

Behrooz, Morteza

From: Hanson, Emily
Sent: Tuesday, March 4, 2025 8:14 AM
To: Behrooz, Morteza
Subject: RE: Prefontaine Place - tree remomvals

Yes, confirmed. Please make sure this is reflected on the plan and the replacement tree locations are provided with the plan.



Emily Hanson (they/them/theirs)
Arboriculturist
City of Seattle, [Seattle Parks and Recreation](#) Urban Forestry
ISA Certified Arborist MN-4445A
ISA Tree Risk Assessment Qualified
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From: Behrooz, Morteza <Morteza.Behrooz@seattle.gov>
Sent: Monday, March 3, 2025 4:36 PM
To: Hanson, Emily <Emily.Hanson@seattle.gov>
Subject: RE: Prefontaine Place - tree remomvals

Hi Emily,

As discussed earlier, we would like to proceed with removing the tree marked with an X, which is the one most leaning. We will compensate for this tree at a 3:1 rate on a site other than Prefontaine TBD. Please confirm this understanding. Thank you!

Morteza Behrooz, OOC CPC Supervisor
C: 206-612-8780

From: Hanson, Emily <Emily.Hanson@seattle.gov>
Sent: Monday, February 24, 2025 7:48 AM
To: Behrooz, Morteza <Morteza.Behrooz@seattle.gov>
Subject: RE: Prefontaine Place - tree remomvals

Hi Morteza,

SPR tree crew is not planning to remove those trees. We prioritize our work based on risk; these are low risk and would need to be removed as part of the design.

Thanks,
Emily



Emily Hanson (they/them/theirs)

Arboriculturist

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From: Behrooz, Morteza <Morteza.Behrooz@seattle.gov>

Sent: Friday, February 21, 2025 3:53 PM

To: Hanson, Emily <Emily.Hanson@seattle.gov>

Subject: Prefontaine Place - tree removals

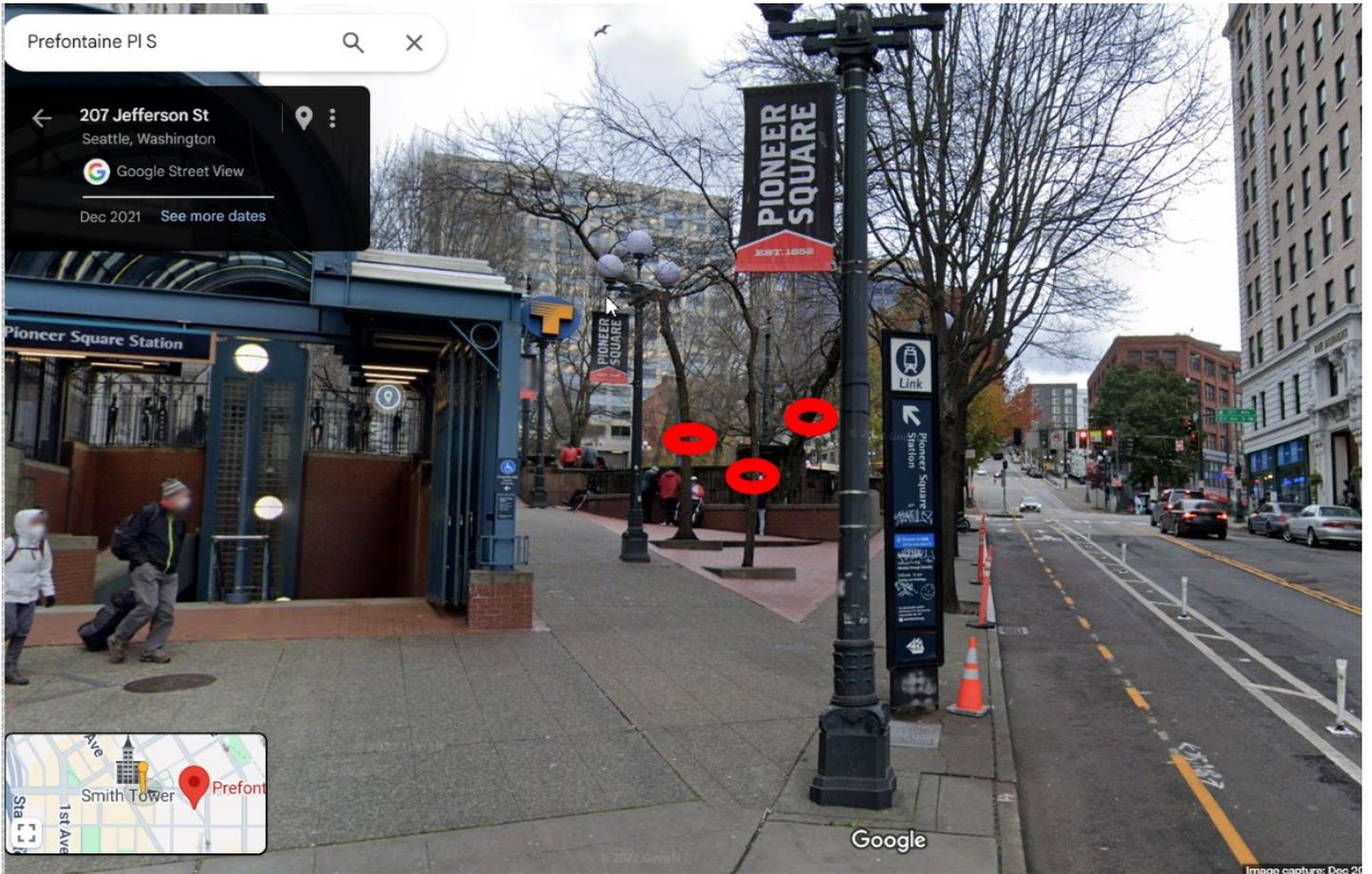
Hi Emily,

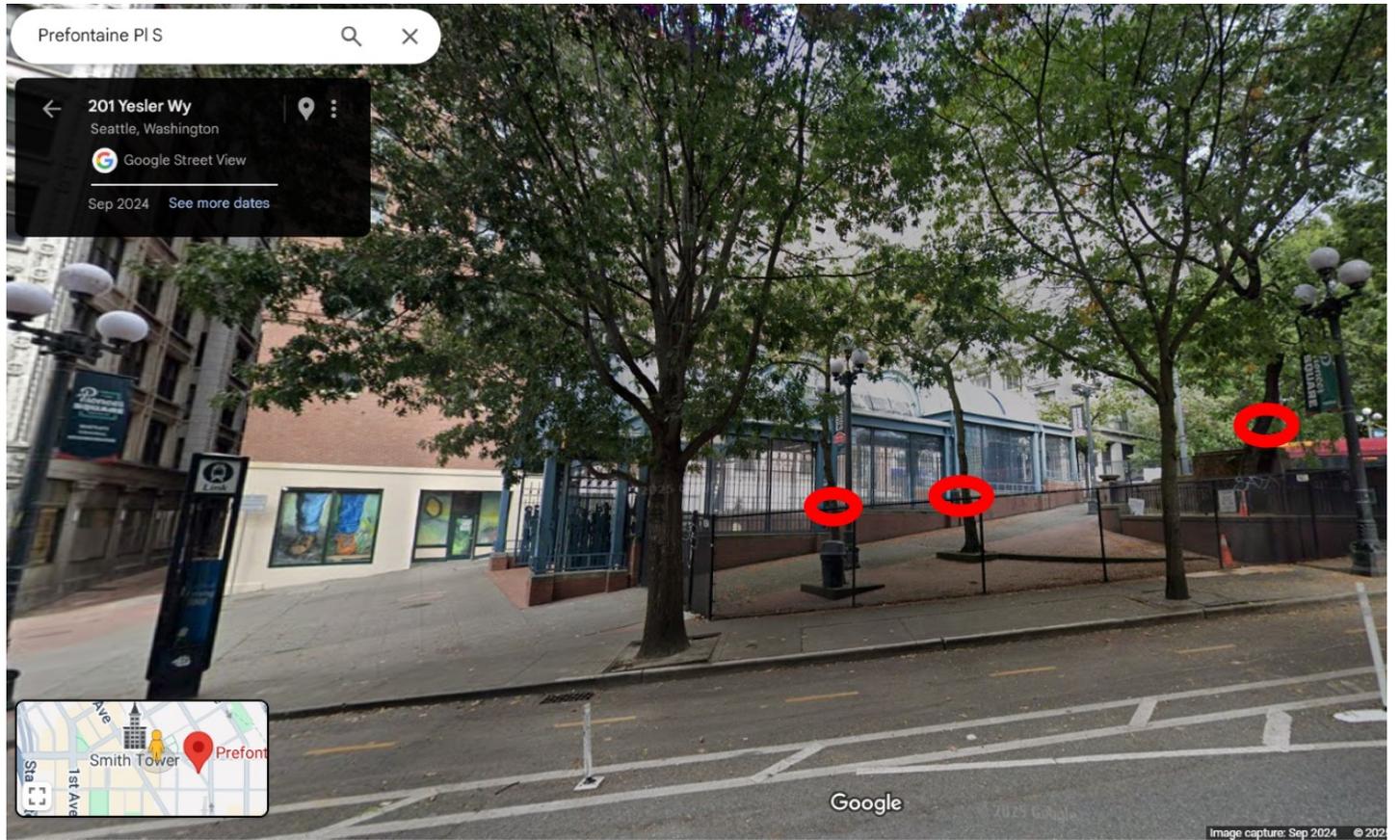
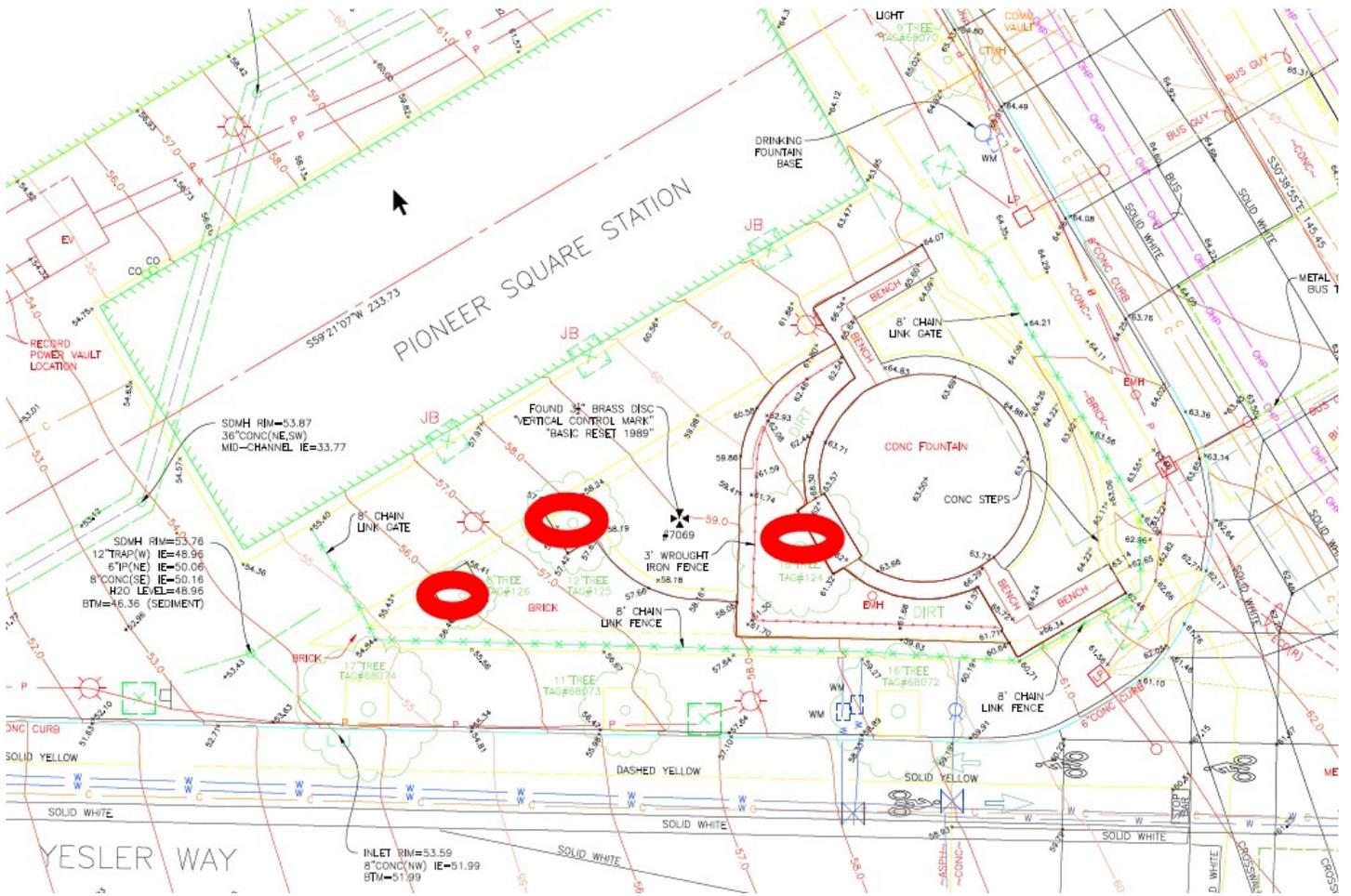
We visited this site and with your input determined that the trees signified below with a bold red circle are in fair to poor condition and can be removed. What is the process required to expedite the removals?

Thanks!

Morteza Behrooz, OOC CPC Supervisor

C: 206-612-8780





Behrooz, Morteza

From: Andy Mitton <andym@bergerpartnership.com>
Sent: Wednesday, March 26, 2025 9:18 AM
To: Behrooz, Morteza; Laura Laney
Cc: Jennifer Garcia
Subject: RE: Prefontaine Place fountain steps

Morteza - after you left yesterday Ben and I noticed there is some damage to the main monument. Some of the blocks have shifted. After closer inspection, it appears the large tree that is leaning has been pushing on the stones in windstorms and has pushed the stones out of place by about ¼ of an inch. Ben was stressing that that tree really needs to come out in order to preserve the integrity of the structure.

In the photo below, you can see part of a scar on the bark where the trunk rubs up against the stone. The movement of the stone is hard to see in the photos, more apparent when you are on site.



Andy

Andy Mitton Principal | ASLA, PLA
Berger Partnership

**Arborist Report
PRELIMINARY**

To: Morteza Behrooz,
Planning, Development and Maintenance Division - City of Seattle

Site: City Hall Park

Re: Tree inventory

Date: November 7, 2023

Project Arborists: Holly Iosso, Registered Consulting Arborist # 567
ISA Certified Arborist #PN- 6298A
ISA Qualified Tree Risk Assessor

Charlie Vogelhelm
ISA Certified Arborist #PN- 9375A
ISA Qualified Tree Risk Assessor

Attached: Table of Trees

Summary

I inventoried, tagged and assessed 35 trees¹ within the project boundaries. This includes both public and private trees.

There were no tree groves² on-site. Private trees comprising a tree grove are regulated as Tier 2 trees.

Of the trees on-site, 6 met the criteria of Tier 2 per the definition in Seattle Director's Rule 07-2023.

Several street trees are actively being girdled by tree grates and should be removed or managed.

I have not reviewed any conceptual development plans and cannot comment on tree retention at this time.

¹ Trees with diameter at standard height (DSH) $\geq 6"$

² Tree grove is eight or more trees each with a DSH of ≥ 12 inches with continuously overlapping canopies (SMC 25.11.130), excluding certain species and trees growing entirely in "the public place".

Table 1. Tree summary

	Total	Removals	Replacements		In-Lieu fee
Tier 1 Trees	0		-	or	
Tier 2 Trees	6		-	or	
Tier 3 Trees	2		-	or	
Tier 4 Trees	2		-	or	
Public trees (no tier status)	25				n/a
Tree total:	35	TBD	TBD		\$ TBD

Assignment and Scope of Work

This report documents the visit by Holly Iosso and Charlie Vogelhelm of Tree Solutions Inc. on October 27, 2023 to the above referenced site. We were asked to complete a tree inventory and assessment by Morteza Behrooz in preparation for the design and permitting for capital projects within the park.

Observations

Site

City Hall Park is an urban park between 3rd and 4th Avenues in downtown Seattle. It includes lawn, trees, walkways and a small plaza. Lights, seating, and lawn games were set out for users. Park ambassadors were present at the time of our visit, presumably to promote safe use of the park.

Prefontaine Place, at Yesler Way and 3rd Ave, is a separate component of City Hall Park across 3rd Ave and adjacent to the transit tunnel access. It is paved with 3 trees. At the time of our visit, the area was fenced off from the public. The fencing company, which had just erected the fencing, allowed us access to the space.

According to the Seattle Department of Construction and Inspections GIS map there are no environmentally critical areas relevant to tree protection on the site. These would include landslide hazards, erosion hazards, steep slopes, streams, and wetlands.

Tree Groves

Trees #110, 112-115, 117-118 are public trees in the right of way and are not included in determining a grove. Trees #106-109, 111, 116, 119 are privately owned by City of Seattle DPR. With only 7 trees on private property, none qualify as a Tree Grove.

Trees

All data for individual trees are listed in the attached Table of Trees and include species, tree diameter at standard height (DSH), dripline measurements, health and structural condition, tier and grove status, notes and locations. We collected GPS locations for each tree.

Additional information (Tree protection areas, proposed action, and replacement tree requirements will be populated after I review design plans.

I have included an aerial photograph of the site to serve as the site map.

Discussion

Tree Regulations

Seattle Municipal Code classifies private trees under a four-tiered system, which are regulated by Seattle Department of Construction and Inspections (SDCI) based on size and species.

Table 2. Tree Classifications (SMC 25.11.050)

Tree category	Definitions	During development – Related to SDCI permit	Not part of a SDCI permit application
Tier 1	Includes <ul style="list-style-type: none"> heritage trees 	May not be removed unless deemed hazardous or in need of emergency action*.	May not be removed unless deemed hazardous or in need of emergency action*.
Tier 2	Includes <ul style="list-style-type: none"> trees ≥ 24 in DSH trees in groves trees < 24” for tree species listed in Director’s Rule 07-2023 	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.
Tier 3	Includes <ul style="list-style-type: none"> all other trees ≥ 12” DSH not considered Tier 2 trees 	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.
Tier 4	Includes <ul style="list-style-type: none"> all other trees > 6” DSH 	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.

*Documentation is required for all hazardous and emergency removals.

Tree Protection

Private Property Trees

A tree protection area (TPA) is required for all Tier 1, 2, and 3 trees that are proposed for retention. This is a protection zone surrounding a tree where excavation, access and material storage cannot occur (SMC 25.11.030). Tree protection areas are also required for trees (Tier 1, 2, 3) growing adjacent to the project with canopies and/or roots extending into the project area.

A basic tree protection area (BTPA) is calculated using a radius that is equal to one foot for every inch DSH of a tree (SMC 25.11.060). It is intended to guide the design process initially, and is typically revised over the course of the design process (Matheny et al, 2023). A revised tree protection area (TPA) can be reduced by up to 35-percent, but not closer than one half of the BTPA radius. Additional reductions in the size of the TPA may be permitted if alternative construction methods are employed.

Tree protection measures should be implemented during construction and are intended to help maintain soil integrity (reduce soil compaction), limit root loss, protect overhead canopy, and maintain tree health. These measures can include (but are not limited to) mulching, temporary irrigation, soil protection, construction monitoring by the project arborist and tree protection fencing. The location of tree protection fencing should be along the edges of the TPA. Once in place, the fence should not be moved unless the project arborist is present. Example of tree protection specifications is in Appendix G.

SDOT Trees

A basic tree protection area (BTPA) is required for trees in the right-of-way per Standard Plan 133 (City of Seattle, 2023). This area is calculated using a radius that is equal to one foot for every inch DSH of a tree. While this is listed as Zone B: Critical Root Zone on Plan 133, this report will refer to it as the Basic Tree Protection Area. No disturbance can occur within this area, unless approved by SDOT Urban Forestry. If approved, encroachment is restricted to 30 percent of this area.

A modified tree protection area (TPA) (referred to as Zone A: Interior Critical Root Zone on Standard Plan 133) is half of radius of the BTPA but not closer than 8 feet to a tree³. No disturbance is allowed within this area without SDOT site visit, approved TVSPP, and tunnelling may be required for utility installation.

Construction Impacts

This report is preliminary as we have not reviewed design or construction plans for this area.

Removals

This report is preliminary, and no removals have been proposed yet.

Replacement Requirements

Private Property

On private property, a minimum of one tree replacement must be planted for each Tier 1, 2 and 3 tree removed (SMC 25.11.090). Replacement tree species must have a mature canopy that is proportional to the one removed. If on-site replanting is not feasible, the applicant may pay a fee-in-lieu.

SDOT and SPR Trees

On public property, a minimum of three tree replacements must be planted for each healthy, site appropriate tree removed (Executive Order 2023-23). A minimum of 2 replacements are required for trees dead, hazardous, or not appropriate for the site.

A summary of these requirements are listed in Table 3 below.

³ Email from SDOT Urban Forestry, Ben Roberts September 12, 2023

Table 3. Replanting Requirements / Fee In-Lieu

Tree category	Replacement Qty per tree	Replacement Requirements		Payment In-Lieu Amount
Tier 1 and Tier 2 if LARGER than 24" DSH	1	5-yr maintenance & monitoring period	OR	\$17.87 / in ² of tree removed, not less than \$8,080
Tier 1 and Tier 2 if SMALLER than 24" DSH	1	5-yr maintenance & monitoring period	OR	\$8,080 per tree
Tier 3	1	5-yr maintenance & monitoring period	OR	\$2,833 per tree
Tier 4	0			none
Public trees / ROW	3			Not applicable

Payment In-Lieu fees are defined in Director's Rule 8-2023.

Survival rates after 5 years must be 100% if only 1 replacement tree is required, and 80% if more than 1 is required.

Replacement requirements for private trees must be a minimum of 3:1 replacements: removals per Executive Order 2023-2.

Recommendations

Several street trees were planted in tree wells with tree grates at the base. In 4 situations (trees TRE-1089262, TRE-68045, TRE-68069 and TRE-68073) the tree had out-grown the grate and was partially or completely engulfing the metal. These grates should be removed, replaced, or expanded as soon as possible to minimize long-term damage to the trees.

Additionally, as plans are conceptualized, consider involving Tree Solutions at the beginning of the design phase to identify and minimize tree and design conflicts early in the process.

Respectfully submitted,

Holly Iosso
 Consulting Arborist

Appendix A Glossary

ANSI A300: Standards for Tree Care. American National Standards Institute (ANSI).

Diameter at Standard height (DSH): diameter of the tree trunk measured 54 inches (4.5 feet) above grade. (SMC 25.11.130)

Dripline: an area encircling the base of a tree, the minimum extent of which is delineated by a vertical line extending from the outer limit of a tree's branch tips down to the ground. The dripline may be irregular in shape to reflect the variation in branch outer limits. (SMC 25.11.130)

ISA: International Society of Arboriculture

Public Place: public right-of-way and the space above or beneath its surface, whether or not opened or improved, including streets, avenues, ways, boulevards, drives, places, alleys, sidewalks, planting strips, squares, triangles, and plazas that are not privately owned. (SMC 15.02.046)

Regulated Tree: A tree required by municipal code to be identified in an arborist report (SMC 25.11.130).

Tier 1 tree: A heritage tree. A heritage tree is a tree or group of trees as defined in Title 15 (SMC 25.11.130)

Tier 2 tree: Any tree that is 24 inches in diameter at standard height or greater, tree groves, each tree comprising a tree grove, and specific tree species below 24 inches in diameter at standard height as provided by Director's Rule 7-2023 "Designation of Tier 2 Trees". (SMC 25.11.130)

Tier 3 tree: Any tree that is 12 inches in diameter at standard height or greater but less than 24 inches in diameter at standard height and is not defined as a Tier 1 or Tier 2 tree. (SMC 25.11.130)

Tier 4 tree: Any tree that is 6 inches or greater in diameter at standard height but less than 12 inches in diameter at standard height and is not defined as a Tier 1 or Tier 2 tree. (SMC 25.11.130)

Tree Protection Area (TPA): the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the (SDCI) Director. The TPA is variable depending on species, age and health of the tree, soil conditions, and proposed construction. (SMC 25.11.130)

Tree Protection Area, Basic (BTPA): the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the (SDCI) Director. This area is delineated using a radius that is equal to one foot for every inch DSH of the tree. (SMC 25.11.130)

Tree Service Provider: means any person or entity engaged in commercial tree work. (SMC 25.11.130)

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, *et al* 1999)

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.

Harrell, B. “Executive Order 2023-03: One Seattle Tree Plan: Growing and Fostering an Equitable tree Canopy on Public Land”. City of Seattle, 2023.

Matheny, Smiley, Gilpin, Hauer. “Best Management Practices – Managing Trees During Construction, Third Edition”. International Society of Arboriculture (ISA), 2023.

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

Seattle Department of Transportation. “Street Tree Manual”. City of Seattle, 2014.

Seattle Municipal Code: TREE PROTECTION

25.11.010 - Purpose and intent

25.11.020 - Exemptions

25.11.030 - Emergency actions

25.11.040 - Hazardous tree removal

25.11.050 - General provisions for regulated tree categories

25.11.060 - Requirements for trees when development is proposed

25.11.070 - Tree protection on sites undergoing development in Neighborhood Residential, Lowrise, Midrise, commercial, and Seattle Mixed zones

25.11.080 - Tree protection on sites in Major Institution Overlay Districts

25.11.090 - Tree replacement, maintenance, and site restoration

25.11.100 - Tree service provider registration

25.11.110 - Off-site planting and voluntary payment in lieu

25.11.115 - Modification of tree removal, replacement, and voluntary in-lieu payment requirements

25.11.120 - Enforcement and penalties

25.11.130 - Definitions

Seattle Municipal Code: REGULATIONS FOR ENVIRONMENTALLY CRITICAL AREAS

25.09.070 - Standards for tree and vegetation and impervious surface management

Standard Plans for Municipal Construction. Plan sheets 132a, 132b, 133. City of Seattle, 2023.

Standard Specifications for Roads, Bridges, and Municipal Construction. Section 8-01.3(2)B. City of Seattle, 2023.

Torgelson, N. “Director’s Rule 7-2023”. Seattle, WA, 2023 – Designation of Tier-2 Trees

Torgelson, N. “Director’s Rule 8-2023”. Seattle, WA, 2023 – Payment in Lieu of Tree Replacement Pursuant to the Tree Protection Code.

Torgelson, N. “Director’s Rule 11-2023 DRAFT”. Seattle, WA, 2023 – Tree Measurements

Torgelson, N. “Director’s Rule 12-2023”. Seattle, WA, 2023 – Tree Replacement Requirements

Appendix C Site Map

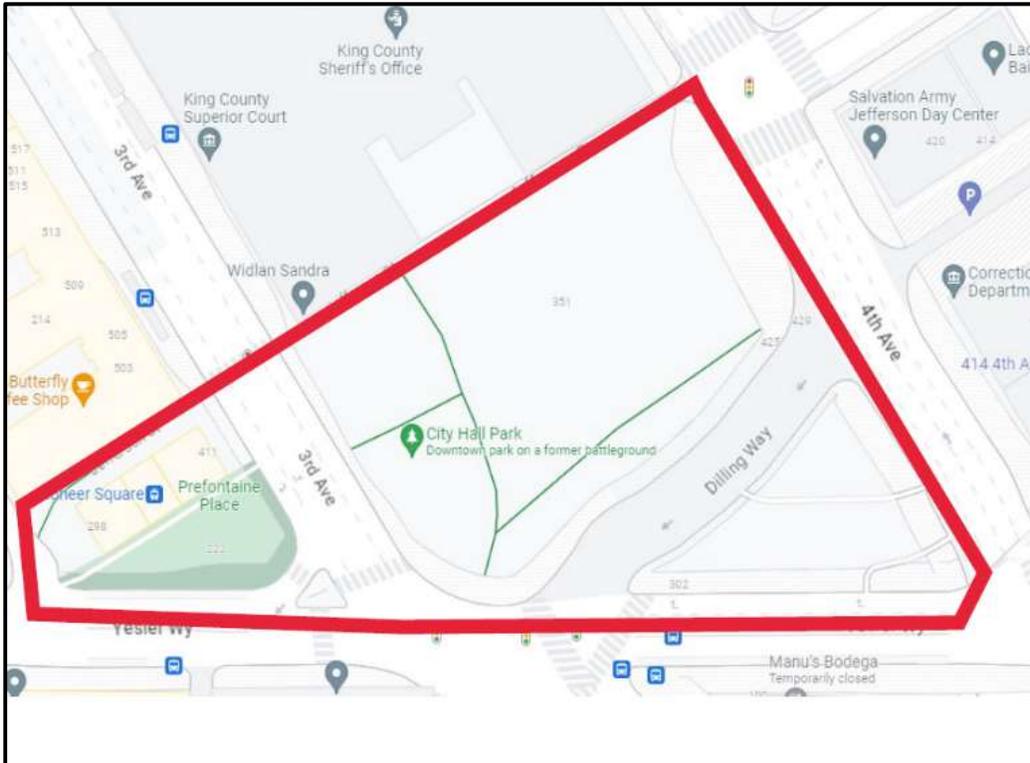


Figure 1: Map of scope area for tree locations inventoried in red, provided by Morteza Behrooz.

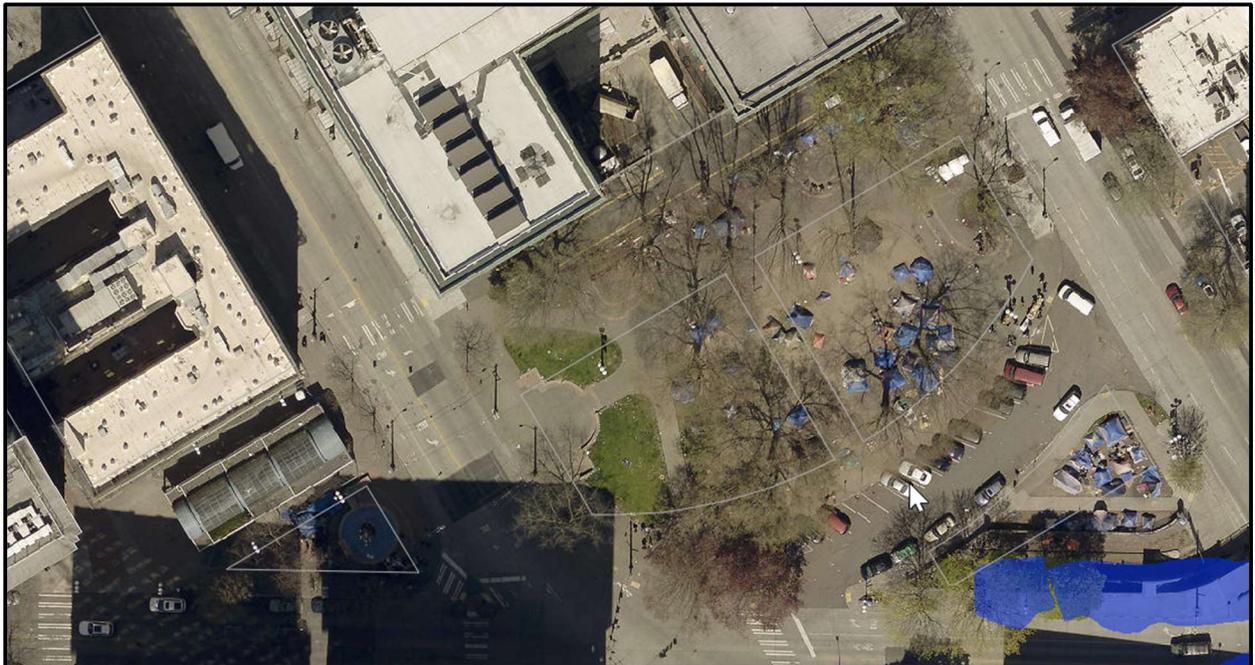


Figure 1. Environmental Critical Areas (purple = steep slope ECA1)
Purple = steep slope ECA1,



Figure 2. Tree locations and IDs for triangular area between Yesler Way, 4th Ave and Dilling way. All trees appear to be public trees managed by SDOT.



Figure 3. Tree locations and IDs for City Hall Park. Yellow circles are trees classified as 'Tier 2': Trees #106, 107, 108, 109, 111, 119.



Figure 4. Tree locations and IDs for Prefontaine Place.

Appendix D Photographs



Photo 1. View west of City Hall Park



Photo 2. View southeast of City Hall Park



Photo 3. Trees to the left of this walkway are publicly owned trees, trees to the right are private.



Photo 4. View east of publicly owned trees.

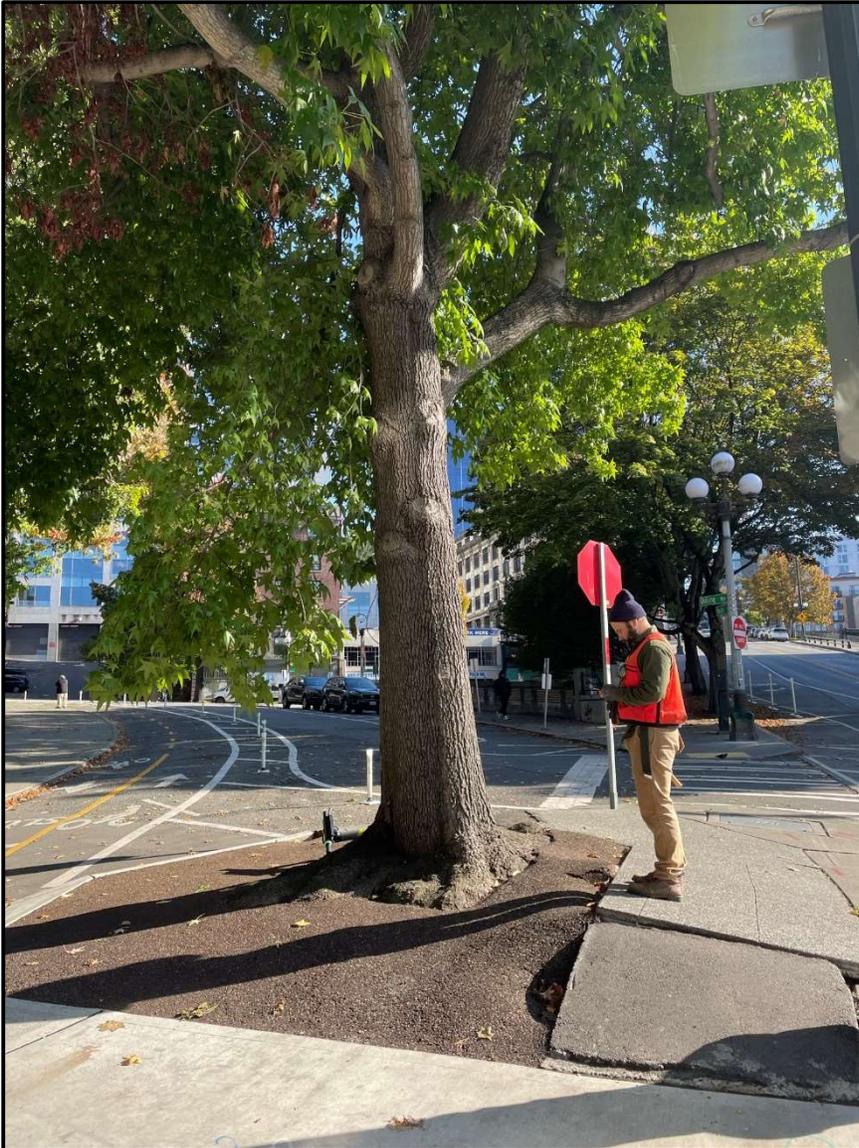


Photo 5. Street tree #TRE-1084223 has considerable sidewalk uplift.



Photo 6. View east across triangle portion of City Hall Park. Dilling Way is out of view on the left. Cars in view are parked on 4th Ave.



Photo 7. View north across Yesler way

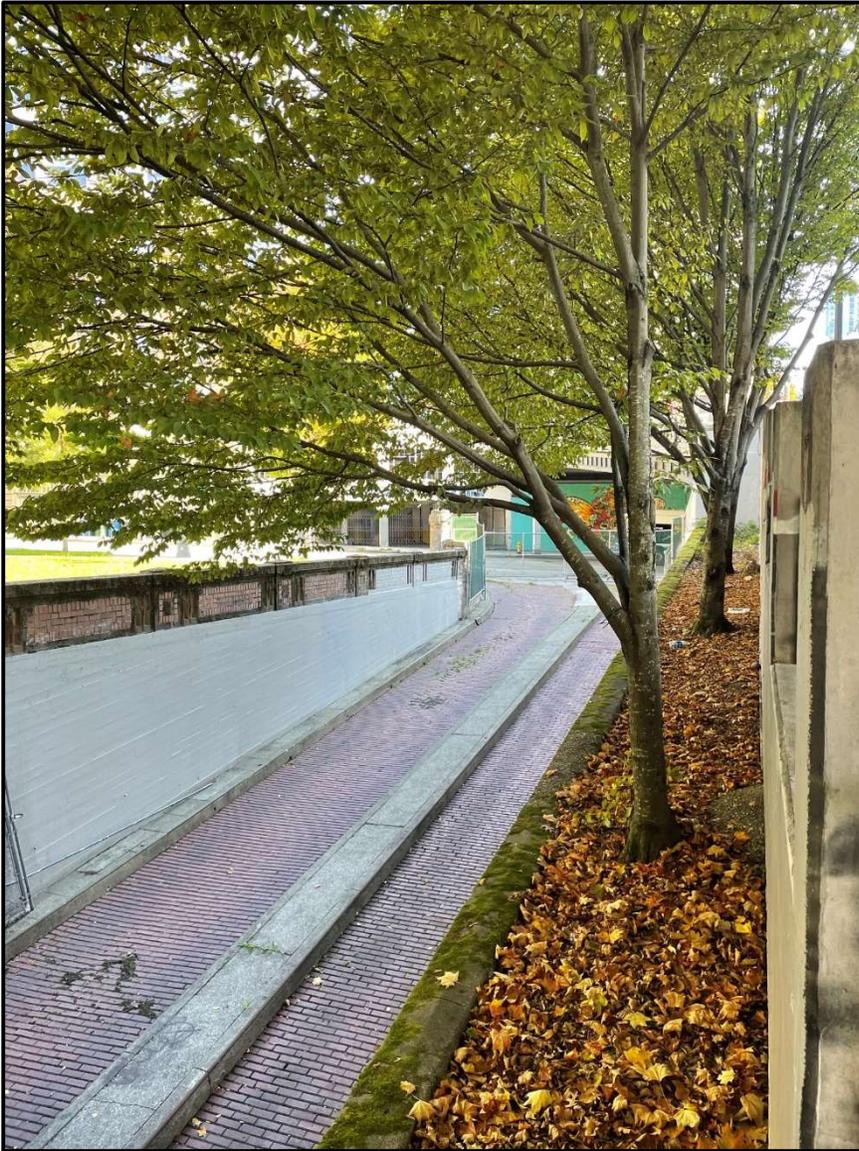


Photo 8. View east of street trees at the top of retaining wall



Photo 9. Prefontaine Place



Photo 10. Prefontaine Place



Photo 11. Street tree near Prefontaine Place. Tree is being girdled by tree grate and requires management as soon as possible.

Appendix E 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 F Methods

Measuring

Tree diameter at standard height (DSH) is measured at 54 inches (4.5 feet) above grade. If a tree had multiple stems, each stem was measured individually and a single stem equivalent was calculated as the root of the sum of each diameter squared (example with 3 stems: $DSH = \text{square root} [(\text{stem})^2 + (\text{stem})^2 + (\text{stem})^2]$). A multi-stem tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some trees in our data set may have diameters smaller than 6 inches. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

Tagging

Each tree was tagged with a circular aluminum tag at the base of the tree and the ID corresponds to our map and tree table. Trees growing in the ROW which had previously been identified by the Seattle Department of Transportation (SDOT), was given an identification (ID) number by that department with the prefix TRE. Those trees were not tagged by Tree Solutions Inc.

Evaluating

Tree health and structure was assessed 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

Tree health ratings take into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. Tree structure ratings take into consideration form, as well as 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.

Health

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 $\frac{3}{4}$ 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.

Structure

Excellent - Root plate undisturbed and clear of any obstructions. Trunk flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.

Good - Root plate appears normal, with only minor damage. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure and less than 25% of bark section missing. Good branch habit; minor dieback with some signs of previous pruning. Codominant stem formation may be present, requiring minor corrections.

Fair - Root plate reveals previous damage or disturbance. Dysfunctional roots may be visible around the main stem. Evidence of trunk damage or cavities, with decay or defects present and less than 30% of bark sections missing on trunk. Co-dominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.

Poor - Root plate disturbance and defects indicate major damage, with girdling roots around the trunk flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important branches dead or broken. Canopy reveals signs of damage or previous topping or lion-tailing, with major corrective action required.

Appendix G Tree Protection Specifications

The following is a list of protection measures which should be employed before, during, and after construction to ensure the long-term viability of retained trees. This specification can be partially, or fully, incorporated onto the site plan or contract documents.

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 Area (TPA):** TPA is the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the Director (SMC 25.11.130).
3. **Tree Protection Fencing:** Tree protection fencing shall consist of 6-foot-tall chain-link fencing installed at the edge of the TPA 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 group.
 - b. Per arborist approval, TPA fencing may be placed at the edge of existing hardscape within the TPA to allow for staging and traffic.
 - c. Where work is planned within the TPA, install fencing at edge of TPA and move to limits of disturbance at the time that the work within the TPA is planned to occur. This ensures that work within the TPA 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:** 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 must include all information in the PDF located here: <http://www.seattle.gov/Documents/Departments/SDCI/Codes/TreeProtectionAreaSign.pdf> in addition to the contact information for the project manager and instructions for gaining access to the area.
6. **Filter / Silt Fencing:** Filter / silt fencing within or at the edge of the TPA 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 TPA.
8. **Soil Protection:** Retain existing paved surfaces within or at the edge of the TPA for as long as possible. No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPA. Heavy machinery shall remain outside of the TPA. Access to the tree protection area will be granted under the supervision of the project arborist. If the project arborist allows, heavy machinery can enter the area if soil is protected from the load. Acceptable methods of soil protection include placing 3/4-inch plywood over 6 inches of wood chip mulch, or use of AlturnaMats® (or equivalent product approved by the project arborist). Compaction of soils within the TPA must not occur.
9. **Soil Remediation:** Soil compacted within the TPA 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 TPA, 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 5 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 TPA to prevent compaction and evaporation. TPA 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 within the TPA 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 TPA.
13. **Fill:** Limit fill to 1 foot of uncompacted well-draining soil, within the TPA 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 TPA. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8. Replace fencing at edge of TPA 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 TPA of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left in place 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 TPA 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 modifications that result in impacts within the TPA 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 on-site and available for use during work in the TPA:
 - **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**



Table of Trees
City Hall Park
 Seattle, WA

Arborist: HI and CV
Date of Inventory: 10/27/2023
Table Prepared: 11/7/2023

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, calculated as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.
 Tier status is for private trees only and is based on SMC 25.11 and Director's Rule 7-2023.
 Fees-in-Lieu for removed trees are calculated using the methods defined in the SMC 25.11.115 (ordinance 126821).
 Tree Protection Area is can be reduced from the BTPA depending on tree species, health, and age once development plans are assessed.
 Species tolerance to construction disturbance is from Trees and Development by Nelda Matheny and James Clark, published by the International Society of Arboriculture in 1998.
 Dripline is the measured from the center of the tree to the outermost extent of the canopy. Longest measurement, or measurement closest to the site was used.

Tree ID	Code	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	Dripline		Tier 2	Grove	Tier Level	Jurisdiction	Basic Tree Protection Area (feet)	Tree Protection Area (feet)	Proposed Action		Fee-In-Lieu (per replacement tree)	Notes	Species Tolerance to Construction	Recommendations	Long	Lat
							Radius	Threshold							Remove / Protect	Replacement Trees Required						
106	QURU	<i>Quercus rubra</i>	Red oak	33.8	Good	Good	62.0	24.0	no	2	Parks / Private	34	TBD	TBD	TBD	TBD		Good		-122.33006990	47.60200652	
107	QURU	<i>Quercus rubra</i>	Red oak	37.5	Good	Good	37.0	24.0	no	2	Parks / Private	38	TBD	TBD	TBD	TBD		Good		-122.32985630	47.60203177	
108	QURU	<i>Quercus rubra</i>	Red oak	29.0	Good	Good	40.0	24.0	no	2	Parks / Private	29	TBD	TBD	TBD	TBD		Good		-122.32980660	47.60211279	
109	ACPS	<i>Acer pseudoplatanus</i>	Sycamore maple	28.8	Good	Fair	30.0	24.0	no	2	Parks / Private	29	TBD	TBD	TBD	TBD	Heavy pruning in the past for clearance.	Good		-122.32967360	47.60228924	
110	QURU	<i>Quercus rubra</i>	Red oak	38.4	Good	Good	48.0	-	-	-	SDOT	38	TBD	TBD	TBD	Not applicable	Over-extended branches to south and east with loons on underside from vehicles	Good		-122.32986850	47.60239414	
111	QURU	<i>Quercus rubra</i>	Red oak	25.0	Good	Good	25.0	24.0	no	2	Parks / Private	25	TBD	TBD	TBD	TBD	Girdling root can easily be pruned on north side	Good		-122.32992970	47.60223578	
112	QURU	<i>Quercus rubra</i>	Red oak	24.5	Good	Good	40.0	-	-	-	SDOT	25	TBD	TBD	TBD	Not applicable	Lifting concrete tree well at base	Good		-122.33005560	47.60227184	
113	QURU	<i>Quercus rubra</i>	Red oak	23.5	Good	Good	34.0	-	-	-	SDOT	24	TBD	TBD	TBD	Not applicable		Good		-122.33008370	47.60232365	
114	QURU	<i>Quercus rubra</i>	Red oak	20.4	Good	Good	40.0	-	-	-	SDOT	20	TBD	TBD	TBD	Not applicable		Good		-122.33020330	47.60230392	
115	QURU	<i>Quercus rubra</i>	Red oak	27.2	Good	Good	41.0	-	-	-	SDOT	27	TBD	TBD	TBD	Not applicable	Minor uplift of concrete edging	Good		-122.33015030	47.60224037	
116	QURU	<i>Quercus rubra</i>	Red oak	21.6	Good	Good	35.0	24.0	no	3	Parks / Private	22	TBD	TBD	TBD	TBD	General uplift of concrete and pavers	Good		-122.33021530	47.60216441	
117	QURU	<i>Quercus rubra</i>	Red oak	35.5	Good	Good	40.0	-	-	-	SDOT	36	TBD	TBD	TBD	Not applicable	Behind benches	Good		-122.33032270	47.60222800	
118	QURU	<i>Quercus rubra</i>	Red oak	28.5	Good	Good	35.0	-	-	-	SDOT	29	TBD	TBD	TBD	Not applicable		Good		-122.33050370	47.60216492	
119	QURU	<i>Quercus rubra</i>	Red oak	34.3	Good	Good	32.0	24.0	no	2	Parks / Private	34	TBD	TBD	TBD	TBD		Good		-122.33020240	47.60207752	
120	CABE	<i>Carpinus betulus</i>	European hornbeam	9.0	Good	Good	15.0	-	-	-	SDOT	9	TBD	TBD	TBD	Not applicable	Not accessible, tagged from Street	Moderate		-122.32948760	47.60180945	
121	CABE	<i>Carpinus betulus</i>	European hornbeam	10.0	Good	Good	14.0	-	-	-	SDOT	10	TBD	TBD	TBD	Not applicable	Not accessible, tagged from Street	Moderate		-122.32953130	47.60181123	
122	CABE	<i>Carpinus betulus</i>	European hornbeam	7.0	Good	Good	14.0	-	-	-	SDOT	7	TBD	TBD	TBD	Not applicable	Not accessible, tagged from Street, DSH estimated	Moderate		-122.32960460	47.60181271	
123	CABE	<i>Carpinus betulus</i>	European hornbeam	6.0	Good	Good	10.0	-	-	-	SDOT	6	TBD	TBD	TBD	Not applicable	Not accessible, tagged from Street, DSH estimated	Moderate		-122.32968780	47.60181254	
124	GLTR	<i>Gleditsia triacanthos</i>	Honeylocust	16.2	Fair	Fair	36.0	20.0	no	3	Parks / Private	16	TBD	TBD	TBD	TBD	Phototropic to Southwest. Base is uneven. Rats? Latrine?	Good		-122.33088520	47.60182500	
125	GLTR	<i>Gleditsia triacanthos</i>	Honeylocust	11.6	Fair	Fair	20.0	20.0	no	4	Parks / Private	12	TBD	TBD	TBD	TBD	Small rooting area. 25% trunk wound.	Good		-122.33098870	47.60182897	
126	GLTR	<i>Gleditsia triacanthos</i>	Honeylocust	7.5	Fair	Fair	17.0	20.0	no	4	Parks / Private	8	TBD	TBD	TBD	TBD	Tree grate present. Suppressed.	Good		-122.33104530	47.60181100	
TRE-103345	ACPL	<i>Acer platanoides</i>	Norway maple	20.2	Good	Good	27.0	-	-	-	SDOT	20	TBD	TBD	TBD	Not applicable	Flexipave at base.	Good		-122.32966200	47.60178130	
TRE-103346	ACPL	<i>Acer platanoides</i>	Norway maple	21.0	Good	Good	26.0	-	-	-	SDOT	21	TBD	TBD	TBD	Not applicable		Good		-122.32977710	47.60178453	



Table of Trees
 City Hall Park
 Seattle, WA

Arborist: HI and CV
 Date of Inventory: 10/27/2023
 Table Prepared: 11/7/2023

Tree ID	Code	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	Dripline		Grove	Tier Level	Jurisdiction	Basic Tree Protection Area (feet)	Tree Protection Area (feet)	Proposed		Fee-In-Lieu (per replacement tree)	Notes	Species Tolerance to Construction	Recommendations	Long	Lat
							Radius (feet)	Tier 2 Threshold						Action (Remove / Protect)	Replacement Trees Required						
TRE-1057705	ACFR	<i>Acer x Freemanii</i>	Freeman maple	11.2	Good	Good	12.0	-	-	-	SDOT	11	TBD	TBD	TBD	Not applicable		Good		-122.32928320	47.60195141
TRE-1084223	LIST	<i>Liquidambar styraciflua</i>	American sweetgum	24.5		Fair	36.0	-	-	-	SDOT	25	TBD	TBD	TBD	Not applicable	Branch tear outs, recent expansion of tree pit with flexipave. Extreme sidewalk uplift.	Good		-122.33008790	47.60181864
TRE-1084224	LIST	<i>Liquidambar styraciflua</i>	American sweetgum	16.5	Good	Fair	29.0	-	-	-	SDOT	17	TBD	TBD	TBD	Not applicable	Leader broke out this season. Recent expansion of tree well with flexipave.	Good		-122.33022490	47.60181307
TRE-1089262	QURU	<i>Quercus rubra</i>	Red oak	17.0	Good	Good	18.0	-	-	-	SDOT	17	TBD	TBD	TBD	Not applicable	Girdled by tree grate.	Good	Manage tree grates ASAP	-122.33149080	47.60174212
TRE-1127878	QUCO	<i>Quercus coccinea</i>	Scarlet oak	5.2	Good	Good	10.0	-	-	-	SDOT	5	TBD	TBD	TBD	Not applicable		Good		-122.32934820	47.60203687
TRE-68045	QURU	<i>Quercus rubra</i>	Red oak	12.0	Good	Fair	16.0	-	-	-	SDOT	12	TBD	TBD	TBD	Not applicable	Tree well grates are in contact on west side.	Good	Manage tree grates ASAP	-122.33065010	47.60207222
TRE-68046	QURU	<i>Quercus rubra</i>	Red oak	22.2	Good	Fair	34.0	-	-	-	SDOT	22	TBD	TBD	TBD	Not applicable	Heavy impact to sidewalk. Metal grate girdling. Asphalt repair present.	Good		-122.33044320	47.60188265
TRE-68069	QURU	<i>Quercus rubra</i>	Red oak	8.0	Good	Fair	16.0	-	-	-	SDOT	8	TBD	TBD	TBD	Not applicable		Good	Manage tree grates ASAP	-122.33086460	47.60204020
TRE-68070	QURU	<i>Quercus rubra</i>	Red oak	9.1	Poor	Fair	14.0	-	-	-	SDOT	9	TBD	TBD	TBD	Not applicable	Premature defoliation.	Good		-122.33081940	47.60198901
TRE-68072	QURU	<i>Quercus rubra</i>	Red oak	16.4	Good	Fair	26.0	-	-	-	SDOT	16	TBD	TBD	TBD	Not applicable	Trunk wound 25% circumference. Grate has been removed. Metal edging still present.	Good		-122.33081490	47.60178534
TRE-68073	QURU	<i>Quercus rubra</i>	Red oak	11.2	Fair	Fair	18.0	-	-	-	SDOT	11	TBD	TBD	TBD	Not applicable	Tree girdled by tree grate. Suppressed.	Good	Manage tree grates ASAP	-122.33097350	47.60178235
TRE-68074	QURU	<i>Quercus rubra</i>	Red oak	17.3	Good	Good	20.0	-	-	-	SDOT	17	TBD	TBD	TBD	Not applicable	Grate has been removed. Metal edging present as an obstruction	Good		-122.33107810	47.60177494