Greenforest Incorporated

Consulting Arborist

TO: Justin Lagers
NW Eastside Builders, LLC

REFERENCE: Significant Tree Inventory Report

SITE ADDRESS: 85th Ave SE, Mercer Island WA

DATE: January 13, 2025

PREPARED BY: Favero Greenforest, ISA Certified Arborist # PN -0143A
ISA Tree Risk Assessment Qualified
ASCA Registered Consulting Arborist® #379
ASCA Tree & Plant Appraisal Qualified

You contacted me and contracted my services as a consulting arborist. My assignment is to tag and inspect trees at the above referenced site. This report establishes the condition of the regulated trees on site, and provides a *significant tree inventory* as per MI code §19.10.090.c.2.a, including:

i. A numbering system of all existing large trees on the subject 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 development proposal site;
ii. Size (diameter);
iii. Proposed tree status (yet to be determined);
iv. Tree type or species;
v. Brief general health or condition rating of these trees (i.e., poor, fair, good, etc.).

I visited the site 1/8/2025 and visually inspected the regulated trees associated with this site, which are the subject of this report.

TREE INSPECTION

I marked each tree with 1" x 3.5" aluminum tag indicating tree number. I visually inspected each tree from the ground. I performed a Level 1 risk assessment.[1] This is the standard assessment for populations of trees near specified targets, conducted in order to identify obvious defects or specified conditions such as a pre-development inventory. This is a limited visual assessment focuses on identifying trees with imminent and/or probable likelihood of failure, and/or other visible conditions that will affect tree retention.

I recorded tree species and size (DBH). I estimated the average dripline of each tree. I rated the condition of each tree, both health and structure/form. A tree's structure/form is distinct from its health. This inspection identifies what is visible with both.

High-risk trees can appear healthy in that they can have a dense, green canopy. This may occur when there is sufficient sapwood or adventitious roots present to maintain tree health, but inadequate strength for structural support.

Conversely, trees in poor health may or may not be structurally stable. For example, tree decline due to root disease is likely to cause the tree to be structurally unstable, while decline due to drought or insect attack may not.

One way that tree health and structure/form are linked is that healthy trees are more capable of compensating for structural defects. A healthy tree can develop adaptive growth that adds strength to parts weakened by decay, cracks, and wounds.

This report identifies unhealthy trees based on existing health conditions and tree structure, and specifies which trees are most suitable for preservation.[2]

No invasive procedures were performed on any trees. The results of this inspection are based on what was visible at the time of the inspection.

[1] Companion publication to the ANSI A300 Part 9: Tree Shrub and Other woody Plant Management – Standard Practices, Tree Risk Assessment. 2011. ISA.
[2] Companion publication to the *ANSI A300 Part 5: Tree Shrub and Other woody Plant Maintenance – Standard Practices, Managing Trees During Construction*. 2008. ISA.

The attached inventory summarizes my inspection results and provides the following information for each tree:

Proposed Action is yet to be determined.

Regulated Tree Category as defined by Municipal code.

Grove tree indicates 8 or more trees, 10" DBH or larger that comprise a contiguous canopy.

> 24" indicates trees with DBH equal to or greater than 24".

Tree number as shown on tag in the field, and on attached exhibit.

DBH Stem diameter in inches measured 4.5 feet from the ground. Multiple-stemmed trees are reported as a single integer, using quadratic mean.

QMD Multiple-stemmed trees are reported as a single integer, using quadratic mean.

Tree Species Latin and common name.

Dripline average branch extension from the trunk as radius in feet.

Health and Structure/Form ratings '1' indicates good to excellent condition; no visible health-related problems or structural defects, '2' indicates fair condition; minor visible problems or defects that may require attention if the tree is retained, and '3' indicates poor condition; significant visible problems or defects and tree removal is recommended.

Comments on Condition visible at time of inspection, which includes:

Tree type indicates if tree is coniferous, deciduous or broadleaf evergreen.

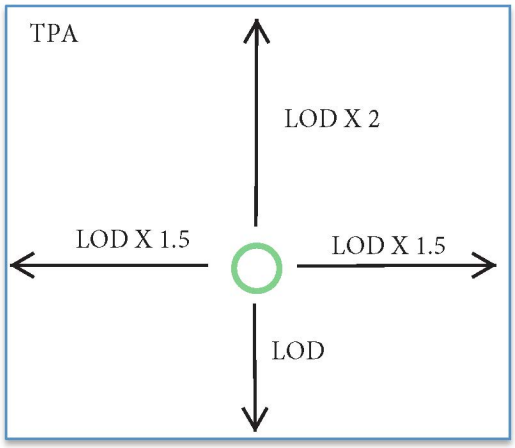
Viability is a determination by the arborist whether the tree is viable for retention.

TREE INDUSTRY BASED LIMITS OF SOIL DISTURBANCE

For planning purposes for proposed building placement and other improvements that require excavation/trenching, Attachment 3 lists minimum distances based on industry standards, likely to be accepted by MI Planning Department as an alternative to code mandated requirements. They are listed as limits of disturbance (LOD).

The tree protection area (TPA) recommended for these LOD is the shape of a square and is most effective when used for perimeter trees. Frequently a portion of this area is offsite or covering a parking area (where the soil and roots are protected by paving), and sometimes the tree is not centered in this defined area.

Encroachment closer to a tree for certain activities can be done while still preserving tree health and stability. This LOD establishes a minimum distance of proximity for a single side of the box-shaped TPA. This allows for work and access closer to the tree on a single side and expands the protected area an equivalent distance on the opposite side of the tree. (See diagram right.)



The LOD are calculated for all the trees (and for trees on adjoining parcels with overhanging driplines). They are listed in the table above as distance in feet from the trunk for the side of the tree to be impacted by construction. They are determined using rootplate[3] and trunk diameter,[4,5] Tree Fund research,[6] and ISA Best Management Practices.[7]

[3] Coder, Kim D. 2005. *Tree Biomechanics Series*. University of Georgia School of Forest Resources.
[4] Smiley, E. Thomas, Ph. D. *Assessing the Failure Potential of Tree Roots, Shade Tree Technical Report*. Bartlett Tree Research Laboratories.
[5] Fite, Kelby and E. Thomas Smiley. 2009. *Managing Trees During construction; Part Two*. Arborist News. ISA.
[6] Andrew R. Benson, Andrew Koeser, Justin Morgenroth. *Responses Of Mature Roadside Trees To Root Severance Treatments.* 2019. Journal of Urban Forestry & Urban Greening.
[7] Companion publication to the ANSI A300 Series, Part 5: Managing Trees During Construction. 2008. ISA.

Limitations and Use of this Report

This document provides required tree attributes for a *tree inventory*: required data for an *arborist report* (as per MI code §19.10.090.c.2.b) shall be provided under separate cover and scope. This inventory shall be used in the building permit process for the subject parcel, and as an aid in tree retention with City planners.

This tree report establishes, via the most practical means available, the existing conditions of the trees on the subject property. Ratings for health and structure, as well as any recommendations are valid only through the development and construction process. This report is based solely on what is readily visible and observable, without any invasive means.

There are several conditions that can affect a tree's condition that may be pre-existing and unable to be ascertained with a visual-only analysis. No attempt was made to determine the presence of hidden or concealed conditions which may contribute to the risk or failure potential of trees on the site. These conditions include root and stem (trunk) rot, internal cracks, structural defects or construction damage to roots, which may be hidden beneath the soil. Additionally, construction and post-construction circumstances can cause a relatively rapid deterioration of a tree's condition.

Attachments:

1. Assumptions and Limiting Conditions
2. Certification of Performance
3. Significant Tree Inventory
4. Tree Retention Plan

Attachment No. 1 - Assumptions & Limiting Conditions

1. A field examination of the site was made 1/8/2025. My observations and conclusions are as of that date.

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

3. I am not a qualified land surveyor. Reasonable care was used to match the trees indicated on the sheets with those growing in the field.

4. Construction activities can significantly affect the condition of retained trees. All retained trees should be inspected after construction is completed, and then inspected regularly as part of routine maintenance.

5. Unless stated other wise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied that problems or deficiencies of the subject tree may not arise in the future.

6. All trees possess the risk of failure. Trees can fail at any time, with or without obvious defects, and with or without applied stress. A complete evaluation of the potential for this (a) tree to fail requires excavation and examination of the base of the subject tree. Permission of the current property owner must be obtained before this work can be undertaken and the hazard evaluation completed.

Attachment No. 2 - Certification of Performance

I, Favero Greenforest, certify that:

- I have personally inspected the trees, and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinion, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinion, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client of any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of International Society of Arboriculture (ISA), and the ISA PNW Chapter, I am an ISA Certified Arborist (#PN-0143A) and am Tree Risk Assessment Qualified, and am a Registered Consulting Arborist® (#379) with American Society of Consulting Arborists. I have worked as an independent consulting arborist since 1989.

Signed:

GREENFOREST, Inc.
By Favero Greenforest, M. S.

Favero Greenforest

Digitally signed by Favero Greenforest
Date: 2025.01.12 13:41:38 -08'00'

Date: January 13, 2025

Attachment No. 3 – Significant Tree Inventory

QMD quadratic mean diameter for multiple stemmed trees
Dripline radius from center of tree
Condition ratings '1' good to excellent, '2' fair, '3' poor
For offsite trees, driplines are reported as branch length overhanging the subject property. DBH is estimated.

Category	Grove	Tree No.	DBH	Species	Dripline (R')	Health	Structure	Comments on Condition
Large	No	1	18.5"	Flowering cherry	17'	2	2	Brown rot fungal tip dieback
Exceptional	No	2	35"	Western red-cedar	16'	1	2	Multiple leaders with included bark, existing foundation prev rootplate development, tree will likely fall over when the foundation is demolished
Large	No	3	21.5"	Grand fir	20'	1	1	
Large	No	4	19"	Douglas-fir	22'	1	1	
Large	No	5	20"	Deodar cedar	23'	1	2	Trunk sweeps W
Large	No	6	13.5"	Scots pine	18'	1	2	Asymmetric canopy
Large	No	7	11"	Flowering cherry	10'	3	3	Diseased, dieback, topped
Large	No	8	(5) 7-8"	Magnolia, Tulip	14'	1	2	Multiple leaders
Large	No	9	11"	Flowering cherry	16'	2	2	Brown rot fungal tip dieback
Small	No	10	6"	Japanese maple	12'	1	2	Asymmetric, suppressed
Small	No	11	6"	Holly	7'	1	1	
Small	No	12	6"	Purpleleaf plum	16'	2	2	Brown rot fungal tip dieback
Large	No	13	13"	Blue spruce	8'	1	1	
Exceptional	No	14	35"	Grand fir	18'	1	1	
Exceptional	No	15	38"	Deodar cedar	18'	1	1	

Attachment No.4 – Tree Number Exhibit (Not to scale; locations are approximate.)