

December 22, 2021

Zachary Evans, P.E.
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Re: Arborist Assessment – 15th Avenue NE Sidewalk Project

The Watershed Company Reference Number: 181216.7

Dear Zachary:

We are pleased to present the findings of the inventory and assessment for the trees located within the right-of-way (ROW) along 15th Avenue NE in Shoreline, WA between NE 155th Street and NE 175th Street. Kyle Braun an ISA Certified Arborists[®] with The Watershed Company, visited the subject property on November 16, 2021, to assess the trees that may be impacted by the proposed sidewalk replacement project.

This letter summarizes the findings of the study. The following documents are enclosed:

- Annotated Tree Map
- Tree Inventory Table

Study Area

The study area is located along 15th Avenue NE between NE 155th Street and NE 175th Street. The area spans approximately one mile and includes trees rooted within the ROW that are within proximity of the proposed sidewalk replacement. Single family homes generally border the ROW along with utilities, street signs, and fences. See Figure 1 for site vicinity and project site overview maps.

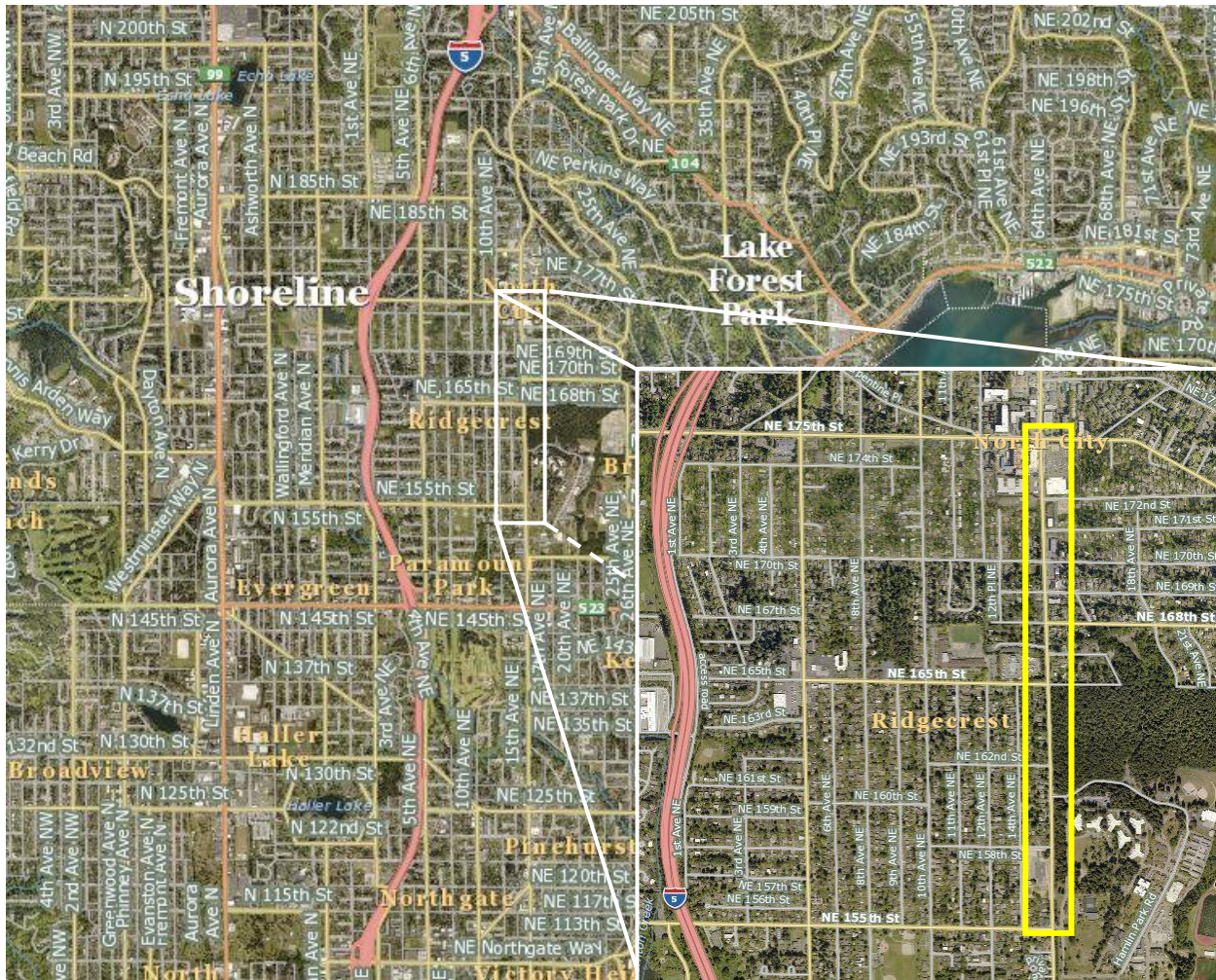


Figure 1. Vicinity map showing the approximate location of the project site and study area (outlined in yellow). (Image courtesy of King County iMap, 2019)

Methods

All trees over four inches in diameter when measured at four-and-a-half feet above ground level were assessed and inventoried. Assessed trees were located along the ROW that would be impacted by new sidewalk development. Each assessed tree along the ROW was assigned a digital identification number but not physically tagged. These tree numbers range from 200-232. Trees with the number series 766-772 were previously tagged and were incorporated into this study. Both sets of trees are shown on the attached Annotated Tree Map.

Attribute Data Collection

Attributes documented for all inventoried trees include a unique identification number, species name (scientific and common), number of stems, estimated diameter, estimated height, estimated canopy radius, condition, and general assessment notes.

Diameter: The diameter at breast height (DBH) of all subject trees was measured at four-and-a-half feet above the ground surface using a graduated metal logger's DBH tape. Methodology for measuring and calculating the diameter of trees with multiple trunks, major leans, or on steep slopes was done by taking the average of each stem. This followed the outline in the *Guide for Plant Appraisal, 10th Edition*, written by the Council of Tree and Landscape Appraisers (CTLA) and published by International Society of Arboriculture (ISA) (CTLA 2018).

Canopy Radius: Canopy radius, also known as dripline, was measured from the trunk to the outermost branch tips by estimating a vertical line to the ground. For trees with uneven crowns, the average of two opposite radii was estimated.

Critical Root Zone: Critical root zone, also known as CRZ, is the area in which any loss of roots would have a significant impact on tree survival. CRZ is calculated at a rate of one (1) foot per one (1) inch DBH.

Height: Tree height was visually estimated.

Condition: A basic Level 1 visual assessment was used to evaluate the health and condition of significant trees within the study area in accordance with ISA and CTLA standards. Each tree was given a rating from one through six (Excellent – Dead) as summarized below in Table 1.

Table 1. Assessment of plant condition considers health, structure, and form. Each may be described in rating categories that will be translated into a percent rating. (CTLA 2018)

Rating Category	Condition Components			Percent Rating
	Health	Structure	Form	
Excellent - 1	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation.	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.	81% to 100%
Good - 2	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.	61% to 80%
Fair - 3	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may compromise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defect. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.	41% to 60%
Poor - 4	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.	21% to 40%
Severe - 5	Poor vigor. Appears dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.	6% to 20%
Dead - 6				0% to 5%

Tree Inventory Results

A total of 40 trees were inventoried and assessed as part of this study (see enclosed annotated tree map). Significant trees within the ROW have an average DBH of 19 inches, an average height of 39 feet, and an overall health condition rating of “Good”. London planetree (*Platanus x acerifolia*) is the most common species with 20 individuals, followed by red maple (*Acer rubrum*) with 18 individuals. The largest inventoried significant tree is a bigleaf maple (*Acer macrophyllum*) (Tree #767) with a DBH of 45 inches, followed by another London planetree (Tree #225) and a Douglas-fir (*Pseudotsuga menziesii*) (Tree #204), each with a DBH of 32 inches. A brief summary of the inventoried trees within the ROW can be found in Table 2 below.

Table 2. Summary of inventoried tree species within the ROW.

Scientific Name / Common Name	Number of Trees Inventoried	Avg. Trunk DBH (inches)	Smallest DBH (inches)	Largest DBH (inches)	Avg. Height (feet)
<i>Acer macrophyllum</i> (Bigleaf maple)	1	45	45	45	65
<i>Acer rubrum</i> (Red maple)	18	17	6	25	39
<i>Platanus x acerifolia</i> (London planetree)	20	19	9	32	35
<i>Pseudotsuga menziesii</i> (Douglas-fir)	1	32	32	32	90
Grand Total	40				

Assessment

Tree #200 - #202

These three trees are medium sized London planetrees (*Platanus x acerifolia*) located on the west side of 15th Avenue NE. Tree #200 is within a planting strip that is two feet wide with approximately 90-percent of the root system covered by impervious concrete. It is recommended that Tree #200 be removed prior to construction due to the severe impacts that excavation and construction will cause within its CRZ. These trees were also observed up lifting a portion of the adjacent bike lane, creating a safety hazard. Trees #201 and #202, given their location to the edge of the road, should be marked for retention.

Tree #203

This is a red maple with a DBH of 22 inches and a CRZ of 22 feet. It is rooted approximately three feet from a water main. While it does have an existing health condition of Good, any excavation on the sidewalk would disturb more critical roots, and retention would pose potential future implications to the adjacent water utility. This tree is recommended for removal prior to construction.

Tree #204

Tree #204 is a large Douglas-fir with a DBH of 32 inches and a CRZ of 32 feet. It is rooted on a retaining wall that has evidence of being previously pruned. The existing concrete is cutting into the trunk, but the tree should still be retained. If possible, the sidewalk and mailboxes should be moved to accommodate this tree. Root barrier could help protect the proposed sidewalk in the future.

Tree #205

This is a red maple in Fair condition with a DBH of 18 inches and a CRZ of 18 feet. There is a large fence approximately five feet away and this tree is within a two-foot-wide planting strip. Many of the roots within its CRZ have already been impacted, and the tree is currently uplifting the adjacent bike lane and should be removed prior to construction.

Tree #206

Tree #206 is a red maple. This tree has a DBH of 22 inches, a CRZ of 22 feet, and is in Good condition. This tree should be retained if the new sidewalk were to be moved to jog around the trunk of the tree.

Tree #207

This is a red maple with a DBH of 22 inches and a CRZ of 22 feet. There are overhead utility wires that the tree is interfering with and there is a water meter approximately two feet from the trunk. This tree should be removed prior to construction.

Tree #208

This is a red maple in Fair condition with a DBH of 17 inches. There is poured asphalt up against the trunk of the tree which has likely resulted in the decline of the tree. Excavation and construction would likely result in further decline. This tree should be removed prior to construction.

Tree #209

Tree #209 is a medium sized red maple with a DBH of 15 inches and a CRZ of 15 feet. This tree is in Good condition and a strong candidate for retention if the Tree Protection Measures identified below are followed and the new sidewalk is moved to accommodate the growth and root zone of this tree.

Tree #210 - #212

These trees are all medium to large red maples. Tree #210 has a DBH of 24 inches and a CRZ of 24 feet; Tree #211 has a DBH of 20 inches and a CRZ of 20 feet; and Tree #212 has a DBH of 16 inches and a CRZ of 16 feet. These trees are all within a small, two-foot-wide planting strip and

there is no room for the sidewalk to navigate around them to ensure their continued survival. However, many of their roots would be severed for the new sidewalk. Therefore, it is recommended that these three trees be removed.

Tree #213

This is a red maple in Excellent condition with a DBH of six inches and a CRZ of six feet. It is planted within the same two-foot-wide planting strip as the other trees and given its juvenile status and healthy condition, efforts should be made to retain this tree by moving the sidewalk to accommodate it.

Tree #214 - 215

These two trees are large red maples. Tree #14 has a DBH of 20 inches and a CRZ of 20 feet while Tree #215 has a DBH of 25 inches and a CRZ of 25 feet. These trees have outgrown the two-foot-wide planting strip they are within. Tree #215 has a large wound on the east side of the trunk and its canopy is conflicting with overhead utility lines. Both trees are recommended for removal.

Tree #216

Tree #216 is a medium sized London planetree with a DBH of 18 inches with overhead utility lines within three feet of its canopy. This tree is located on the east side of 15th Avenue NE. While in Good condition, this tree has outgrown the two-foot-wide planting strip it is planted in, and the overhead utility line conflict results in the recommendation that this tree be removed prior to construction.

Tree #217

This is a medium sized London planetree with a DBH of 11 inches and an estimated height of 25 feet. It is conflicting with overhead utility lines; however, it is a young enough tree that it can be pruned effectively to accommodate the lines without greatly impacting the health of the canopy. If the sidewalk were to be moved to accommodate the projected growth of the tree and the following Tree Protection Measures are followed, then this tree would likely survive construction.

Tree #218 - #220

These three trees are medium to large London planetrees that are 28-, 13-, and 17-inches in diameter sized and are an estimated 35 to 45 feet in height. Although two of the three are in Good health, they are all too large for the small, two-foot-wide planting strip they are in and are causing the existing sidewalk and asphalt road to crack and uplift. These trees are

recommended to be removed and replaced with a more appropriate species when the new sidewalk is complete.

Tree #221 - #223

These three trees are small, nine-inch diameter London planetrees that are in Good condition. It is likely that these trees would survive construction if the following Tree Protection Measures are followed and efforts should be made to retain them.

Tree #224 - #228

These five trees are all medium to large London planetrees with diameters that range from 14 to 32 inches. The critical root zones of these trees range from 14 to 32 feet. Tree #224 is in Poor health because of a large wound on the south side of the trunk that has not healed properly and is conflicting with overhead utility wires. The other four trees are in Good health but have greatly outgrown the small planting strip they are in and there is no room for the adjacent sidewalk to be moved because parking lots for commercial buildings border the east side of the sidewalk. These five trees are recommended for removal.

Tree #229

Tree #229 is a London planetree that is similar to Trees #224 - #228 but the sidewalk is not restricted by the parking lot like the other trees are. It is because of this that efforts should be made to retain this tree by moving the sidewalk to accommodate it. This tree is in Good health and has a DBH of 13 inches.

Tree #230

This is a large London planetree with a DBH of 28 inches and a CRZ of 28 feet. This tree is restricted by being planted within a two-foot-wide planting strip and a rock retaining wall to the east that restricts the movement of the sidewalk. By having such a large CRZ and little soil growing space, this tree would likely not survive the excavation phase of construction process which would result in a large amount of critical root disturbance. This tree should be removed.

Tree #231 - #232

These two trees are large London planetrees with measured diameters of 22- and 28-inches. While in Good health, these trees have outgrown the small planting strip and have large critical root zones that have been disrupted by the large amount of impervious surfaces that surround them. There is little room to move the sidewalk to accommodate the trees due to the adjacent parking lot and the excavation process of construction would disturb already stressed critical roots. These trees should be removed.

Tree #766

Tree #776 is a small red maple with a DBH of seven inches and a CRZ of seven feet. This tree is in Poor health with multiple wounds on the trunk and in severe competition with adjacent trees. This tree should be removed.

Tree #767

This is a large bigleaf maple with a DBH of 45 inches and a CRZ of 45 feet. This is an Exceptional tree and efforts should be made to retain it throughout the construction process. There is only slight uplift of the driveway of the adjacent single-family home and there is evidence that the adjacent sidewalk was recently replaced. This tree is within an area of soil that measures approximately 4 x 15 feet. The following Tree Protection Measures should be followed to improve the likelihood of survival of this tree.

Tree #768

This is a medium sized red maple with a DBH of 11 inches in Fair health. It has an asymmetrical crown likely caused by competition from the neighboring Douglas-fir and is within a small planting strip. This tree has a slight lean to the street and should be removed prior to construction.

Tree #769

Tree #769 is a medium sized red maple with a DBH of 12 inches and a CRZ of 12 feet. There is slight uplift of the adjacent sidewalk and has some pieces of concrete up against the trunk. This tree is within a small, two-foot-wide planting strip. Efforts should be made to retain this tree by moving the sidewalk and following the Tree Protection Measures identified in the following section.

Tree #770

This is the large red maple with a DBH of 18 inches and a CRZ of 18 feet. Similar to Tree #769, the sidewalk should be moved to accommodate the tree. There is some dieback in the upper canopy, however this is likely a response to the stress of the growing conditions and limited soil volume. There are also pieces of concrete up against the trunk. Efforts should be made to retain this tree by moving the sidewalk and following the Tree Protection Measures identified in the following section.

Tree #771

This is a large red maple with a DBH of 17 inches in Good health. There is extreme sidewalk uplift and the base of the tree is within a small planting strip. Similar to Trees #769 and #770, the

sidewalk can be moved to accommodate this tree. Due to the health of this tree, efforts should be made to retain the tree by following the identified Tree Protection Measures.

Tree #772

Tree #772 is a large red maple with a DBH of 17 inches and a CRZ of 17 feet. The tree is within a larger planting strip that is approximately 8 x 30 feet in size. Because this tree has a larger soil volume and is in Good health, this tree is a strong candidate for retention and efforts should be made to protect it. This tree should be retained and the sidewalk moved to accommodate to the tree.

Table 3. Summary of trees identified for removal.

Tag #	Scientific Name / Common Name	DBH (inches)	Condition	Reason for Removal	Possible results of not removing
200	<i>Platanus x acerifolia</i> (London planetree)	20	Good	Sidewalk and narrow planting strip are already impeding the large CRZ, construction would further damage critical roots likely leading to death.	Continued road and future sidewalk uplift.
203	<i>Platanus x acerifolia</i> (London planetree)	22	Good	Sidewalk and narrow planting strip are already impeding the large CRZ, construction would further damage critical roots likely leading to death.	Potential interference with the adjacent water main. Continued sidewalk uplift.
205	<i>Acer rubrum</i> (Red maple)	18	Fair	Sidewalk and narrow planting strip are already impeding the large CRZ, construction would further damage critical roots likely leading to death.	Continued sidewalk and future fence interference.
207	<i>Acer rubrum</i> (Red maple)	22	Good	Large CRZ of 22 feet. Sidewalk and planting strip are already impeding the CRZ, construction would further damage critical roots.	Continued interference with overhead utility lines. Potential interference with adjacent water main and future sidewalk uplift.
208	<i>Acer rubrum</i> (Red maple)	17	Fair	Large CRZ of 17 feet. Sidewalk and narrow planting strip are	Continued sidewalk uplift.

				already impeding the CRZ, construction would further damage critical roots.	
210	<i>Acer rubrum</i> (Red maple)	24	Good	Large CRZ of 24 feet. Narrow planting strip and sidewalk are restricting CRZ, construction would further damage critical roots.	Continued sidewalk and road uplift.
211	<i>Acer rubrum</i> (Red maple)	20	Good	Sidewalk and narrow planting strip are already impeding the large CRZ, construction would further damage critical roots likely leading to death.	Continued road and sidewalk uplift.
212	<i>Acer rubrum</i> (Red maple)	16	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Continued sidewalk uplift.
214	<i>Acer rubrum</i> (Red maple)	20	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Continued road and sidewalk uplift.
215	<i>Acer rubrum</i> (Red maple)	25	Fair	Large CRZ of 25 feet. Sidewalk and planting strip are already impeding the CRZ. There is no room for a new sidewalk between tree and the road.	Continued sidewalk uplift. Tree decline from CRZ disturbance.
216	<i>Platanus x acerifolia</i> (London planetree)	18	Good	Large CRZ of 22 feet. Sidewalk and planting strip are already impeding the CRZ, construction would further damage critical roots.	Continued sidewalk uplift.
218	<i>Platanus x acerifolia</i> (London planetree)	28	Fair	Large CRZ of 28 feet; already showing signs of decline. The CRZ is already restricted by sidewalk and narrow	Continued tree decline requiring eventual removal and sidewalk uplift.

				planting strip. Construction would lead to further decline likely leading to death.	
219	<i>Platanus x acerifolia</i> (London planetree)	13	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Tree decline from CRZ disturbance.
220	<i>Platanus x acerifolia</i> (London planetree)	17	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Eventual tree decline from CRZ disturbance and sidewalk uplift.
224	<i>Platanus x acerifolia</i> (London planetree)	19	Poor	Tree is already in Poor health with a large wound on the trunk. Tree should be removed.	Continued tree decline and eventual death requiring future removal.
225	<i>Platanus x acerifolia</i> (London planetree)	32	Fair	Large CRZ of 32 feet already showing signs of decline. The CRZ is already restricted by sidewalk and narrow planting strip. Construction would lead to further decline likely leading to death.	Disturbance to CRZ leading to eventual tree decline. Large tree diameter damaging sidewalk.
226	<i>Platanus x acerifolia</i> (London planetree)	27	Good	Large CRZ of 27 feet. The CRZ is already restricted by sidewalk and narrow planting strip. Construction would lead to further decline likely leading to death.	Disturbance to CRZ leading to eventual tree decline. Large tree diameter damaging sidewalk.
227	<i>Platanus x acerifolia</i> (London planetree)	19	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Disturbance to CRZ leading to eventual tree decline. Future sidewalk uplift. No room to relocate sidewalk around tree.
228	<i>Platanus x acerifolia</i> (London planetree)	14	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Disturbance to CRZ leading to eventual tree decline. Future sidewalk uplift. No

					room to relocate sidewalk around tree.
230	<i>Platanus x acerifolia</i> (London planetree)	28	Good	Large CRZ of 28 feet. The CRZ is already restricted by sidewalk and narrow planting strip. Construction would lead to further decline likely leading to death.	Disturbance to CRZ leading to eventual tree decline. Large tree diameter damaging sidewalk. Eventual damage to adjacent rock retaining wall.
231	<i>Platanus x acerifolia</i> (London planetree)	22	Good	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Disturbance to CRZ leading to eventual tree decline. Large tree diameter damaging sidewalk.
232	<i>Platanus x acerifolia</i> (London planetree)	28	Good	Large CRZ of 28 feet. The CRZ is already restricted by sidewalk and narrow planting strip. Construction would lead to further decline likely leading to death.	Disturbance to CRZ leading to eventual tree decline. Large tree diameter damaging sidewalk.
766	<i>Acer rubrum</i> (Red maple)	7	Poor	Already in Poor health and restricted by narrow planting strip and sidewalk.	Continued tree decline and eventual death requiring future removal.
768	<i>Acer rubrum</i> (Red maple)	11	Fair	Sidewalk is restricting the CRZ. Construction would result in the loss and disturbance of critical root zone.	Continued tree decline from the disturbance of CRZ. Continued uplift of sidewalk.
Grand Total		24			

Tree Protection Measures

For the health and longevity of the existing trees to remain, the arborist recommends determining which trees will be preserved and implementing tree protection best management practices (BMPs).

The following BMPs are recommended to protect retained trees:

- **Tree protection fencing:** The critical root zone (CRZ) is the area that contains tree roots critical to the health and stability of the tree. Tree protection fencing should be installed along the outer dripline edge of all trees to remain. Because tree roots can extend many

times the distance of the overhead canopy and several of the trees are growing closely together, the arborist advises extending the fence to a minimum distance of one foot for every diameter inch of the trunk to ensure adequate root survival. The fencing should be four to six feet high, constructed of chain link, wire-mesh, or high-visibility plastic fencing, and include warning signs, such as “Tree Protection Area – Keep Out.”

- **Minimize critical root disturbance:** Excavation of tree roots should be conducted using an Air Spade to safely remove soil from the base of the tree and root flare. The spade uses high pressure air to blow soil from the tree base which provides the opportunity to examine the condition of roots and provide access to prune the roots.
- **Minimize root zone disturbance:** All construction activities, including staging and driving machinery, should be located outside of the CRZ. If temporary impacts in the CRZ are unavoidable, the arborist recommends using one of the following temporary measures to minimize soil compaction and root damage:
 - Install six to twelve inches of wood chip mulch over the CRZ.
 - Lay down a ¾-inch thick plywood sheet over at least four inches of wood chip mulch.
 - Apply four to six inches of gravel over staked geotextile fabric.
 - Place commercial logging mats on top of a four inch mulch layer.

The gravel, geotextile fabric, mats, and all mulch over four-inches thick **must** be removed after the temporary disturbance is finished.

- **Minimize grade changes:** Most tree roots grow in the top six to 18 inches of soil and are highly susceptible to damage from grade changes. If the grade is lowered in the CRZ, roots critical to health and stability will be removed. If the grade is raised in the CRZ, roots can suffocate from lack of oxygen. The grade should not be altered in the CRZ.
- **Root pruning:** If mechanical excavation occurs near a tree to remain, the arborist recommends using an air or water excavator and root pruning by hand, or using a mechanical root pruning tool designed to cut roots. Any roots over one inch that are exposed after mechanical excavation should be clean cut by hand.
- **Canopy pruning:** All construction activities should stay out of the canopy zone. However, if the canopy of a tree will conflict with construction, the canopy could be raised to a maximum of 20 feet to avoid aerial conflicts. Any pruning of trees should be

done using best management practices as defined by the International Society of Arboriculture (ISA), and performed by ISA certified arborists. Topping, coppicing, or pollarding are **not** acceptable pruning methods for these trees. After the other trees are removed, the shaded inner canopy will likely contain dead branches that could be removed for aesthetic purposes. No other pruning should be necessary and could negatively impact the health of the trees.

- **Maintenance:** The impacts of construction are stressful to trees, which may not show the signs of stress for up to five to ten years after being impacted. When trees are removed, the remaining tree roots and soil will be exposed to more sunlight. To help the trees adjust to the new conditions, two to four inches of wood chip mulch can be placed in the CRZ (keep mulch 12 inches away from trunks). Additionally, applying one to two inches of water to the root zones each month in the summer during construction will help the trees regenerate roots and acclimate to their new conditions.
- **Monitoring:** After construction is complete, the tree protection fencing can be removed. Any branches accidentally broken during construction should be pruned. An ISA certified arborist could assist with health assessment, monitoring, and provide management recommendations for the trees post-construction as the trees recover from the impacts of construction and adapt to their new conditions.

Limitations to the Study

The findings of this report are based on the best available science and are limited to the scope, budget, and site conditions at the time of the assessment. Although the information in this report is based on sound methodology, internal physical flaws (such as cracking or root rot) or other conditions that are not visible cannot be detected with this limited basic visual screening. Trees are inherently unpredictable. Even vigorous and healthy trees can fail due to high winds, heavy snow, ice storms, rain, age, or other causes.

This report is based on the current observable conditions and may not represent future conditions of the trees. Changes in site conditions, including clearing and grading, will alter the condition of remaining trees in a way that is not predictable. The conclusions contained within this report have been made for permitting purposes only and are not intended for tree risk assessment purposes.

Sincerely,



Jake Robertson
ISA Certified Arborist® PN-8934A



Kyle Braun, PLA, ASLA
Landscape Architect & ISA TRAQ Certified
Arborist®

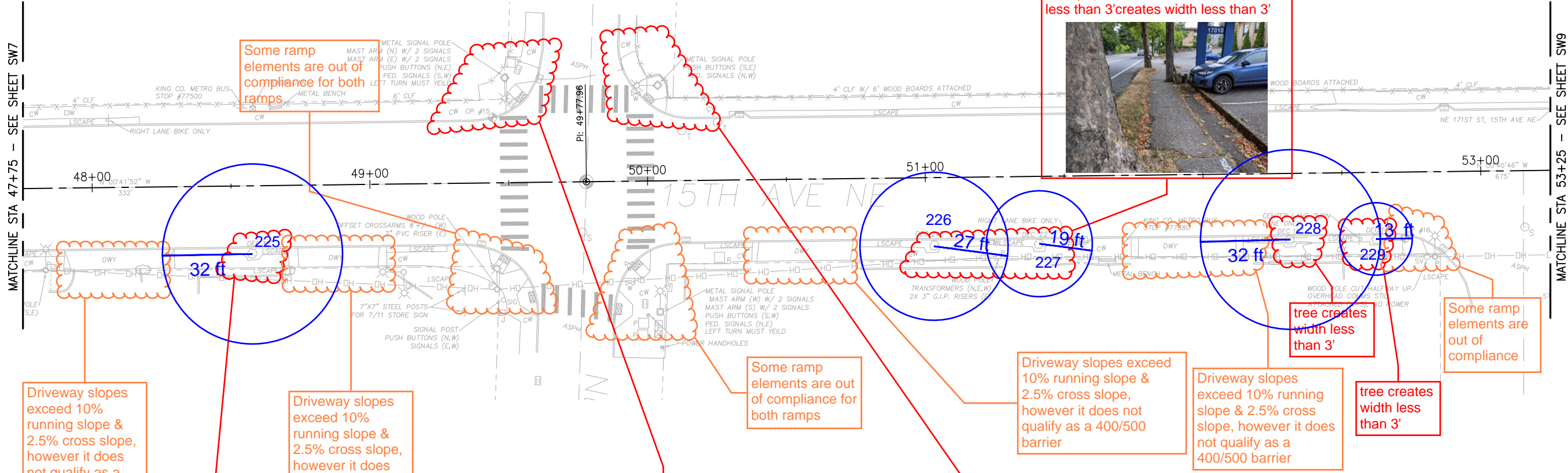
Enclosures: Tree Map & Tree Inventory Table

Enclosure A: Tree Inventory Table

TAG #	TREE NAME	EV / DEC	# STEMS	COMBINED DBH (IN)	HEIGHT (FT)	DRIPLINE BOUNDARY (FT)	CONDITION	CRITICAL ROOT ZONE (CRZ) (FT)	NOTES
200	Platanus x acerifolia (London planetree)	D	1	20	35	25	Good	20	Planter strip 2, 90% impervious cover
201	Platanus x acerifolia (London planetree)	D	1	23	35	30	Fair	23	Pro-dominant root flare, gall present. Plant strip 2'
202	Platanus x acerifolia (London planetree)	D	1	22	45	25	Goof	22	Damage root zone behind sidewalk
203	Acer rubrum (Red maple)	D	1	22	35	25	Good	22	Water meter within 3 feet
204	Pseudotsuga menziesii (Douglas-fir)	E	1	32	90	18	Good	32	Poor root flare on sidewlk side. Concrete cutting into bark
205	Acer rubrum (Red maple)	D	1	18	35	25	Fair	18	Large fence 5' away
206	Acer rubrum (Red maple)	D	1	22	45	25	Good	22	Mail box and stairs could be moved back to ROW line
207	Acer rubrum (Red maple)	D	1	22	40	25	Good	22	Overhead wires and storm main 2' away
208	Acer rubrum (Red maple)	D	1	17	35	25	Fair	17	Asphalt on trunk of tree
209	Acer rubrum (Red maple)	D	1	15	35	18	Good	15	
210	Acer rubrum (Red maple)	D	1	24	45	25	Good	24	
211	Acer rubrum (Red maple)	D	1	20	45	25	Good	20	
212	Acer rubrum (Red maple)	D	1	16	35	25	Good	16	
213	Acer rubrum (Red maple)	D	1	6	25	8	Excellent	6	
214	Acer rubrum (Red maple)	D	1	20	45	25	Good	20	
215	Acer rubrum (Red maple)	D	1	25	45	25	Fair	25	Large trunk wound on east side of trunk. Overhead utility line conflict
216	Platanus x acerifolia (London planetree)	D	1	18	35	25	Good	18	Overhead utility lines within 3 feet
217	Platanus x acerifolia (London planetree)	D	1	11	25	15	Good	11	Overhead utility lines
218	Platanus x acerifolia (London planetree)	D	1	28	35	25	Fair	28	
219	Platanus x acerifolia (London planetree)	D	1	13	35	25	Good	13	Large rock retaining wall
220	Platanus x acerifolia (London planetree)	D	1	17	45	25	Good	17	
221	Platanus x acerifolia (London planetree)	D	1	9	30	20	Good	9	Oh power
222	Platanus x acerifolia (London planetree)	D	1	9	30	20	Good	9	
223	Platanus x acerifolia (London planetree)	D	1	9	30	20	Good	9	
224	Platanus x acerifolia (London planetree)	D	1	19	30	20	Poor	19	Bad trunk wound poor response. Oh power
225	Platanus x acerifolia (London planetree)	D	1	32	35	25	Fair	32	
226	Platanus x acerifolia (London planetree)	D	1	27	40	30	Good	27	
227	Platanus x acerifolia (London planetree)	D	1	19	35	30	Good	19	
228	Platanus x acerifolia (London planetree)	D	1	14	40	25	Good	14	
229	Platanus x acerifolia (London planetree)	D	1	13	30	20	Good	13	
230	Platanus x acerifolia (London planetree)	D	1	28	30	20	Good	28	
231	Platanus x acerifolia (London planetree)	D	1	22	35	25	Good	22	
232	Platanus x acerifolia (London planetree)	D	1	28	40	20	Good	28	
766	Acer rubrum (Red maple)	D	1	7	40	10	Poor	7	Trunk wounds, 3x4' soil, thin canopy, severe competition with adjacent trees, codom at 10'.
767	Acer macrophyllum (Bigleaf maple)	D	1	45	65	20	Fair	45	Good vigor, previous reduction cut stubs, driveway uplift slight, sidewalk section recently rePlatanus x acerifoliaed, 4x15' soil.

TAG #	TREE NAME	EV / DEC	# STEMS	COMBINED DBH (IN)	HEIGHT (FT)	DRIPLINE BOUNDARY (FT)	CONDITION	CRITICAL ROOT ZONE (CRZ) (FT)	NOTES
768	Acer rubrum (Red maple)	D	1	11	40	15	Fair	11	Burl at trunk base, asymmetrical crown, competition with adjacent trees (Pseudotsuga menziesii 70'), slight lean towards street, 3x4' soil, Pseudotsuga menziesii dead branches in crown, slight sidewalk lift.
769	Acer rubrum (Red maple)	D	1	12	30	15	Fair	12	canopy foliage wilt at top of leader, minimal competition with Pseudotsuga menziesii (75'), concrete pieces up to trunk, 2x20' soil, very minimal sidewalk lift, limited dark black oozing spots on trunk.
770	Acer rubrum (Red maple)	D	1	18	50	20	Fair	18	Top of leader dieback, minimal competition with Pseudotsuga menziesii (75'), concrete pieces up to trunk, 2x20' soil, sidewalk uplift extreme, codom at 10'.
771	Acer rubrum (Red maple)	D	1	17	35	15	Good	17	2x20' soil, extreme sidewalk uplift, previous reduction/thin cuts, adjacent Pseudotsuga menziesii no current competition.
772	Acer rubrum (Red maple)	D	1	17	40	15	Good	17	8x30' soil, previous reduction/thin cuts, extended limb, 1' from sidewalk, codom with adjacent maple.

Enclosure B: Annotated Tree Map



tree, pole, and tree create narrow width less than 3' creates width less than 3'

Driveway slopes exceed 10% running slope & 2.5% cross slope, however it does not qualify as a 400/500 barrier

Driveway slopes exceed 10% running slope & 2.5% cross slope, however it does not qualify as a 400/500 barrier

Some ramp elements are out of compliance for both ramps

Driveway slopes exceed 10% running slope & 2.5% cross slope, however it does not qualify as a 400/500 barrier

Driveway slopes exceed 10% running slope & 2.5% cross slope, however it does not qualify as a 400/500 barrier

tree creates width less than 3'

Some ramp elements are out of compliance



tree creates width less than 3'



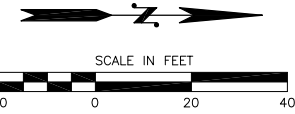
No landing, ramp slopes are out of compliance. Could be an expensive fix due to walls and steep slopes



No landing, ramp slopes are out of compliance. Could be an expensive fix due to walls and steep slopes

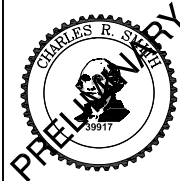


Know what's below. Call before you dig.



PLAN CHECK	BY	DATE			
DATE	NO.	REVISION	BY		
DESIGNED BY: CRS		DRAWN BY: WRM			

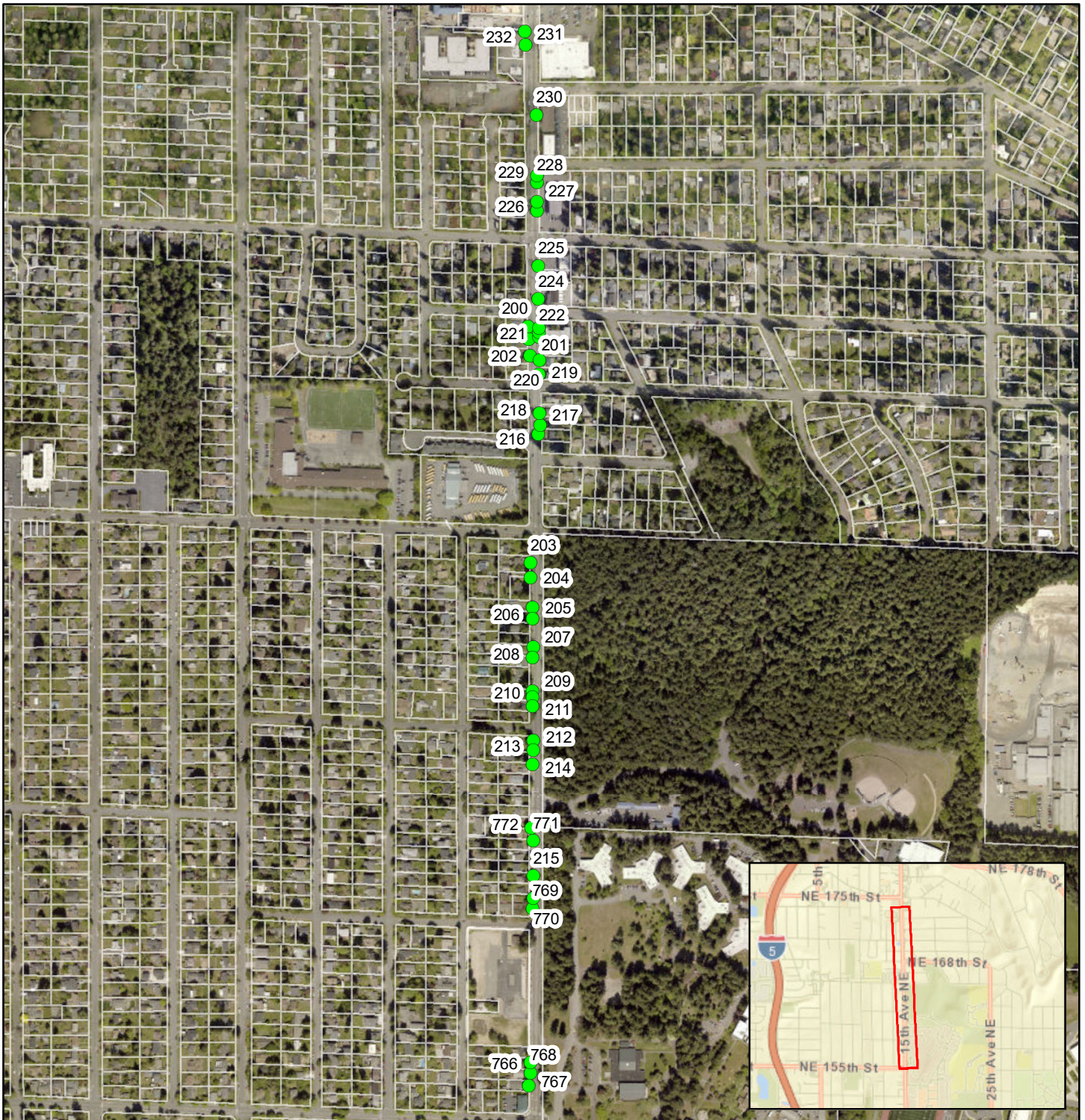
Reid Middleton
728 134th Street SW Suite 200
Everett, Washington 98204
Ph: 425 741-3800



CITY OF SHORELINE
DEPARTMENT OF
PUBLIC WORKS
CITY PROJ NUMBER: 10119

CITY OF SHORELINE
15TH AVE NE SIDEWALK REHABILITATION
NE 155TH ST TO NE 175TH ST
SIDEWALK PLAN

DRAWING NO. SW8
SHEET X OF SHEETS



Shoreline 15th Ave NE Tree Assessment

Legend

- Tree Location
- King County Parcels

Tree Inventory Map

Site Address: 15th Ave NE

Shoreline

Site Visit Date: December 2, 2021

Prepared for: Zachary Evans

TWC Project #: 181216.7

N



0 165 330 660 Feet



THE
WATERSHED
COMPANY

Each identified tree was assessed and assigned a digital tag number. Trees 766-772 were previously tagged and included in this study. For questions on tree locations, contact Jake Robertson at the Watershed Company. Phone: (425) 822-5242



Shoreline 15th Ave NE Tree Assessment

Legend

- Tree Location
- King County Parcels

Tree Inventory Map

Site Address: 15th Ave NE
 Shoreline
 Site Visit Date: December 2, 2021
 Prepared for: Zachary Evans
 TWC Project #: 181216.7

N



0 35 70 140
 Feet



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Shoreline 15th Ave NE Tree Assessment

Legend

- Tree Location
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 Shoreline
 Site Visit Date: December 2, 2021
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N



0 30 60 120 Feet



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N



0 40 80 160 Feet



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Shoreline 15th Ave NE Tree Assessment

Legend

- Tree Location
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Tree Inventory Map

Site Address: 15th Ave NE
Shoreline

Site Visit Date: December 2, 2021

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TWC Project #: 181216.7

N

0 45 90 180
Feet

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