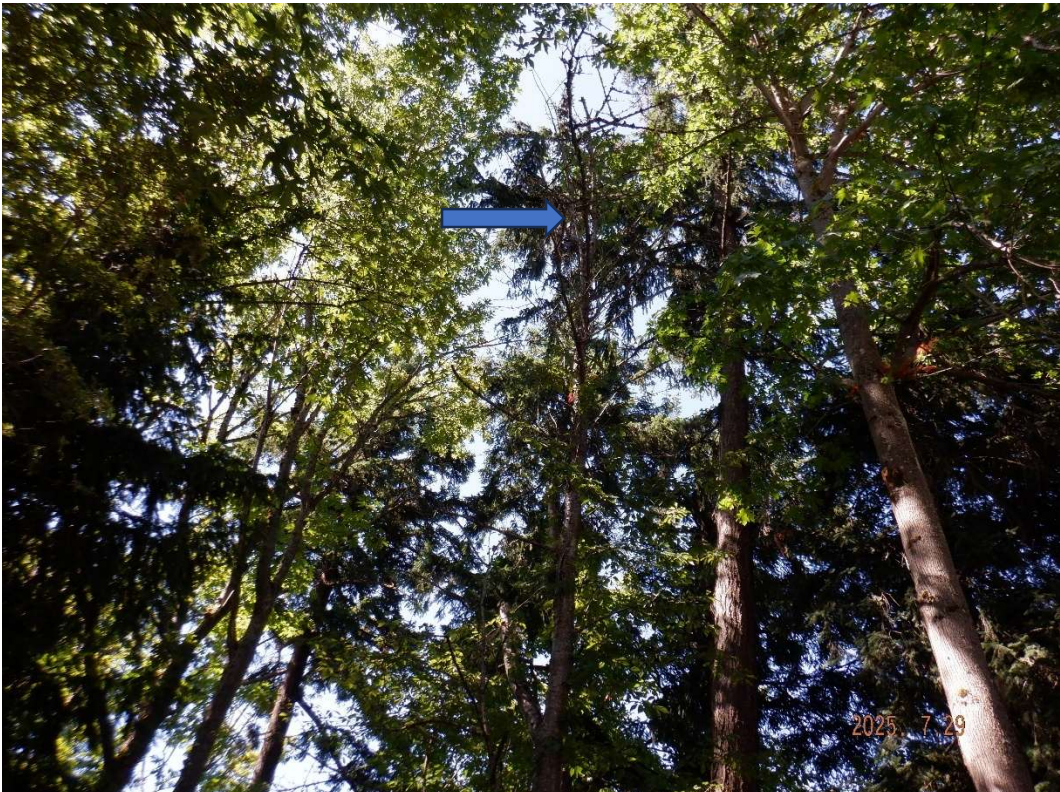
Trees #17 and #18 off south corner of house



Tree #25 (center/arrow)



Tree #25, dead top





Layton Tree Consulting LLC

For: Shihang Zhang
 Site: 4103 78th Ave SE - Mercer Island

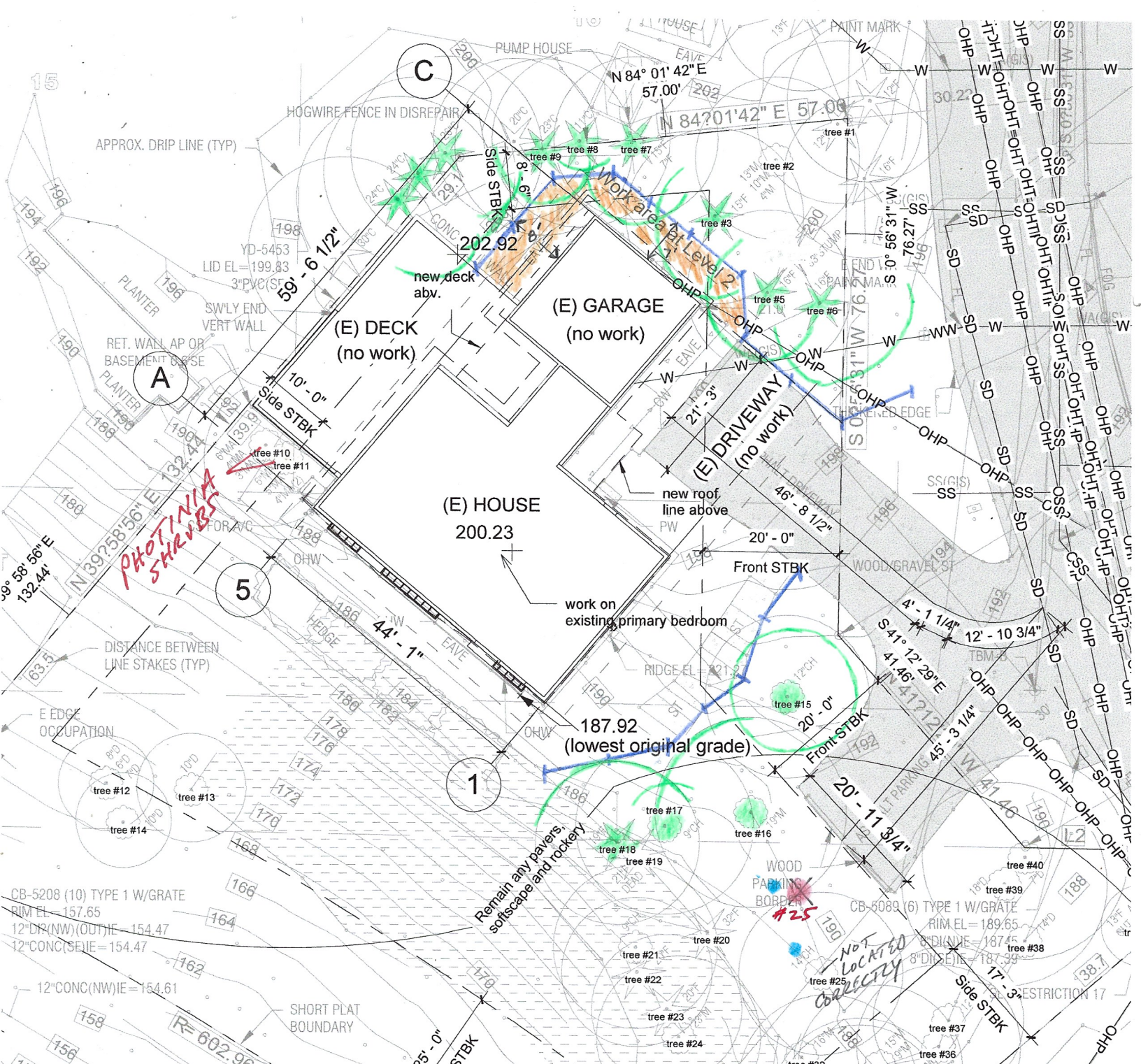
Tree Summary Table

Date: 7/29/2025

| Tree/ Tag # | Species Common Name | Species Scientific Name | DBH (inches) | Height (feet) | Drip-Line (feet) | | | | Condition | Regulated Yes/No | Exceptional Yes/No | Comments | Proposal |
|----------------------------|---------------------------|------------------------------|-----------------|------------------|---------------------|----|----|---|-----------|---------------------|-----------------------|----------------------------------|----------|
| | | | | | N | S | E | W | | | | | |
| 15 | Japanese flowering cherry | <i>Prunus serrulata</i> | 12 | 16 | 10 | 8 | 10 | 8 | Fair | Yes | No | poor form, decent vigor | Protect |
| 6 | Douglas fir | <i>Pseudotsuga menziesii</i> | 17 | 73 | 8 | 12 | 14 | 6 | Good | Yes | No | no concerns | Protect |
| 5 | Douglas fir | <i>Pseudotsuga menziesii</i> | 17 | 75 | 8 | 10 | 10 | 8 | Good | Yes | No | may need minor clearance pruning | Protect |
| 3 | Douglas fir | <i>Pseudotsuga menziesii</i> | 16 | 72 | 8 | 12 | 10 | 8 | Good | Yes | No | may need minor clearance pruning | Protect |
| 25 | bitter cherry | <i>Prunus emarginata</i> | 13 | 55 | x | x | x | x | Poor | Yes | No | dead top, in ultimate decline | Remove |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Neighboring/Off-site Trees | | | | | | | | | | | | | |
| 7 | Douglas fir | <i>Pseudotsuga menziesii</i> | 16 | 72 | 10 | 12 | 8 | 6 | Good | Yes | No | boundary line tree, minor crook | Protect |
| 8 | incense cedar | <i>Calocedrus decurrens</i> | 11 | 32 | 4 | 4 | 6 | 2 | Fair | Yes | No | suppressed | Protect |
| 9 | incense cedar | <i>Calocedrus decurrens</i> | 19 | 68 | 8 | 8 | 8 | 6 | Good | Yes | No | no concerns | Protect |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Drip-Line measurements from face of trunk

4103 78TH AVE SE
 TREE PLAN MAP



- - TREE TO BE RETAINED / PROTECTED
- ✘ - POOR CONDITION - TO BE REMOVED
- - DRIPLINE
- + - TREE PROTECTION FENCE
- PLACE 6-INCH LAYER OF MULCH / HOG FUEL
- - REPLACEMENT TREE - WESTERN RED CEDAR (2)

APPROX. SCALE
 1" = 20'

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



MERCER ISLAND TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

PROJECT INFORMATION

Property Owner
Name: _____

Site Address or
Parcel Number: _____

Project Contact
Name: _____

Contact Email
Address: _____

Contact Phone
Number: _____

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater _____

List tree numbers: _____

Number of trees 24" or greater (including 36" or greater) _____

List tree numbers: _____

Number of trees from Exceptional Tree Table (MICC 19.16) _____

List tree numbers: _____

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site _____ (A)

List tree numbers: _____

Number of Large Regulated Trees on site proposed for removal _____ (B)

List tree numbers: _____

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% _____ %

RIGHT OF WAY TREES

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way _____

List tree numbers: _____

Number of Large Regulated Trees in right of way proposed for removal _____

List tree numbers: _____

Reason for removal: _____

TREE REPLACEMENT

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

| Diameter of Removed Tree (measured 4.5' above ground) | Tree replacement Ratio | Number of Trees Proposed for Removal | Number of Tree Required for Replacement Based on Size/Type |
|---|------------------------|--------------------------------------|--|
| Less than 10"* | 1 | | |
| 10" up to 24" | 2 | | |
| Greater than 24" up to 36" | 3 | | |
| Greater than 36" and any Exceptional Tree | 6 | | |
| TOTAL TREE REPLACEMENTS | | | |

****no replacement tree is needed if the tree fits all of the following;
Less than 10 inches in diameter, not an exceptional tree, and not a replacement tree from another tree permit. ****