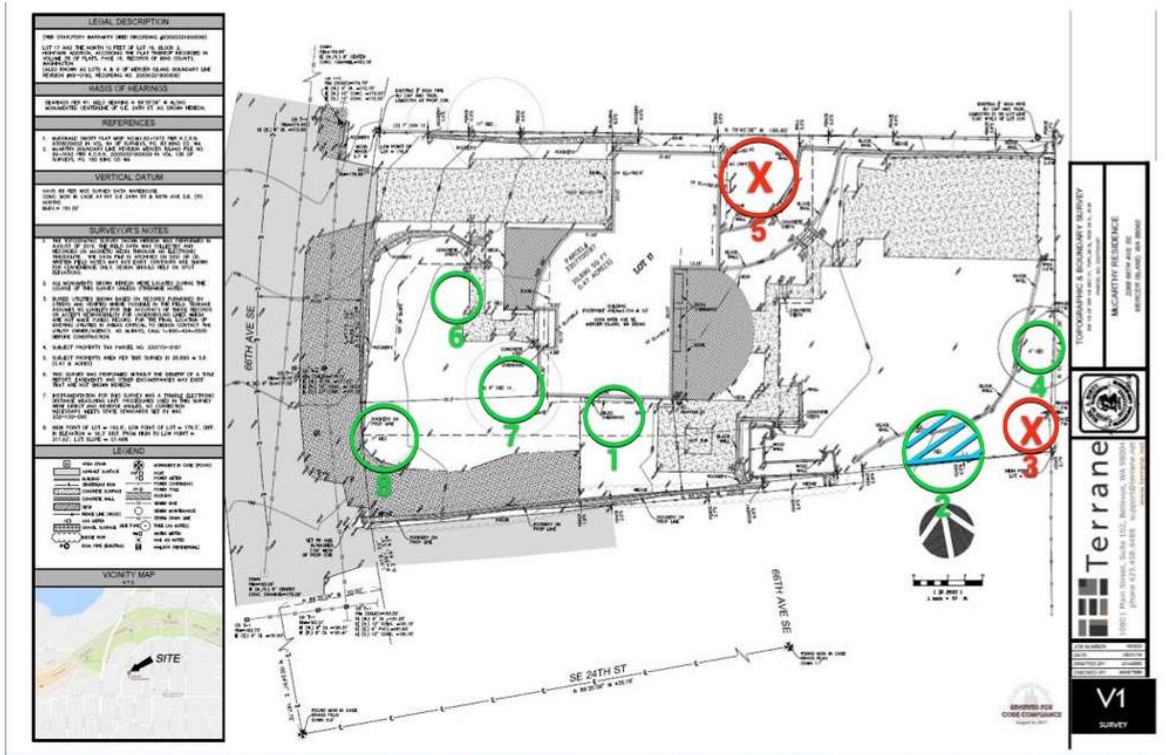


Eric Ledford
 Sound Tree Care LLC
 3/12/2025 | 11 Photos



Cahoon Residence Arborist Report

2268 66th Ave SE
 Mercer Island, WA 98040



Arborist Report for Construction – Cahoon Residence

Prepared for: Kelly Engelbracht 2268 66th Avenue Southeast Mercer Island, Washington 98040

Site Visit Details: Date: March 11, 2025 Time: 9:30 AM – 10:30 AM

Certified Arborist: Eric Ledford PN 9290A

1. Arborist Qualifications

This report has been prepared by Eric Ledford, a Certified Arborist (ISA PN-9290A) with Tree Risk Assessment Qualification (TRAQ).

- Experience: 19 years of industry experience, with 12 years serving as a Project Arborist on construction projects of similar scope.
- Specialties: Tree risk assessment, preservation during development, and regulatory compliance.
- Compliance: Meets the Qualified Arborist standard per MICC 19.10 and Mercer Island Tree Submittal Checklist.

2. Methodology

The evaluation and recommendations in this report adhere to the following International Society of Arboriculture (ISA) Best Management Practices (BMPs):

- Tree Risk Assessment (ISA BMP, 2017): Utilized for evaluating structural integrity and potential failure risks.
- Managing Trees During Construction (ISA BMP, 2008): Guidelines for minimizing construction impacts on retained trees.
- Tree Protection During Development (ISA BMP, 2012): Standards for fencing, soil compaction prevention, and root zone protection.
- Pruning (ISA BMP, 2019): Considerations for structural pruning and hazard reduction.
- Tree Planting (ISA BMP, 2014): Ensuring proper species selection, planting techniques, and after-care.

Critical Root Zone (CRZ) Determination:

- Method Used: Following ISA BMP guidance, CRZ was determined using a 1-foot radius per 1 inch of DBH.
- Mitigation Measures: Special instructions outlined below. Key:
- DBH Calculation: For multistem trees, $DBH = \sqrt{(\text{stem1}^2 + \text{stem2}^2 + \dots)}$.
- CRZ Calculation: 1 ft per 1 inch DBH.

Exceptional & Large Regulated Trees

- Exceptional Trees ($\geq 36"$ DBH): None.
- Large Regulated Trees ($\geq 10"$ DBH): Trees #2, #5, #7 and #8.

Proposed Tree Removal & Replacement

- Trees #3, and #5 are proposed for removal.
- Replacement Requirements:
Tree #5 (12" DBH) → Requires 2 replacement trees.
Tree #3 (6" DBH) → Requires 1 replacement tree.

Total Replacement Trees Required: 3.

4. Impact Analysis & Tree Protection

- Impact on Remaining Trees & Adjacent Properties:
Removal of Tree #3 may expose Tree #4 to increased wind loads.
Removal of Tree #5 may impact root zones of nearby trees.

- Protection Measures for Retained Trees:

Tree Protection Fencing: Chain-link fencing installed outside the CRZ.

Soil Protection: Apply mulch layer to prevent compaction.

Hand-Digging Methods: Required within 2 feet of the CRZ.

Monitoring Plan: Weekly inspections during construction.

- Timing & Installation of Tree Protection Measures:
To be installed prior to site grading and remain until project completion.

5. Replanting Plan

- Suggested Replacement Trees:

Species: Native Pacific Northwest species per MICC 19.16.

Size Requirements: Conifers ≥ 6 ft tall, deciduous $\geq 1.5"$ caliper.

Planting Locations: Adjacent to removed trees for canopy continuity.

- Maintenance Plan:

Irrigation: Deep watering biweekly for 1 year.

Mulching: Maintain 3-inch mulch ring.

Structural Pruning: After 2 years.

6. Conclusion & Recommendations

- Secure tree removal and replacement permits from Mercer Island's Community Planning & Development Department.
- Implement tree protection measures before construction begins.
- Replace removed trees per MICC 19.16 regulations.
- Monitor retained trees for post-construction stress and root impacts.

1

Cahoon Residence Tree Table

Tree #	Species	DBH	CRZ	Condition	Location	Notes	Status
1	Magnolia grandiflora	9"	9'	Good	Side yard		Retain
2	Katsura	12"	12'	Fair	Back yard	Vine encroachment	Retain
3	Katsura	6"	6'	Fair	Back yard		Proposed removal
4	Katsura	6"	6'	Good	Back yard		Retain
5	Fig	12"	12'	Fair	Back yard		Proposed removal
6	Styrax japonica	7"	7'	Good	Front yard		Retain
7	Japanese maple	11"	11'	Good	Front yard	Multistemmed	Retain
8	Magnolia "Galaxy"	10"	10'	Good	Front yard		Retain

Project: Kelly Engelbracht
 Date: 3/17/2025, 6:56pm
 Creator: Dana Ledford

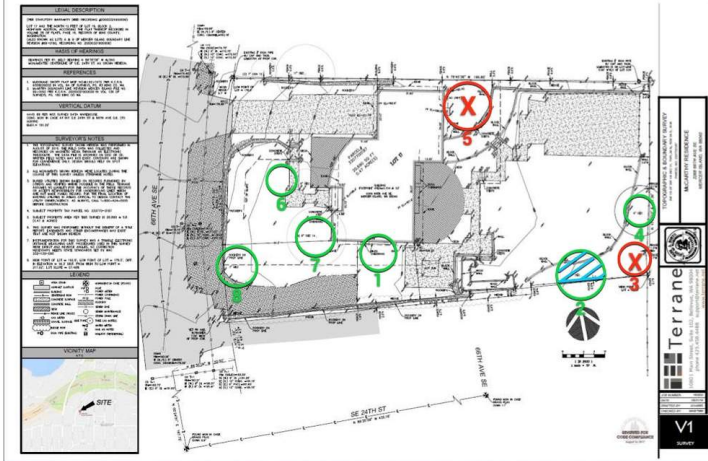
Tree Protection Plan

There are 5 trees in the area of construction, trees 1-5. Trees 3,5 are slated for removal. Tree 4 will not need protection. Tree 2 will need protection, as indicated by the blue hash marks.

Trees 6-8 fall outside of the construction area and will not need protection.

Tree protection fencing must follow the guidelines set by Mercer Island in the diagram below.

1



Project: Kelly Engelbracht
 Date: 3/13/2025, 6:26pm
 Creator: Dana Ledford

Tree Protection Diagram

2

TREE PROTECTION AREA (TPZ)

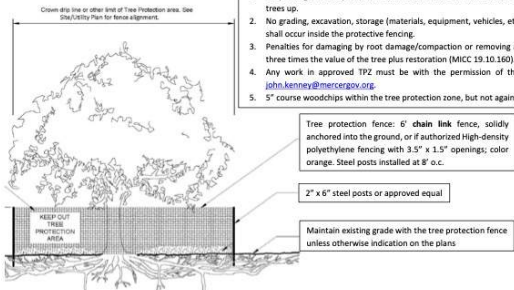
KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation

- Notes:
1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
 2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
 3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
 4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
 5. 5" course woodchips within the tree protection zone, but not against the tree trunk.



Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

Project: Kelly Engelbracht
 Date: 3/13/2025, 7:35pm
 Creator: Dana Ledford

Tree Photos

1



Project: Kelly Engelbracht
Date: 3/11/2025, 10:21am
Creator: Eric Ledford
Tags: #1

2



Project: Kelly Engelbracht
Date: 3/11/2025, 10:21am
Creator: Eric Ledford
Tags: #2

3



Mar 11, 2025 at 10:22:00 AM
47.589771° N 122.246039° W

Project: Kelly Engelbracht
Date: 3/11/2025, 10:22am
Creator: Eric Ledford
Tags: #3

4



Mar 11, 2025 at 10:22:12 AM
47.589802° N 122.246021° W

Project: Kelly Engelbracht
Date: 3/11/2025, 10:22am
Creator: Eric Ledford
Tags: #4

5



Project: Kelly Engelbracht
Date: 3/11/2025, 10:22am
Creator: Eric Ledford
Tags: #5

6



Project: Kelly Engelbracht
Date: 3/11/2025, 10:23am
Creator: Eric Ledford
Tags: #6

7



Mar 11, 2025 at 10:24:22 AM
47.589782° N 122.246542° W

Project: Kelly Engelbracht
Date: 3/11/2025, 10:24am
Creator: Eric Ledford
Tags: #7

8



Mar 11, 2025 at 10:24:57 AM
47.589843° N 122.246642° W

Project: Kelly Engelbracht
Date: 3/11/2025, 10:24am
Creator: Eric Ledford
Tags: #8