LAYTON TREE CONSULTING, LLC

INITIAL ARBORIST REPORT

6221 83rd Place SE
Mercer Island, WA

Report Prepared by:

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January 3, 2022

It's all about trees……

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Assignment

Layton Tree Consulting, LLC was asked to compile an Arborist Report for a property on Mercer Island. The subject property is located at 6221 83rd PL 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 (demolition of existing structure and the construction of a new single-family residence) 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: December 29, 2021

Description

Five 'regulated' trees were identified and assessed on the subject property. These are comprised of planted deciduous species. Two are located within a proximity of property lines and may be boundary trees, where portions of the tree are located on the subject property and the neighboring properties.

Each of the subject trees was assigned a number. These numbers correspond with the numbers on the Tree Summary Table and attached map. The Tree Summary Table provides detailed information for all of the subject trees.

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

Judging Retention Suitability

Not all trees necessarily warrant retention. The three retention suitability categories as described in ANSI A300 Part 5 (Standard Practices for the Management of Trees During Site Planning, Site Development and Construction) are as follows:

Good – trees are in good health condition and structural stability and have the potential for longevity at the site

Fair – trees are in fair health condition and/or have structural defects that can be mitigated with treatment. These trees may require more intense management and monitoring, and may have shorter life-spans than those in the “good” category.

Poor – trees are in poor health condition and have significant defects in structure that cannot be mitigated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess characteristics that are incompatible or undesirable in landscape settings or be unsuited for the intended use of the site.

Observations

Tree #1 is a semi-mature cluster of European white birch, located close to the southeast property corner. It appears to be a boundary line tree. Vigor appears good for age. There are no signs of any top decline. It has developed fairly good structural form. Overall condition is rated ‘fair-to-good’.

Tree #2 is a young flowering cherry variety located close to the existing house corner. It is believed to be the Mt. Fuji cultivar. No concerning issues were observed. It is in ‘good’ condition.

Tree #3 is a semi-mature flowering cherry, also located close to the existing house. It is believed to be the ‘Kwanzan’ variety. It has been topped in the past. Condition is ‘fair’.

Tree #4 is a young cluster of flowering dogwood, located close to the northeast property corner. It is comprised of four small stems or trunks. It appears to be of good vigor. It was partially topped in the past, likely to provide roadside clearance. It is in 'good' condition.

Tree #5 is a semi-mature European beech, possibly the purple leaf form or variety. The tree diameter was measured with a Spiegel Relaskop. In order to get a tape around the tree, access onto the neighboring property is needed. The tree has developed good structural form and appears to be of good vigor. It appears to be a boundary line tree. It is located close to the existing house, there is roughly 6-feet between the house wall and trunk face. The crown or canopy extends several of feet over the house.

Discussion/Recommendations

The extent of driplines (farthest reaching branches) for the subject trees can be found on the tree summary table at the back of this report. The information on the attached maps and in this report shall be used by the project architect to create the final tree retention plan sheet for City submittal, once the final site design has been completed.

The recommended Limit of Disturbance (LOD) measurements can also be found on the tree summary table for trees that may be potentially impacted by proposed improvements. The LOD measurements are based on species, age, condition, drip-line, prior improvements, proposed impacts and the anticipated cumulative impacts to the entire root zone. This is the maximum allowable encroachment. Encroachment (soil excavations) beyond the LOD is likely to cause decline or compromise long-term structural stability. These measurements shall be referenced when determining tree retention feasibility.

Trees #2 and #3 are proposed for removal. These will be compromised by the demolition of the existing house and new construction. The removal of the proposed trees from the subject property will not have any adverse impacts on trees to remain at the site.

Trees #1 and #5 appear to be boundary line trees. It is assumed both of these are to be retained. Tree #1 is located in the front corner of the property and not likely to be impacted. Tree #5 is located within a proximity of the existing house. The new house can likely be sited in the same location as the existing house foundation without having any significant impact on the tree, so long as work is carried out diligently. The canopy may need to be pruned to provide adequate construction clearance depending on the house design.

Once a final design has been developed, more specific tree protection measures can be provided.

The project arborist shall be on-site to monitor any excavation within the driplines of retained and/or impacted trees so necessary precautions can be taken to maintain these in a viable condition. Care shall be taken when working near trees to protect soils and surface roots that likely extend beyond the drip-line. Cover areas with a protective 6 to 8-inch layer of wood chips or hog fuel to protect soils from compaction and damage to surface roots.

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. Standards have been set forth under MICC 19.10.080. Please review these standards prior to any development activity.

- 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 is required and allowed within the drip-line 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 drip-line 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.

Tree Replacement

Replacement trees will be required per 19.10.070 Tree Replacement. The replacement ratios per tree removed are as follows:

Trees 10-inches to 24-inches = 2:1
Trees 24-inches to 36-inches = 3:1
Any ‘Exceptional’ tree = 6:1

Based on the attached preliminary ‘Tree Inventory & Replacement Submittal Information’ worksheet, a total of 4 replacement trees are required for the removal of Trees #2 and #3. All replacement trees are to be planted on site. Replacement trees shall be at a minimum – 1 ½ inch caliper for deciduous species and 6 feet in height for coniferous species.

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 #1 – lower trunks

Tree #1 – upper crowns

Tree #2

Tree #3 in foreground, #5 in background

Tree #4

Tree #4 – upper crown

Tree #5 – lower trunk

Tree #5 – upper crown

Tree #3 on left, #5 on right

Tree #5 – lower trunk

Back of property

Back northwest corner of property – shrubs/small trees

Layton Tree Consulting LLC

For: Coombes Development
Site: 6221 83rd PL SE - Mercer Island

Tree Summary Table
Date: 12/29/2021

Tree/ Tag #	Species Common Name	Species Scientific Name	DBH (inches)	Height (feet)	Drip-Line / Limits of Disturbance (feet)				Condition	Regulated Yes/No	Exceptional Yes/No	Comments	Proposal
					N	S	E	W					
1	European white birch	*Betula pendula*	14,13,10 (22)	55	18/14	14	18	16/14	Fair-Good	Yes	No	fairly good form and vigor	Save
2	Mt. Fuji Cherry	*Prunus serrulata 'Shirotae'*	*14	20	8	12	12	6	Good	Yes	No	young specimen, close to house	Remove
3	Kwanzan cherry	*Prunus serrulata 'Kwanzan'*	15	22	10	6	8	8	Fair	Yes	No	topped in past, close to house	Remove
4	flowering dogwood	*Cornus florida*	7,5,4,4 (10)	16	10	10/7	6	8/7	Good	Yes	No	typical cluster, topped in past	Save
5	European beech	*Fagus sylvatica L.*	28	78	22	18/5	22/16	18/16	Good	Yes	No	good form, good vigor, close to house	Save
Neighboring Trees													
	Trees #1 and #5 possibly 'boundary line' trees												

* - caliper measurement at one-foot above ground
Drip-Line and Limits of Disturbance measurements from face of trunk
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)2 +(stem2)2 +(stem3)2]).

6221 83rd PL SE

King County iMap

Tree Locator Map

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King County

Date: 12/28/2021 Notes:

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

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: 0

List tree numbers:

Number of trees 24" or greater (including 36" or greater): 1

List tree numbers: 5

Number of trees from Exceptional Tree Table (MICC 19.16): 0

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: 5 (A)

List tree numbers: 1,2,3,4,5

Number of Large Regulated Trees on site proposed for removal: 2 (B)

List tree numbers: 2,3

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30%: 60 %

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: 0

List tree numbers:

Number of Large Regulated Trees in right of way proposed for removal: 0

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	0	0
10" up to 24"	2	2	4
Greater than 24" up to 36"	3	0	0
Greater than 36" and any Exceptional Tree	6	0	0
		TOTAL TREE REPLACEMENTS	4