Tree Solutions Inc
Consulting Arborists

Project No. TS - 8418

Arborist Report

To:	Mill Creek Residential Trust LLC. c/o Matt Quigley
Site:	1032 S Jackson St., Seattle, WA 98104; Parcel# 8591900145
Re:	Tree Inventory and Assessment
Date:	April 27, 2022
Project Arborist:	Sean Dugan, Registered Consulting Arborist # 457 ISA Board Certified Master Arborist #PN- 5459B ISA Qualified Tree Risk Assessor
Referenced Documents:	Site Plan A100 (Tiscareno Associates; plotted January 31, 2022)
Attached:	Tree Inventory - Table of Trees Aerial Photograph with Tree Locations

Summary
I inventoried 19 significant size trees, 6 inches in diameter and greater, on the subject site. Trees 5 and 17 meet the exceptional tree criteria outlined in the Seattle Director's Rule 16-2008[1]. There are no groves on the site. Based on the proposed development plans, none of the trees will be retained.

I inventoried 10 trees within the adjacent rights-of-ways (ROW) to the west and south of the subject site. All ten trees are proposed to be retained.

Assignment and Scope of Work

This report documents the visit by Sean Dugan, of Tree Solutions Inc. on March 29, 2022. I was asked to review maps, plans, and documents in preparation for a site inspection to the above referenced site. I was asked to complete a tree inventory/assessment of all significant trees, measuring six inches in diameter and greater, and all significant trees on adjacent property with canopies overhanging the subject site.

I was asked to provide an arborist report to document each tree identification number, species, DSH, health and structural condition, driplines, and a proposed action for the tree (remove, retain, etc.) based on design plans. I was asked to determine if any tree meets the city of Seattle's Exceptional tree and/or grove criteria. Matt Quigley, of Mill Creek Residential Trust LLC., requested the report and supporting information to be used for design, site planning, and permitting purposes.

[1] Sugimura, D.W. "DPD Director's Rule 16-2008". Seattle, WA, 2009

This report contains observations and a discussion of my findings and recommendations. Appendices include:

- Appendix A – Site Maps and Plans
- Appendix B – Photographs
- Appendix C – Assumptions and Limiting Conditions
- Appendix D - Methods

Observations and Discussion

Site

The 80,231 square foot site fronts South Jackson Street St. to the south. A large commercial structure, parking area, a retaining wall, and significant trees stand on the site (see Figure 1). The property is within a Downtown zone.

A steep slope and potential slide environmental critical area (ECA) are located on the site (see Figure 2). An unmaintained landscape swath is located along the north portion of the property above a rockery retaining wall. Several trees on the slope show symptoms consistent with slope creep (soil movement down slope). Several trees have failed at the roots in the shallow soils in this area.

Proposed Plans

A site plan created by Tiscareno Associates; plotted January 31, 2022 shows a proposed site redevelopment schematic. None of the existing trees on site are shown to be retained on the proposed plan. Trees in the surrounding ROW are shown to be retained.

Trees

I have included an aerial photograph of the site with tree locations to serve as the site map (see Figure 1). The numbers on the map and in the photographs that follow correspond to the numbers provided in the attached Tree Inventory – Table of Trees. Information specific to each tree can be found in this table.

I inventoried 19 trees that meet the significant size threshold. Photographs 1 and 2 provides a ground level layout of the majority of the trees in the northeast stand. Trees are generally in fair to good health and structural condition. The trees are young and mature in age class. It is unclear if the trees are volunteer trees that established on their own or if they were planted. There are no exceptional groves on the property. Trees 5 and 17 meet the city of Seattle's criteria of an exceptional tree.

Trees 1 and 2 are small diameter maple (*Acer spp)* trees (Photos 3 and 4). Tree 2 has a swept or "J-hook" base that indicates possible slope creep. The same structure can be seen in Tree 19 in Photo 5. Tree 3 is a Douglas-fir (*Pseudotsuga menziesii*) tree that has failed at the base in the shallow soils (Photo 5). The tree's structure is considered to be poor.

Tree 5 is an exceptional Shore pine (*Pinus contorta*) tree that has a lean to the south (Photos 1, 2 and 5). The majority of the canopy is located over the parking lot. There is a slight correction at the top of the tree to vertical, indicating the tree is currently stable.

The largest tree in the stand is a 23-inch diameter Black cottonwood (*Populus trichocarpa*) tree at the top of the rockery (Photos 2 and 6). This tree is not to be considered exceptional unless part of a grove, which does not exist.

There are three Pear (*Pyrus communis*) trees located in the parking lot west of the existing structure (Photo 7). These trees are in good condition but are damaging the surrounding infrastructure. Trees 14, 15 and 16 are pear trees locate along the north property line (Photos 7 and 8).

Tree 17 is an exceptional willow (*Salix spp*) tree located on the west portion of the site (Photos 10, 11, 12). The tree is in poor structural condition, having previously failed at the roots. A saprophytic fungus is growing along the trunk. It is unclear if the chain-link fence is acting as a support to keep the tree upright. The tree is a poor candidate for retention and is proposed for removal.

Adjacent Site Trees

I inventoried ten trees in the surrounding ROW. Five Purple plum (*Prunus cerasifera*) trees are located along 10th Ave. South to the west of the site. The trees are generally in good health and structural condition. The trees are proposed to be retained.

There are five trees located along South Jackson Street within individual planting pits. Tree R6 is a flowering cherry (*Prunus serrulata*) tree in fair health and structure. The tree has been poorly pruned. The remaining trees in the ROW are in good health and structural condition. All of the trees in this ROW are proposed to be retained.

Recommendations

- Unless removal is approved by the Director, site planning around exceptional trees must follow the requirements outlined in SMC 25.11.050. [2]
- Site planning around trees in critical areas must follow the requirements outlined in SMC 25.09.070.[3]

Respectfully submitted,

Sean Dugan, Principal
Tree Solutions Inc.

[2] Seattle Municipal Code 25.11.050. General Provisions for Exceptional Trees

[3] Seattle Municipal Code 25.09.070 Standards for Trees and Vegetation in Critical Areas

Appendix A **Site Maps and Plans**

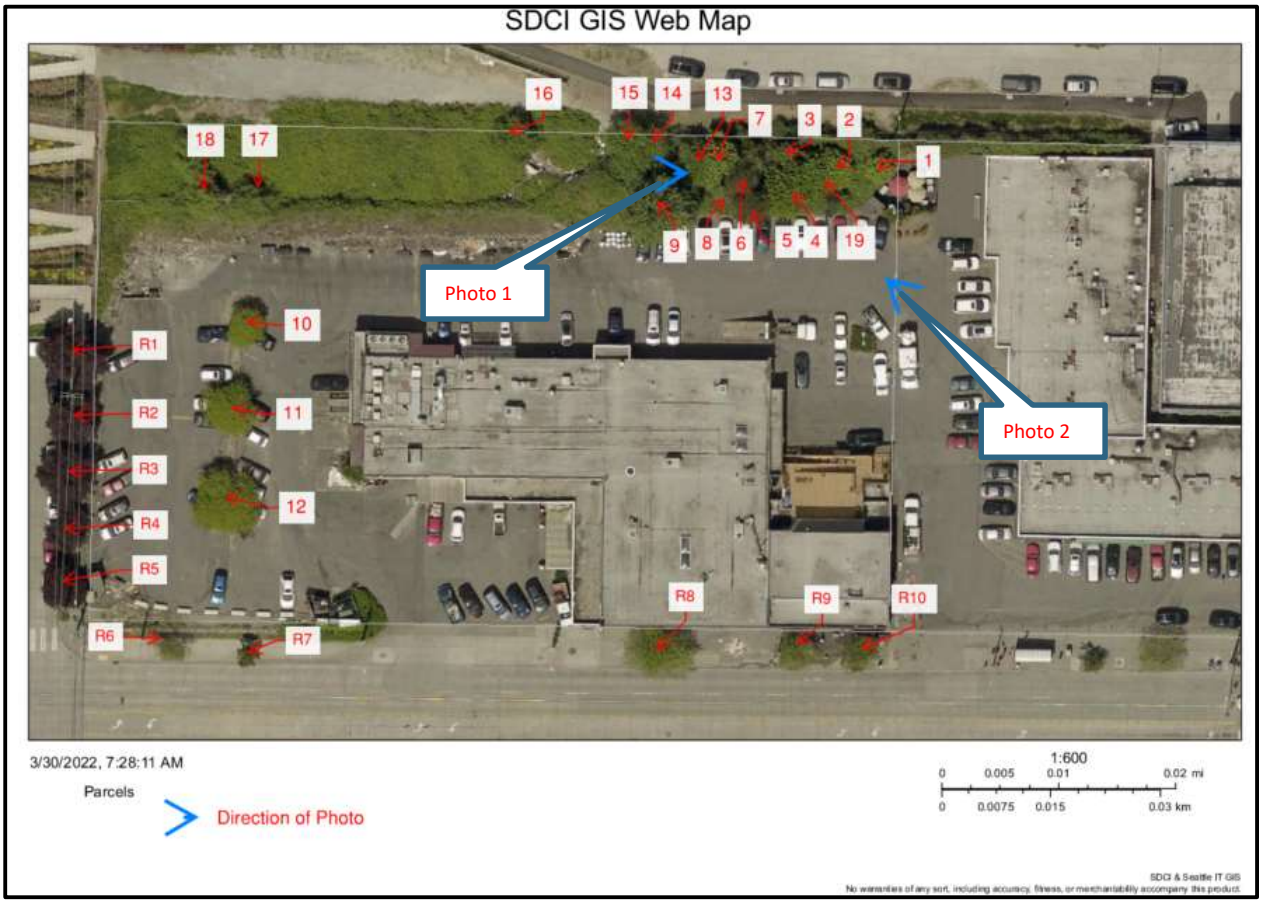


Figure 1. Aerial photograph with tree locations. (Source: Seattle GIS Web Map accessed March 30, 2022)

Figure 2. Aerial photograph with environmental critical areas. (Source: Seattle GIS Web Map accessed March 30, 2022)

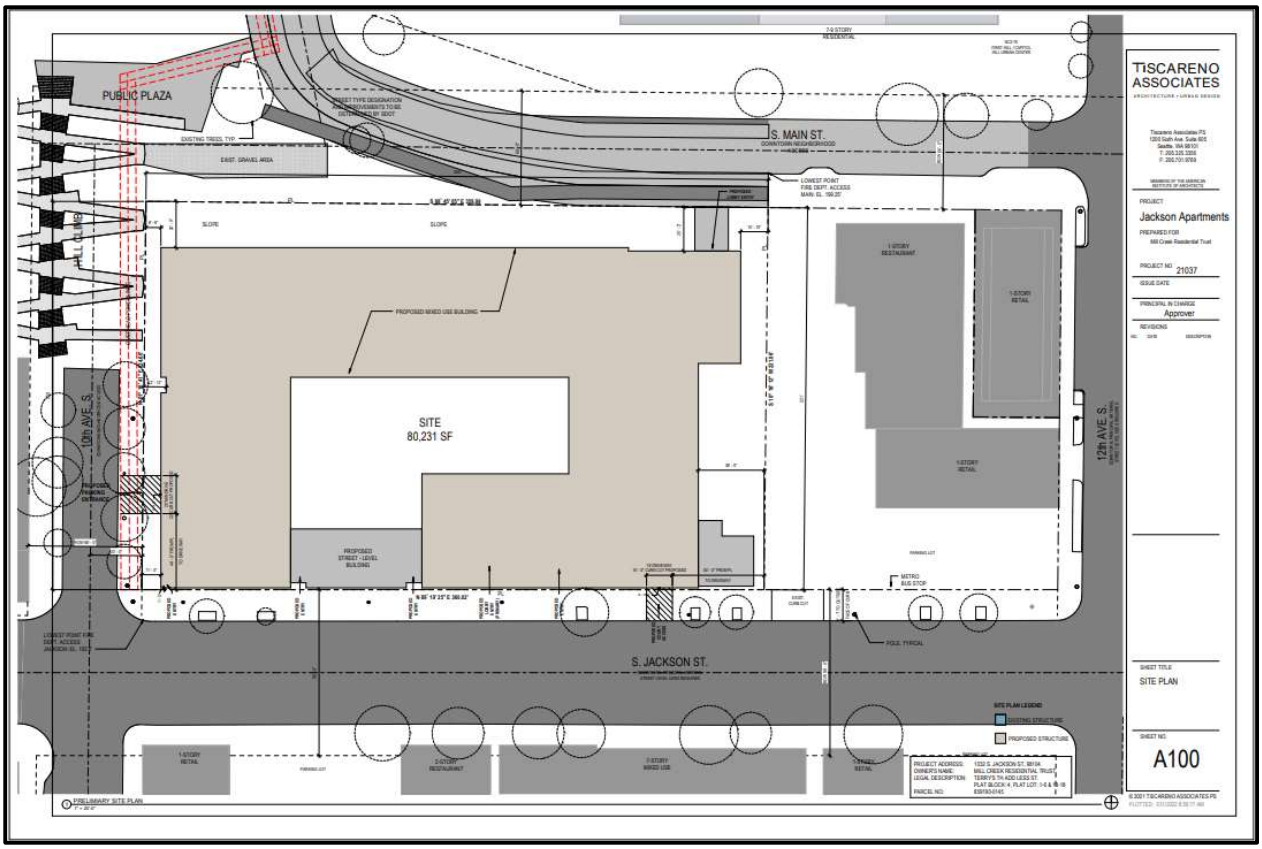
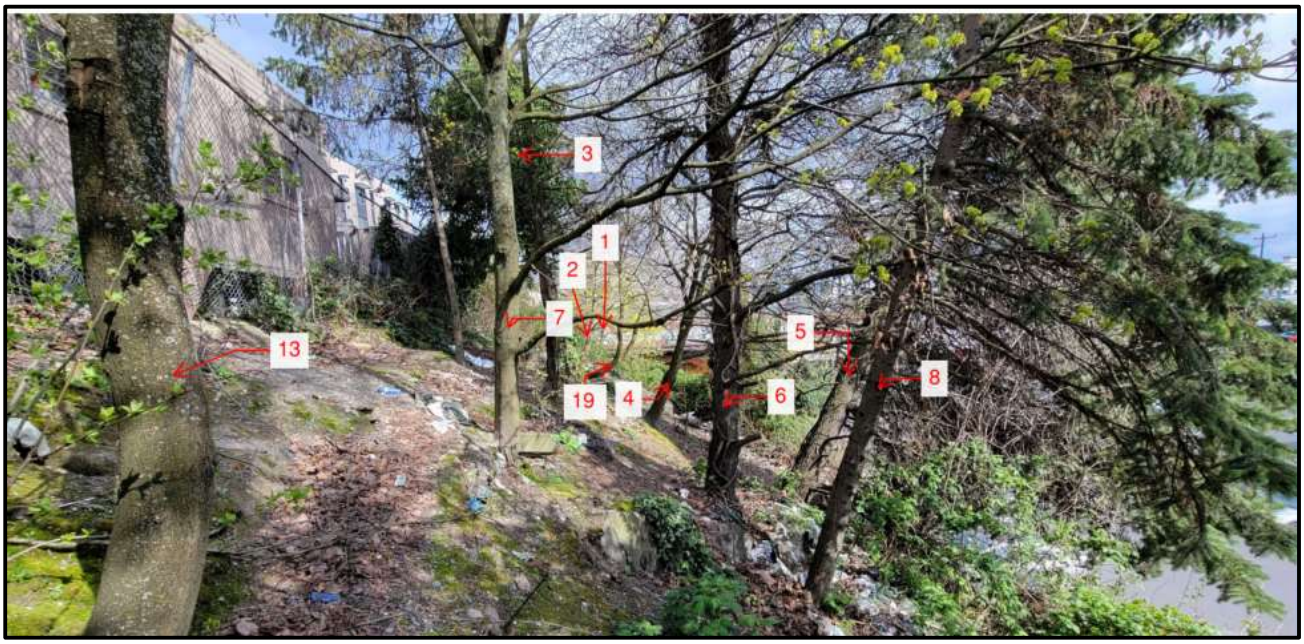


Figure 3. Proposed site development plans (Source: provided by MCRT West Coast LLC.; developed by Tiscareno Associates – Architecture and Urban Design)

Appendix B **Photographs**



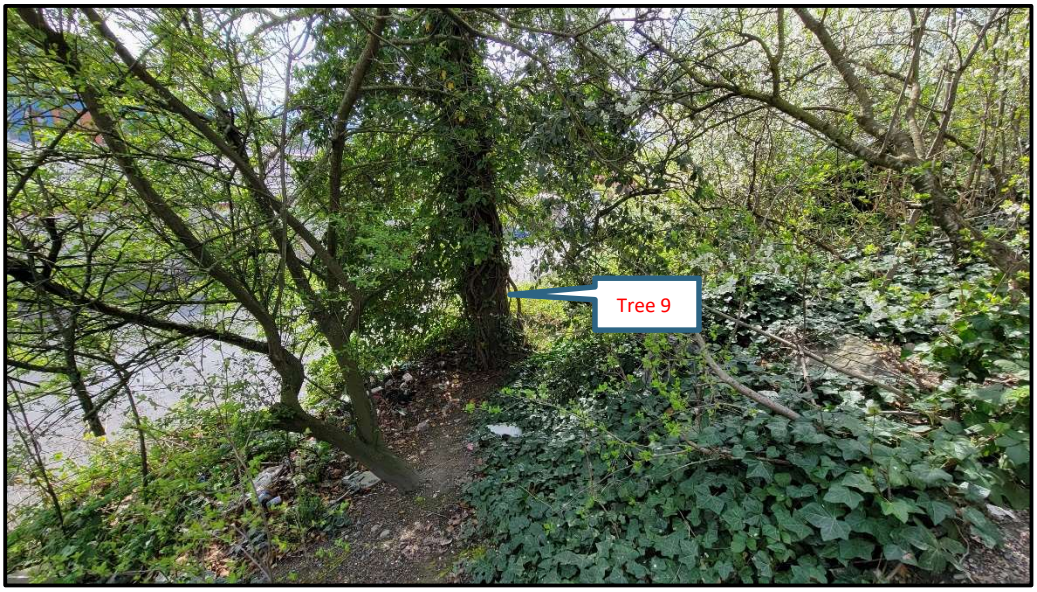
Photograph 1. View looking east on the north slope.

Photograph 2. View looking northwest from the parking lot.

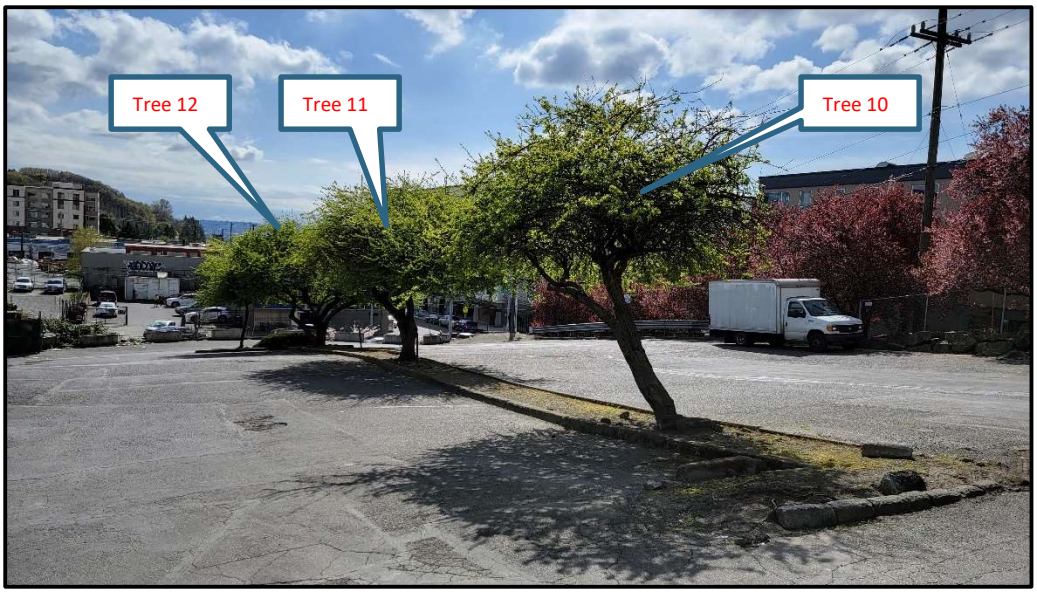
Photograph 3. View looking east at Trees 1 and 2.


Photograph 4. View looking east at Tree 2. Tree 2 has a swept base, an indicator of slope creep.

Photograph 5. View looking to the west from Tree 2.



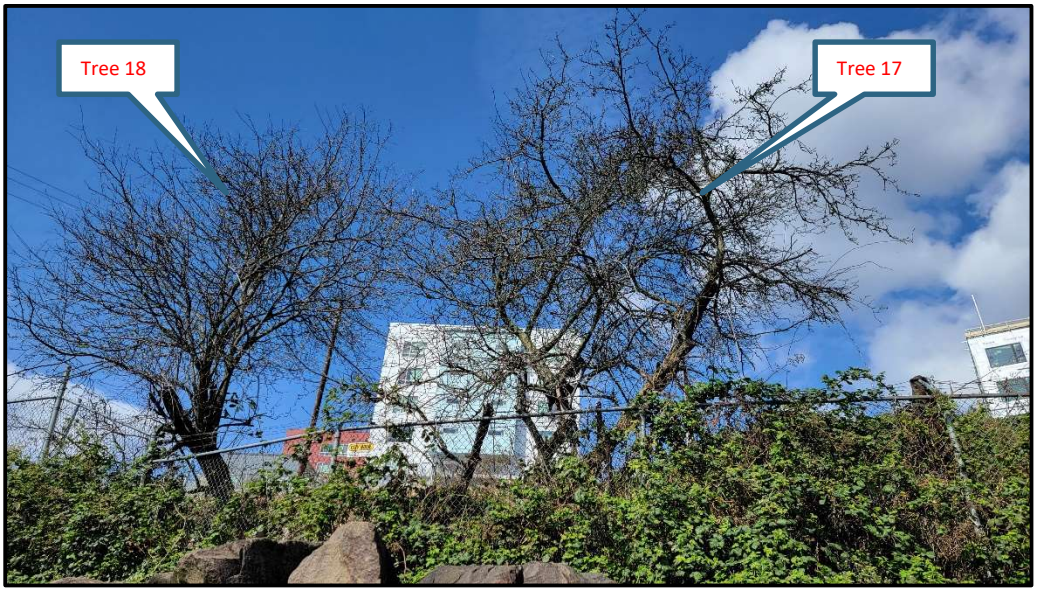
Photograph 6. View looking west at the base of Tree 9.



Photograph 7. View looking south at the parking lot Trees 10, 11, and 12.

Photograph 8. View looking east at Trees 14 and 15.

Photograph 9. View looking west at Tree 16.

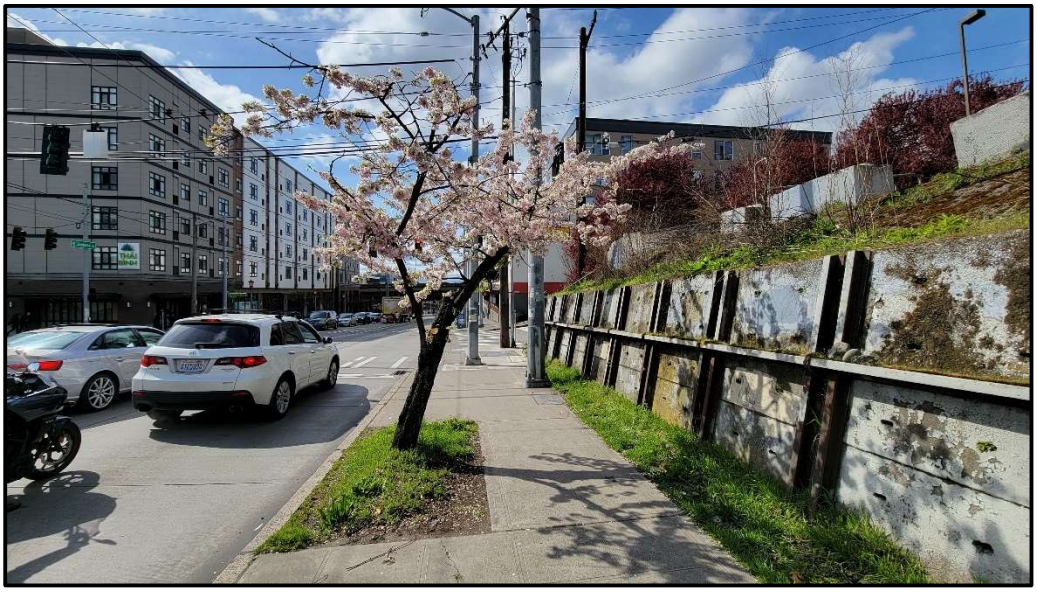


Photograph 10. View looking north at Trees 17 and 18. Tree 17 meets the exceptional species/size threshold.

Photograph 11. Base of Tree 17.

Photograph 12. Fruiting bodies on the trunk of Tree 17.

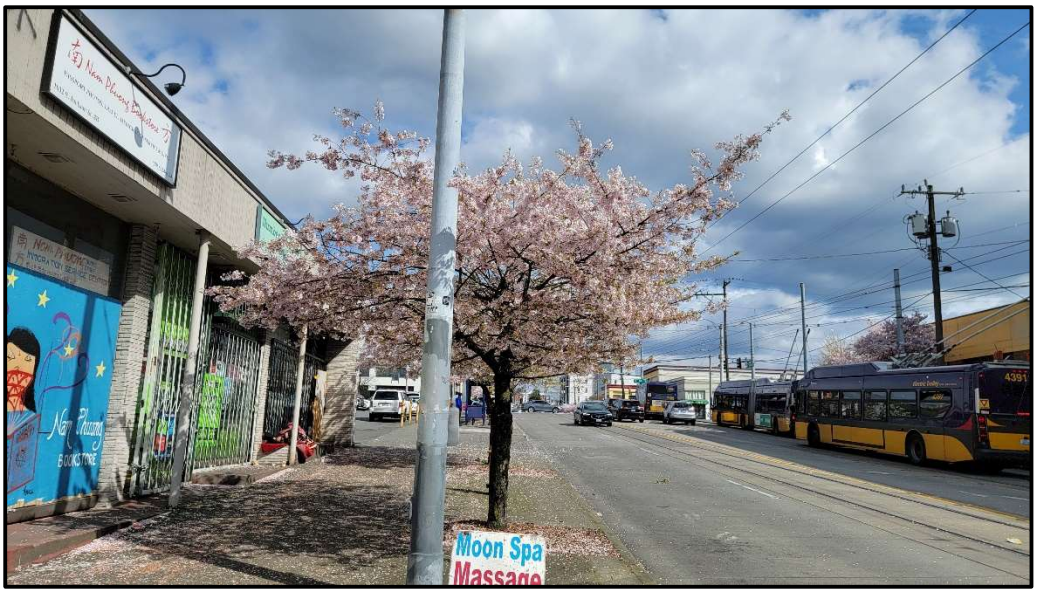
Photograph 13. View looking to the west at the trees in the right-of-way.



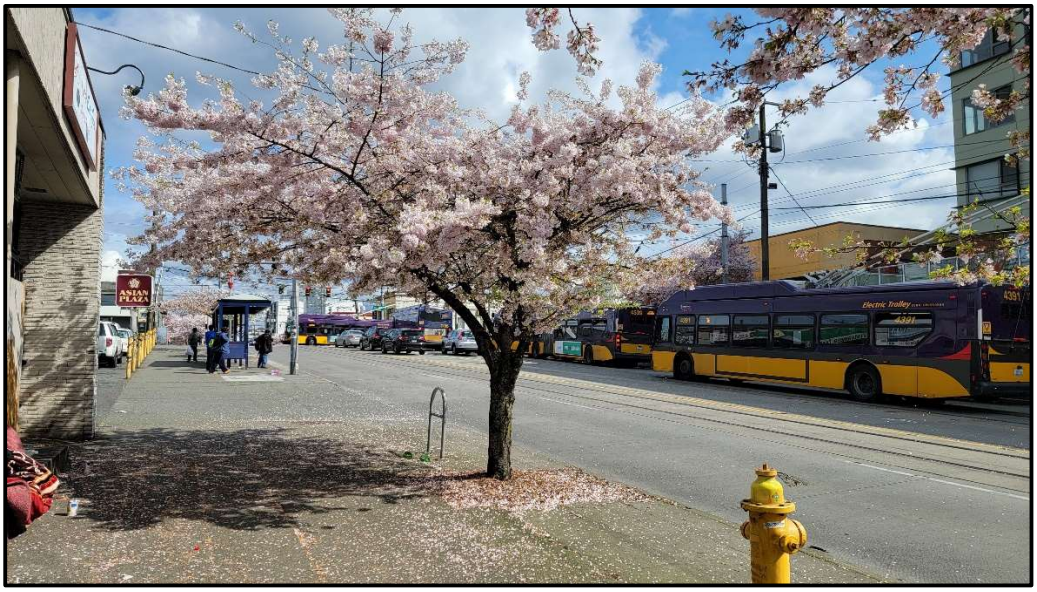
Photograph 14. View looking to the west at Tree R7.

Photograph 15. View looking east at Tree R9.


Photograph 16. View looking east at Tree R10.



Photograph 17. View looking east at Tree R11.


Photograph 18. View looking east at Tree R12.

Appendix C **Assumptions & Limiting Conditions**

1 Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.

2 The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.

3 Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.

4 All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.

5 Unless otherwise agreed, (1) information contained in any report by consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.

6 These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described and assessed.

7 Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.

8 Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.

9 Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

Appendix D **Methods**

Measuring

I measured the diameter of each tree at 54 inches above grade, diameter at standard height (DSH). If a tree had multiple stems, I measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the city of Seattle Director's Rule 16-2008 or the Guide for Plant Appraisal, 10th Edition Second Printing published by the Council of Tree and Landscape Appraisers. A tree is regulated based on this single-stem equivalent diameter value.

Tagging

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

Evaluating

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

Rating

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

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 ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist, they are controllable, or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

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

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

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.

Tree Solutions Inc
Consulting Arborists

MCRT West Coast LLC. - Table of Trees

1032 S. Jackson, Seattle, WA

Arborist: S. Dugan
Date of Inventory: 03.29.2022
Table Prepared: 03.30.2022

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.
DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the Director's Rule 16-2008.
Letters are used to identify trees on neighboring properties with overhanging canopies.
Dripline is measured from the center of the tree to the outermost extent of the canopy.

Tree ID	Code	Scientific Name	Common Name	DSH Single Stem Input	DSH Multistem	Health Condition	Structural Condition	Dripline Radius (ft)	Exceptional Threshold	Exceptional by Size	Proposed Action	Notes
1	*acpl*	*Acer platanoides*	Norway maple	6		Fair	Fair	7.0	*30.0*	-	Remove	Top lost
2	*acpl*	*Acer platanoides*	Norway maple	6.5		Good	Good	8.0	*30.0*	-	Remove	
3	*psme*	*Pseudotsuga menziesii*	Douglas-fir	7		Fair	Poor	6.0	*30.0*	-	Remove	lean to the north, roots destabilized, ivy up trunk
4	*acpl*	*Acer platanoides*	Norway maple	10.2		Fair	Fair	11.0	*30.0*	-	Remove	codominant
5	*pico*	*Pinus contorta var. contorta*	Shore pine	14.3		Good	Fair	14 south 8 avg.	*12.0*	Exceptional	Remove	lean to south, slight correction
6	*pico*	*Pinus contorta var. contorta*	Shore pine	10.5		Good	Good	9.0	*12.0*	-	Remove	
7	*acpl*	*Acer platanoides*	Norway maple	6.7		Good	Good	8.0	*30.0*	-	Remove	
8	*pipu*	*Picea pungens*	Colorado spruce	7		Good	Good	7.0	*23.1*	-	Remove	
9	*potr*	*Populus trichocarpa*	Black cottonwood	23		Good	Good	20.0	*Not Exceptional except in*	-	Remove	
10	*pyco*	*Pyrus communis*	European pear	7.8		Good	Good	8.0	*27.2*	-	Remove	maintained as small tree
11	*pyco*	*Pyrus communis*	European pear	11.4	7, 9	Good	Good	12.0	*27.2*	-	Remove	
12	*pyco*	*Pyrus communis*	European pear	15.3		Good	Good	15.0	*27.2*	-	Remove	infrastructure damage
13	*acpl*	*Acer platanoides*	Norway maple	6		Fair	Fair	8.0	*30.0*	-	Remove	
14	*pyco*	*Pyrus communis*	European pear	7		Fair	Fair	9.0	*27.2*	-	Remove	
15	*pyco*	*Pyrus communis*	European pear	7		Fair	Fair	9.0	*27.2*	-	Remove	
16	*pyco*	*Pyrus communis*	European pear	6		Fair	Fair	9.0	*27.2*	-	Remove	
17	*sa*	*Salix sp. (native)*	Native Willow	8.5	6, 6	Fair	Poor	12.0	*8.0*	Exceptional	Remove	failed at roots, fruiting bodies up east lead
18	*sa*	*Salix sp. (native)*	Native Willow	5.2	3, 3, 3	Fair	Fair	11.0	*8.0*	-	Remove	failed mai lead with upright sprouts
19	*acpl*	*Acer platanoides*	Norway maple	7.1	5, 5	Fair	Fair	9.0	*30.0*	-	Remove	
Adjacent Site Trees												
R1	*prce*	*Prunus cerasifera*	Cherry plum	10.5	5, 6, 7	Good	Good	16.0		NA	Retain	poor pruning
R2	*prce*	*Prunus cerasifera*	Cherry plum	11		Good	Good	16.0		NA	Retain	
R3	*prce*	*Prunus cerasifera*	Cherry plum	12		Good	Good	14.0		NA	Retain	
R4	*prce*	*Prunus cerasifera*	Cherry plum	9		Good	Good	12.0		NA	Retain	
R5	*prce*	*Prunus cerasifera*	Cherry plum	10		Good	Good	12.0		NA	Retain	
R6	*prse*	*Prunus serrulata*	Flowering cherry	7		Fair	Fair	7.0		NA	Retain	
R7	*tico*	*Tilia cordata*	Littleleaf linden	4		Good	Good	4.0		NA	Retain	
R8	*prse*	*Prunus serrulata*	Flowering cherry	14.3		Good	Good	15.0		NA	Retain	
R9	*prse*	*Prunus serrulata*	Flowering cherry	9.6		Good	Good	9.0		NA	Retain	
R10	*prse*	*Prunus serrulata*	Flowering cherry	9.3		Good	Good	9.0		NA	Retain	

SDCI GIS Web Map

3/30/2022, 7:28:11 AM

Parcels

Direction of Photo

1:600

0 0.005 0.01 0.02 mi

0 0.0075 0.015 0.03 km