



ARBOR INFO LLC

2406 N Castle Way Brier, WA, 98036

**Tree Assessment
For
Seascape Homes
At
Lot 1, 5222 Forest Ave SE
Mercer Island, Washington**



**Date
9/15/2024**

Table of Contents

1. Introduction 3

2. Competence 3

3. Client 3

4. Assignment, Purpose and Use of Report 3

5. Limits of Assignment 3

6. Site Description 4

7. Methodology 4

8. Tree Description 5

9. Root Zone Impacts 6

10. Replacement Trees 6

11. Summary 7

12. Assumptions and Limiting Conditions 8

List of Tables

1-Area Summary 4

2-Tree Classifications-Buildable Site 5

3-Tree Classifications-NGPA 5

4-Tree Classifications-ROW 5

5-Root Zone Impacts 6

6-Replacement Trees-Buildable Site 6

7- Mitigation Replacement Trees 7

Addenda

- I. Tree Location Map
- II. Tree Assessment Summary Table
- III. Tree Replacement Plan
- IV. Mercer Island Check list
- V. Mercer Island Tree Inventory Form
- VI. Air Excavation Report

1. Introduction

I was contacted by Kati Eitzman of Sturman Architects to describe and assess the condition, viability and protection of trees on Lot 1, 5214 Forest Avenue, Mercer Island, WA. This report summarizes my observations and conclusions.

2. Competence

- Certified Arborist (International Society of Arboriculture, ISA #23136, PN 0426 A)
- Registered Consulting Arborist (American Society of Consulting Arborists #499).
- Tree Risk Assessment Qualified (ISA).
- Seattle Tree Service Provider #18581
- Certified forester (Society of American Foresters #951)
- Bachelor of Science degree in Forest Management from the University of Washington
- Licensed Washington State Real Estate Managing Broker #11534

3. Client

The client to whom this report is addressed is:

Jon Tellefson
Seascape Homes
PO Box 40568
Bellevue, WA 98105
Jmt1231@gmail.com

Kati Eitzman
Sturman Architects
kati@sturmanarchitects.com

4. Assignment, Purpose and Use of Report

The assignment is to describe and assess the condition and viability and recommend protection measures for on-site trees and those off site potentially affected by proposed residential construction in conformance with the City of Mercer Island “Tree Submittal Check List”, attached.

5. Limits of Assignment

The assignment is limited to the information gathered during the site visit June 21, 2020, and June 10, 2022 (date of assessment) and references noted in this report. No excavation or sampling was undertaken to determine unseen defects. No inspection of trees not reported herein was made.

A site plan indicating a proposed development plan was provided and is included in the Addenda with tree locations noted.

6. Site Description

Lot 1, 5222 Forest Ave SE, Mercer Island, WA, King County Parcel No. 1410300057. The subject property is treed and includes a single-family residence that will be removed. The lot is 15,001square feet in area.

Table 1- Area Summary

Buildable Area	5,523 sq ft
NGPA	7,778 sq ft
ROW	1,700 sq ft
Total	15,001sq ft

A new single-family residence is planned for the site.

7. Methodology

Each tree was measured for diameter at 4.5-feet above ground, (or equivalent) total height, percentage of live green crown, and dripline (extent of live limbs). Each tree is identified on the ground with a numbered aluminum tag corresponding to the attached Tree Location Map and Tree Assessment Spreadsheet.

Each tree was assessed as to its condition, or vigor and viability:

Vigor or condition:

Health: Biotic

- Good: No evidence of fungal infection or decay; expected to survive without disturbance to its normal life expectancy. (40-100 years in this case)
- Fair: Tree has initial fungal decay or evidence of insect habitat and is less likely to survive to normal life expectancy. Some with minor defects, are rated viable,
- Poor: Tree has significant fungal decay and defects that render it not likely to survive three years.

Structural: Abiotic

- Good: no significant abiotic or mechanical defects
- Fair: less than preferred form, defects such as breaks in the bole, poor limb attachments, included bark, poor root contact, etc.
- Poor: Broken or cracked bole or limbs; root plate compromised

Viability:

- A measure of whether the tree is likely to live to its “normal” life span or has defects limiting that potential or poses a risk to the residence or proposed development is a simple ‘yes/no’ rating.

8. Tree Description

Refer to the attached Tree Assessment Summary Form. A total of fourteen on-site trees as indicated on the Site Plan provided were found. They are classified by the City Municipal Code (MICC) 19.10 – “Trees” as indicated following in the following tables.

Table 2- Tree Classifications-On-Buildable site

Species	Exceptional	Large	Small	Not Viable
Douglas-fir	1	1		
Bigleaf maple	1			

A total of ten NGPA trees as indicated on the Site Plan provided were found. They are classified by the City Municipal Code (MICC) 19.10 – “Trees” as indicated following in Table 2.

Table 3- Tree Classifications-On-NGPA

Species	Exceptional	Large	Small	Not Viable
W. red cedar	2	2		
Bigleaf maple			1	2
W. Hemlock		1		
Red alder				1

A total of two ROW trees as indicated on the Site Plan provided were found. They are classified by the City Municipal Code (MICC) 19.10 – “Trees” as indicated following in Table.

Table 4- Tree Classifications-On-ROW

Species	Exceptional	Large	Small	Not Viable
Douglas-fir	1			
W. Hemlock	1			

The Exceptional tree category does not double count the “large” trees. Non-viable trees are not counted in the classifications.

9. Root Zone Impacts

Retained trees are those in the ROW and NGPA as all on site trees will be removed. The limits of disturbance for retained trees are determined on a case-by-case basis for each tree in consideration of the tree size, estimate of the extent of the root zone and consideration of the planned root zone disturbance. Distances from the face of each tree to the excavation limit were provided by the client.

Site Development impacts on retained tree root systems are rated as follows:

- None; Site Disturbance, Excavation and fill are beyond the Critical Root Zone
- Minor: Shallow Site Disturbance or will affect less than 15-percent of the Critical Root Zone –Careful excavation required including consideration of air-vac methods.
- Moderate: Site Disturbance will affect less than 30-percent of the Critical Root Zone but is species and circumstance dependent. Careful excavation required including consideration of air-vac methods.

Table 5 – Root Zone Impacts-Lot 1 ROW

Root Zone Impacts-Retained Trees - Lot 1 Forest Avenue											
Tree #	Species	DBH (in)	Disposition		Root Zone (radius)		Distance tree face to:		Impacted Root Zone (%)*	Comment	Impact
			Retain	Remove	Outer (ft)	Inner (ft)	Excavation (ft)	Fill (ft)			
ROW											
1005	Douglas-fir	41.2	x		24	12	18	NA	5.90%	125 sf (disturbed) / 2093 sf (RZ) = .59	Minor
1006	Western hemlock	24.2	x		16	8	20	NA	0%	Less than 1 sf of outer root zone affected	None
NGPA-- No Disturbance											
*A calculation of the total area (square feet) of proposed disturbance in the outer half of the tree's drip line divided by the total area of the outer half of the dripline (square feet) that cannot exceed 33 percent or 1/3 of the outer dripline.											

Root zone impacts to the retained ROW trees are none or minor.

The tree removal plan will remove all viable trees, leaving no viable trees on site.

10. Replacement Trees

The Tree Inventory and Replacement Form in Addendum IV provides the tree removal and replacement calculation. Trees 1001,1003 and 1004 are proposed for removal and will be replaced with 14 trees.

The selected native replacements to be planted on site as indicated on the attached Replacement Tree Plan sheet A1.2 in the addenda is indicated following.

Table 6 – Replacement Trees-Buildable Site

Common name	Scientific name	Number	Size
Western hemlock	<i>Tsuga heterophylla</i>	5	6’ height
Douglas-fir	<i>Psuedotsuga menziesii</i>	1	6’ height
Quaking aspen	<i>Populus tremuloides</i>	3	1.5” caliper
Vine maple	<i>Acer macrophyllum</i>	3	1.5” caliper
Western hazel nut	<i>Corylus avellana</i>	2	1.5” caliper
Total		14	

Per MCC 19.10.070 replacement trees must be at least 6-feet tall for the conifer Douglas-fir and Western hemlock and 1.5-inches in diameter at the base for the deciduous aspen, vine maple and hazel nut. These are to be maintained for a period of 5 years after establishment. The planting detail is found in the addenda.

Accompanying this report is the Stream Buffer Reduction and Enhancement for Forest Creek Lot 1 5222 Forest Ave SE, Parcel 141030-0057, Mercer Island, WA report prepared by Altman Oliver and Associates. That report specifies the following replacement trees along with complete planting and survival specifications.

Table 7 – Mitigation Replacement Trees

Common name	Scientific name	Number	Size
Douglas-fir	<i>Psuedotsuga menziesii</i>	5	6’ height
Western hazel nut	<i>Corylus avellana</i>	4	1.5” caliper
Vine maple	<i>Acer macrophyllum</i>	3	1.5” caliper
Cascara	<i>Rhamnus purshiana</i>	4	1.5” caliper
Total		16	

11. Summary

Tree protections for those to be retained include:

- Certified Arborist on site during excavation activities within the defined root zone of all trees.
- All trees to be retained are to be fenced at the edge of the recommended tree protection zone with 6-foot high cyclone type fencing.
- Utility lines should be bored. Bore access pits to be developed with 18” buckets or hand dug.
- Retaining wall footings to be minimally deep, no more than 12-inches.
- Tree roots over 1-1/2 inches in diameter encountered in all excavations are to be cut cleanly to the trench wall with clean sharp tools. Roots to be covered with soil or wetted burlap if they must remain exposed.

- Supplemental irrigation is to be provided during summer months (generally June-September) for all trees in the construction zones.
- Recommended protected tree root zones are to be covered with 4-inches of hog fuel at all times. Where machinery access is needed, the root zones should be covered with 12-inches of hog fuel, plywood or steel sheets.
- Stumps for trees to be removed are to be ground out (not excavated).

12. Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Ownership of the subject trees as provided by the client is assumed to be correct. No responsibility is assumed for legal matters. No opinion as to the property line location is made.
2. Care has been taken to obtain all information from reliable sources. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
3. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including additional fees.
4. This report and any values expressed herein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
5. The exhibits in this report are included to assist the reader and are not necessarily to scale.
6. Unless expressed otherwise, information in this report covers only items that were examined and reflects the condition of those items at the time of inspection. The subject site was cleared of all vegetation at the time of inspection therefore the extent of removals is inferred from adjacent undisturbed areas. The inspection is limited to visual examination of accessible portions of the trees and plants.
7. Loss or alteration of any part of the report invalidates the entire report. Ownership of any documents related to this report passes to the client only.
8. The liability of ArborInfo LLC its contractors and employees is limited to the client only and only up to the amount of the fee actually received for the assignment.
9. *There is no warranty suggested for any of the trees subject to this report. Weather, latent tree conditions, and future man-caused activities could cause physiologic changes and deteriorating tree condition. Over time, deteriorating tree conditions may appear and there may be conditions, which are not now visible which, could cause tree failure. This report or the verbal comments made at the site in no way warrant the structural stability or long-term condition of any tree, but represent my opinion based on the observations made.*

10. *NEARLY ALL TREES IN ANY CONDITION STANDING WITHIN REACH OF IMPROVEMENTS OR HUMAN USE AREAS REPRESENT HAZARDS THAT COULD LEAD TO DAMAGE OR INJURY. THE ASSESSMENT IS VALID FOR TWO YEARS FROM THE DATE OF INSPECTION, ONLY.*

11. PERTINENT JURISDICTION RULES AND REGULATIONS SHOULD BE CONSULTED PRIOR TO THE REMOVAL OF ANY TREE.

Respectfully Submitted,

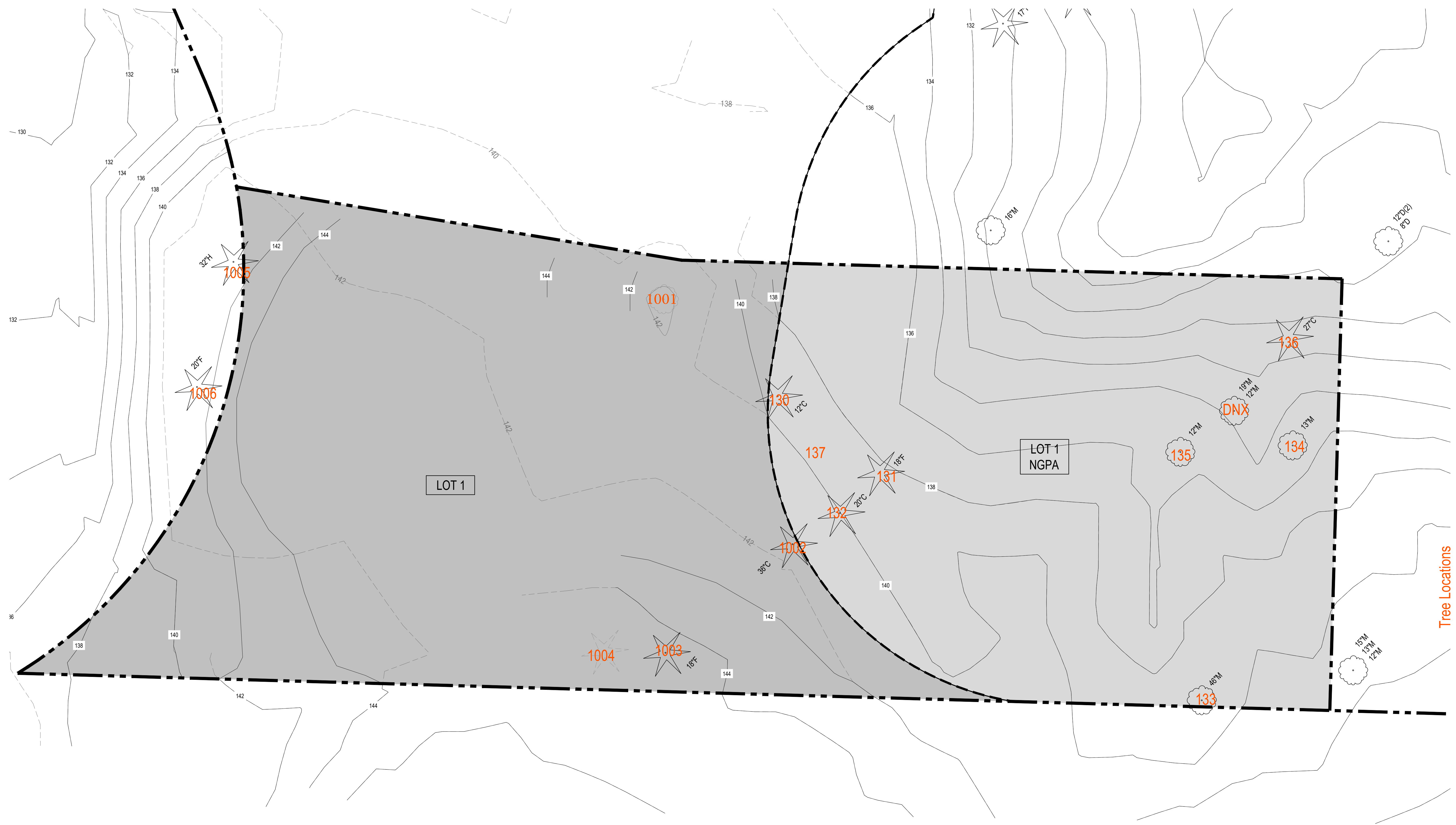
A handwritten signature in cursive script that reads "Tom Hanson".

Thomas M. Hanson, CF, RCA

Addenda

- I. Tree Location Map
- II. Tree Assessment Summary Table
- III. Tree Replacement Plan
- IV. Mercer Island Check list
- V. Mercer Island Tree Inventory Form
- VI. Air Excavation Report

REVISIONS:	DRAWN BY:	CHECKED BY:
	KE	BJS



1 LOT 1 FULL TREE PLAN
SCALE: 1/8" = 1'-0"

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org

Inspection Requests: Online: www.mybuildingpermit.com VM: 206.275.7730



TREE SUBMITTAL CHECKLIST

If a box is checked, please provide the information in your next submittal

SUBMITTAL ITEMS

1. The Mercer Island Tree Inventory Form

- Provide the City's Mercer Island Tree Inventory Form

2. Arborist report/tree inventory

- Provide an Arborist report, prepared by a qualified Arborist. Include the following information in the arborist report.
 - 1. Description of how the arborist meets the threshold requirements for Qualified Arborist.
 - 2. A complete description of each tree's diameter, species, critical root zone, limits of allowable disturbance, health, condition, and viability.
 - 3. A description of the method(s) used to determine the limits of allowable disturbance (i.e., critical root zone, root plate diameter, or a case-by-case basis description for individual trees).
 - 4. Any special instructions specifically outlining any work proposed within the limits of disturbance protection areas (i.e. hand-digging, air space, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare).
 - 5. For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation, windfirmness, unsuitability species, etc. If there is no reasonable alternative action (pruning, cabling, etc.) possible, replacement recommendations must be given.
 - 6. Describe the impact of necessary tree removal on the remaining trees, including those in a grove or on adjacent properties.
 - 7. Describe timing and installation of tree protection measures. Such measures must include fencing and be in accordance with the tree protection standards as outlined in MICC 19.10.
 - 8. The suggested location and species of replacement trees to be used when required. The report shall include planting and maintenance specifications to ensure long term survival.
 - 9. **A Tree Inventory** containing the following:
 - a. A numbering system of all existing large trees on the property (with corresponding tags on trees). The inventory shall also include large trees on adjacent property with driplines or critical root zones extending into the property.
 - b. Tree size (diameter).
 - c. Proposed tree status (retained or proposed for removal).
 - d. Tree type or species.
 - e. Identify all Exceptional trees and differentiate between those less than 24 inches and those greater than or equal to 24 inches in diameter.
 - f. Brief general health or condition rating of each tree (i.e. poor, fair, good, etc.).

3. Site/tree retention plan

Indicate the following on all civil/utility and grading sheets. If there are no civil sheets indicate on the architectural site plan

- 1. Location of all proposed improvements (building footprint, access, utilities, buffers, required landscape areas).
- 2. Surveyed location of all large trees and Exceptional trees on the property
- 3. Show the critical root zone of Large trees on adjacent properties if driplines extend over the subject property line.
- 4. Trees labeled corresponding to the tree inventory numbering system on the Mercer Island Tree Inventory Form.
- 5. Identify Exceptional trees using different symbols for trees less than 24 inches and trees greater than or equal to 24 inches.
- 6. Location of tree protection measures.
- 7. Limits of excavation near potential saved trees (e.g. excavation limits for building foundation).
- 8. Indicate clearing limits/limits of disturbance (LOD) around all trees potentially impacted by site disturbances - grading, demolition, construction activities (including approximate LOD of off-site trees with overhanging driplines), etc.
- 9. Proposed tree status (trees to be removed or retained) noted by an 'X' for removal.

4. Replanting plan

- Provide the Replanting plan showing proposed locations of any required replacement trees.

PEER REVIEW AND CONFLICT OF INTEREST

A peer review of the tree permit application by a qualified arborist may be required to verify the adequacy of the information and analysis. **The applicant shall bear the cost of the peer review.**

The City Arborist may require the applicant retain a replacement qualified arborist or may require a peer review where the City Arborist believes a conflict of interest may exist.

For example, if an otherwise qualified arborist is employed by a tree removal company and prepares the arborist report for a development proposal, a replacement qualified arborist or peer review may be required.

ARBORIST QUALIFICATION

For tree reviews associated with a development proposal, a qualified arborist must have

- A minimum of three (3) years' experience working directly with the protection of trees during construction
- Have experience with the likelihood of tree survival after construction
- Be able to prescribe appropriate measures for the preservation of trees during land development
- ISA Tree Risk Assessment Qualification
- Your qualified arborists must have at least one (1) of the following credentials:
 - ISA Certified Arborist;
 - ISA Certified Arborist Municipal Specialist;
 - ISA Board Certified Master Arborist;
 - American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - Society of American Foresters (SAF) Certified Forester for Forest Management Plans;

ADDITIONAL INFORMATION

Additional Information. The City Arborist or Code Official may require additional documentation, plans, or information as needed to ensure compliance with applicable City regulations.

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 3 (A)

List tree numbers: _____

Number of Large Regulated Trees on site proposed for removal 3 (B)

List tree numbers: _____

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% 87 %

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. ****

Memorandum

To: Seascape Homes LLC c/o Jon Tellefson
CC: Sturman Architects c/o Kati Eitzman
Site: 5222 Forest Ave SE, Mercer Island, WA 98040
Re: Exploratory Pneumatic Excavation
Date: June 20, 2024
Project Arborist: Connor McDermott
ISA Certified Arborist PN-8704A
ISA Qualified Tree Risk Assessor
John Wells
Arborist Technician
Referenced Documents: Site Plan A1.1 (Sturman Architects, 05/14/2024)

Summary

This memorandum documents the site visit of Connor McDermott and John Wells, of Tree Solutions Inc., to the above referenced site on June 14, 2024. We were asked to visit the site and perform exploratory pneumatic excavation at the proposed limits of disturbance for tree 1005 in preparation for a site development. We were asked to provide a memo with our findings and evaluation of proposed impacts. This memo only includes the tree within the immediate construction area as delineated on site plan specifically referenced in this memo (Figure 1).

We utilized staking by the contractor, Jon Tellefson of Seascape Homes LLC, to determine the proposed limits of disturbance adjacent to the tree (Photo 1). We excavated an approximately 30 foot long trench 19 feet east of tree 1005 to a depth of 24 inches (Photo 2). We exposed no structural roots, roots over 2-inches diameter, during our excavation and exposed minimal fine roots (Photo 3). Photos documenting our excavation can be found in Appendix B.

In our professional opinion, the proposed disturbance will have a minimal impact to the health and structural condition of the tree. We recommend tree protection measures in accordance to Mercer Island Municipal Code 19.10.080, including tree protection fencing, are set at the proposed limits of disturbance.

Respectfully Submitted,

Connor McDermott,
Consulting Arborist

Appendix A Figures

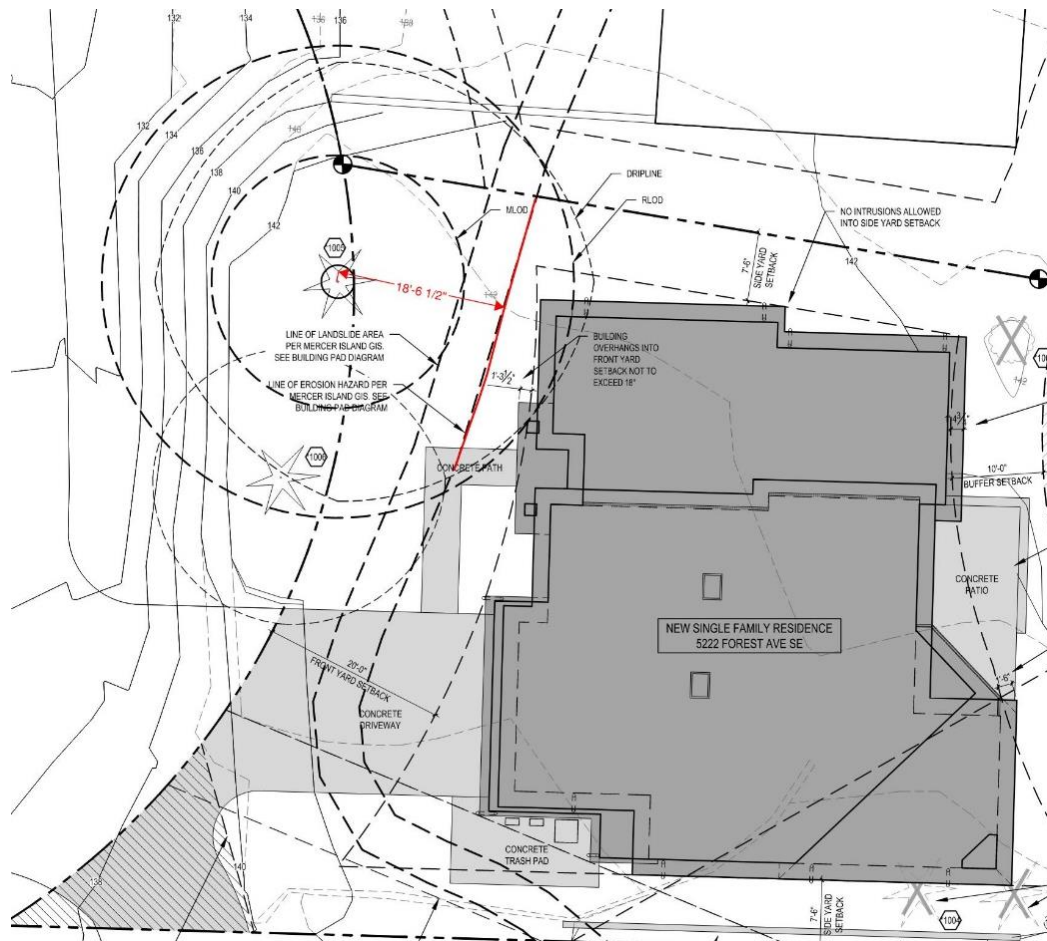


Figure 1. Snip of the provided site plan (Site Plan A1.1, Sturman Architects, 05/14/2024). The approximate location of the excavation performed is indicated by the red line.

Appendix B Photographs

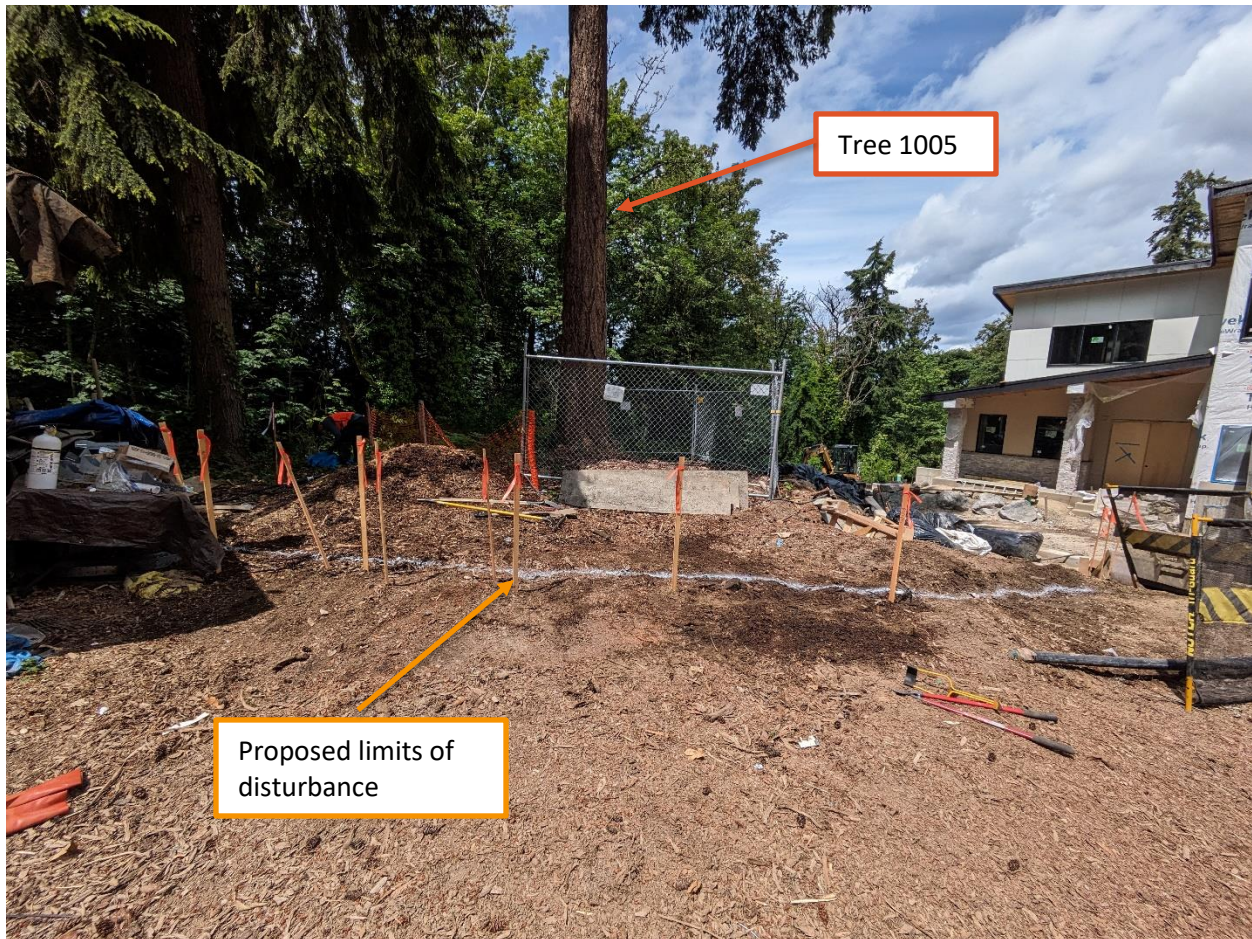


Photo 1. Tree 1005 indicated above. The proposed limits of disturbance, and where we trenched, is indicated by the orange staking.



Photo 2. View of the trench from the north following pneumatic excavation.



Photo 3. A typical section of trench with small feeder roots are exposed.

Appendix C Assumptions & Limiting Conditions

- 1 Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.
- 2 The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.
- 3 Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.
- 4 All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.
- 5 Unless otherwise agreed, (1) information contained in any report by consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.
- 6 These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described and assessed.
- 7 Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.
- 8 Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.
- 9 Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.