

September 23, 2016

Seth Amrhein

Project # 3020338

Arborist Report Correction Notice #1

City of Seattle

Department of Construction and Inspection

700 Fifth Avenue, Suite 2000

Seattle, WA 98124-4019

RE: 2925 E Madison St
Correction Notice #1 Response

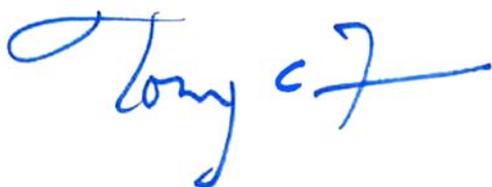
Dear Seth,

Attached is our response to your correction notice dated July 28, 2016.

Documents attached:

- 1.) Tree Solutions Inc. Response to City Correction Notice #1 (14 pages)
- 2.) Table of Trees (4 pages)

Thank you,

A handwritten signature in blue ink that reads "Tony C Fan". The signature is stylized and fluid.

Tony C Fan, AIA
Studio Meng Strazzara

Response to City Corrections Notice #1

TO: Geza DeGall, The Velmeir Companies
SITE: 2925 E Madison St, Seattle, WA 98112
RE: Project# 3020338
DATE: September 15, 2016
PROJECT ARBORISTS: Sean Dugan, ASCA Registered Consulting Arborist #457
ISA Board Certified Master Arborist #PN-5459B
ISA Qualified Tree Risk Assessor

In response to the Seattle Department of Construction and Inspection regarding project #3020338 dated July 28, 2016, Tree Solutions, Inc. conducted additional investigation and evaluation of the project site. This investigation included a field visit, more detailed tree survey and meeting with the project architect, geotechnical engineer and civil engineer to understand slope stability and project constructability issues that may directly or indirectly impact trees, root zones and long-term survivability.

The tree survey, included as Appendix A, precisely and accurately depicts the location of trees and the various trunk diameters to scale. A copy of a report from the civil engineer describing the steep slope, fill soils, and constructability issues is appended to this response as Appendix B. Details expressed in site photographs can be found in Appendix C.

Correction Item 1

Please provide more details to demonstrate that the 13 trees noted in the arborist report (page 1) cannot be retained due to the proposed upgrade of the East Dewey PI right-of-way. What work is proposed in the right-of-way and how will the tree specifically be impacted?

Arborist Response 1

Trees 1105, 1106, 1109, 1116, 1117, 1128, 1129, 1130, 1131, 1132, 1133, 1135, & 1137 cannot be retained because they will be negatively impacted by improvements necessary to stabilize the toe of the slope and potential right-of-way improvements.

The City categorizes the site as an environmental critical area having a steep slope and being within a liquefaction zone. A known slide area has been documented in the adjacent right-of-way (ROW) to the northeast of the property. The soil on the slope has been moving downward, indicating it is unstable. I noted this in my report by mentioning that there are trees with a “j” shaped base. Conditions negatively impacting the trees were also noted in another consultant’s report, Steinbrueck Urban Strategies LLC, where it states on page 2 “ Others [trees] have noticeable lean (particularly the largest poplars on the north end of the slope) due to the slow movement of the unstable slope.”

The primary factors effecting long-term tree health and survivability are 1) impacts to the fill soils resulting from construction of the development; 2) impacts resultant from a toe-of-slope retaining wally that will be required; and 3) dedication of City-required right-of-way ("ROW area") because of the current sub-standard width of Dewey Place E. As described in Appendix B, to stabilize the slope and improve the safety of the site, a retaining wall is required to be constructed west of the five-foot ROW area.

To comply with SMC 23.53.015.D.1.b.1, the ROW along Dewey Place E. needs to be expanded. Because the ROW currently does not meet street standards, the property owner will be required to dedicate a five-foot wide strip west of the current right-way-way edge. Additionally, a retaining wall needed to stabilize the slope behind the ROW area will extend 24 to 36 inches west of the proposed dedication. This retaining wall is needed to ensure the safety of the slope and minimize the possibility of a slide or soil failure(See Appendix B). Preparation of the ROW area and construction of the retaining wall will require the excavation of soil seven to eight feet west of the current sidewalk. The area of excavation may extend further to the west if the soils become unstable and additional layback of the slope is needed. As shown on Appendix C (photos) ROW area work and retaining wall will directly impact several on-site trees—particularly the cedar trees currently located along the toe of the slope near the existing sidewalk (see Appendix A).

The excavation for the retaining wall, and required ROW improvements is detailed in a geotechnical report written by Joe Talfin, P.E., of Navix Engineering (Appendix B). The report and the Eastern Tree Exhibit (Appendix A) confirms that, at minimum, the retaining wall construction will compromise the root systems of 13 trees (1105, 1106, 1109, 1116, 1117, 1128, 1129, 1130, 1131, 1132, 1133, 1135, & 1137). Additional trees, specifically trees 1110 & 1134, may also be compromised as excavation will occur within a distance equal or less than three times each tree's trunk diameter. This is considered to be the minimum root plate necessary to ensure a tree's stability, particularly given the slope and presence of fill soils. As an example, tree 1311, a 37.5 inch diameter black cottonwood tree requires a minimum root plate approximately 9.4 feet in radius. With the proposed improvements, the root plate on the east side of the tree would be reduced at best to a 4.5 feet and possibly as close as 2.5 feet away. This substantially increases the likelihood of tree failure and ultimately will lead to the tree's decline as disease enters into the severed roots and decay develops.

A reduced root plate can become a greater issue when there are unstable soils. The force placed on the soil is significantly increased when the tree is under load. The energy placed on an undisturbed root system can extend out into the surrounding soil area. When the roots are shortened the force is no longer dispersed, increasing the load on the soil. This can cause the soil and tree to fail on the shorter root plate side when the tree is under a compressive load. Trees that have roots severed within the minimum required root plate will have a higher probability for failure and will present a hazard to any target within striking distance, equal to the height of the tree.

In addition to the negative impacts that will occur during the construction of the retaining wall there are other factors that are likely to lead to the decline of several of the trees in the stand. Currently, the trees down the slope are being provided with supplemental irrigation from the porous surface and nursery up slope. Development of the site, including the temporary shoring that is described in section 2 of the geotechnical report, will significantly alter the hydrological patterns of the site, likely leading to the reduction of water to the stand. In particular, western red cedar (trees 1105 through 1109) do not tolerate changes to soil hydrology.

Correction Item 2

There are two clusters of trees along the north and south ends of the lot along Dewey Pl E. that seem like they could potentially constitute a “grove” of trees, as defined in SDCI Director’s Rule 16-2008. Please have the arborist confirm that he has considered whether there are any “groves,” which would be “exceptional trees,” on the site, and provide details of any analysis performed to make this determination. A graphical depiction on a site plan exhibit could be helpful to show how this analysis to identify any groves was completed.

Arborist Response 2

No groves exist on the site as per the definition provided in the city of Seattle Director’s Rule 16-2008.

The city of Seattle Directors Rule 16-2008 states:

Tree Grove - Per City regulations, a grove means a group of 8 or more trees 12” in diameter or greater that form a continuous canopy. Trees that are part of a grove shall also be considered exceptional unless they fail to meet the risk criteria discussed in the following section. Trees that are less than 12” in diameter that are part of a grove’s continuous canopy cannot be removed if their removal may damage the health of the grove. Street trees shall not be included in determining whether a group of trees is a grove.

Risk Assessment – Per City regulations, Trees that meet the size threshold or grove definition discussed above shall be considered exceptional unless DPD finds that the tree or trees should be removed based on a risk assessment produced by a qualified professional. In making this determination, *a qualified professional will consider crown size, structure, disease, past maintenance practice, potential damage to existing or future targets, risk mitigation options, and, when development is proposed, the likelihood of survival after construction.* Red alders, black cottonwoods, and bitter cherries shall not be considered exceptional trees except as part of a grove.

To determine if the presence of groves exist, I used the following methods. I measured the diameter at standard height and canopy radius in the four cardinal directions for each tree. The canopy coverage is shown on the site survey as an average of the radius to the north/south and east/west. To determine if trees are to be included as part of a grove I evaluated the canopy of each tree 12 inches in diameter and greater to see if they formed a contiguous canopy. If any tree did not have a portion of its canopy in contact or overlapping any portion of an adjacent tree, it was not counted.

Based on these findings, on the north end of the site, there are less than eight trees that are 12 inches in diameter and greater that have a contiguous canopy. This does not meet the definition of a grove. At minimum, three of the trees (1131, 1134 & 1137) will be compromised by the construction of the retaining wall west of the dedicated ROW. Trees 1131, 1134 and 1138 will all be compromised by the construction of the wall to the east. The compromised trees will present a greater probability of tree failure to the new construction to the west and Dewey Pl. E to the east.

There are ten trees on the south portion of the site that that are 12 inches in diameter and have a contiguous canopy. During the original assessment there were an additional two trees represented on the survey as part of the grove. An advanced assessment was made for trees 1112/1113 and 1114/1115. During this advanced assessment it was determined that that tree 1112/1113 were in fact a

single tree, which we have since labeled as 1112. This was also the case for trees 1114/1115, which we have since labeled 1114. A total of ten trees stand in this area.

The trees at the southern portion of the site, as it currently exists, meets the Code definition of a “grove” of ten trees with a diameter of 12 inches and greater with a continuous canopy. However, to be in compliance with city code, the ROW along Dewey Pl. E. needs to be brought up to City street standards. Trees 1105, 1106, 1109 & 1117 will be located in the ROW and as per the Director’s rule these trees will not be counted as part of the grove post-construction. Removing these trees reduces the number of trees in the stand to six trees, below what is needed for a “grove”. The loss of the canopy from these trees also separates the contiguous canopy.

Additionally, the engineering report (Appendix B) concludes that the construction of the retaining wall is necessary to stabilize the slope. The retaining wall construction will ultimately lead to the removal of at least trees 1105, 1106, 1109, 1117 and possibly 1110 for the same reasons indicated for the north stand trees and the wall. Removing these trees will result in fewer trees needed to constitute a grove. Based on construction of building of code-allowed floor area ration, trees 1103, 1111, 1112, and 1114 will be in the building envelope and will need to be removed. Loss of this canopy will also reduce the number of trees needed to constitute a grove.

In addition the need for removal due to being within the development areas, other items were considered as per the Director’s Rule *“a qualified professional will consider crown size, structure, disease, past maintenance practice, potential damage to existing or future targets, risk mitigation options, and, when development is proposed, the likelihood of survival after construction.”*

Thirteen trees (1105, 1106, 1109, 1116, 1117, 1128, 1129, 1130, 1131, 1132, 1133, 1135, & 1137) will be negatively impacted by the sidewalk dedication and construction of the retaining wall required along the west side of Dewey Place. These trees will all have too much of their root systems compromised by the proposed right-of-way regrading and curb, gutter and sidewalk construction and the retaining wall construction to allow them to be safely retained. Construction of this infrastructure will remove a significant amount of each tree’s root plate. This will increase their likelihoods of failure due to a lack of structural roots.

In addition to the loss of structural support for the above trees, the severing of such a substantial amount of roots will inevitably cause decline in the trees’ health. This reduction of feeder roots coupled with the extreme changes in hydrology that will be associated with the removal of much of the soil upslope and to the west of the trees, will likely cause the trees to decline even greater.

The combined disturbance for trees 1105, 1106, 1109, 1116, 1117, 1128, 1129, 1130, 1131, 1132, 1133, 1135, & 1137 will likely result in either tree death, or an elevated risk that would make these trees unsuitable for their location.

Tree 1103 is a red alder (*Alnus rubra*) tree that has some decay in the lower stem, and has a co-dominant union with included back. This species does not compartmentalize decay way, and tends to have weak unions where included back is present. This tree is associated with moist soil conditions, and would be expected to decline in health during construction due to proposed changes in hydrology and the more extreme summer droughts we are experiencing in our region. These are not considered long-term retention trees.

Trees 1105, 1106, 1107 and 1109 are Zebrina western redcedar (*Thuja plicata* 'Zebrina') trees. These trees are most likely to decline in health due to changes in hydrology due to the removal of the porous surfaces upslope from them. This species is not very tolerant of hydrology changes and extreme changes in site conditions, most notably when extreme root disturbance takes place within its critical root zone. Tree 1109 has also been topped below the power lines by approximately 50 percent.

Tree 1110 is a Lombardy poplar (*Populus nigra* var. *italica*). This tree may be compromised by the proposed retaining wall as it is very close to the area that will be heavily disturbed. The disturbance will increase the likelihood of failure.

Trees 1111, 1112, and 1114 are all bigleaf maples with co-dominant unions. Trees 1111 and 1112 both have narrow angles of attachments between their unions, which can become defects once the stems grow larger and develop included bark. In addition, tree 1112 has the decay-causing fungus *Kretzschmaria deusta* in the stem that causes internal decay and ultimately leads to tree failure. Given the amount of proposed disturbance, the tree will likely become stressed and be unable to compartmentalize the decay. This could lead to a failure at the base of the tree and increase its risk potential. Tree 1114 has had previous trunk failures and damage along the main stem.

There are unprecedented issues negatively compromising bigleaf maple trees in the Puget Sound region. It is not clear to the cause but it appears to be related to changes in environmental conditions. These changes have resulted in the death of many of these trees in the Seattle area. The maple trees on the site are showing these symptoms that may lead to their decline. Thus, even if the bigleaf maple trees are retained there is no guarantee that they will survive, especially given any additional changes to the site.

All trees less than 12 inches in diameter have been removed from the Eastern Tree Exhibit. The Exhibit shows the location of and canopy dimensions of all trees 12 inches in diameter and greater. The five foot setback line depicts the location of the required dedication. The slope stabilizing retaining wall will at minimum be placed two to three feet west of this dedication. The 17.5 foot setback line shows a maximum setback line for the face of the building and illustrates the challenges in retaining trees on the slope given the building envelope, required ROW dedication, and retaining wall location.

Corrections Item 3

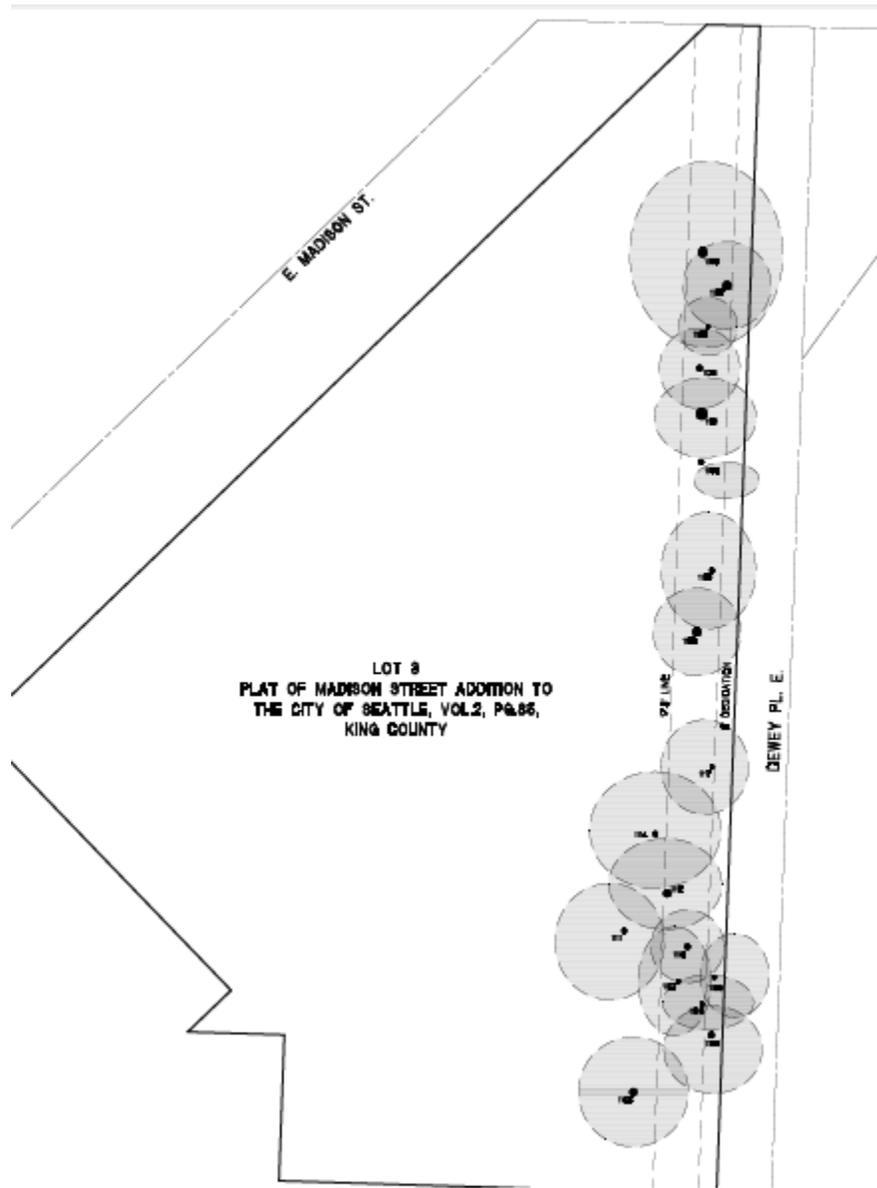
The arborist report indicates at least one "exceptional tree" and other trees with trunk diameters in excess of 24 inches at 4.5 feet above ground will be removed for this proposal. Removal of any such trees is subject to the tree canopy replacement requirement under SMC 25.11.090. To show that this requirement will be met, we need a landscape plan that clearly shows replacement trees and supporting calculations showing that the canopy of the replacement trees will, upon their maturity, equal or exceed the canopy of "exceptional trees" and trees 24 inches or greater that will be removed.

Arborist Response 3

Canopy coverage of Exceptional trees and trees over 24" in diameter is equal to 4,717 square feet. The mature canopy of the replacement trees is equal to 10,545 square feet.

See Tree Replacement Data on the landscape plan sheet L1.33

Appendix A – Trees located on current tree Survey



Appendix B – Engineer’s Report



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Memo

To: Tony Fan, AIA
From: Joe Taflin, P.E. LEED AP
CC:
Date: September 6, 2016

Subject: 2939 Madison Apartments – Excavation Conditions and Required Improvements Along Dewey Place

Navix has reviewed the proposed building plan, existing conditions, and required right-of-way (ROW) improvements along Dewey Place for potential impacts to the existing trees on the subject property. The trees could potentially be impacted by the following activities and improvements:

1. Required ROW improvements along Dewey Place.
2. Excavation and shoring construction at the east building face.

These issues are discussed below.

1. Required ROW improvements along Dewey Place.

A 5'-0" dedication is required along Dewey for ROW improvements per the City of Seattle Land Use Code. ROW improvements will consist of a 6-inch curb and gutter, sidewalk, and a planter strip. The sidewalk and planter strip are constructed at a 2 percent grade up from the curb. After the dedication is made, the new property boundary along the east frontage (along Dewey Place) will be 5'-0" inside the current property line.

The existing grade on the subject property along Dewey is generally an upward slope at approximately 1.5H:1V (horizontal:vertical) from the existing property line, which is located at the existing back of sidewalk. Existing grade will be approximately 2 to 4 feet above sidewalk grade at the 5'-0" setback line. Therefore, a retaining wall is required at the back of sidewalk to retain the existing slope.

The new retaining wall will likely be a rockery, unit block, or cast-in-place wall type that will require approximately 4 to 5 feet of width to construct the wall and the associated drainage system behind the wall. A cut slope behind the wall to allow for wall construction is required and can be installed at a 1.5H:1V slope, possibly with a limited (4 feet or less) neat (vertical) cut at the base of the wall, depending on field conditions and soil stability.

Per the project arborist, the required retaining wall will impact tree 1131, located in the building notch, as the existing tree is located approximately 5 to 6 feet behind the 5'-0" dedication. See Section 1.

The required retaining wall will also impact several trees along the south of the property. See Section 2.

2. **Excavation and shoring along Dewey Place.**

The Level 1 finished floor elevation will be 132.0, and the proposed bottom parking level (P2) will be located approximately at elevation 109.5. The bottom of footing will likely be about elevation 106, about 3 to 4 feet below the slab.

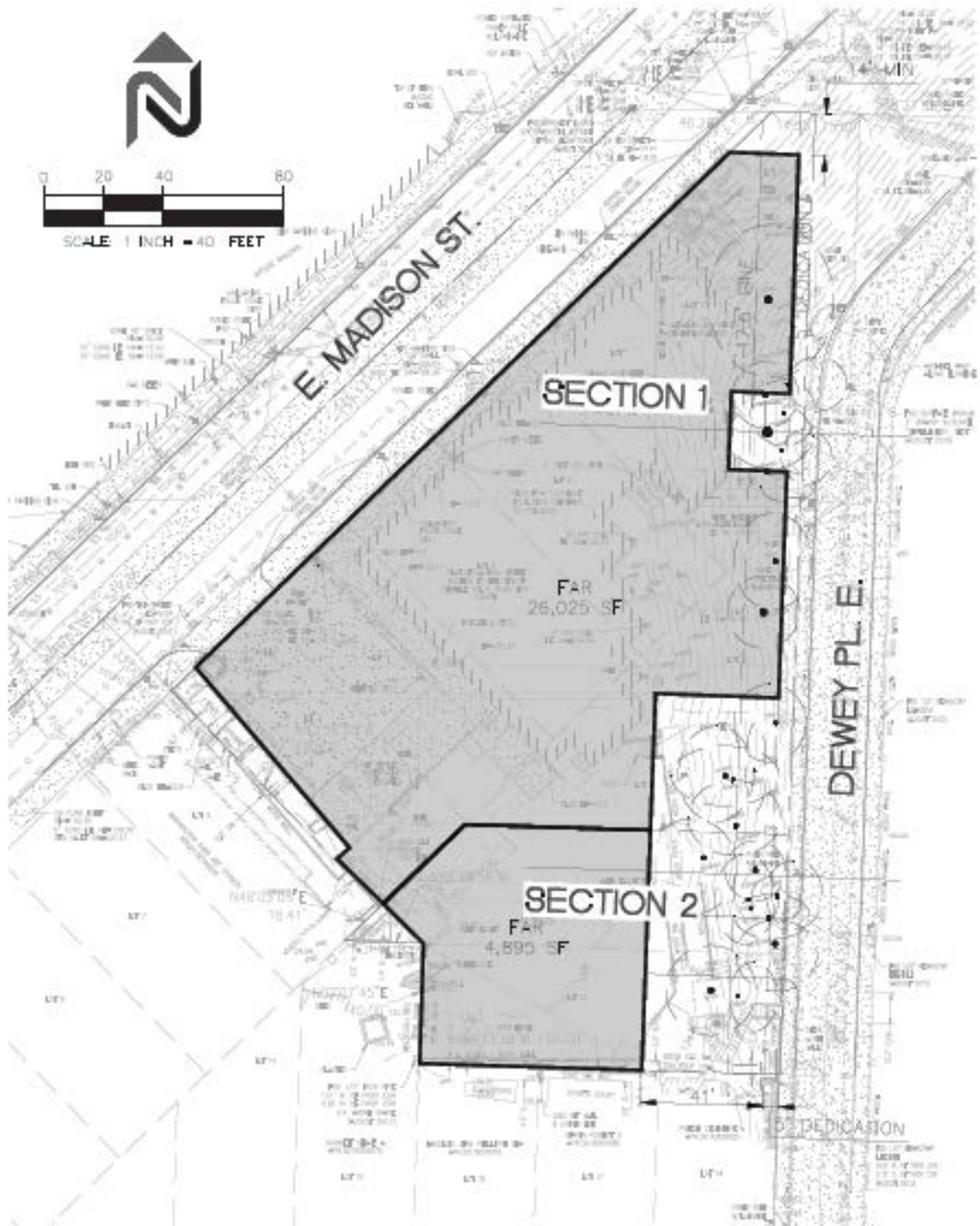
Under typical design conditions, a temporary shoring system consisting of soldier piles, tiebacks, and lagging would be installed along Madison, the south building wall, and the north building wall. The excavation would be daylighted along Dewey since Dewey is located below the proposed bottom of excavation (street elevations along Dewey vary from 92 to 106) and there is sufficient space to use cut slopes.

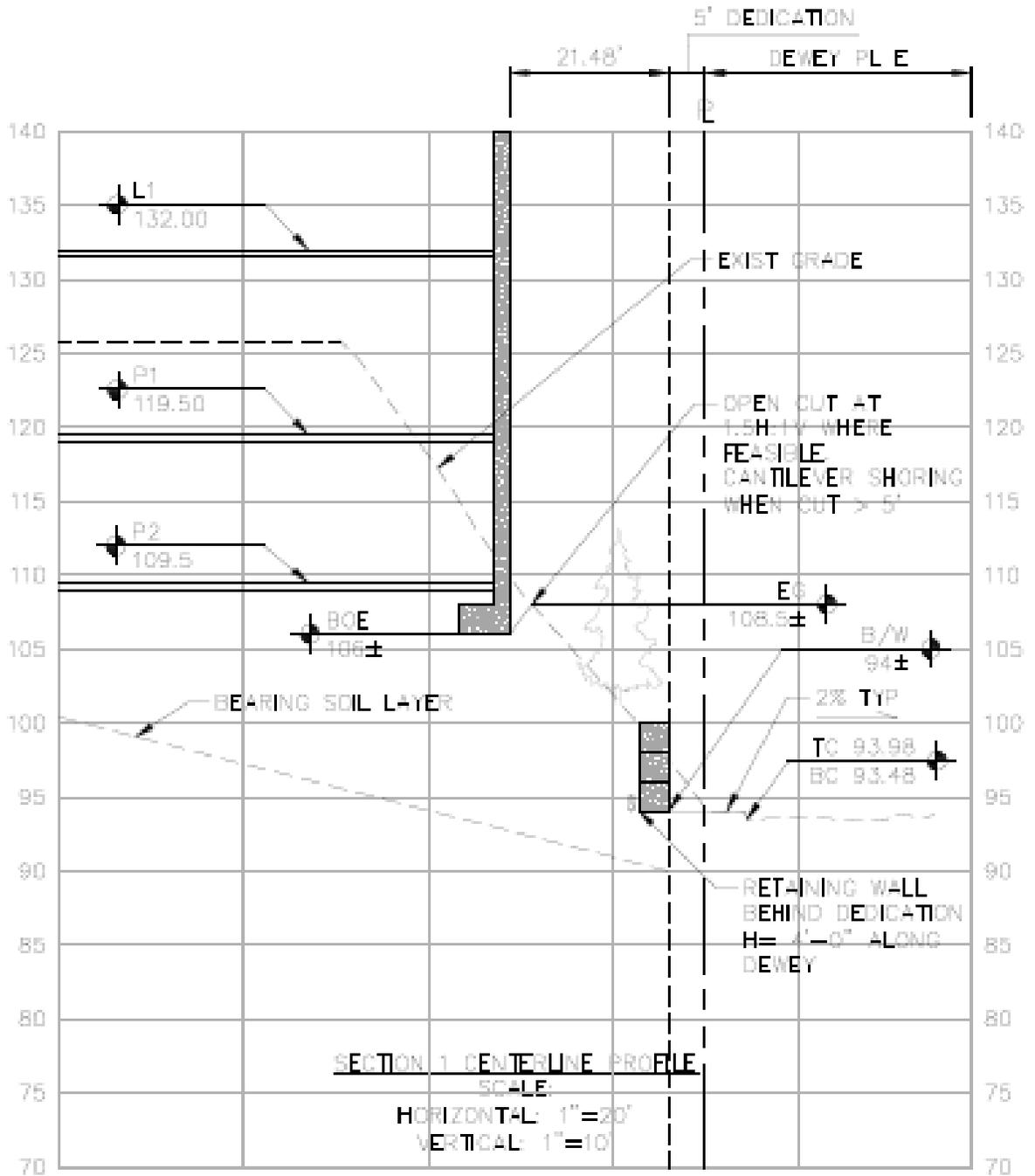
Temporary shoring could also be installed along the Dewey frontage in order to minimize the excavation footprint and minimize impact to the trees. Along the south end, where the building is set back 41 feet from the dedication line, the shoring system would need to support approximately 5 to 22 feet of soil. Cantilever soldier piles could be utilized for shoring heights of 15 feet or less, while tiebacks would be required for heights above 15 feet.

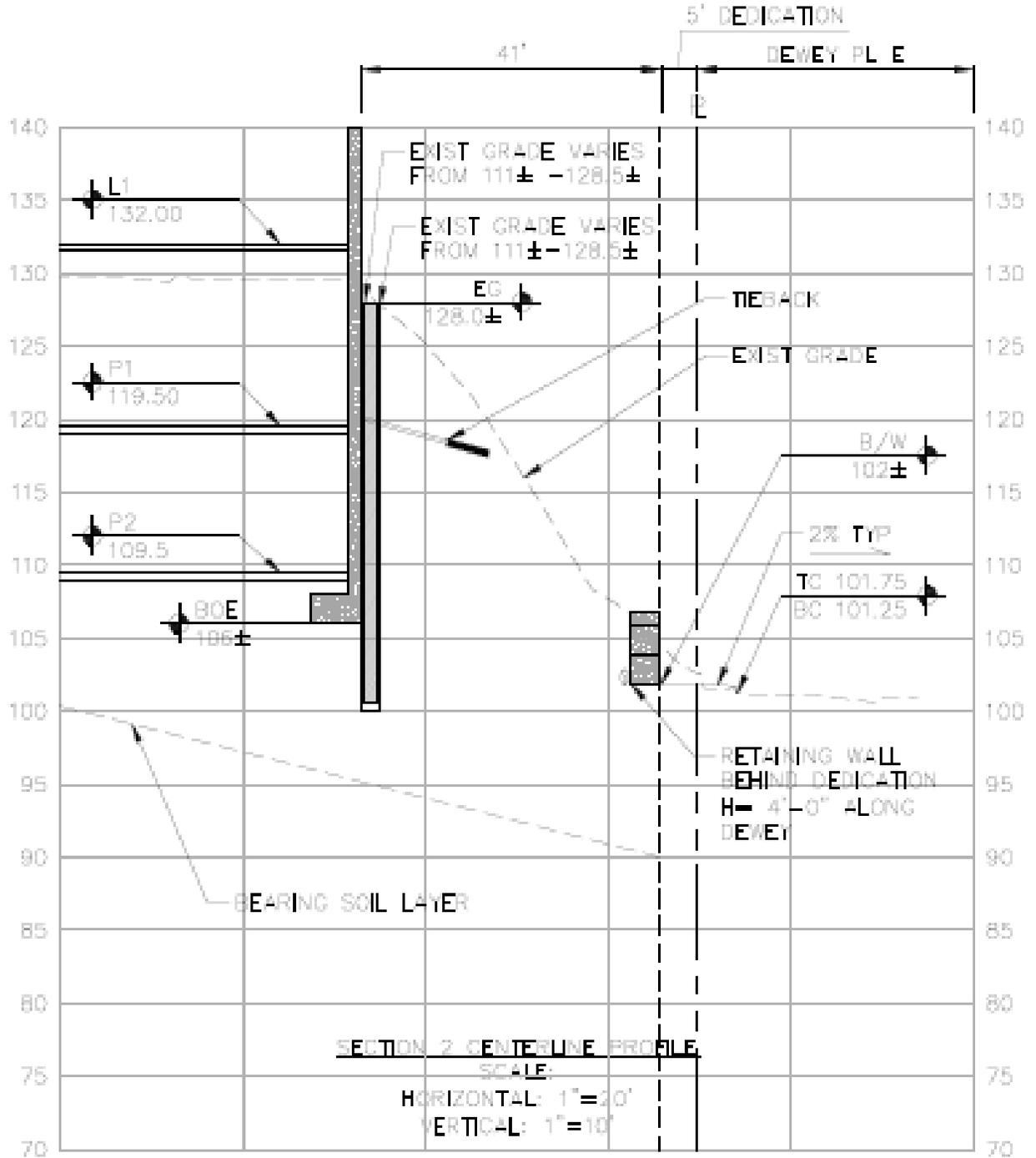
At the south end, a wedge of soil would be left between the proposed building and the new retaining wall located behind the dedication line. The slope of the wedge of soil would match existing conditions. See Section 2.

At the north end, the bottom of excavation (elevation 106) would be near the existing grade (approximately elevation 108). Therefore, shoring would not be required and an open cut could be utilized. See Section 1.









Appendix C - Photos



Photograph 1. View looking to the north. The dedication and proposed retaining wall will at minimum result in the removal of trees 1106, 1109, and 1110.



Photograph 2. View looking to the south. Trees 1105 and 1106 will be compromised by the necessary safety retaining wall.



Photograph 3. View looking to the north. Many of the trees near the minimum ROW location and west of the proposed safety retaining wall will be negatively compromised by the site development.

Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	Drip line Radius (feet)				Exceptional Threshold	Exceptional (y/n)	Proposed Action	Notes
						North	East	South	West				
56	<i>Ilex aquifolium</i>	English holly	8*	Good	Good		6			19	No	Remove	*Estimated DSH, no access, no tag
1101	<i>Cercidiphyllum japonicum</i>	Katsura	13.5	Good	Good	15	13	9	17	30	No	Remove	
1102	<i>Cercidiphyllum japonicum</i>	Katsura	12.6	Good	Good	6	11	12	16	30	No	Remove	Co-dominant: 8.5, 9.3;
1103	<i>Alnus rubra</i>	Red alder	24.4	Good	Good	15	15	15	15	Only Exceptional in Grove	No	Remove	May have had a past top failure; old pruning wounds, north side has slight decay; union has included bark on west side
1104	<i>Acer macrophyllum</i>	Bigleaf maple	7.5	Good	Fair	11	13	12	3	30	No	Remove	Co-dominant: 5.5, 5.1; j-shaped base due to slope creep
1105	<i>Thuja plicata</i> 'Zebrina'	Zebrina western redcedar	21.2	Good	Fair	8	14	16	13	30	No	Remove	Co-dominant: 14.1, 15.9; Portion topped for power line; in ROW dedication -future hazard
1106	<i>Thuja plicata</i> 'Zebrina'	Zebrina western redcedar	12.2	Good	Good	8	14	7	11	30	No	Remove	In ROW dedication - future hazard
1107	<i>Thuja plicata</i> 'Zebrina'	Zebrina western redcedar	14.0	Good	Good	15	9	15	11	30	No	Remove	
1108	<i>Thuja plicata</i> 'Zebrina'	Zebrina western redcedar	7.3	Good	Fair	10	9	4	0	30	No	Remove	J-shaped base, corrected lean
1109	<i>Thuja plicata</i> 'Zebrina'	Zebrina western redcedar	12.9	Good	Fair	12	15	11	4	30	No	Remove	Topped for powerlines, in ROW dedication - future hazard
1110	<i>Populus nigra</i>	Lombardy poplar	19.4	Good	Good	10	10	10	10	30	No	Remove	Base slightly buried
1111	<i>Acer macrophyllum</i>	Bigleaf maple	16.4*	Good	Fair	13	11	19	19	30	No	Remove	Co-dominant: 5.1, 5.9, 7.9, 8.3, 4.9, 7.8; stump sprout; narrow angles of attachment
1112	<i>Acer macrophyllum</i>	Bigleaf maple	19.1	Good	Good	15	15	10	16	30	No	Remove	

Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	North	East	South	West	Exceptional Threshold	Exceptional (y/n)	Proposed Action	Notes
1113	<i>Acer macrophyllum</i>	Bigleaf maple	16.9*	Fair	Poor	10	10	10	10	30	No	Remove	Co-dominant: 11.4, 12.5; Narrow angle of attachment, included bark; poor union with <i>Kretzschmaria deusta</i> present, decay in largest stem
1114	<i>Acer macrophyllum</i>	Bigleaf maple	17.7	Good	Good	10	18	10	18	30	No	Remove	
1115	<i>Acer macrophyllum</i>	Bigleaf maple	11.3*	Fair	Fair	17	7	15	18	30	No	Remove	Co-dominant: 9.5, 6.2; trunk failure near top, tension side wounds
1116	<i>Acer macrophyllum</i>	Bigleaf maple	8.4	Fair	Poor	16	4	13	3	30	No	Remove	Invasive ivy (<i>Hedera</i> spp.) on stem; trunk failure in past; sprouts at top, low live crown ratio; root damage will occur from ROW dedication - future hazard
1117	<i>Alnus rubra</i>	Red alder	13.9	Good	Good	13	10	13	14	Only Exceptional in Grove	No	Remove	Invasive ivy on stem, in ROW dedication - future hazard
1118	<i>Acer macrophyllum</i>	Bigleaf maple	27.6*	Good	Fair	7	20	24	21	30	No	Remove	Co-dominant: 9.7, 16.5, 19.9; narrow angle of attachment; invasive ivy on stem
1119	<i>Acer macrophyllum</i>	Bigleaf maple	11.0	Fair	Fair	20	20	16	5	30	No	Remove	Invasive ivy on stem
1120	<i>Acer macrophyllum</i>	Bigleaf maple	7.5	Good	Good	12	5	14	17	30	No	Remove	
1121	<i>Acer macrophyllum</i>	Bigleaf maple	11.7	Good	Good	10	0	5	25	30	No	Remove	Suppressed
1122	<i>Acer macrophyllum</i>	Bigleaf maple	17.9*	Good	Fair	25	0	0	26	30	No	Remove	Narrow angle of attachment
1123	<i>Acer macrophyllum</i>	Bigleaf maple	9.7	Good	Fair	25	0	0	26	30	No	Remove	Swept base, old tear out at 6 feet
1124	<i>Acer macrophyllum</i>	Bigleaf maple	13.2	Good	Good	14	14	12	12	30	No	Remove	Swept base
1125	<i>Acer macrophyllum</i>	Bigleaf maple	6.5	Good	Fair	6	20	6	0	30	No	Remove	Swept base, suppressed
1126	<i>Acer macrophyllum</i>	Bigleaf maple	18.0*	Fair	Fair	19	9	11	19	30	No	Remove	Stump sprout, old wound at base, small leaf size
1127	<i>Acer macrophyllum</i>	Bigleaf maple	21.3*	Fair	Fair	20	21	17	12	30	No	Remove	Small leaf size, swep base, narrow angle of attachments

Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	North	East	South	West	Exceptional Threshold	Exceptional (y/n)	Proposed Action	Notes
1128	<i>Populus nigra</i>	Lombardy poplar	28.5	Good	Good	12	12	12	12	30	No	Remove	Mid-slope measurement marked with red paint showing level of measurement; pruned for powerlines, root damage will occur from ROW dedication - future hazard
1129	<i>Prunus serrulata</i>	Flowering cherry	16.9*	Fair	Fair	16	12	16	14	23	No	Remove	Co-dominant: 4.8, 6.2, 15.0; Previous top failure, brown rot in stem, root damage will occur from ROW dedication - future hazard
1130	<i>Populus nigra</i>	Lombardy poplar	18.1	Good	Good	0	16	10	2	30	No	Remove	Root damage will occur from ROW Dedication - future hazard
1131	<i>Populus nigra</i>	Lombardy poplar	37.5	Good	Good	10	15	12	13	30	No	Remove	Root damage will occur from ROW Dedication - future hazard
1132	<i>Prunus serrulata</i>	Flowering cherry	7.1	Fair	Fair	11	11	11	11	23	No	Remove	Brown rot in stem, in ROW dedication - future hazard
1133	<i>Prunus serrulata</i>	Flowering cherry	8.9*	Fair	Fair	7	17	11	0	23	No	Remove	Co-dominant: 4.3, 6.1, 4.8; Brown rot in stem
1134	<i>Populus nigra</i>	Lombardy poplar	19.6	Good	Good	11	11	11	11	30	No	Remove	
1135	<i>Prunus serrulata</i>	Flowering cherry	10.1	Fair	Fair	9	20	9	0	23	No	Remove	Measured at narrowest point below the union; phototropic to east; in ROW dedication - future hazard
1136	<i>Populus nigra</i>	Lombardy poplar	13.7*	Good	Good	8	8	8	8	30	No	Remove	
1137	<i>Populus nigra</i>	Lombardy poplar	29.0	Good	Good	12	12	12	12	30	No	Remove	Adjusted size for ivy on stem; split at 4.0 feet, narrow angle of attachment; in ROW dedication - future hazard

Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	North	East	South	West	Exceptional Threshold	Exceptional (y/n)	Proposed Action	Notes
1138	<i>Acer macrophyllum</i>	Bigleaf maple	29.3	Fair	Fair	25	22	26	20	30	No	Remove	Measured at narrowest point below union, invasive ivy on stem; narrow angle of attachment, cavity present swept base
Offsite Trees That Have Canopies That Overhang The Site													
A	<i>Fagus sylvatica</i>	European beech	23.4	Good	Good	20	20	20	20	N/A	N/A		ROW tree
B	<i>Fagus sylvatica</i>	European beech	20.7	Good	Good	18	18	18	18	N/A	N/A		ROW tree
C	<i>Fagus sylvatica</i>	European beech	18.5	Good	Good	20	20	20	20	N/A	N/A		ROW tree
D	<i>Prunus lusitanica</i>	Portugese laurel	11.3*	Good	Good		6						Co-dominant: estimated DSH for both stems is 8 inches
E	<i>Pseudotsuga menziesii</i>	Douglas-fir	16.0	Good	Good		15						Estimated DSH
F	<i>Malus domestica</i>	Common apple	10*	Fair	Fair	8							Estimated DSH

Additional notes:

DSH (Diameter at Standard Height) is measured 4.5 feet above grade.

Multi-stem trees are noted, and a single stem equivalent is calculated using the method defined in the Director's Rule 16-2008.

Drip line is measured from the center of the tree to the outermost extent of the canopy