



ARBOR INFO LLC

2406 N Castle Way Brier, WA, 98036

**Tree Assessment
For
Sturman Architects
At
8413 SE 82nd St.
Mercer Island, Washington**



**Date
6/13/2024**

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Addenda

- I. Tree Location Map
- II. Site Development Plan with Tree Protections
- III. Tree Assessment Summary Table
- IV. Mercer Island Check list
- V. Mercer Island Tree Inventory Form
- VI. Tree Protection Signage Requirements

1. Introduction

I was contacted by John Magcawas at Sturman Architects to describe and assess the condition and viability of trees on and adjacent to 8413 SE 82nd St., 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).
- 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:

John Magcawas
Sturman Architects
9-103rd Ave NE, Suite 203
Bellevue, WA 98004

4. Assignment, Purpose and Use of Report

The assignment is to describe and assess the condition and viability of on-site and off-site trees adjacent to the subject parcel. Protection recommendations in conformance with the City of Mercer Island “Tree Submittal Check List” are included.

5. Limits of Assignment

The assignment is limited to the information gathered during the site visit April 15, 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 the current condition of the property was provided and is included in the Addenda with tree locations noted.

6. Site Description

8413 – SE 82nd St. Mercer Island, WA
King County Parcel No. 3625600080, 16,386 square feet; 0.37 acres

The subject property is an irregularly shaped lot that contains a single-family residence on near level ground that drops off sharply on the SE end.

The existing house is planned for remodel on 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 was assessed as to its vitality, structure, vigor and viability:

Vigor or condition:

Vitality: Biotic

- Good: No evidence of fungal infection or decay;) Tree has sufficient photosynthetic capacity to reach expected 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 because they have sufficient photosynthetic capacity to reach expected normal life expectancy,
- 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. May be rated non-viable.
- Poor: Broken or cracked bole or limbs; root plate compromised; generally rated non-viable.

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. There are a total of sixty-one on-site trees and nine off-site. A summary of the trees follows.

Table 1- Tree Category Summary – On site

<u>Category</u>	<u>Number</u>
Total	21
Total viable	21
36”+	2
24”+	9
Exceptional	6
Large Regulated	16
Large Regulated to be Removed	4
Percentage Retention	75%

Table 2- Tree Category Summary – Off site – Private

<u>Category</u>	<u>Number</u>
24”+	1
Exceptional	0
Large Regulated	9
Large Regulated to be Removed	0
Percentage Retention	100%

9. Tree Retention and Removals

Refer to Addendum II and Mercer Island City Code 19.10.060.

There are twenty-one trees on site with five proposed for removal, leaving 76-percent retention.

19.10.060.A.2. *Retention requirement.* Development proposals specified under subsection (a)(1) of this section shall retain trees as follows:

a .A minimum of 30 percent of trees with a diameter of ten inches or greater, or that otherwise meet the definition of large tree, shall be retained over a rolling five-year period.

The retention requirement is met.

The following Table 3 provides the likely root zone incursion and impacts for all trees.

Table 3 – Root Zone Impacts

Root Zone Impacts							
Tree #	Species	DBH (in)	Root Zone		Distance tree face to:		Impact
			Outer (ft)	Inner (ft)	Excavation (ft)	Percent Disturbance*	
On-site							
1	Shore pine	8.1	7	4	4'-10 1/2"	1%	Minor
2	Douglas-fir	30.5	23	12	15'	36%	Remove
3	Douglas-fir	30.4	18	9	Within driveway Excavation	6%	Remove
4	Douglas-fir	32.5	15	8	Within house foot print	29%	Remove
5	Douglas-fir	37.5	26	13	12'-8"	8%	Minor
6	Beech	15.5	25	13	23'-9"	1%	Minor
7	Japanese maple	11.1	14	7	8'-2"	3%	Minor
8	Flowering cherry	9.5	10	5	Within house foot print	75%	Remove
9	Douglas-fir	36.5	24	12	1'-1"	38%	Remove
10	Bitter cherry	28.9	24	12	16'-2"	7%	Minor
11	Shore pine	15.8	9	5	22'-4"	0%	None--Outside dripline/root zone
12	Flowering cherry	12.2	16	8	23'-6"	0%	None--Outside dripline/root zone
13	Douglas-fir	34.4	22	11	NA	0%	None--Outside dripline/root zone
14	Flowerign cherry	8.1	12	6	NA	0%	None--Outside dripline/root zone
15	Douglas-fir	29.7	18	9	NA	0%	None--Outside dripline/root zone
16	Douglas-fir	24.5	17	9	NA	0%	None--Outside dripline/root zone
17	Douglas-fir	19.5	18	9	NA	0%	None--Outside dripline/root zone
18	Cherry	13.9	15	8	NA	0%	None--Outside dripline/root zone
19	Vine maple	7.6	14	7	NA	0%	None--Outside dripline/root zone
20	Katsura	10.4	14	7	NA	0%	None--Outside dripline/root zone
21	Shore pine	8.1	7	4	NA	0%	None--Outside dripline/root zone
Off Site							
A	Norway spruce	25	20	10			None--Outside dripline/root zone
B	Norway spruce	18	12	6			None--Outside dripline/root zone
C	Douglas-fir	17	12	6			None--Outside dripline/root zone
D	Douglas-fir	18	15	8			None--Outside dripline/root zone
E	Douglas-fir	22	16	8			None--Outside dripline/root zone
F	Leyland cypress	12	10	5			None--Outside dripline/root zone
G	Leyland cypress	12	9	5			None--Outside dripline/root zone
H	Douglas-fir	24	25	13			None--Outside dripline/root zone
I	Norway spruce	17	20	10			None--Outside dripline/root zone
J	Bay laural	10	6	3			None--Outside dripline/root zone

*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.

Site Development impacts are rated as follows:

- None; Site Disturbance, Excavation and fill are beyond the Critical Root Zone
- Minor: Shallow Site Disturbance, will affect less than 15-percent of the Critical Root Zone –Careful excavation required
- Moderate: Site Disturbance will affect less than 30-percent of the Critical Root Zone with depths up to 12-inches – Careful excavation required
- Significant: Site Disturbance, Excavation and fill exceed the above limits: Tree not recommended for retention.

Table 4 following summarizes the proposed tree removals.

Table 4 – Tree Removal Summary

<u>Tree No.</u>	<u>Species</u>	<u>Diameter (in)</u>	<u>Classification</u>	<u>Purpose</u>
2	Douglas-fir	30.5	Exceptional	Driveway Expansion
3	Douglas-fir	30.4	Exceptional	Driveway Expansion Potential Hazard
4	Douglas-fir	32.5	Exceptional	Within House foot print
8	Flowering cherry	9.5	Not Regulated	Within House foot print
9	Douglas-fir	36.5	Exceptional	W/in Building footprint

Within the Guidelines of MICC as excerpted following, trees 2,4,8 and 9 that are planned for removal meet the allowable removal criteria as demonstrated by demonstrates unavoidable root zone impacts.

19.10.060.A.3 *Retention of exceptional trees.* Development proposals specified under subsection (a)(1) of this section shall retain exceptional trees with a diameter of 24 inches or more. Exceptional trees with a diameter of 24 inches or more that are retained shall be credited towards compliance with the retention requirements of subsection (A)(2) of this section. Removal of exceptional trees with a diameter of 24 inches or more, shall be limited to the following circumstances:

a. Retention of an exceptional tree(s) with a diameter of 24 inches or more will result in an unavoidable hazardous situation; or

b. Retention of an exceptional tree(s) with a diameter of 24 inches or more will limit the constructable gross floor area to less than 85 percent of the maximum gross floor area allowed under [chapter 19.02](#) MICC; or,

c. Retention of an exceptional tree(s) with a diameter of 24 inches or more will prevent creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title.

Tree No. 3 is proposed for removal at the request of the client.

10. Replacement Trees

Removal of four trees, 24-36 inches requires replacement at a 3:1 ratio. (See Attached Tree Removal and Replacement Work sheet).

The project landscape architect will develop a tree planting plan including species and placement on the property.

11. Tree Protection

Trees to be retained must be protected per MIC 19.10.080.b. The following guidelines should be employed to protect all retained trees on and off site at this project location.

- Place no construction material or equipment within the protected area of any tree to be retained
- Tree protection fencing consisting of chain link at least 4-feet in height. at the dripline
- “Tree Protection Area- Entrance Prohibited” at 15-foot intervals on the fence
- Prohibiting excavation or compaction of earth or other damaging activities within the barriers unless approved by the Planning Official and supervised by a qualified professional
- Approved landscaping in a protected zone shall be done by light machinery or by hand
- Any exposed roots should be cut cleanly and backfilled with soil as soon as possible
- Root zones should be protected by a 4-inch-deep layer of clean organic material (tree chips, etc.)

Detailed Tree Protection Signage requirements per Mercer Island Requirements are attached in Addendum V.

11. Summary

The tree retention, removal and protection plan described above meets the objectives of the 19.10.010 by retaining and protecting 75-percent of the onsite trees and 100-percent of the trees on adjacent property.

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, the 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 OR ALTERATION OF ANY TREE.

Respectfully Submitted,



Thomas M. Hanson, CA, RCA

Addenda

- I. Tree Location Map
- II. Site Development Plan with Tree Protections
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Glossary of Common Terms

DBH	Diameter at breast height, 4 ½' above ground level
Basal	In the vicinity of the root/trunk connection at ground level
Bole	The tree stem (Trunk)
Butt Swell	Abnormal swelling at the base of the tree
Canker	Localized diseased area on stems, roots and branches. Often shrunken and discolored.
Codominant	Two or more trunks originating from a single main trunk
Conk	The fruiting body of a fungus
Critical Root Zone	Variously defined as an area extending to or outside the dripline to as much as 1-foot per inch or 1.5 inches of trunk diameter at DBH
Crook	Abrupt bend in a branch or trunk
Crown	The live branches or live leaves or live needles of a tree
Crown ratio	The percentage of live green leaves or needles to total height
Dieback	Notable dead foliage, starting at the end of a branch or the top of a tree
Dripline	The extent of live limbs from the trunk
Epicormic	A shoot arising from a dormant bud following exposure to sunlight
Flat Side	Trunk of the tree has a flattened appearance on the side, sometimes an indicator of internal decay
Girdling Root	A root that winds around the stem at ground level
Included Bark	Bark that is pinched between codominant stems; a common weak point
Leader	The central stem tip
Leaf Spot	Diseased areas on foliage
Limb Collar	The swelling at the junction of the bole and limb

Photosynthesis The process of converting water, nutrients and CO₂ to carbohydrates (wood)

Pitchy Excessive sap exuding from the tree trunk; often an indicator of stress

Pruning The cutting and removal of limbs (**Crown Raising**)

Rotten knot Point of the stem where limb removal has allowed pathogen infection and decay (**Black knot**)

Root Disease Fungal decay of the root system often causing tree failure

Taper The ratio of diameter on different points of a trunk, stem or branch

Thin Crown Comparatively low live foliage percentage; often an indicator of root disease

Topping Removal of the main stem above live, green limbs

Trimming Shortening or cutting of limbs; sometimes called **heading**

Trunk Seam A seam in the trunk, suggests internal decay

Viable span A structurally sound and healthy condition, expected to live to normal life span

Vigor Tree health and growth rate

Vitality The suitability of the tree for the site.

Addenda

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LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING #20130730002745)
 LOT 8, ISLAND POINT NO. 2, ACCORDING TO THE PLAT THEREOF,
 RECORDED IN VOLUME 79 OF PLATS, PAGE(S) 18 AND 19, IN KING
 COUNTY, WASHINGTON.

BASIS OF BEARINGS

N 83°59'24" E BETWEEN FOUND CENTERLINE MONUMENTATION
 ALONG SE 82ND ST - CALCULATED PER R1

REFERENCES

R1. ISLAND POINT NO. 2 PLAT, VOL. 79, PG. 18,
 RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER CITY OF MERCER ISLAND BENCHMARK #4360
 DB ID: 47498
 ELEV: 299.86

SURVEYOR'S NOTES

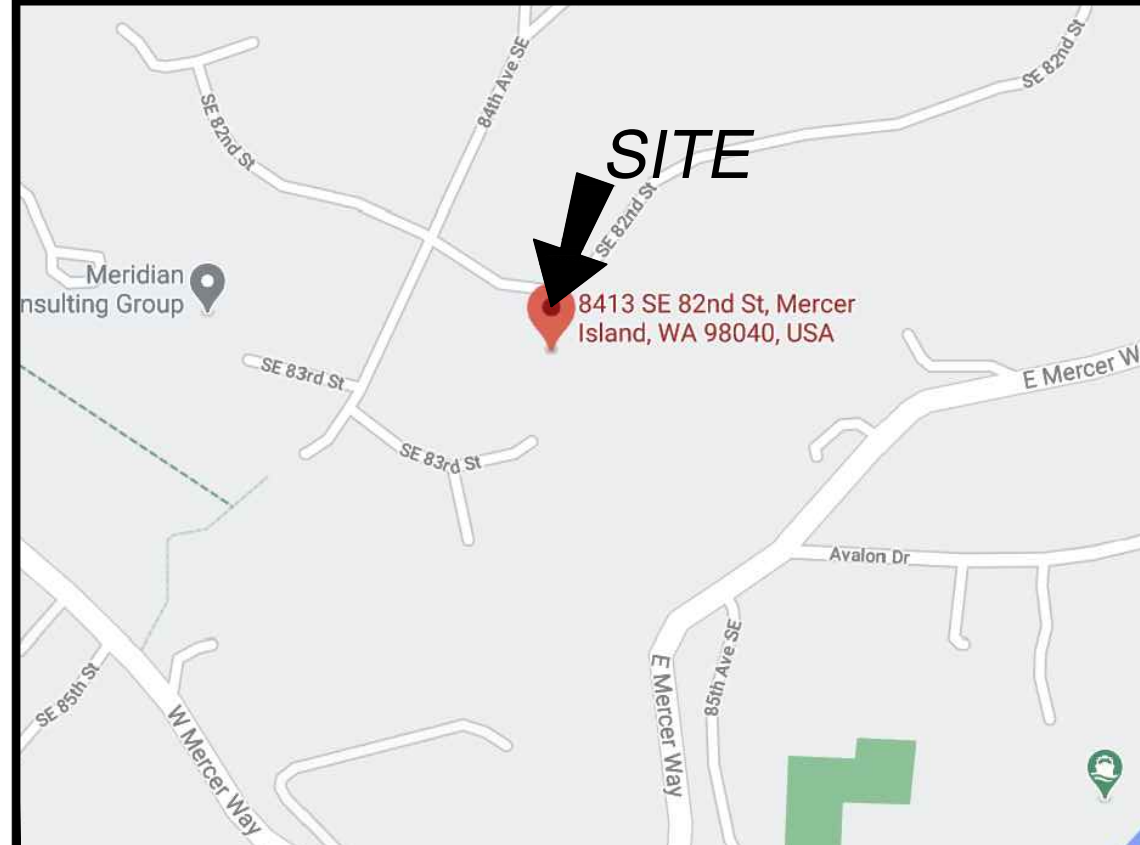
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN MARCH OF 2021. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 3625600080.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 16,386± S.F. (0.38 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

TOPOGRAPHIC & BOUNDARY SURVEY

LEGEND

	AREA DRAIN		NAIL AS NOTED
	ASPHALT SURFACE		MONUMENT IN CASE (FOUND)
	BRICK SURFACE		PAVER SURFACE
	BUILDING		POWER METER
	CENTERLINE ROW		POWER (UNDERGROUND)
	CONCRETE SURFACE		REBAR AS NOTED (FOUND)
	RETAINING WALL		ROCKERY
	DECK		SEWER LINE
	FENCE LINE (CHAIN LINK)		SEWER MANHOLE
	FENCE LINE (WOOD)		STORM DRAIN LINE
	GAS LINE		TEL SENTRY
	GAS METER		TREE (AS NOTED)
	INLET (TYPE 1)		WATER LINE
	IRON PIPE (FOUND)		WATER METER
	LUMINAIRE		AC UNIT
	STEEP SLOPE AREA		

VICINITY MAP
N.T.S.



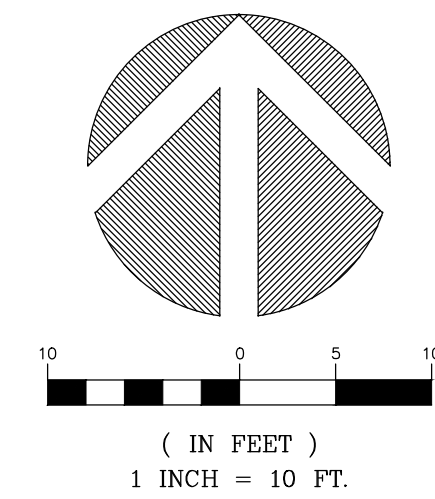
STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

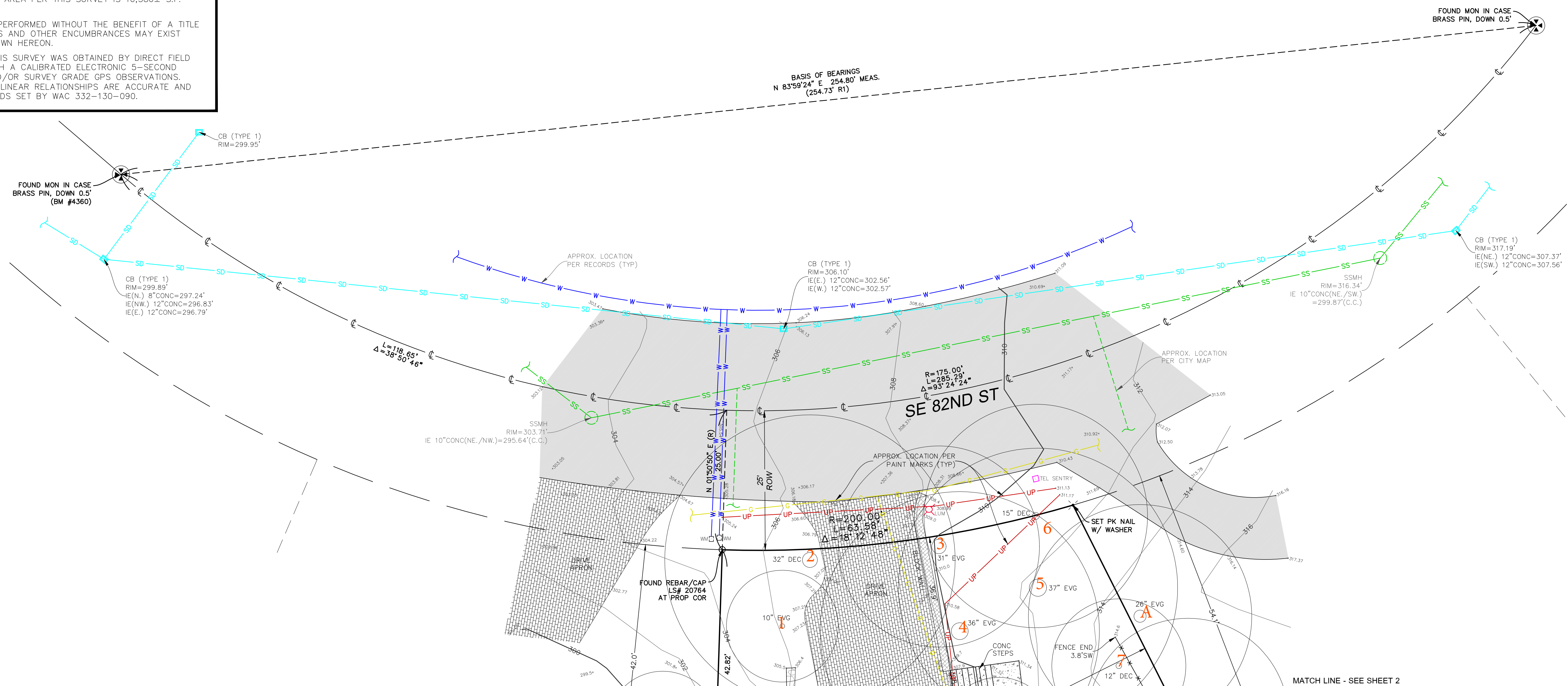
INDEXING INFORMATION

NW 1/4	NE 1/4	NW 1/4
SW 1/4	SE 1/4	SW 1/4

SECTION: 31
 TOWNSHIP: 24N
 RANGE: 05E, W.M.
 COUNTY: KING



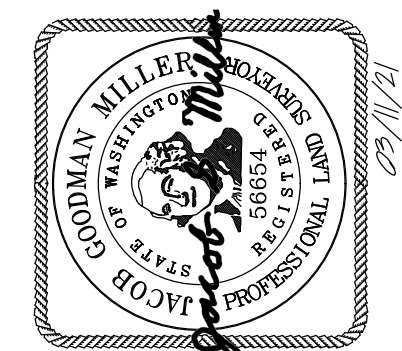
Tree Locations
 1-21 On-site
 A-J Off-site



TOPOGRAPHIC & BOUNDARY SURVEY
 PARCEL NO. 3625600080

RAWSON RESIDENCE

8413 SE 82ND ST
 MERCER ISLAND, WA 98040



Terrane
 10801 Main Street, Suite 102, Bellevue, WA 98004
 phone 425.458.4488 support@terrane.net
 www.terrane.net

JOB NUMBER: 210217
 DATE: 03/11/21
 DRAFTED BY: RSN
 CHECKED BY: JGM/CSP
 SCALE: 1" = 10'

REVISION HISTORY

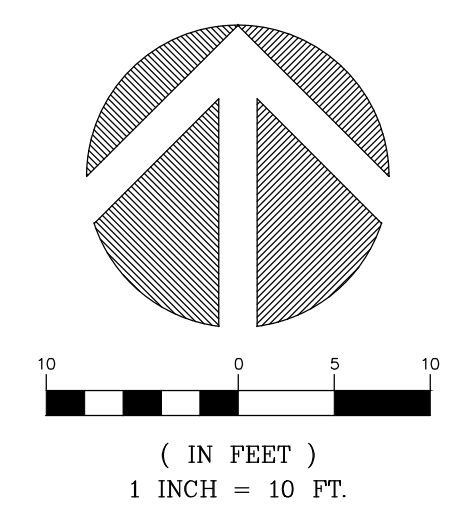
SHEET NUMBER
 1 OF 2

TOPOGRAPHIC & BOUNDARY SURVEY

LEGEND

- | | |
|-------------------------|--------------------------|
| AREA DRAIN | NAIL AS NOTED |
| ASPHALT SURFACE | MONUMENT IN CASE (FOUND) |
| BRICK SURFACE | PAVER SURFACE |
| BUILDING | POWER METER |
| CENTERLINE ROW | POWER (UNDERGROUND) |
| CONCRETE SURFACE | REBAR AS NOTED (FOUND) |
| RETAINING WALL | ROCKERY |
| DECK | SEWER LINE |
| FENCE LINE (CHAIN LINK) | SEWER MANHOLE |
| FENCE LINE (WOOD) | STORM DRAIN LINE |
| GAS LINE | TELEPHONE SENTRY |
| GAS METER | TREE (AS NOTED) |
| INLET (TYPE 1) | WATER LINE |
| IRON PIPE (FOUND) | WATER METER |
| LUMINAIRE | AC UNIT |
| STEEP SLOPE AREA | |

INDEXING INFORMATION	
NW 1/4 NW 1/4	SECTION: 31
	TOWNSHIP: 24N
	RANGE: 05E, W.M.
	COUNTY: KING



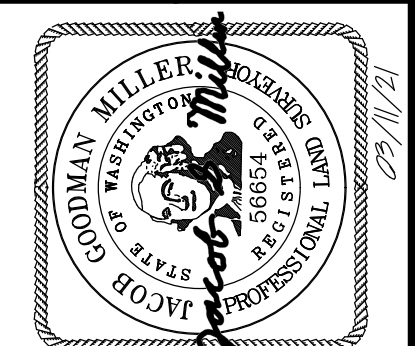
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measure success

TOPOGRAPHIC & BOUNDARY SURVEY

PARCEL NO. 3625600080

RAWSON RESIDENCE
 8413 SE 82ND ST
 MERCER ISLAND, WA 98040



Terrane
 10801 Main Street, Suite 102, Bellevue, WA 98004
 phone 425.458.4488 support@terrane.net
www.terrane.net

JOB NUMBER:	210217
DATE:	03/11/21
DRAFTED BY:	RSN
CHECKED BY:	JGM/CSP
SCALE:	1" = 10'

REVISION HISTORY	



TREE PROTECTION AREA (TPZ)

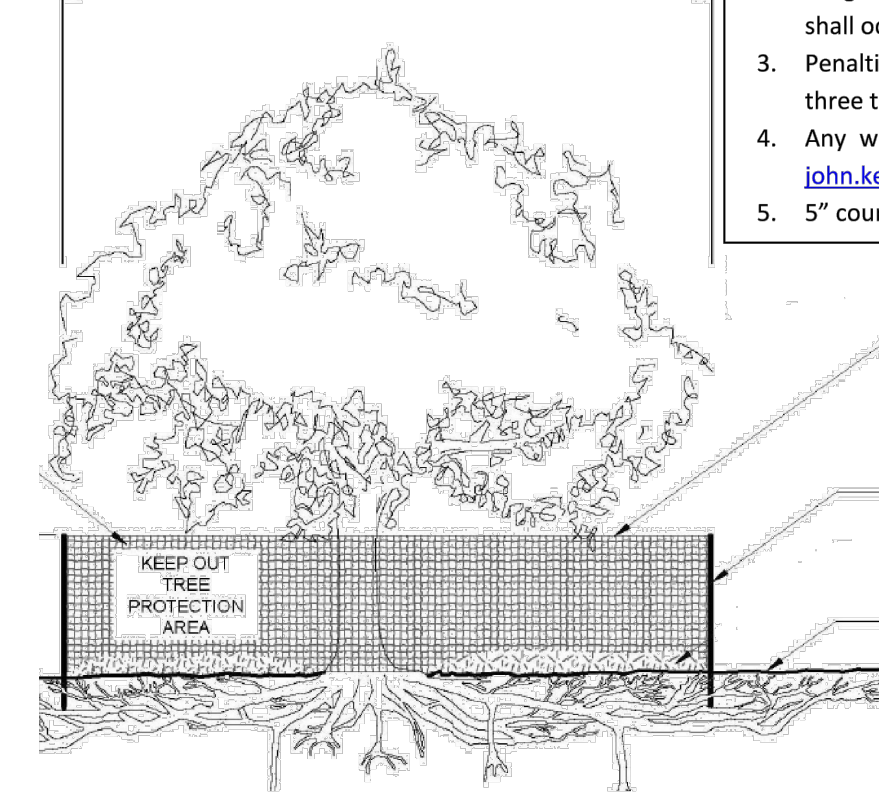
KEEP OUT!

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

Crown drip line or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.



Notes

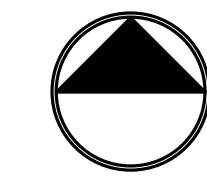
1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction 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.

Tree protection fence: 6' chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

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



EXCAVATION PLAN

SCALE: 1/8" = 1'

LEGEND

- INNER TREE ROOT ZONE
- TREE ROOT ZONE INSIDE EXCAVATION
- EXCAVATION
- NEW WORK

REVISIONS:

1	CORRECTION 1 - 5/30/2024
2	
3	
4	
5	

PLOT DATE: 6/13/2024
DRAWN BY: JM
CHECKED BY: BJS

SHEET

A1.2

SCALE: IF SHEET IS LESS THAN 24" x 36" IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY
CORRECTION 1 SET 5/30/2024

Tree Assessment																		
Site: Sturman Architects at 8413 SE 82nd St., Mercer Island, WA												Date:	4/15/2022					
Tree #	Species		DBH	Height	Crown Ratio	Dripline(ft)				Root Zone/Outer Radius	Root Zone/Inner Radius	Vigor		Viable	Large Regulated	Exceptional	Disposition	Comments
	Common	Scientific				inches	(feet)	(%)	N			S	E					
On Site																		
1	Shore pine	<i>Pinus contorta 'contorta'</i>	8.1	75	40	8	8	4	8	7	4	Fair	Fair	Yes			Retain	
2	Douglas-fir	<i>Psuedotsuga menziesii</i>	30.5	120	60	26	20	20	26	23	12	Good	Good	Yes	✓	✓	Remove	2' West of driveway
3	Douglas-fir	<i>Psuedotsuga menziesii</i>	30.4	130	60	28	12	16	16	18	9	Good	Fair	Yes	✓	✓	Remove	Perched above driveway, minor pitching
4	Douglas-fir	<i>Psuedotsuga menziesii</i>	32.5	130	60	12	22	12	14	15	8	Good	Good	Yes	✓	✓	Remove	Perched above driveway
5	Douglas-fir	<i>Psuedotsuga menziesii</i>	37.5	130	70	34	26	20	22	26	13	Good	Good	Yes	✓	✓	Retain	
6	Beech	<i>Fagus sylvatica</i>	15.5	70	80	32	16	24	28	25	13	Good	Good	Yes	✓		Retain	
7	Japancee maple	<i>Acer palmatum</i>	11.1	22	80	16	14	20	4	14	7	Good	Good	Yes	✓		Retain	
8	Flowering cherry	<i>Prunus sp.</i>	9.5	14	80	14	10	6	10	10	5	Good	Fair	Yes			Remove	Poor pruning
9	Douglas-fir	<i>Psuedotsuga menziesii</i>	36.5	125	50	30	22	26	18	24	12	Good	Good	Yes	✓	✓	Retain	
10	Bitter cherry	<i>Prunus emarginata</i>	28.9	70	70	28	18	22	26	24	12	Good	Fair	Yes	✓		Retain	3 codominants above 5-feet
11	Shore pine	<i>Pinus contorta 'contorta'</i>	15.8	65	50	12	8	0	14	9	4	Good	Fair	Yes	✓		Retain	asymetric
12	Flowering cherry	<i>Pruus sp.</i>	12.2	20	70	17	12	14	19	16	8	Good	Good	Yes	✓		Retain	
13	Douglas-fir	<i>Psuedotsuga menziesii</i>	34.4	110	60	24	24	14	24	22	11	Good	Good	Yes	✓	✓	Retain	
14	Flowerign cherry	<i>Prunus sp.</i>	8.1	18	60	12	14	12	10	12	6	Good	Good	Yes			Retain	
15	Douglas-fir	<i>Psuedotsuga menziesii</i>	29.7	110	60	19	19	16	16	18	9	Good	Good	Yes	✓		Retain	
16	Douglas-fir	<i>Psuedotsuga menziesii</i>	24.5	105	60	24	14	16	12	17	8	Fair	Good	Yes	✓		Retain	Flat top
17	Douglas-fir	<i>Psuedotsuga menziesii</i>	19.5	55	40	14	26	30	0	18	9	Fair	Fair	Yes	✓		Retain	
18*	Cherry	<i>Prunus avium</i>	13.9	44	50	14	16	15	15	15	8	Good	Good	Yes	✓		Retain	
19*	Vine maple	<i>Acer circinatum</i>	7.6	25	80	16	14	14	12	14	7	Good	Good	Yes			Retain	
20	Katsura	<i>Cercidiphyllum sp.</i>	10.4	20	50	14	12	14	14	14	7	Good	Good	Yes	✓		Retain	
21	Shore pine	<i>Pinus contorta 'contorta'</i>	8.1	40	30	8	6	10	3	7	3	Good	Good	Yes			Retain	
Off Site																		
A	Norway spruce	<i>Picea abies</i>	25	112	60	20	20	26	14	20	10	Good	Good	Yes	✓		Retain	
B	Norway spruce	<i>Picea abies</i>	18	100	40	10	12	12	14	12	6	Fair	Good	Yes	✓		Retain	
C	Douglas-fir	<i>Psuedotsuga menziesii</i>	17	100	30	0	16	20	12	12	6	Fair	Fair	Yes	✓		Retain	Asymetric, suppressed
D	Douglas-fir	<i>Psuedotsuga menziesii</i>	18	90	30	18	10	18	14	15	8	Good	Fair	Yes	✓		Retain	

Tree Assessment																		
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	Common	Scientific	inches	(feet)	(%)	N	S	E	W	(feet)	(feet)	Vitality	Structure	Viability				
On Site																		
E	Douglas-fir	<i>Pseudotsuga menziesii</i>	22	110	40	16	16	14	18	16	8	Good	Good	Yes	✓		Retain	
F	Leyland cypress	<i>Cupressus x leylandii</i>	12	30	90	4	16	12	8	10	5	Good	Good	Yes	✓		Retain	
G	Leyland cypress	<i>Cupressus x leylandii</i>	12	30	90	14	4	14	4	9	5	Good	Good	Yes	✓		Retain	
H	Douglas-fir	<i>Pseudotsuga menziesii</i>	24	120	80	26	24	30	20	25	13	Good	Good	Yes	✓		Retain	
I	Norway spruce	<i>Picea abies</i>	17	105	70	22	20	22	16	20	10	Good	Good	Yes	✓		Retain	
J	Bay laurel	<i>Laurus nobilis</i>	10	14	30	6	10	4	3	6	3	Fair	Fair	Yes	✓		Retain	Severely pruned
* multiple stems converted to single																		

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.

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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 _____

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			

TREE PROTECTION AREA (TPZ)

KEEP OUT!

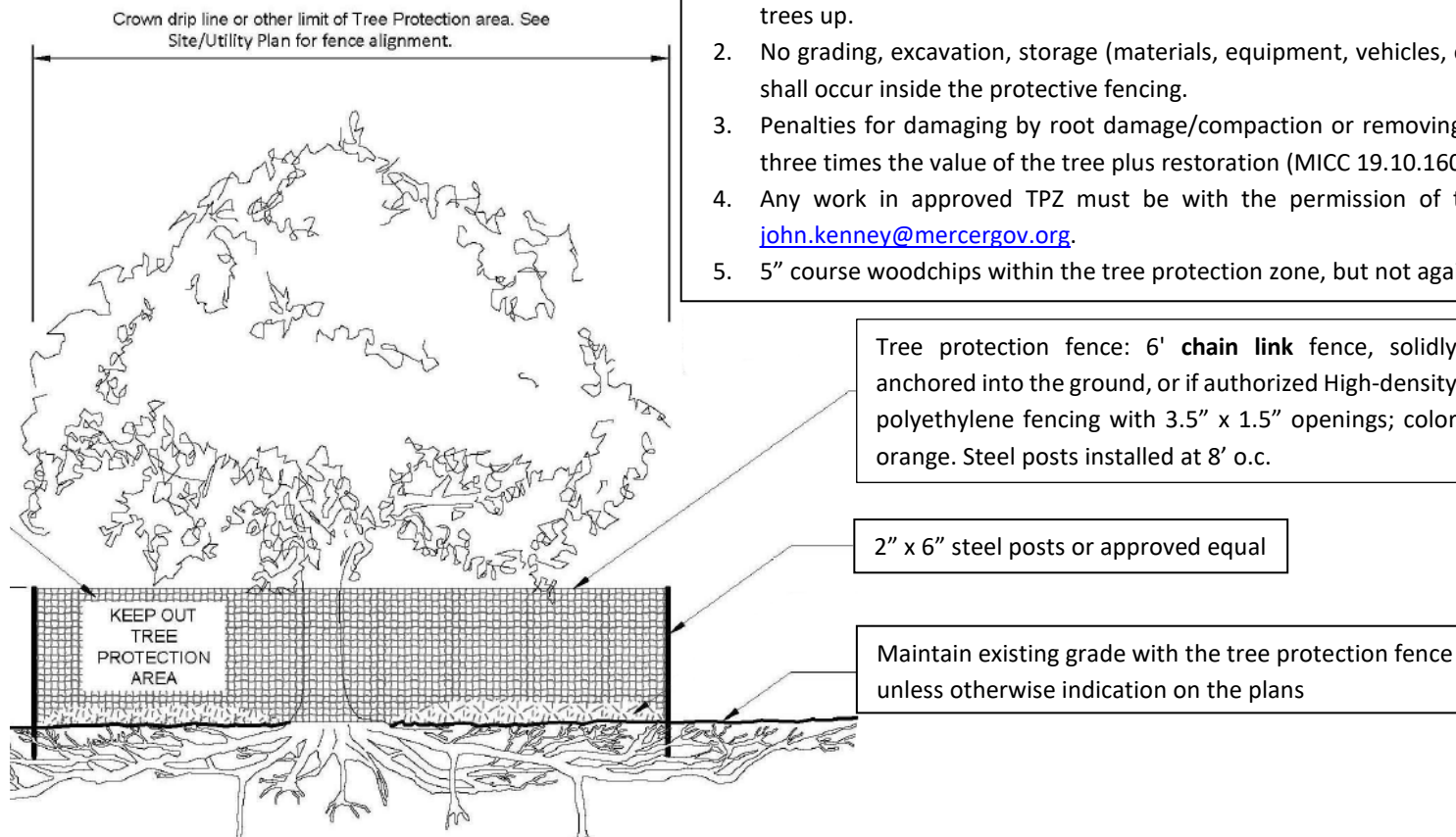
DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

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