

Arborist Report

To: Julie Ross
Site: 4040 Island Crest Way, Mercer Island, WA 98040
Re: Tree Inventory
Date: June 3, 2022
Project Arborist: Joseph Sutton-Holcomb
ISA Certified Arborist #PN-8397AM
Municipal Specialist; ISA Qualified Tree Risk Assessor
Referenced Documents: Site Plan: 4040 Island Crest Way (Jaymarc Homes, 06/03/2022)
Attached: Table of Trees
Tree Site Map
Tree Inventory and Replacement Worksheet

Summary

Josh Petter of Tree Solutions Inc. inventoried and assessed 14 trees on this lot. Based on the Mercer Island City Code (MICC) large (regulated) and exceptional trees are required to be assessed for development projects. I tagged each tree with an aluminum tree tag. Tree identifier corresponds to the number on each tag.

Of the trees assessed, three met the exceptional tree criteria outlined in the MICC.

I found no tree groves on site. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree.

There were six adjacent trees that required documentation for this property. Trees on neighboring properties were documented if they appeared to be greater than 10 inches diameter and their driplines extended over the property line. All trees on adjacent properties were estimated from the subject site or public property such as the adjacent right-of-way. I used an alphabetical tree identifier for trees off-site.

Assignment and Scope of Work

This report outlines the site inspection by Josh Petter, of Tree Solutions Inc, on November 2, 2021. He was asked to visit the site and provide a formal report including findings and management recommendations. Julie Ross requested these services for project planning purposes.

Observations & Discussion

Site

This 10,388 square foot site was located on Island Crest Way of Mercer Island. According to King County iMap there are no environmentally critical areas on site.

The understory was largely turf grass and ornamental plants. There was invasive ivy (*Hedera* sp.) along the norther property line. The property slopes up steeply approximately 10 feet from the eastern property line.

Trees

Josh Petter assessed and tagged 14 large trees on the site. The trees ranged from poor to good health and structural condition.

There were three exceptional trees on the site, all three were vine maples (*Acer circinatum*). These three trees (306 through 308) were growing in a planter along the street frontage. Tree 307, the middle tree, was in poor health and structural condition. This tree had bark peeling and bark beetle galleries underneath. While this tree was exceptional by size, the condition makes this tree a poor candidate for retention.

Tree 311 is an English holly (*Ilex aquifolium*) and 313 is a wild cherry (*Prunus avium*) both of these trees are on the King County Weeds of Concern List and should be removed during development.

I have included an annotated survey of the site to serve as the site map and attached a table of trees that has detailed information about each tree.

Discussion—Construction Impacts

I have reviewed a site plan produced by Jaymarc Homes dated June 3, 2022 I have not reviewed a complete set of construction plans and have not assessed impacts related to demolition, utilities and landscaping.

The site plan I reviewed shows seven trees proposed for removal: Trees 301, 302, 303, 306, 309, 310, and 311.

Trees 301, 302, and 309 are in conflict with the footprint of the proposed new building. Tree 311 is proposed for removal due to its invasive species status.

The site plan I reviewed (dated 06/03/2022) shows tree protection fencing at or beyond the limits of disturbance for the retained trees. The tree protection fencing is in three areas, each with groups of trees protected as a contiguous unit.

The group of protected trees to the east of the proposed house comprises trees 311, 312, 313, and 314.

The group of protected trees to the west of the proposed house comprises trees 304, 305, 307, and 308.

The group of protected trees to the northwest of the proposed house comprises off-site trees A, B, C, D, and E.

In my opinion, all retained trees will survive construction impacts if protected during construction as indicated on the plans. If any impacts are proposed within the shown limits of disturbance, Tree Solutions should be consulted and this report should be updated to discuss those impacts.

I recommend that all retained trees be mulched with 4 inches of coarse woody mulch (arborist woodchips) within the limits of disturbance. Retained trees should also be provided supplemental irrigation 2-4x per month during dry months (generally May-Sept.).

Replacement Trees

The tree inventory and replacement worksheet attached to this report shows six trees 10" up to 24" and one exceptional tree proposed for removal. According to MICC, 18 replacement trees will be required.

Recommendations

- Obtain all necessary permits and approval from the City prior to commencement of site work.
- Update site plans to include limits of disturbance (LOD) / critical root zones as listed in the attached table of trees.
- Tree protection consisting of chain-link fencing should be installed at the limits of disturbance of all retained trees. Trees growing in a group should be protected at the edge of their shared LOD. General tree protection specifications can be found in Appendix E.
- Retained trees should be mulched within their limits of disturbance with 4 inches of coarse woody mulch (arborist woodchips) and be provided supplemental irrigation 2-4X per month May-Sept.
- All off-site trees must be protected during construction.
- All pruning should be conducted by an ISA certified arborist following current ANSI A300 specifications.
- All tree retention and removal regulations must be followed and are outlined in MICC Chapter 19.10 Trees.
- Ensure tree protection standards comply with MICC 19.10.080 and ISA Best Management Practices (BMP) – Managing Trees During Construction.
- Replant 18 trees to adhere to MICC tree replacement requirements.

Appendix A **Glossary**

DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade (Council of Tree and Landscape Appraisers 2019)

tree grove: a group of eight or more trees each 10 inches or more in diameter that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional trees, unless they also meet the definition of a hazardous tree. (MICC 19.16.010)

exceptional tree: a tree measuring 36 inches DSH or greater or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table (MICC 19.16.010)

ISA: International Society of Arboriculture

large tree (regulated): A tree measuring 10 inches or greater DSH (MICC 19.16.010)

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth (Mattheck & Breloer 1994)

Appendix B **References**

Accredited Standards Committee A300 (ASC 300). ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Londonderry: Tree Care Industry Association, 2017.

Council of Tree and Landscape Appraisers, Guide for Plant Appraisal, 10th Edition Second Printing. Atlanta, GA: The International Society of Arboriculture (ISA), 2019.

Fite, Kelby and Dr. E. Thomas Smiley. Best Management Practices: Managing Trees During Construction, Second Edition. Champaign, IL: International Society of Arboriculture (ISA), 2016.

Mattheck, Claus and Helge Breloer, The Body Language of Trees.: A Handbook for Failure Analysis. London: HMSO, 1994.

Mercer Island Municipal Code (MICC) 19.16.010. Definitions

Mercer Island Municipal Code (MICC) 19.10. Trees

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.

Appendix D **Methods**

Measuring

I measured the diameter of each tree at 54 inches above grade, diameter at standard height (DSH). If a tree had multiple stems, I measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the Guide for Plant Appraisal, 10th Edition Second Printing published by the Council of Tree and Landscape Appraisers. A tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some unregulated trees may be included in our data set. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

Tagging

I tagged each tree with a circular aluminum tag at eye level. I assigned each tree a numerical identifier on our map and in our tree table, corresponding to this tree tag. I used alphabetical identifiers for trees off-site.

Evaluating

I evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. An understanding of the uniform stress allows the arborist to make informed judgments about the condition of a tree.

Rating

When rating tree health, I took into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. When rating tree structure, I evaluated the tree for form and structural defects, including past damage and decay. Tree Solutions has adapted our ratings based on the Purdue University Extension formula values for health condition (*Purdue University Extension bulletin FNR-473-W - Tree Appraisal*). These values are a general representation used to assist arborists in assigning ratings.

Excellent - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

Good - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist, they are controllable or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

Fair - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and “off” coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

Poor - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

Appendix E Tree Protection Specifications

The following is a list of protection measures that must be employed before, during and after construction to ensure the long-term viability of retained trees.

1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
2. **Tree Protection Zone (TPZ):** The city of Mercer Island requires a tree protection zone (TPZ) of 1 foot for every 1 inch diameter at standard height. In some cases, the TPZ may extend outside tree protection fencing. Work within the TPZ must be approved and monitored by the project arborist.
3. **Tree Protection Fencing:** Tree protection shall consist of 6-foot chain-link fencing installed at the TPZ as approved by the project arborist. Fence posts shall be anchored into the ground or bolted to existing hardscape surfaces.
 - a. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove.
 - b. Per arborist approval, TPZ fencing may be placed at the edge of existing hardscape within the TPZ to allow for staging and traffic.
 - c. Where work is planned within the TPZ, install fencing at edge of TPZ and move to limits of disturbance at the time that the work within the TPZ is planned to occur. This ensures that work within the TPZ is completed to specification.
 - d. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.
4. **Access Beyond Tree Protection Fencing:** In areas where work such as installation of utilities is required within the TPZ, a locking gate will be installed in the fencing to facilitate access. The project manager or project arborist shall be present when tree protection areas are accessed.
5. **Tree Protection Signage:** Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2' x 2' in size. Signage will note: "Tree Protection Area – Do Not Enter: Entry into the tree protection area is prohibited unless authorized by the project manager." Signage shall include the contact information for the project manager and instructions for gaining access to the area.
6. **Filter / Silt Fencing:** Filter / silt fencing within the TPZ of retained trees shall be installed in a manner that does not sever roots. Install so that filter / silt fencing sits on the ground and is weighed in place by sandbags or gravel. Do not trench to insert filter / silt fencing into the ground.
7. **Monitoring:** The project arborist shall monitor all ground disturbance at the edge of or within the TPZ, including where the TPZ extends beyond the tree protection fencing.
8. **Soil Protection:** No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPZ. Heavy machinery shall remain outside of the TPZ. Access to the tree protection area will be granted under the supervision of the project arborist. If project arborist allows, heavy machinery can enter the area if soils are protected from the load. Acceptable methods of soil protection include applying 3/4-inch plywood over 4 to 6 inches of wood chip mulch or use of AlturnaMats® (or equivalent product approved by the project arborist). Retain existing paved surfaces within or at the edge of the TPZ for as long as possible.
9. **Soil Remediation:** Soil compacted within the TPZ of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.
10. **Canopy Protection:** Where fencing is installed at the limits of disturbance within the TPZ, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not damage canopy parts. Exhaust from machinery shall be located five feet outside the dripline of retained trees. No exhaust shall come in contact with foliage for prolonged periods of time.

11. **Duff/Mulch:** Apply 6 inches of arborist wood chip mulch or hog fuel over bare soil within the TPZ to prevent compaction and evaporation. TPZ shall be free of invasive weeds to facilitate mulch application. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible.
12. **Excavation:** Excavation done at the edge of or within the TPZ shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist spotting for roots. When roots are encountered, stop excavation and cleanly sever roots. The project arborist shall monitor all excavation done within the TPZ.
13. **Fill:** Limit fill to 1 foot of uncompacted well-draining soil, within the TPZ of retained trees. In areas where additional fill is required, consult with the project arborist. Fill must be kept at least 1 foot from the trunks of trees.
14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear polyethylene sheeting and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
16. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the TPZ. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8. Replace fencing at edge of TPZ if soil exposed by hardscape removal will remain for any period of time.
17. **Tree Removal:** All trees to be removed that are located within the TPZ of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
18. **Irrigation:** Retained trees with soil disturbance within the TPZ will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
19. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
20. **Plan Updates:** All plan updates or field modification that result in impacts within the TPZ or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
21. **Materials:** Contractor shall have the following materials onsite and available for use during work in the TPZ:
 - **Sharp and clean bypass hand pruners**
 - **Sharp and clean bypass loppers**
 - **Sharp hand-held root saw**
 - **Reciprocating saw with new blades**
 - **Shovels**
 - **Trowels**
 - **Clear polyethylene sheeting**
 - **Burlap**
 - **Water**

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.

DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the Guide for Plant Appraisal, 10th Edition.

Letters are used to identify trees on neighboring property with overhanging canopies.

Dripline is measured from the center of the tree to the outermost extent of the canopy.

Limits of disturbance are determined by critical rootzone or 1 foot for every 1 inch diameter

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Dripline Radius (feet)				Exceptional Threshold	Exceptional	Above 24 inches	Limits of Disturbance (CRZ ft)	Proposed Action	Notes
							N	E	S	W						
301	<i>Gleditsia triacanthos</i>	Honey Locust	14.4		Fair	Fair	14.6	14.6	14.6	14.6	20.0	No	No	14.4	Remove	Wound from base to approximately 5 feet, bark peeling; low vigor; close to curb
302	<i>Gleditsia triacanthos</i>	Honey Locust	11.4		Fair	Fair	15.5	15.5	15.5	15.5	20.0	No	No	11.4	Remove	Ivy in canopy, indiscriminate pruning cuts present
303	<i>Acer rubrum</i>	Red Maple	19.3		Good	Fair	17.8	17.8	17.8	17.8	25.0	No	No	19.3	Remove	Codominant unions with included bark, typical of species, close to concrete wall on property line
304	<i>Acer palmatum</i>	Japanese Maple	8.1	4,6,5,8,3,2	Good	Good	17.8	17.8	17.8	17.8	12.0	No	No	8.1	Retain	Wood at base, some indiscriminate pruning cuts
305	<i>Acer rubrum</i>	Red Maple	12.0		Fair	Fair	18.5	18.5	18.5	18.5	25.0	No	No	12.0	Retain	Leaning to north, pruned for line clearance, wood piled at base
306	<i>Acer circinatum</i>	Vine Maple	9.2	6,6,4,5	Good	Fair	16.4	16.4	16.4	16.4	8.0	Exceptional - Size	No	9.2	Remove	Growth restricted by fence, indiscriminate cuts present
307	<i>Acer circinatum</i>	Vine Maple	8.0		Poor	Poor	7.3	7.3	7.3	7.3	8.0	Exceptional - Size	No	8.0	Retain	Two dead trunks, bark beetle galleries, bark peeling, sprouting at base
308	<i>Acer circinatum</i>	Vine Maple	10.2	8,6,4	Good	Fair	12.4	12.4	12.4	12.4	8.0	Exceptional - Size	No	10.2	Retain	Indiscriminate cuts present, low LCR
309	<i>Prunus cerasifera</i>	Flowering Plum	12.4	9,5,8	Fair	Fair	14.5	14.5	14.5	14.5	21.0	No	No	12.4	Remove	Narrow codominant trunks, indiscriminate pruning cuts present
310	<i>Prunus cerasifera</i>	Flowering Plum	16.5		Fair	Fair	15.7	15.7	15.7	15.7	21.0	No	No	16.5	Remove	Narrow codominant trunks, indiscriminate pruning cuts present; decay in trunk, bark peeling; surface roots
311	<i>Ilex aquifolium</i>	English holly	13.1	10,4,5,7,5,6	Good	Good	15.5	15.5	15.5	15.5	-	No	No	13.1	Remove	Invasive species, should be removed during development
312	<i>Prunus cerasifera</i>	Flowering Plum	11.9		Good	Fair	17.5	17.5	17.5	17.5	21.0	No	No	11.9	Retain	Phototropic to the west
313	<i>Prunus avium</i>	Wild cherry	8.7	6,6,3	Good	Fair	20.4	20.4	20.4	20.4	-	No	No	8.7	Retain	Codominant at base, suppressed by adjacent maple

Table of Trees
4040 Island Crest Way, Mercer Island, WA

Arborist: JSH
Date of Inventory: 11.02.21
Table Prepared: 06.03.2022

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Exceptional Threshold	Exceptional	Above 24 inches	Limits of Disturbance (CRZ ft)	Proposed Action	Notes
314	<i>Acer macrophyllum</i>	<i>Bigleaf Maple</i>	17.3		Good	Good	22.7	22.7	22.7	22.7	30.0	No	No	17.3	Retain	Good form, slight kink at base that is corrected; no codominant trunks or unions; best tree on property; on a small slope
A	<i>Acer palmatum</i>	<i>Japanese Maple</i>	10.2	8,5,4	Good	Good	12.9	12.9	12.9	12.9	12.0	No	No	10.2	Retain	Heavy ivy and holly at base and climbing trunk
B	<i>Betula pendula</i>	<i>European White Birch</i>	12.0		Good	Good	17.5	17.5	17.5	17.5	24.0	No	No	12.0	Retain	Might have tip dieback from BBB, Ivy at base
C	<i>Betula pendula</i>	<i>European White Birch</i>	22.0		Good	Good	18.4	18.4	18.4	18.4	24.0	No	No	22.0	Retain	Might have tip dieback from BBB, Ivy at base, abnormal swelling of tissue at approximately 6 feet
D	<i>Betula pendula</i>	<i>European White Birch</i>	15.6	10,12	Fair	Fair	15.7	15.7	15.7	15.7	24.0	No	No	15.6	Retain	Top dieback from BBB, Ivy at base
E	<i>Pinus contorta 'contorta'</i>	<i>Shore Pine</i>	6.7	6,3	Fair	Fair	7.3	7.3	7.3	7.3	12.0	No	No	6.7	Retain	Ivy at base, codominant near base, low lcr, wisteria in canopy
F	<i>Pseudotsuga menziesii</i>	<i>Douglas-fir</i>	16.0		Good	Fair	13.7	13.7	13.7	13.7	30.0	No	No	16.0	Retain	Topped, but young enough to recover

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 202107001843)
 THE SOUTH 30 FEET OF LOT 9 AND THE NORTH 45 FEET OF LOT 8 IN BLOCK A OF MERCER CREST, AS PER PLAT RECORDED IN VOLUME 42 OF PLATS, PAGE 26, RECORDS OF KING COUNTY AUDITOR.
 SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

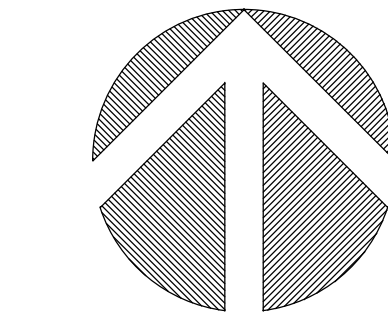
NAD 83/91 WASHINGTON NORTH COORDINATES, THE CENTERLINE OF ISLAND CREST WAY BEARS N 01°02'33" E PER CITY OF MERCER ISLAND CONTROL POINT 1076 & 1075.

REFERENCES

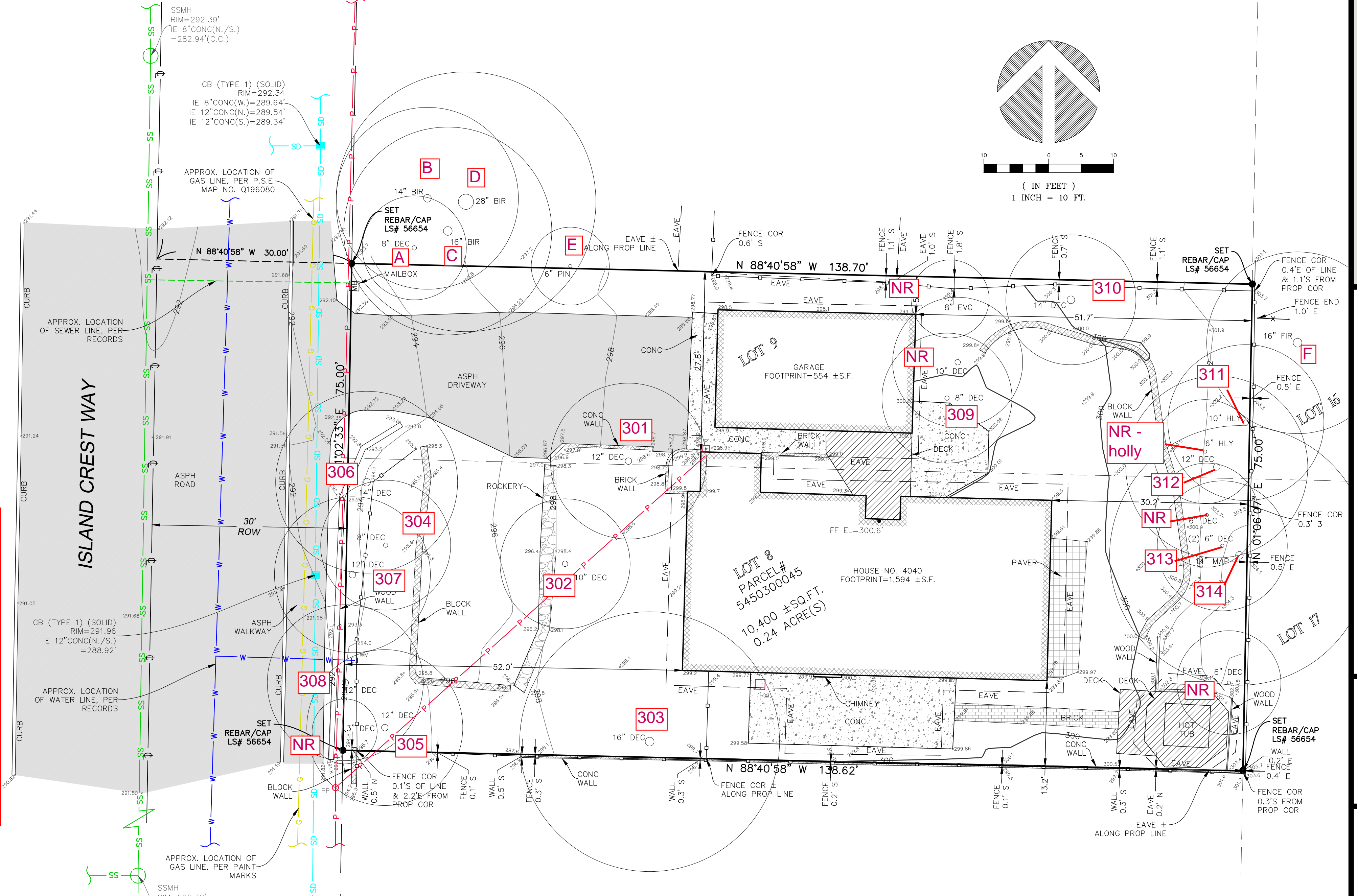
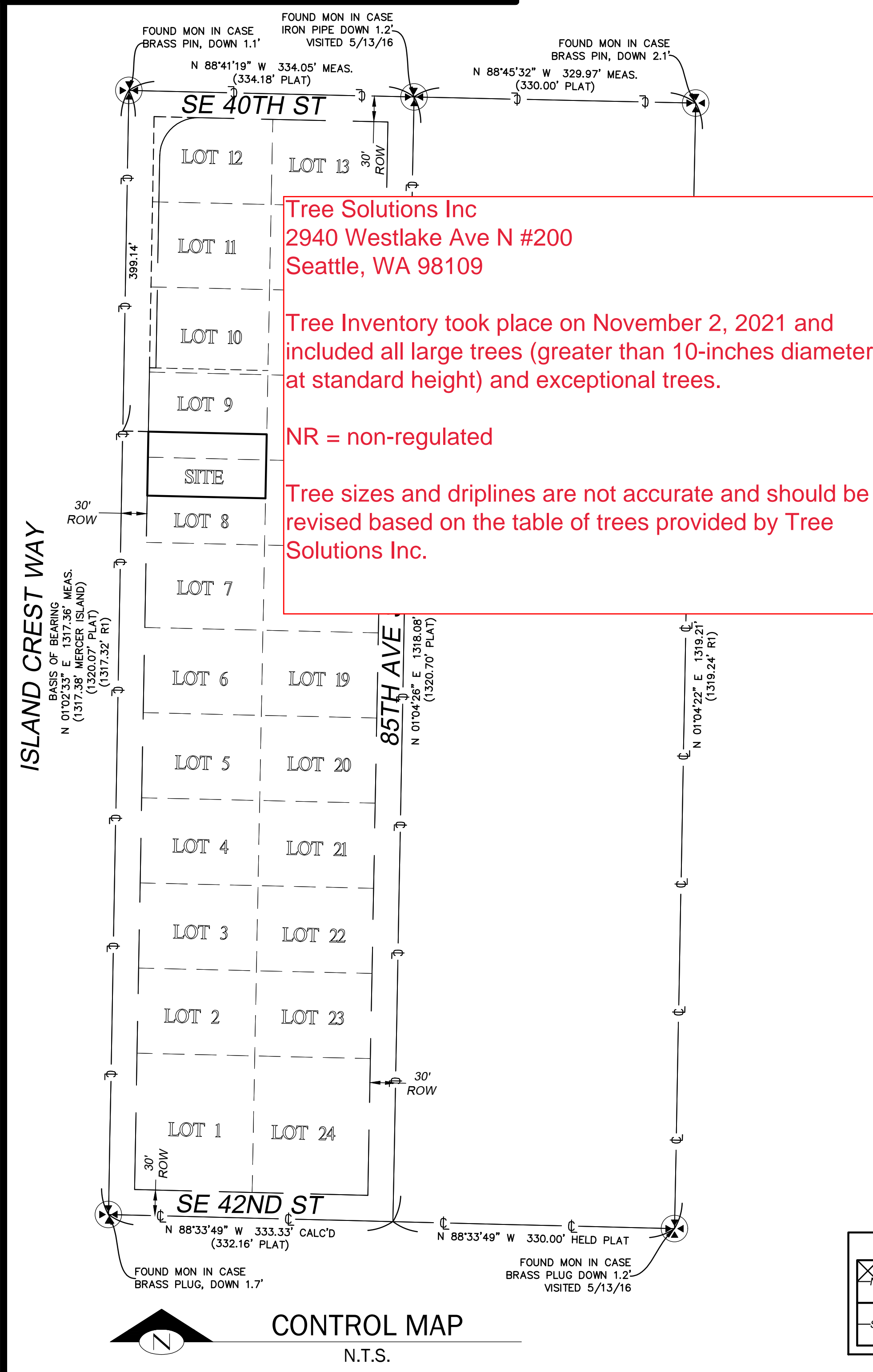
1. MERCER ISLAND LOT LINE ADJUSTMENT NO. SUB07-008, RECORDED UNDER RECORD NUMBER 20090506900003, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER CITY OF MERCER ISLAND CONTROL POINT 1076.
 3/8" BRASS DISC WITH PUNCH MARK IN 4" X 4" CONCRETE POST IN MONUMENT CASE DOWN 1.2".
 ELEV: 293.094



(IN FEET)
 1 INCH = 10 FT.



INDEXING INFORMATION	
NW 1/4	NW 1/4
SECTION: 18	TOWNSHIP: 24N
RANGE: 05E, W.M.	COUNTY: KING

LEGEND			
	ASPHALT SURFACE		MONUMENT IN CASE (FOUND)
	BRICK SURFACE		P P POWER METER
	BUILDING		P P POWER (OVERHEAD)
	CENTERLINE ROW		PP O POWER POLE
	CONCRETE SURFACE		REBAR & CAP (SET)
	RETAINING WALL		ROCKERY
	DECK		SS SEWER LINE
	FENCE LINE (CHAIN LINK)		SEWER MANHOLE
	FENCE LINE (WOOD)		SD STORM DRAIN LINE
	GAS LINE		W WATER LINE
	HX HEAT EXCHANGER		SIZE TYPE TREE (AS NOTED)
	INLET (TYPE 1) (SOLID)		WM WATER METER
	MAILBOX (RESIDENTIAL)		



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.

SURVEYOR'S NOTES

- THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN SEPTEMBER 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.
- ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
- 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).
- SUBJECT PROPERTY TAX PARCEL NO. 545030-0045
- SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,400 ± S.F. (0.24 ACRES)
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
- EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
- 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.

measure success

TOPOGRAPHIC & BOUNDARY SURVEY
 PARCEL NO. 5450300045
ROSS RESIDENCE
 4040 ISLAND CREST WAY
 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: 211789
 DATE: 10/01/21
 DRAFTED BY: IDV / RPM
 CHECKED BY: JGM / PQO
 SCALE: 1" = 10'
 REVISION HISTORY

SHEET NUMBER
 1 OF 1

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: Jay & Julie Ross

Site Address or

Parcel Number: 4040 Island Crest Way

Project Contact

Name: Gary Upper

Contact Email

Address: gary@jaymarchomes.com

Contact Phone

Number: 425 281 2706

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)

0

List tree numbers:

Number of trees from Exceptional Tree Table (MICC 19.16)

3

List tree numbers: 306,307,308

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 14 (A)

List tree numbers: 301 through 314

Number of Large Regulated Trees on site proposed for removal 7 (B)

List tree numbers: 301.302.303.306.309.31.311

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% 50 %

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	
10" up to 24"	2	6	12
Greater than 24" up to 36"	3		
Greater than 36" and any Exceptional Tree	6	1	6
TOTAL TREE REPLACEMENTS			18

**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. **