



ECTYPOS

ARCHITECTURE

November 4, 2022

John Kenney, City Arborist
City of Mercer Island

Re: 6405 W. Mercer Way—memo supplemental to development proposal Arborist report.

Dear John,

This letter is supplemental to the Arborist Report prepared by Neal Baker for the referred development proposal. It is necessary because the intention of the Owners cannot be reconciled in the worksheets.

The project site is very heavily treed with an existing residence built in the 1960's. The proposed addition is on the main floor level. It is intended to support the elderly parents of the Owner, and therefore needs to be continuous with the main floor and require no stairs.

The allowed gross floor area for the site is 8,368.8 SF. The proposed total gross floor area (existing and proposed) is 5,558 SF or 66% of allowed GFA. MICC 19.10.060.3(b)

Of (50) trees on the site, (7) are identified as exceptional plus (1) exceptional/hazardous. The Arborist Report and associated Tree Inventory is assuming the removal of (3) exceptional trees plus the hazardous tree. This is a "worst case scenario."

The Owners intention, however, is to retain (2) of the (3) proposed for removal. Tree #10 is more than 10' from the face of foundations. The site plan shows the roof overhangs which make work seem much closer than it is. Tree #50 is a little over 5' from proposed work, however there is an existing slab and corner of the house immediately adjacent to the tree and there has been no indication of upheaval or cracking of either as is often the case when large trees are adjacent to buildings or slabs. It is our belief, therefore, that significant roots have redirected from this area.

The Owners have gone to great lengths to retain these trees by distancing the project from #50 and reducing scope to protect #10. Furthermore they intend to air spade in the areas around the trees to verify the extent of the root system. Should roots be present in these areas the structural design has accounted for pipe piles and a grade beam (note #4 S2.0).

We recognize that the removal of exceptional trees is not desirable for the City, nor is it for the Owners. We see the proposed removal of trees #10 and #50 as a worst case scenario. Should, however the trees be retained due to the above efforts, the number of replacement trees will be reduced by the associated number.

Best regards,

Lucia Pirzio-Biroli, AIA

RE: Morgan-Hornsby project
6405 We4st Mercer Way
Mercer Island, WA.
98040

What follows is a discussion of ArboristsNW LLC. findings regarding trees on the property. We will discuss the species' critical root zone/limits of disturbance, condition, and status-retention and or removal with long-term viability. In addition, methods used to reach conclusions, protect those trees retained, the reasoning for removals, impact on trees to remain. Finally, tree replacement species and maintenance for two calendar years, the reasoning for species choices and locations. All trees now sport metal numbered tags that correspond to the site survey.

The site is heavily wooded with various species; the main ones are Sequoias, Western Red Cedars, Douglas firs, and Maples. Critical root zones equate to the driplines as listed on the inventory. A measuring tape and range finder was used to determine the lines. Limits of disturbance are also set at these driplines. Six trees are proposed for removal due to their proximity to and inclusion in the building footprint, with two trees numbered 22-3 Big Leaf Maples included due to poor/hazardous conditions. Please note the included memo of client intent regarding the retention of trees slated for removal that are found at the time of excavation/start of construction viable after inspection by the project arborist who is to be on-site during excavation. Tree 12, the 32" DBH exceptional Sequoia, is the only tree that is in the footprint and will need to be removed as the project is designed.

Tree protection measures Fencing, mulching, and trunk wrapping to be the first activity before any other work on the project. The project arborist is to be on-site during installation.

A soil compaction meter was used along the length of the driveway at every tree with a dripline that extends over it. Readings exceeded 300psi at the driveway's surface, never piercing below 1-2". Two hundred and below is the optimal range for root growth, and along the driveway, the readings all were off the scale. It appears that the trees along the driveway have all grown after the drive was put in use, and compaction is near absolute. Trees 1, 11, 25-7 all have roots growing to the edge of the drive and then along the run. Tree 1 is so close to the driveway that

it has developed a flat spot on the drive side of its trunk. T 1

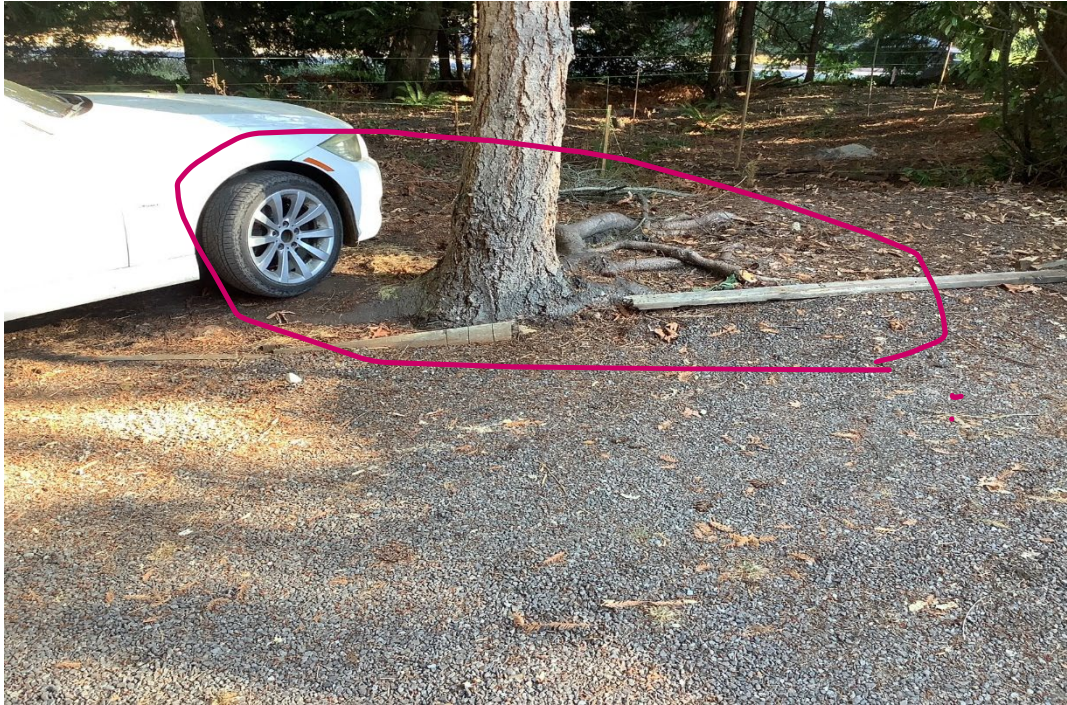


Tree 1 above

Red lines show the direction of major root growth



Tree 11 has been subjected to this same compaction. In this case, it has developed extensive surface rooting to the east, away from the drive. The soil on the east side of the tree was easily penetrated to a depth of 1-1.5'. This tree will have its trunk wrapped for protection and then a layer of mulch on the exposed roots on the other three sides of the trunk. This mulch is to be 6-8" deep with plywood or expanded metal placed over the mulch to protect the surface roots and preserve the tree. Tree 11, pictured below.



With the level of compaction found along the driveway, it is our opinion that no root protection be placed on the driveway. Again, trees along the driveway will have their trunks wrapped in 2X4s for protection again from stray traffic, and the tree fencing to be along the edges of the driveway.

Trees 22-3 are Big Leaf Maples in poor condition, the stumps have decay in them, and the crowns have large dead scaffold branches with significant deadwood. The main targets for these trees are the many utilities that run along the west side of West Mercer and West Mercer Way itself.

These trees are slated for removal and replacement.



Stump and crown of T 22 above.



Crown and stump of tree 23 above.

Trees 9, 10, 12, 50, and 50 are in good condition but slated for removal (again, reference tree retention memo). If they have any issue, it would be that they are overcrowded by the density of the stand.

Given the degree of tree protection outlined and that all the trees in the vicinity of the removals are blocked from the wind, they are assured to be viable for many years to come. All the tree west and south of the proposed work are either blocked by neighboring trees or have grown with the full force of the SW winds on them (trees on the west lawn) and so will not be adversely affected by any removals.

With the density of the canopy on the property, the trees selected as replacements are understory trees that will withstand the deep shading by that canopy. We have locations for the replacements, so they have a minimum of 10' of spacing from any other tree. The species are Vine Maple, Serviceberry, Shore Pine, and Pacific Wax Myrtle. These trees will be fed after planting again in early spring and then after the first frost the following year. This schedule to be repeated for 5 years. Monthly observations are to begin in the spring and be repeated as climate conditions dictate. Supplementary watering and or monitoring for the need for added irrigation to begin in the first spring also. If supplemental irrigation becomes necessary, Tree-Gaters will be employed.

Respectfully Submitted



11-4-22

Neal Baker
ArboristsNW.com
ISA Cert. PN1075A
TRAQ ISA (Tree Risk Assessment Qualified)
Member AREA & SOCA



CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



MERCER ISLAND TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

PROJECT INFORMATION

Property Owner
Name: _____

Site Address or
Parcel Number: _____

Project Contact
Name: _____

Contact Email
Address: _____

Contact Phone
Number: _____

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater _____

List tree numbers: _____

Number of trees 24" or greater (including 36" or greater) _____

List tree numbers: _____

Number of trees from Exceptional Tree Table (MICC 19.16) _____

List tree numbers: _____

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site 40 (A)
 List tree numbers: _____

Number of Large Regulated Trees on site proposed for removal 6 (B)
 List tree numbers: _____

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% 85 %

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 2
 List tree numbers: 16-7 _____

Number of Large Regulated Trees in right of way proposed for removal 0
 List tree numbers: _____

Reason for removal: N/A _____

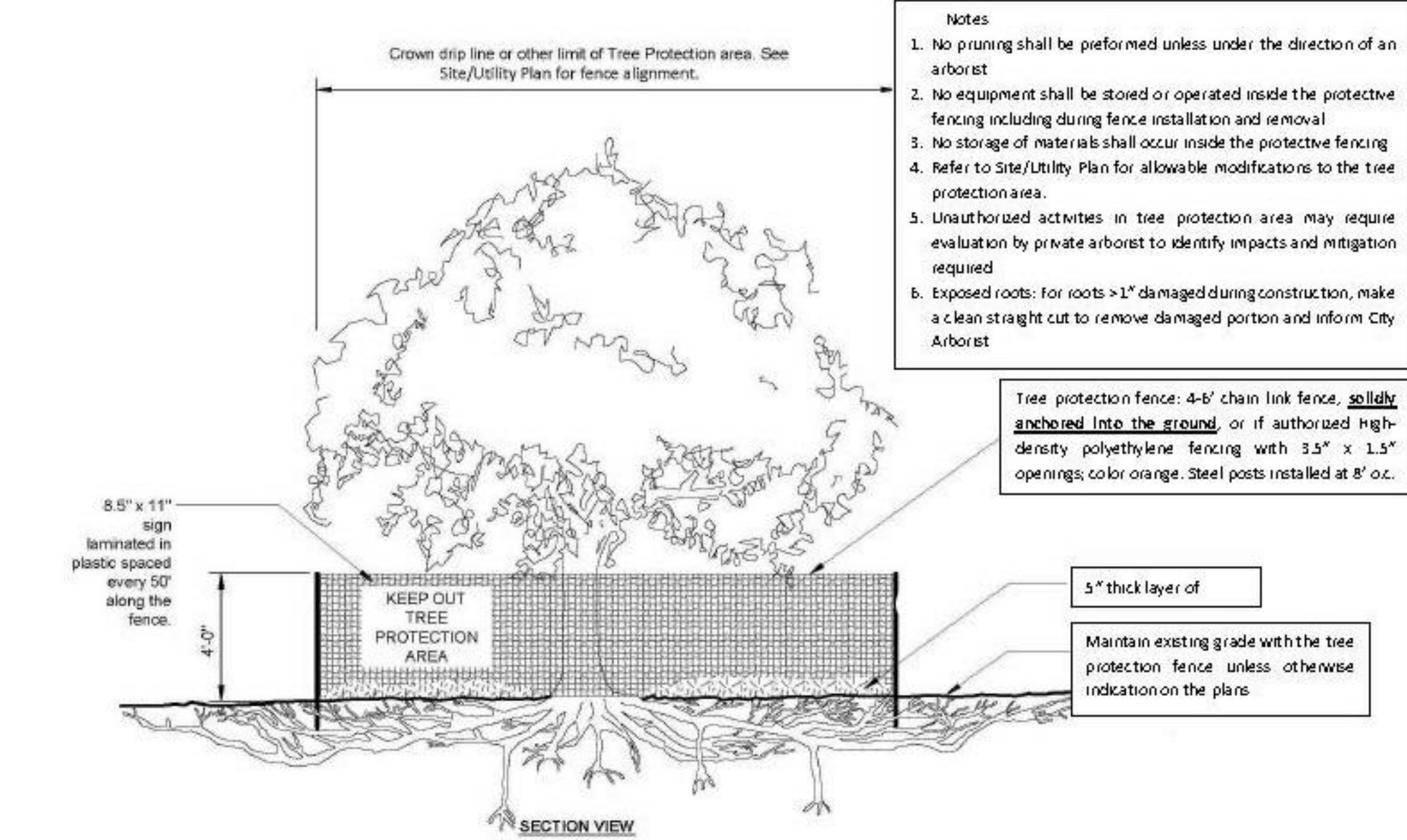
TREE REPLACEMENT

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.

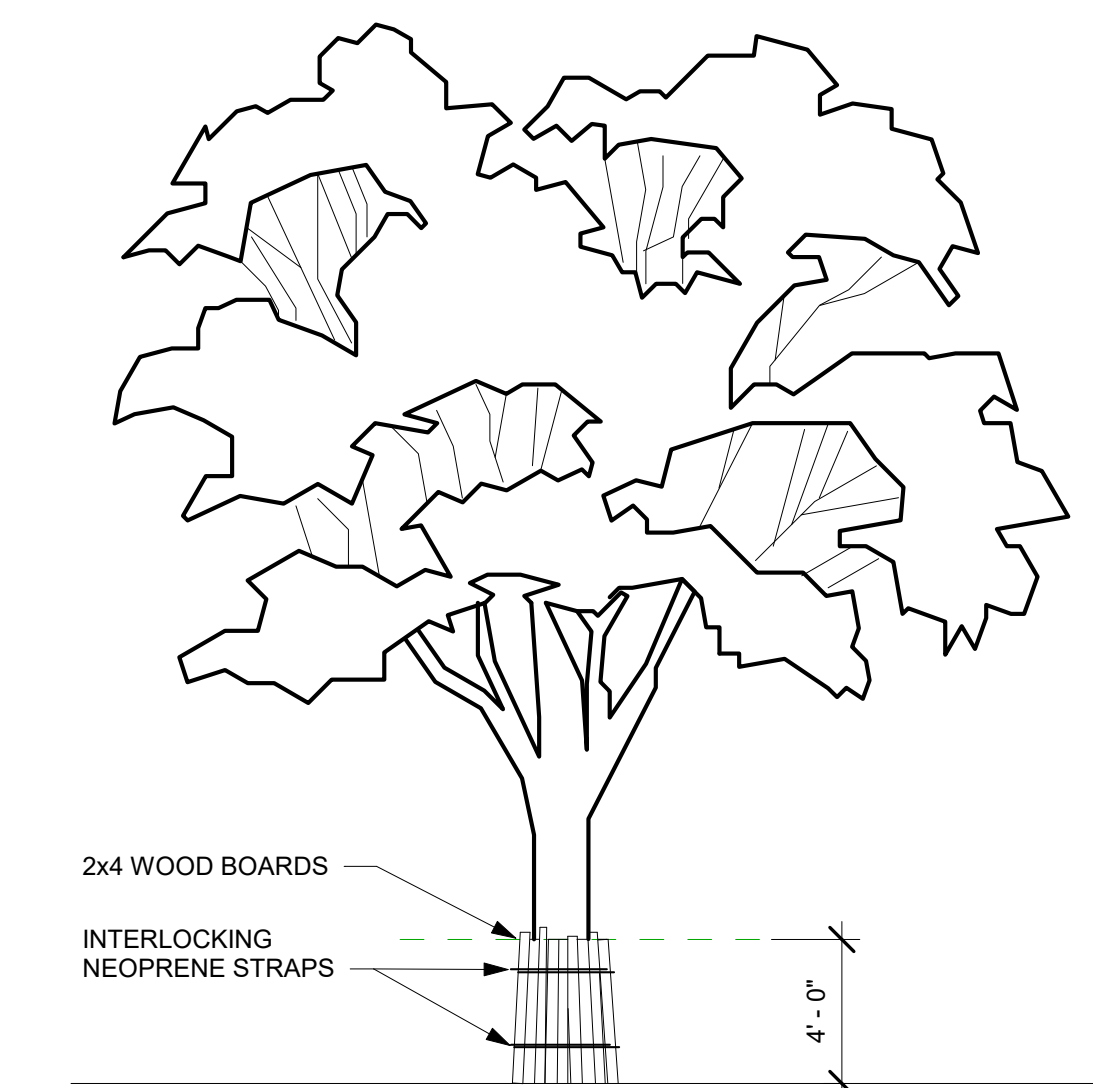
Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"*	1		
10" up to 24"	2	2	4
Greater than 24" up to 36"	3	3	9
Greater than 36" and any Exceptional Tree	6	1	6
TOTAL TREE REPLACEMENTS			19

***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. ***

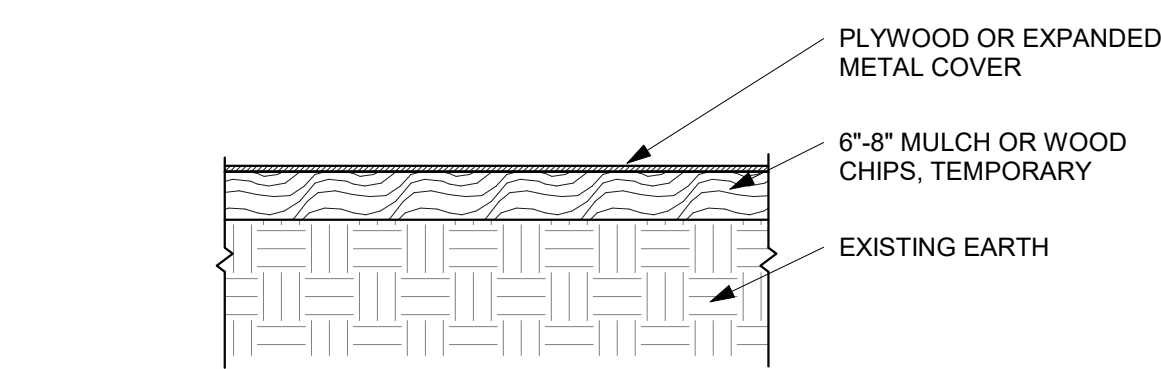
No.	Description	Date



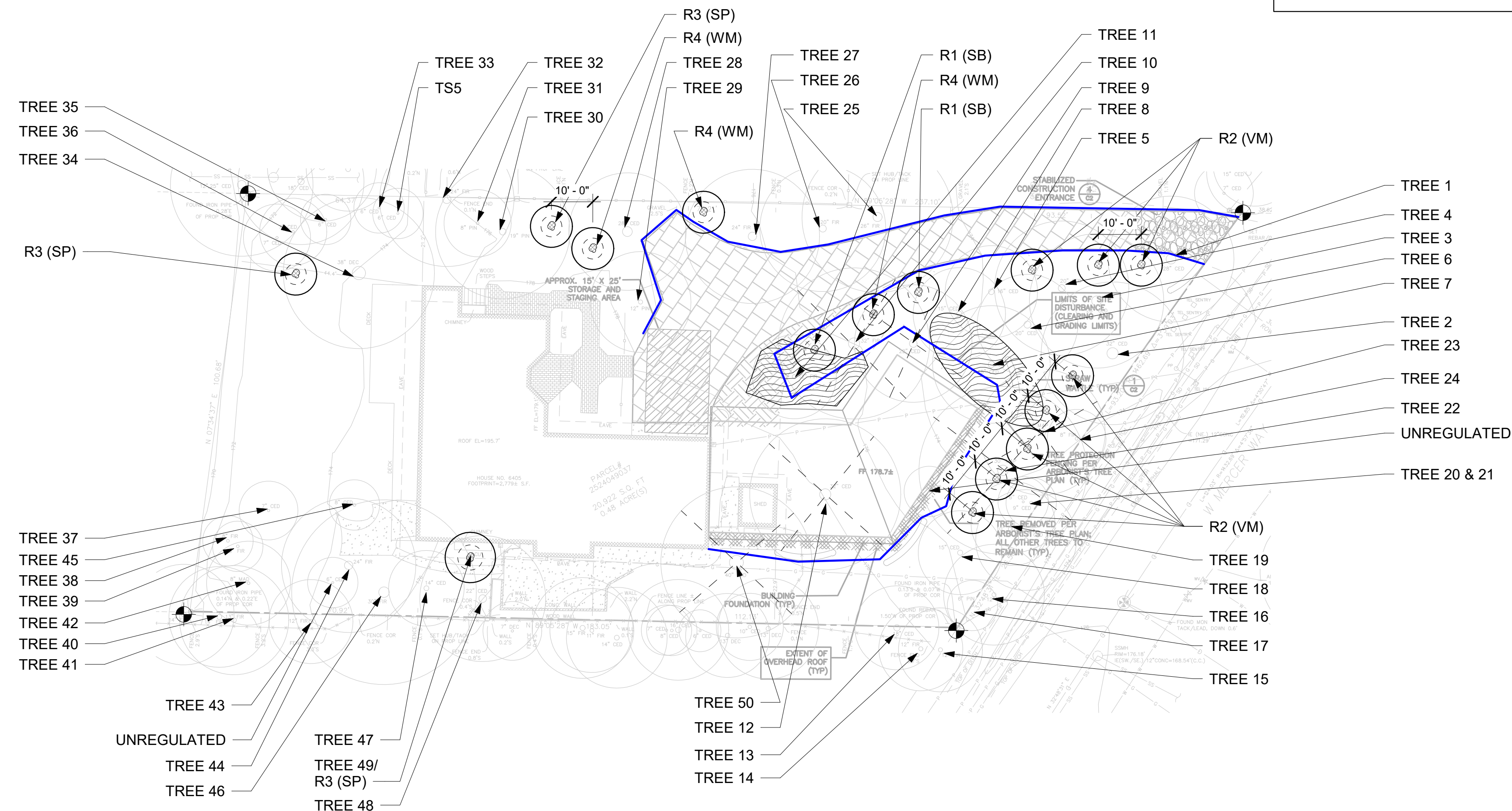
2 Mercer Island Tree Protection Detail
 1/4" = 1'-0"



3 Trunk Protection
 3/16" = 1'-0"



4 Tree planting protection - Traffic Cover
 1/2" = 1'-0"



ARBORISTS SITE PLAN
 1" = 20'-0"

	TREE DRIP LINE (DL)
	DIAMETER STANDARD HEIGHT (DSH)
	EVERGREEN TREE
	DECIDUOUS TREE
	TREE TO BE REMOVED
	TREE PROTECTION FENCING
	NEW TREE
	6"-12" DEEP MULCH

TREE #	TREE TYPE	DBH	DRIPLINE	CONDITION	RETAIN OR REMOVE	TRUNK PROTECTION	COMMENTS
1.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	30"	15'	Good	RETAIN		EXCEPTIONAL
2.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	32"	15'	Good	RETAIN		EXCEPTIONAL
3.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	28"	18'	Good	RETAIN		
4.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	20"	18'	Good	RETAIN		
5.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	16"	18'	Good	RETAIN		
6.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	20"	15'	Good	RETAIN		
7.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	20"	15'	Good	RETAIN		
8.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	15"	12'	Good	RETAIN		
9.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	22"	18'	Good	REMOVE		
10.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	12"	21'	Good	RETAIN		EXCEPTIONAL
11.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	32"	12'	Good	RETAIN	YES	
12.	SEQUOIA <i>SEQUIADENDRON GIGANTEUM</i>	32"	21'	Good	REMOVE		EXCEPTIONAL
13.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	18"	15'	Good	RETAIN		
14.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	12"	12'	Poor	RETAIN		
15.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	12"	12'	Poor	RETAIN		
16.	DEODORA <i>CEDRUS DEODORA PENDULA</i>	32"	12'	Good	RETAIN		UNREGULATED
17.	PINE <i>PINUS PONDEROSA</i>	6"	8'	Poor	RETAIN		
18.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	15"	15'	Good	RETAIN		
19.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	10"	14'	Fair	RETAIN		
20.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	9"	12'	Fair	RETAIN		UNR
21.	-	-	-	-	-	-	-
22.	BIG LEAF MAPLE <i>ACER MACROPHYLLUM</i>	22"	22'	Poor	REMOVE		UNREGULATED
23.	BIG LEAF MAPLE <i>ACER MACROPHYLLUM</i>	20"	18'	Fair	REMOVE		
24.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	8"	14'	Fair	RETAIN		
25.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	26"	21'	Good	RETAIN	YES	
26.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	20"	8'	Good	RETAIN	YES	
27.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	24"	21'	Good	RETAIN	YES	
28.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	28"	18'	Fair	RETAIN	YES	
29.	PINE <i>PINUS PONDEROSA</i>	12"	12'	Poor	RETAIN	YES	UNREGULATED The tree between to small remove from drawing
30.	DEODORA <i>CEDRUS DEODORA PENDULA</i>	19"	18'	Good	RETAIN		UNREGULATED
31.	DEODORA <i>CEDRUS DEODORA PENDULA</i>	8"	15'	Good	RETAIN		UNREGULATED
32.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	24"	16'	Good	RETAIN		EXCEPTIONAL/Hazardous
33.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	6"	12'	Fair	RETAIN		
34.	BIG LEAF MAPLE <i>ACER MACROPHYLLUM</i>	38"	18'	Poor	RETAIN		
35.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	7"	12'	Fair	RETAIN		UNREGULATED
36.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	7"	12'	Fair	RETAIN		UNREGULATED
37.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	7"	14'	Fair	RETAIN		UNREGULATED
38.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	8"	8'	Dead	RETAIN		UNREGULATED
39.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	8"	8'	Dead	RETAIN		UNREGULATED
40.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	14"	18'	Fair	RETAIN		
41.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	13"	6'	Fair	RETAIN		
42.	MADRONA <i>ARBUTUS MENZIESII</i>	8"	12'	Fair	RETAIN		EXCEPTIONAL
43.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	12"	14'	Fair	RETAIN		6" WESTERN RED CEDAR between gone
44.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	24"	18'	Good	RETAIN		
45.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	8"	12'	Fair	RETAIN		UNREGULATED
46.	DOUGLAS FIR <i>PSEUDOTSUGA MENZIESII</i>	30"	14'	Good	RETAIN		EXCEPTIONAL
47.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	14"	14'	Fair	RETAIN		
48.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	22"	16'	Fair	RETAIN		
49.	VINE MAPLE <i>ACER CIRCINATUM</i>	6.5"	12'	Fair	RETAIN		UNREGULATED - REPLACED WITH SHORE PINE
50.	WESTERN RED CEDAR <i>THUJA PLICATA</i>	40"	27'	Good	REMOVE		EXCEPTIONAL

NOTE: 10, 12, AND 50 ARE EXCEPTIONAL AND SLATED FOR REMOVAL IN GOOD CONDITION USING (MICC19.10.060(A)(3))THE GFA CALCULATIONS ARE FOUND ON PAGE A1.2

PREPARED BY:
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 TRAQ ISA (TREE RISK ASSESSMENT QUALIFIED)
 MEMBER AREA & SOCA
 PH: 206 779 2579

MORGAN-HORNSBY
 6405 W MERCER WAY, MERCER ISLAND, WA 98040

MORGAN-HORNSBY

ARBORIST TREE PLAN

Project number	22013
Date	--
Drawn by	CW
Checked by	NB

X100

Scale As indicated