



**LEROY SURVEYORS & ENGINEERS, INC.**

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Surveying • Engineering • Geology • Septic Design • GPS • GIS Mapping

# Exhibit 3.b

## Arborist Report



#### THE PROPOSED DEVELOPMENT AND SITE IMPROVEMENTS

The overall site currently includes 4 parcels comprising just over 21 acres. A proposed boundary line adjustment will reduce the parcels 4 into 3: parcels A, B & C.

Parcel A (3.20 acre) will be a commercial lot to include the construction of approximately 26,000 square foot religious assembly that will have a maximum congregation capacity of 350 people. The architectural footprint for this Religious Assembly is very unique to allow for the existing grove of Landmark Oregon white oak trees that sit on an existing knoll to be protected and remain on-site. This parcel will include a total of 135 parking stalls.

Parcel B (0.92 acres) is also a commercial lot to include the construction of approximately 3,000 square foot eating and drinking establishment. The maximum capacity is unknown at this time, but will include a 38 parking stalls.

Parcel C (17.17 acres) is an existing wetland, wetland buffer, stream, stream buffer and Fema Flood Zone A. This parcel will be deeded to the City of DuPont upon the recording of the boundary line adjustment.

#### TREE NUMBERING SYSTEM

Each tree onsite is marked with a 1" x 3.5" aluminum tag indicating tree number. Offsite trees are not tagged. The numbering systems in this report, and on associated project drawings are, generally: onsite trees 1-77; wetland buffer and offsite trees 101-138; street trees 8000 – 8014. (Trees 119 and 120 were initially inventoried with onsite trees, but are within the street right-of-way and are street trees.)

#### TREES OF NON-SIGNIFICANCE

Trees not shown on the sheets (and/or appear to be out of sequence) are either too small or are a non-regulated species. They are removed from the sheets and the attached inventory to reduce clutter, and they include the following tree numbers:

Trees of Non-Significance				
26	44	72	112	133
28	48	74	113	
29	55	101	114	
32	56	107	115	
43	57	110	116	

## TREE INSPECTION

I visually inspected each tree from the ground. I performed a Level 1 risk assessment.<sup>1</sup> This is the standard assessment for populations of trees near specified targets, conducted in order to identify obvious defects or specified conditions such as a pre-development inventory. This is a limited visual assessment focuses on identifying trees with imminent and/or probable likelihood of failure, and/or other visible conditions that will affect tree retention.

I recorded tree species and size (DBH). I estimated the average dripline of each tree. I rated the condition of each tree, both health and structure. A tree's structure is distinct from its health. This inspection identifies what is visible with both.

High-risk trees can appear healthy in that they can have a dense, green canopy. This may occur when there is sufficient sapwood or adventitious roots present to maintain tree health, but inadequate strength for structural support.

Conversely, trees in poor health may or may not be structurally stable. For example, tree decline due to root disease is likely to cause the tree to be structurally unstable, while decline due to drought or insect attack may not.

One way that tree health and structure are linked is that healthy trees are more capable of compensating for structural defects. A healthy tree can develop adaptive growth that adds strength to parts weakened by decay, cracks, and wounds.

This report identifies unhealthy trees based on existing health conditions and tree structure, and specifies which trees are most suitable for preservation.<sup>2</sup>

No invasive procedures were performed on any trees. The results of this inspection are based on what was visible at the time of the inspection.

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<sup>1</sup> Companion publication to the ANSI A300 Part 9: Tree Shrub and Other woody Plant Management – Standard Practices, Tree Risk Assessment. 2011. ISA.

<sup>2</sup> Companion publication to the ANSI A300 Part 5: Tree Shrub and Other woody Plant Maintenance – Standard Practices, Managing Trees During Construction. 2008. ISA.

The attached inventory summarizes my inspection results and provides the following information for each tree:

**Retain Tree?** indicates if tree is proposed for retention.

**Tree Category: Landmark, Specimen, Street or Hazard**, as defined by municipal code.

**Tree number** as shown on tag in the field (for onsite trees), and on attached exhibit.

**DBH** stem diameter in inches measured 4.5 feet from the ground.

**Tree Species** common name.

**Dripline** measured branch extension into the subject parcel as measured from an existing fence for offsite trees.

**Healthy? Well formed? Safe?** in addition to species and DBH, these criteria define a landmark tree (or conversely, define a hazard tree). Trees in poor health are identified under the 'Health' column. Many of the oak trees that are stressed, or exhibiting only *fair* health, appear healthy enough to retain, but the lack of a non-healthy indication does not imply a tree in good to excellent condition.

**Comments on Condition** visible at time of inspection, which includes:

Asymmetric canopy - the tree has an asymmetric canopy from space and light competition from adjacent trees.

Branch dieback - mature branches in canopy are dying/dead.

Bow in trunk - a trunk lean characterized by the top of the tree leaning over (common with edge trees).

Canker - disease cankers are established on trunk/branches.

Crack - separation of wood fibers and predisposed to failure.

Dead - tree is dead.

Deadwood - large and/or multiple dead branches throughout canopy.

Decay - process of wood degradation by microorganisms resulting in weak and defective structure.

Diseased - foliage and trunk/stems are diseased.

Dogleg in trunk - trunk with a bow or defective bend (90°) in trunk often half way of further up the trunk.

Double leader - the tree has multiple stem attachments, which may require maintenance or monitoring over time.

Foliar disease - foliage is diseased with manageable fungus.

Grove trees - tree should be retained only as a grove tree, not stand-alone.

Gummosis - oozing resin, indicating stress/decline.

Heart rot - fungal infection with interior of tree decayed.

Included bark - an inclusion of bark at the attachment of multiple leaders that prevents a wood-to-wood attachment.

Insect Injury - active insect injury affecting tree health.

Ivy - dense ivy prevents a thorough inspection, and other defects may be present.

Ganoderma –a wood-decaying fungi inside the tree eating the wood.

LCR - live crown ratio: the ratio of crown length to total tree height. Stand-alone trees with a LCR of 30 and lower are at increased risk of failure.

Lean - angle of the trunk from vertical.

Multiple leaders - the tree has multiple stem attachments, which may lead to tree failure and require maintenance or monitoring over time.

Poor structure - tree's structure is deformed and defective/unsightly.

Previous failure - tree trunk previously broken and defective.

Response wood - new wood produced in response to loads that indicate uneven loading from wind or end-weight.

Slender - tree lacks adequate trunk taper to stand alone (poor height/trunk diameter ratio).

Stem Canker - disease canker on trunk/branches.

Sweep in trunk - characterized by a leaning lower trunk and a more upright top.

Thinning foliage - low foliage density may indicate stress, or early infection/declining health.

Self-corrected lean - self-corrected leans and sweeps are characterized by a leaning lower trunk and a top that is more upright.

Stumpsprout- tree previously cut at grade with multiple stems and potentially weak attachments.

Suppressed - tree crowded by larger adjacent trees, with defective structure and/or low vigor. Retain tree only as a grove tree, not stand-alone.

Sweep - tree leans away from adjacent trees. Characterized by a leaning lower trunk and a top that is more upright.

Taper - change in diameter over the length of trunks, branches and roots.

Topped – the tree is previously topped and has poor structure and/or stem decay.

Tree leans - trunk has significant lean from vertical.

Trunk decay - wood decay is visible in the trunk.

Wound/decay base of trunk - open wound with visible decay in trunk.

## DEFINITIONS

DMC 25.10.190.115 S definitions.

**“Specimen tree”** means an existing *healthy tree which poses no safety hazard* due to potential collapse and is of the following species and minimum diameter measured at breast height; provided, that the measure of multi-trunk trees shall be the sum of the diameters:

- Douglas fir, western red cedar, western hemlock, or big leaf maple: 15 inches;
- Oregon white oak, Pacific yew, or madrone: 12 inches;
- Historic fruit trees: no size limit.

DMC 25.10.040.070 D definitions.

**“Drip line”** means the imaginary line around a tree aligning with the outer edge of the tree’s canopy.

DMC 25.10.120.005 L definitions.

**“Landmark tree”** means an existing *healthy, well-formed tree which poses no safety hazard due to potential collapse* and that is of the following species, trunk type, and minimum diameter measured at breast height:

	Species	
Trunk-type	Oregon white oak, Pacific yew, or Pacific madrone	Douglas-fir, Western red-cedar, Western hemlock, or Bigleaf maple
Single-trunk	24 inches	30 inches
Multi-trunk (sum of diameters)	30 inches	45 inches

[Above italics are mine.]

DMC 25.10.190.160 S definitions.

**“Street tree”** means a tree planted or retained in a public right-of-way or parking strip.

#### LANDMARK TREES

Twenty-two (22) trees meet the definition of landmark tree. The following two tables separate them by oaks (top table) and non-oak species (lower table). (Tree 119 is a landmark-size oak and stands in the street right-of-way. This tree will be retained, and is not included in the retention calculation because of its designation as a *street tree*.)

LANDMARK OAK TREES				
Location	Tree No.	DBH	Species	Proposed Action
	3	30"	Oregon oak	<b>Retain</b>
	6	25"	Oregon oak	<b>Retain</b>
	9	28"	Oregon oak	<b>Retain</b>
	16	25"	Oregon oak	Remove
	20	24"	Oregon oak	Remove
	21	30"	Oregon oak	Remove
	127	14,16,18"	Oregon oak	<b>Retain</b>
Total Oaks = 7      Retained Oaks = 4      Percent Retained = 57%				

LANDMARK NON- OAK TREES				
Location	Tree No.	DBH	Species	Proposed Action
	24	54"	Douglas-fir	Remove
	27	54"	Douglas-fir	Remove
100' WB	30	34"	Douglas-fir	Remove
	31	31"	Douglas-fir	Remove
	60	32"	Douglas-fir	Remove
	62	35"	Douglas-fir	Remove
	69	34"	Douglas-fir	<b>Retain</b>
	70	35"	Douglas-fir	<b>Retain</b>
75' WB	103	31"	Douglas-fir	<b>Retain</b>
75' WB	105	38"	Douglas-fir	<b>Retain</b>
75' WB	106	43"	Douglas-fir	<b>Retain</b>
75' WB	108	38"	Douglas-fir	<b>Retain</b>
75' WB	109	36"	Douglas-fir	<b>Retain</b>
75' WB	117	32"	Bigleaf maple	<b>Retain</b>
75' WB	118	30"	Bigleaf maple	<b>Retain</b>
Total Non-Oaks = 15      Retained Non-Oaks = 9      Percent Retained = 60%				



#### HAZARD TREES OF LANDMARK SIZE

Based on the above definitions, vis-à-vis healthy, well-formed and safe trees, the following table identifies six (6) landmark-size trees that do not exhibit these attributes, and are established here as *hazard trees*.

These trees are excluded from retention calculations. All are proposed for removal. See attachment 4 for photo illustrations of existing conditions.

Table of Six (6) Hazard Landmark-Size Trees

Tree No.	DBH	Species	Comments on Condition
2	13,20,24"	Bigleaf maple	Multiple leaders along trunk axis, previous leader failure and open wound with decay, included bark with response wood present
22	56"	Douglas-fir	Recent failure of the top of the tree, trunk decay visit at failure, 7.5" sound wood at base observed after extracting a wood core, scaffold branch failure in upper canopy at previous topping wound, dead hanging branch in upper canopy
63	32"	Douglas-fir	Resin oozing on lower portion of trunk, 6" sound wood from removed core, then discolored wood further in trunk, very thin foliage, some branch dieback, and suspect root rot infection.
66	33"	Douglas-fir	Previous rootplate failure and with an obvious sweep in the trunk, low LCR, thin branches throughout canopy
67	(11) 9-26"	Bigleaf maple	Multiple leaders at single attachment near grade (tree was likely cut to grade decades ago), bark inclusions present at most attachments, previous failure of structural branches, <i>Ganoderma</i> fungus fruiting bodies on lower trunk.
77	24"	Oregon oak	Dense ivy covering trunk, trunk leans, asymmetric structure, deadwood throughout canopy, thin branches, low LCR.

An additional eight (8) hazard trees of specimen size are indicated separately in the inventory table of attachment 5. (No photographs are provided for these trees.)

## TREE RETENTION

*Tree retention shall constitute an integral design goal in all public and private site design processes. Retention is particularly desired for trees that are especially large, well-formed, historic, grouped, close to a sensitive area, visually prominent, part of a recognizable landmark, or valuable as wildlife habitat. (DMC25.120.030 Tree retention)*

Very few of the existing trees stand alone, and most in close proximity with other trees of similar species and/or age. This is particularly evident with the largest stand of native oak trees just north of Dupont-Steilacoom Road. This group includes 21 trees, and all save two (2) are oak.

Overall, these oaks are in fair to poor condition, and for two (2) primary reasons: neglect (resulting in competition from invasive bramble and vines), and poor structure (from close proximity to each other resulting in competition for light and space).

The image right, and also on the following page, show the disarray of this grove of oak trees. Invasive bramble and vine has dominated both the understory of the forest floor, and also the upper canopy of several trees.

The invasive bramble has out competed native understory shrubs within the stand, and also competes with the oaks for available rainwater.





Several tree trunks are covered in dense ivy, some recently cut and killed, and some still living. The dense ivy competes for light and space, resulting in skinny trees (a high height/diameter ratio, or H/D) and tall trees with few or no low branches (low live crown ratio (LCR)). The result is stressed and poorly formed trees. These conditions of slenderness and low LCR affect tree health and stability as evidenced by an oak recently pulled to the ground by the dense ivy.

Removal of the ivy is insufficient to cause the trees to grow new low branches on their trunks, reversing the H/D and LCR conditions, partly because of species characteristics, and particularly because of their existing close proximity to each other.



The native Oregon oak typically thrives in a 'hands-off' environment, and rarely requires intervention by people for optimal growth (and in many cases, neglecting them, or the lack of 'over care' is the best option). In this case, neglect over the decades has resulted in the establishment of the invasive vegetation that has negatively impacted both the health and structure of these trees.

This neglect has impacted the trees' ability to meet criteria that define a landmark tree: *healthy, well-formed tree which poses no safety hazard due to potential collapse.*

## REQUIRED TREE RETENTION

The purpose of City's tree retention code is as follows (DMC 25.120.010 Purpose):

- (1) The purpose of this chapter is to:*
  - (a) Protect natural habitats, air quality, and ground water recharge,*
  - (b) Improve the appearance of the community,*
  - (c) Provide shade and wind protection,*
  - (d) Reduce stormwater discharge, and*
  - (e) Conserve water supplies.*
- (2) This chapter is intended to help achieve these purposes by:*
  - (a) Retaining trees, without reducing developmental densities from those indicated in the comprehensive plan.*

This project is fortunate to contain the stand of mature native Oregon oaks in full view from both arterial streets that abut the site. This project is aligned with the purpose of the code, and is committed to preserving to the extent possible this existing stand of oaks, and to assure their continued legacy as an asset of the community and the proposed development.

The stated purpose of the retention code is for protection and preservation of environmental benefits and amenities. They are listed below (from the above code) as are the ways in which this project achieves/preserves them.

<b>(a) Protect natural habitats</b>	Foremost is the protection of the existing stand of native Oregon oak trees. Although currently there is minimal native understory around these trees, this will be augmented during landscaping with native vegetation that supports native oak groves, as well as the planting of additional oak saplings.
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Revised parcel C is 17.17 acres of critical area and associated buffer, all of which will be protected as natural habitat.

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<b>(b) Improve the appearance of the community.</b>	The site is currently vacant and neglected for years. Invasive ivy and blackberry infest the area of the primary oak grove. Landscaping will remove the invasive plants, and the construction of the proposed improvements and landscaping will be a vast enhancement in the area's appearance, and a contribution to the vitality of the commercial district.
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In anticipation of maintaining and preserving the landmark oak grove as a legacy on this site, the project's owner has already 96

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white oak trees growing in a private nursery, all to be planted throughout this site.

These oak trees will augment the exiting grove of mature oak trees, assuring continued canopy for decades. Others will be planted throughout the project where soil and site conditions favor the growth of this species.

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**(c) Provide shade and wind protection.**

In addition to the legacy oak grove, several large and mature trees within the wetland buffer are retained, and will maintain existing shade and wind protection.

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Items (d) and (e), reduction of stormwater discharge and conservation of water supplies, along with the stated intent of the code (2) (tree retention and developmental density) will be addressed by others in a separately submitted tree retention modification request.

### **TREE RETENTION MODIFICATION**

DMC allows for a modification of the City's tree retention regulations as follows:

*Anyone with an ownership interest in land may request a modification from the provisions of this chapter based on special circumstances pertaining to that land or the trees on it. (25.120.050 Modifications)*

A formal request for tree retention modification will be submitted by others for this project.

### **ATTACHMENTS:**

1. Assumptions and Limiting Conditions
2. Certification of Performance
3. Significant Tree Inventory
4. Photographs of Hazard Landmark-Size Trees
5. Tree Retention Plan

ATTACHMENT NO. 1 - Assumptions & Limiting Conditions

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- 1) A field examination of the site was made 8/15/2022 and 6/22/2023. My observations and conclusions are as of that date.
- 2) Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/arborist can neither guarantee nor be responsible for the accuracy of information provided by others.
- 3) Unless stated other wise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied that problems or deficiencies of the subject tree may not arise in the future.
- 4) All trees possess the risk of failure. Trees can fail at any time, with or without obvious defects, and with or without applied stress. A complete evaluation of the potential for this (a) tree to fail requires excavation and examination of the base of the subject tree. Permission of the current property owner must be obtained before this work can be undertaken and the hazard evaluation completed.
- 5) Loss or alteration of any part of this report invalidates the entire report.
- 6) Unless required by law otherwise, neither all nor any part of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media without the prior expressed written or verbal consent of the consultant/appraiser, particularly as to value, conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualifications.
- 7) The consultant does not assume any liability for the subject tree and does not represent the transfer of such for any risks associated with the tree from the landowner to the consultant.  
**Risk management is solely the responsibility of the landowner.**



ATTACHMENT NO. 2 - CERTIFICATION OF PERFORMANCE

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I, Favero Greenforest, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinion, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinion, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client of any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of International Society of Arboriculture (ISA), and the ISA PNW Chapter, I am an ISA Certified Arborist (#PN-0143A) and am Tree Risk Assessment Qualified, and am a Registered Consulting Arborist® (#379) with American Society of Consulting Arborists. I have worked as an independent consulting arborist since 1989.

Signed:



GREENFOREST, Inc.

By Favero Greenforest, M. S.

**Favero**

**Greenforest**

Date: September 6, 2023



Digitally signed by Favero Greenforest  
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ATTACHMENT NO. 3 – Significant Tree Inventory Table

Retain Tree?	Location	Category	Tree No.	DBH	Species	Dripline (R')	Healthy?	Well formed?	Safe?	Comments on Condition
N	Onsite	Specimen	1	18"	Douglas-fir	17'		N	Only in grove	Thin canopy, sweep in trunk
N	Onsite	<b>Hazard</b>	2	13,20,24"	Bigleaf maple	32'		N	N	Multiple leaders attached to trunk, previous leader failure, included bark with response wood, trunk decay
Y	Onsite	Landmark	3	30"	Oregon oak	25'				
Y	Onsite	Specimen	4	18"	Oregon oak	28'		N	Only in grove	Asymmetric canopy, tree leans S
Y	Onsite	Specimen	5	23"	Oregon oak	30'		N	Only in grove	Slight asymmetry
Y	Onsite	Landmark	6	25"	Oregon oak	35'		N	Only in grove	Slight asymmetry
Y	Onsite	Specimen	7	14"	Oregon oak	20'		N	Only in grove	Bend in trunk, tree leans
Y	Onsite	Specimen	8	12"	Oregon oak	16'		N	Only in grove	Leaning trunk
Y	Onsite	Landmark	9	28"	Oregon oak	23'				Dead ivy covers trunk
Y	Onsite	Specimen	10	14"	Oregon oak	18'				
N	Onsite	<b>Hazard</b>	11	13"	Oregon oak	25'	N	N	N	Dense ivy covers trunk/canopy, 90 degree lean, slender trunk, LCR, thin foliage
Y	Onsite	Specimen	12	13"	Oregon oak	18'		N	Only in grove	Ivy
Y	Onsite	Specimen	13	18"	Oregon oak	20'		N	Only in grove	Ivy
Y	Onsite	Specimen	14	16"	Oregon oak	25'		N	Only in grove	Ivy
Y	Onsite	Specimen	15	20"	Oregon oak	23'				
N	Onsite	Landmark	16	25"	Oregon oak	25'				
Y	Onsite	Specimen	17	12"	Oregon oak	16'		N	Only in grove	
Y	Onsite	Specimen	18	20"	Oregon oak	22'		N	Only in grove	Slight asymmetry





Retain Tree?	Location	Category	Tree No.	DBH	Species	Drip line (R')	Healthy?	Well formed?	Safe?	Comments on Condition
Y	Onsite	Specimen	19	17"	Oregon oak	25'		N	Only in grove	Slight asymmetry
N	Onsite	Landmark	20	24"	Oregon oak	25'				
N	Onsite	Landmark	21	30"	Oregon oak	25'				Dense ivy covering trunk
N	Onsite	<b>Hazard</b>	22	56"	Douglas-fir	35'	N	N	N	Recent top failure, trunk decay, 7.5" sound wood at base, scaffold branch failure, dead hanging branch in upper canopy
N	Onsite	Specimen	23	17"	Bigleaf maple	25'		N		Double leader, trunk sweeps toward street
N	Onsite	Landmark	24	54"	Douglas-fir	32'				Sweep, deadwood
N	Onsite	<b>Hazard</b>	25	26,26"	Oregon ash	16'	N	N	N	Double leader, trunk decay, lean
N	Onsite	Landmark	27	54"	Douglas-fir	35'				Deadwood, hanger
N	100' WB	Landmark	30	34"	Douglas-fir	35'				
N	Onsite	Landmark	31	31"	Douglas-fir	30'				
N	Onsite	<b>Hazard</b>	33	17"	Douglas-fir	25'	N	N	N	Sweep/dogleg in trunks, previous rootplate failure, LCR, thin foliage
N	Onsite	<b>Hazard</b>	34	17"	Douglas-fir	25'	N	N	N	
N	Onsite	<b>Hazard</b>	35	17"	Douglas-fir	25'	N	N	N	
N	Onsite	Specimen	36	25"	Douglas-fir	20'		N	Only in grove	Deadwood, bow in trunk, asymmetric
N	Onsite	Specimen	37	19"	Douglas-fir	18'		N	Only in grove	Asymmetric
N	Onsite	Specimen	38	21"	Douglas-fir	18'		N	Only in grove	Asymmetric
N	Onsite	Specimen	39	18"	Douglas-fir	16'		N		Asymmetric
N	Onsite	<b>Hazard</b>	40	12"	Douglas-fir	12'	N	N	N	Suppressed canopy, thin foliage, asymmetric, slender
N	Onsite	<b>Hazard</b>	41	13"	Douglas-fir	14'	N	N	N	Suppressed canopy, thin foliage, asymmetric, slender



Retain Tree?	Location	Category	Tree No.	DBH	Species	Dripline (R')	Healthy?	Well formed?	Safe?	Comments on Condition
N	Onsite	Specimen	42	23"	Douglas-fir	30'				Deadwood
N	Onsite	Specimen	45	14,14"	Bigleaf maple	25'				Double leader
N	Onsite	Specimen	46	22"	Bigleaf maple	35'		N		Sweep, asymmetric canopy
N	Onsite	Specimen	47	20"	Douglas-fir	25'				
N	Onsite	Specimen	49	22"	Douglas-fir	20'				Dense ivy on trunk
N	Onsite	Specimen	50	19"	Douglas-fir	20'				Dense ivy on trunk
N	Onsite	Specimen	51	24"	Douglas-fir	20'				Dense ivy on trunk
N	Onsite	Specimen	52	27"	Douglas-fir	20'				Dense ivy on trunk
N	Onsite	Specimen	53	17"	Douglas-fir	20'		N		Asymmetric, thin branches
N	Onsite	Specimen	54	26"	Douglas-fir	25'				Ivy, thin branches
N	Onsite	Specimen	58	18"	Douglas-fir	18'				
N	Onsite	Specimen	59	26"	Douglas-fir	25'				
N	Onsite	Landmark	60	32"	Douglas-fir	30'		N	Only in grove	Asymmetric
N	Onsite	Specimen	61	29"	Douglas-fir	30'		N	Only in grove	Asymmetric
N	Onsite	Landmark	62	32"	Douglas-fir	30'				
N	Onsite	<b>Hazard</b>	63	35"	Douglas-fir	30'	N	N	N	Resin oozing on trunk, 6" sound wood, then discolored wood, thin foliage, some branch dieback, suspect root rot infection.
N	Onsite	Specimen	64	27"	Douglas-fir	25'				
N	Onsite	Specimen	65	25"	Douglas-fir	25'				
N	Onsite	<b>Hazard</b>	66	33"	Douglas-fir	35'	N	N	N	Previous rootplate failure, sweep, LCR, thin branches
N	Onsite	<b>Hazard</b>	67	(11) 9-26"	Bigleaf maple	45'	N	N	N	Multiple leaders, bark inclusions,



Retain Tree?	Location	Category	Tree No.	DBH	Species	Dripline (R')	Healthy?	Well formed?	Safe?	Comments on Condition
										previous failure, Ganoderma fruiting bodies
Y	Onsite	Specimen	68	29"	Douglas-fir	20'		N		Asymmetric
Y	Onsite	Landmark	69	34"	Douglas-fir	25'		N		Asymmetric
Y	Onsite	Landmark	70	35"	Douglas-fir	30'				
Y	75' WB	Specimen	71	22"	Douglas-fir	20'				
N	Onsite	Specimen	73	22"	Douglas-fir	18'				
Y	Offsite	Street Tree	75	13"	Douglas-fir	16'				
Y	Offsite	Street Tree	76	17"	Douglas-fir	18'				
N	Onsite	<b>Hazard</b>	77	24"	Oregon oak	45'	N	N	N	Dense ivy, lean, asymmetric, deadwood, thin branches, low LCR
Y	100' WB	Specimen	102	28"	Douglas-fir	25'		N		Asymmetric
Y	75' WB	Landmark	103	31"	Douglas-fir	25'				
Y	75' WB	Specimen	104	28"	Douglas-fir	25'		N		Asymmetric
Y	75' WB	Landmark	105	38"	Douglas-fir	40'				
Y	75' WB	Landmark	106	43"	Douglas-fir	35'		N		Dogleg in trunk
Y	75' WB	Landmark	108	38"	Douglas-fir	30'		N		Dogleg
Y	75' WB	Landmark	109	36"	Douglas-fir	35'		N		Dogleg, multiple leaders
Y	75' WB	Specimen	111	26"	Douglas-fir	20'		N		Asymmetric
Y	75' WB	Landmark	117	32"	Bigleaf maple	45'		N		Asymmetric
Y	75' WB	Landmark	118	30"	Bigleaf maple	35'		N		Asymmetric
Y	Offsite	Street Tree	119	32"	Oregon oak	22'				Sidewalk obstruction for rootcrown
Y	Offsite	Street Tree	120	23"	Oregon oak	11'				Sidewalk obstruction for rootcrown
N	Onsite	Specimen	121	28"	Douglas-fir	22'				



Retain Tree?	Location	Category	Tree No.	DBH	Species	Dripline (R')	Healthy?	Well formed?	Safe?	Comments on Condition
N	Onsite	Specimen	122	15"	Douglas-fir	15'				Trunk wound
N	Onsite	Specimen	123	20"	Douglas-fir	16'		N		Asymmetric
N	Onsite	Specimen	124	16"	Douglas-fir	20'		N		Asymmetric
N	Onsite	Specimen	125	23"	Douglas-fir	20'		N		Asymmetric
N	Onsite	Specimen	126	18"	Oregon oak	26'				
Y	Onsite	Landmark	127	14,16,18"	Oregon oak	17'				Multiple leaders
N	Onsite	Specimen	128	18"	Oregon oak	20'				Trunk wound
Y	Onsite	Specimen	129	13"	Oregon oak	16'		N		Double leaders
Y	Offsite	Offsite	130	18"	Oregon oak	25'				
Y	Offsite	Offsite	131	32"	Oregon oak	34'				
N	Onsite	Specimen	132	19"	Oregon oak	30'				
Y	Offsite	Offsite	134	20"	Oregon oak	28'				
Y	100' WB	Specimen	135	21"	Oregon oak	30'		N		Lean
Y	Offsite	Offsite	136	(5) 20-36"	Bigleaf maple	55'		N		Multiple leaders
Y	Offsite	Offsite	137	17"	Oregon oak	20'		N		Lean, asymmetric
Y	Offsite	Offsite	138	24"	Oregon oak	25'				
Y	Offsite	Street Tree	8000	17	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection
Y	Offsite	Street Tree	8001	15	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection
Y	Offsite	Street Tree	8002	17	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection
Y	Offsite	Street Tree	8003	17	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection

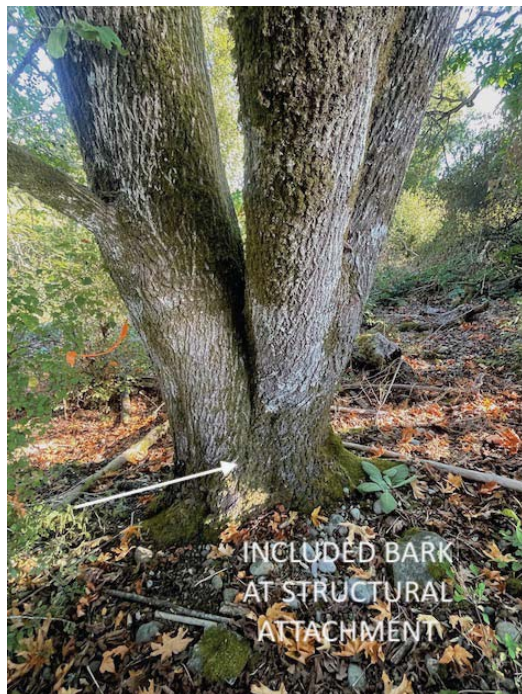


Retain Tree?	Location	Category	Tree No.	DBH	Species	Dripline (R')	Healthy?	Well formed?	Safe?	Comments on Condition
Y	Offsite	Street Tree	8004	12	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection
Y	Offsite	Street Tree	8005	13	Autumnalis flowering cherry	16'	N			Branch dieback from brown fungus infection
Y	Offsite	Street Tree	8006	18	Kwanzan flowering cherry	20		N		Asymmetric, grows over street
Y	Offsite	Street Tree	8007	13	Kwanzan flowering cherry	14		N		Asymmetric, suppressed canopy
Y	Offsite	Street Tree	8008	15	Kwanzan flowering cherry	14		N		Asymmetric, suppressed canopy
Y	Offsite	Street Tree	8009	19	Kwanzan flowering cherry	14		N		Asymmetric, suppressed canopy
N	Offsite	Street Tree	8010	22	Kwanzan flowering cherry	16		N		Asymmetric, grows over street
Y	Offsite	Street Tree	8011	24	Kwanzan flowering cherry	20		N		Asymmetric, grows over street
N	Offsite	Street Tree	8012	15	Kwanzan flowering cherry	10	N	N	N	Dead
Y	Offsite	Street Tree	8013	20	Kwanzan flowering cherry	18		N		Asymmetric, grows over street
Y	Offsite	Street Tree	8014	18	Oregon ash	22				Multiple trunk injuries (from vehicles)



ATTACHMENT NO. 4 – Photographs of Landmark-Size Hazard Trees

Tree No.	DBH	Species	Comments on Condition
2	13,20,24"	Bigleaf maple	Multiple leaders along trunk axis, previous leader failure and open wound with decay, included bark with response wood present



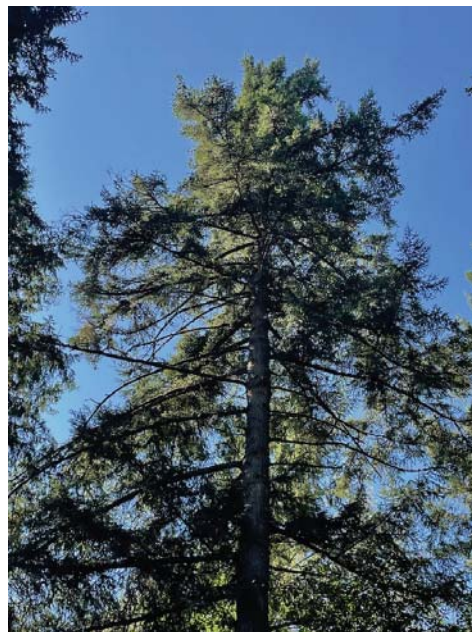
Tree No.	DBH	Species	Comments on Condition
22	56"	Douglas-fir	Recent failure of the top of the tree, trunk decay visit at failure, 7.5" sound wood at base observed after extracting a wood core (75% of radius is decayed wood), scaffold branch failure in upper canopy at previous topping wound, dead hanging branch in upper canopy





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Tree No.	DBH	Species	Comments on Condition
63	32"	Douglas-fir	Resin oozing on lower portion of trunk, 6" sound wood from removed core (66% of radius is decayed wood), then discolored wood further in trunk, very thin foliage, some branch dieback, and suspect root rot infection.

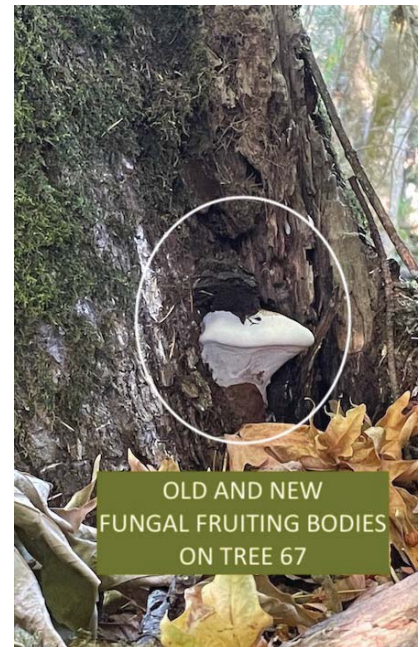
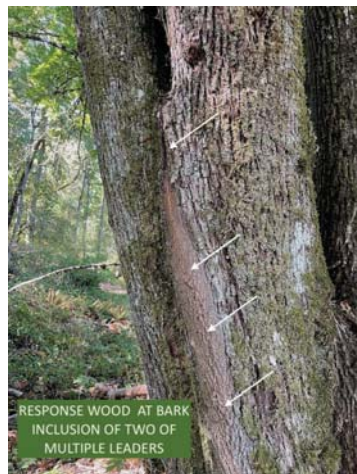




Tree No.	DBH	Species	Comments on Condition
66	33"	Douglas-fir	Previous rootplate failure and with an obvious sweep in the trunk, low LCR, thin branches throughout canopy



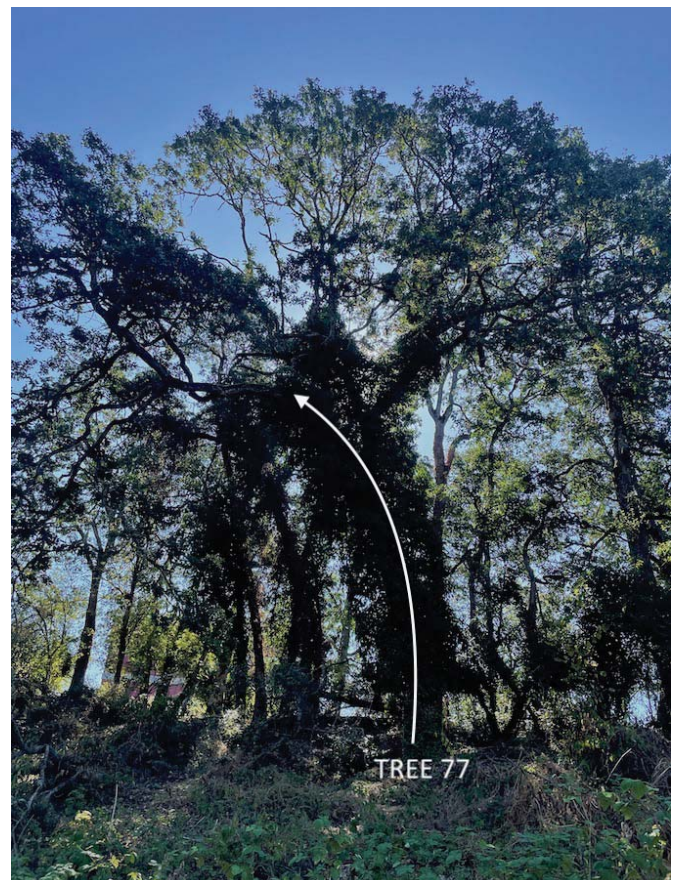
Tree No.	DBH	Species	Comments on Condition
67	(11) 9-26"	Bigleaf maple	Multiple leaders at single attachment near grade (tree was likely cut to grade decades ago), bark inclusions present at most attachments, previous failure of structural branches, <i>Ganoderma</i> fungus fruiting bodies on lower trunk.





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Tree No.	DBH	Species	Comments on Condition
77	24"	Oregon oak	Dense ivy covering trunk, trunk leans and with bow, asymmetric structure, deadwood throughout canopy, thin branches, low LCR.





GRAPHIC SCALE

1 INCH = 40 FEET

# CHAMPIONS CENTRE TREE RETENTION PLAN

A PORTION OF THE SE ¼ OF THE SW ¼ OF SECTION 25 AND NE ¼ OF  
SECTION 26, TOWNSHIP 19 N, RANGE 4x E, W.M.  
CITY OF DUPONT, PIERCE COUNTY, WASHINGTON

**PARCEL NUMBERS:**  
0119362039, 0119362009, 0119362012 & 0119362043

**PARCEL AREA:**  
927,027 S.F. (21.28 AC)

**SURVEY DISCLAIMER:**  
THIS IS NOT A BOUNDARY SURVEY

[illegible]

**LEGEND**

1 DECIDUOUS TREES TO REMAIN

3 LANDMARK DECIDUOUS TREES TO REMAIN

6 CONIFER TREES TO REMAIN

7 LANDMARK CONIFER TREES TO REMAIN

13 OREGON WHITE OAK TO REMAIN

4 LANDMARK OREGON WHITE OAK TO REMAIN

4 DECIDUOUS TREES TO BE REMOVED

5 LANDMARK DECIDUOUS TREES TO BE REMOVED

22 CONIFER TREES TO BE REMOVED

5 LANDMARK CONIFER TREES TO BE REMOVED

3 OREGON WHITE OAK TO BE REMOVED

3 LANDMARK OREGON WHITE OAK TO BE REMOVED

10 HAZARD TREES TO BE REMOVED

11 KIRAZAN FLOWERING CHERRY TO REMAIN

1 KIRAZAN FLOWERING CHERRY TO BE REMOVED

### TREE CALCULATIONS

50% OF ALL NON-OAK LANDMARK TREES MUST BE RETAINED  
 15 X 50% = 8 NON-OREGON WHITE OAK LANDMARK MUST BE RETAINED  
 10 NON-OREGON WHITE OAK LANDMARK REMAIN

REMOVAL OF LANDMARK OREGON WHITE OAK TREES PROHIBITED  
 7 LANDMARK OREGON WHITE OAK TREES MUST BE RETAINED

REMOVAL OF LANDMARK OREGON WHITE OAK TREES PROHIBITED  
7 LANDMARK OREGON WHITE OAK TREES MUST BE RETAINED  
4 LANDMARK OREGON WHITE OAK TREES REMAIN  
PLEASE SEE TYPE II TREE MODIFICATION REPORT

### OFF-SITE TREES

1 OREGON WHITE OAK LANDMARK TO REMAIN  
9 NON-OREGON WHITE OAK LANDMARK TO REMAIN  
1 OREGON ASH TO REMAIN  
12 KWANZAN FLOWERING CHERRY TO REMAIN  
1 NON-LANDMARK CONIFER TO REMAIN

TOTAL 26 (24 WILL REMAIN)

BEFORE ANY CONSTRUCTION CONTACT:  
CALL BEFORE YOU DIG @ 1-800-424-5555

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 P.O. Box 740, Puyallup, Washington 98371  
 (253) 848-6808 Fax: (253) 840-4140

Free Retention Plan

**Champions Centre  
Tree Retention Plan**  
David Rich, Mustard Seed Legacy Dev. LLC  
XX Barksdale Ave.  
DuPont, WA 98237  
Phone: 253-614-8887

DRAWING  
T1  
SHEET 01  
OF 01