# -APPENDIX E----**Arborist Reports**



June 2023

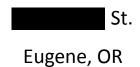
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





# **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
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Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

## Overview

This report covers the mitigation recommendations for the trees at Baxter Street hereto referenced as DU-09. There are three total individual trees under the purview of this report, in addition to several smaller trees and shrubs not covered under the tree assessment forms. Figure 1 details the locations of the trees within DU-09. As detailed in Figure 2, soil removal on the entirety of DU-09 will be at an 18-inch depth.



Figure 1

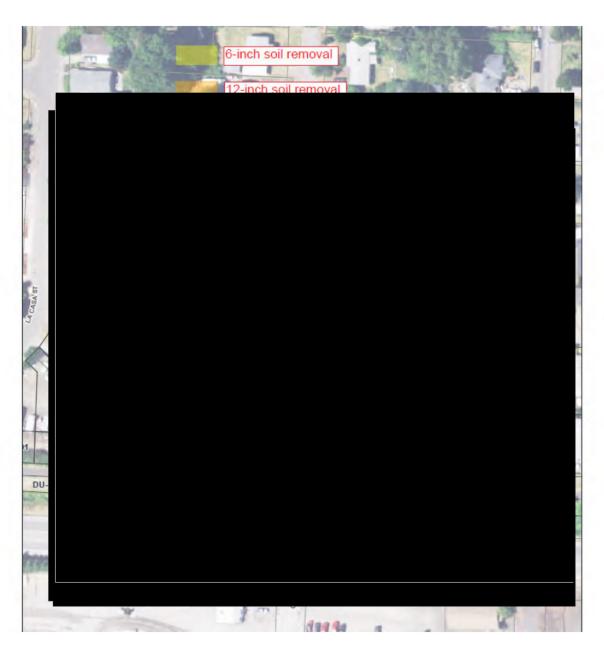


Figure 2

# DU-09-01

Located on the southern portion of the property in the front yard (Figure 1, 01), tree 01 is a *Prunus* species with a diameter of 3', height of 7', and a crown spread of 8'. Due to the size and location of this tree and the depth of the soil removal, removal of the tree is recommended. This specimen can be transplanted if the tree is to be maintained. In the event of a transplant,

as much of the root mass as possible should be maintained with the excess soil to be washed off onsite.

### DU-09-02

Located in the northern portion of the property in the backyard (Figure 1, 02), Tree 02 is a *Puesdotsuga menziesii* with a diameter of 16", a height of 50', and a crown spread of 20'. It has several defects: there is a wound at the base of the tree to the north (Figure 3), it has been previously topped, it is being suppressed by the larger *Sequoia* to the west, and it has an unbalanced canopy to the east (Figures 4 and 5). Due to the species, the size, and the required soil removal depth, this tree would experience significant root loss and structural instability. It is recommended this tree be removed, and the removal would best be done before the soil removal, to minimize the chances of an instability failure.

### DU-09-03

Located in the northern portion of the property in the backyard (Figure 1, 03), Tree 03 is a *Sequoia sempervirens* with a diameter of 51", a height of 75', and a crown spread of 40'. It has been previously topped, and out of this topping cut several codominant stems have emerged (Figure 6 and 7). This species is known to fail at codominant stems and is a shallow rooted species. Due to the species, the size, and the required soil removal depth, this tree would experience significant root loss and structural instability. This tree removal would best be done before the soil removal, to minimize the chances that the instability would cause a failure.

# Juglans nigra

There are several *Juglans nigras* that have sprouted across the property. These are poorly placed and were potentially planted through natural means i.e. squirrels or birds. There is a cluster to the western side (Figure 8 and 9) of the house and another has sprouted next to the power pole in the northeastern corner of the property (Figure 10). These trees should be removed prior to the soil removal and would pose a liability if they were maintained in the landscape.

# Corylus avellana

Located along the northern fence line originating on the property to the north a Corylus avellana that would be impacted by the soil removal activity (Figure 11 and 12). To minimize the impacts to the root system, the soil should be vactor excavated, hand dug, or other minimal impact excavation technique at a diameter of 5 feet from the center of the

multi-stem section invading DU-09. It is recommended that an arborist is onsite while the soil removal is conducted in this critical root zone to monitor potential root damage.



Figure 3



Figure 4

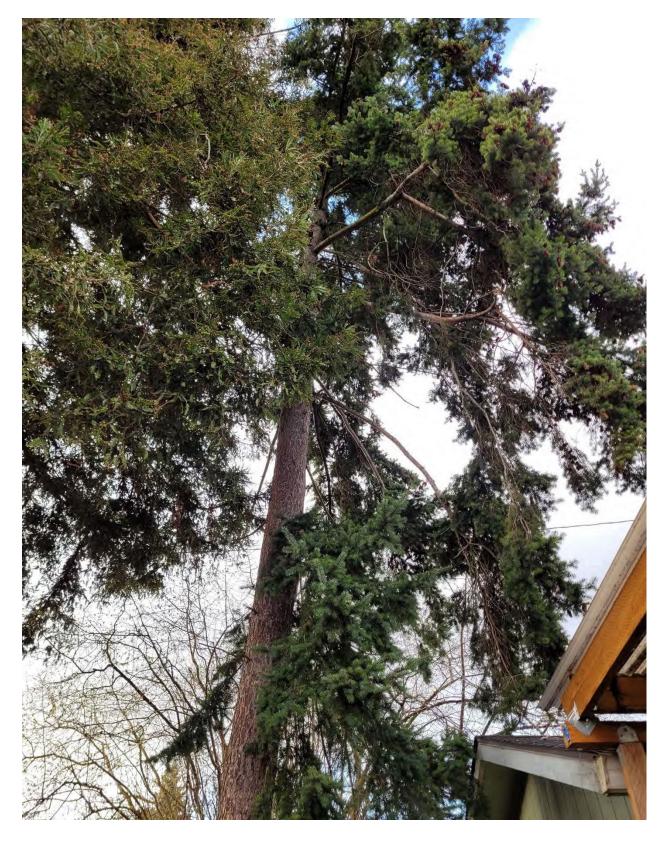


Figure 5

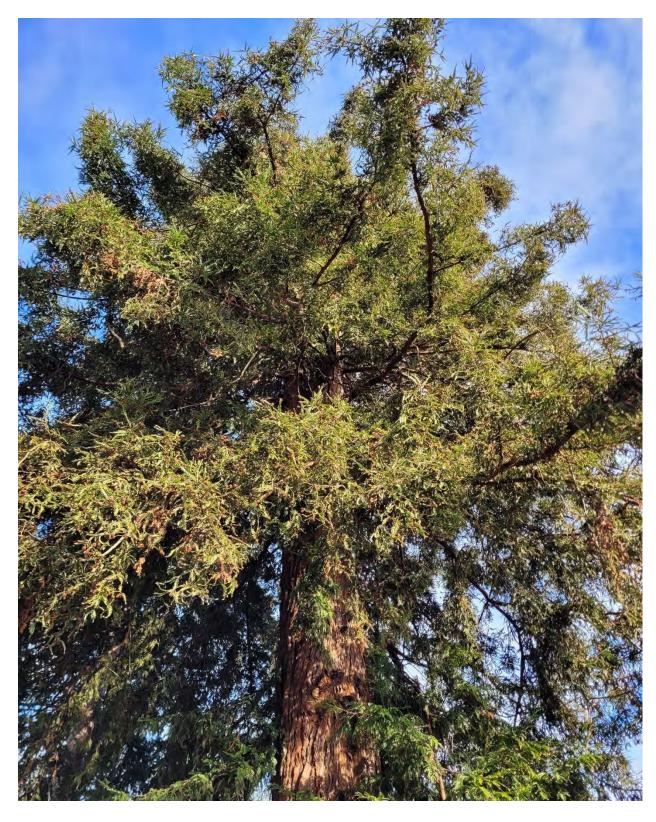


Figure 6



Figure 7

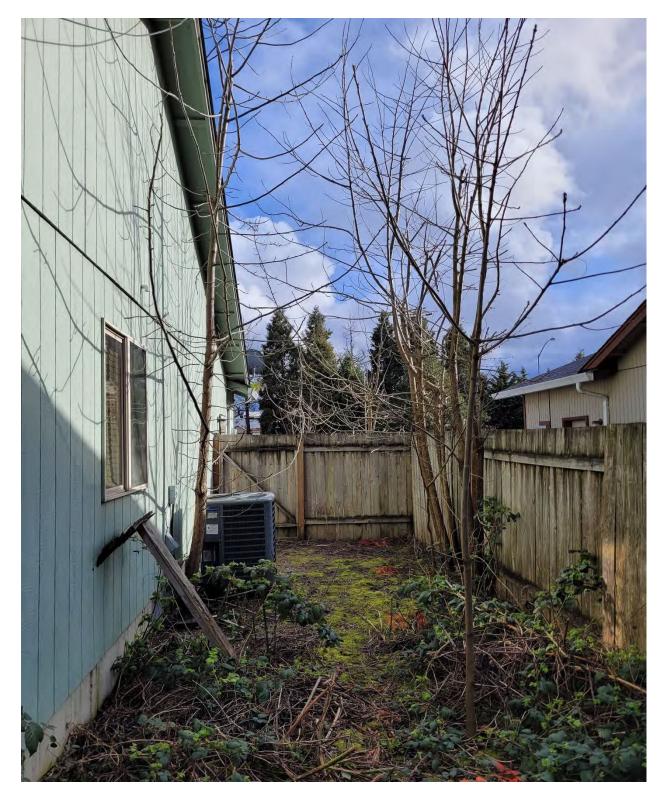


Figure 8

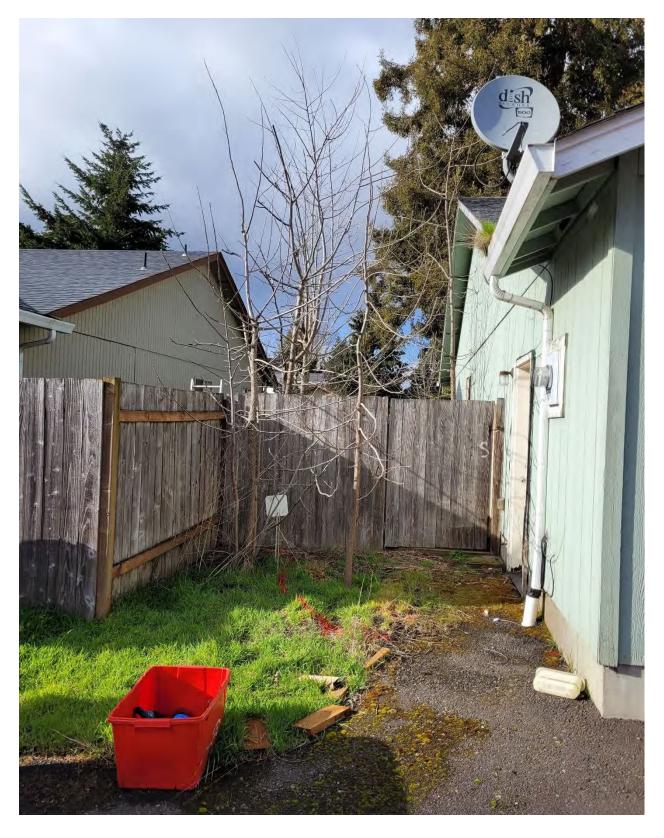


Figure 9

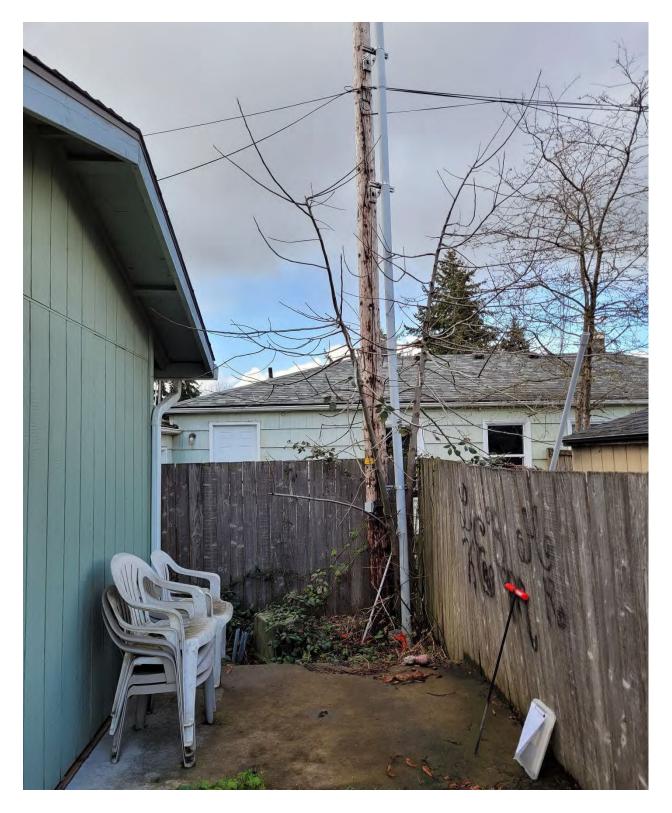


Figure 10



Figure 11



Figure 12



# ISA Basic Tree Risk Assessment Form

Client GSI				Date 4/	4/23			Tir	Time 1700								
	ree location <u>DU-0</u>						_ Tree i	no. DL	. <u>DU-09-1</u> Sheet <u>1</u> of <u>1</u>								
								Crown spread dia. 8'									
Assessor(s)	Cory Shields			Time frame	3		Tools u	sed Pr	robe								
				nent													
Target number			Target description						Target tab		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?				
1		Park	ed cars in driveway	to south				✓	1	1	3	Υ	Υ				
2																	
3																	
4																	
				Site Factors	,						•						
Site change Soil condition	ons Limited volum	ne 🗆 Saturated 🛭	learing ☐ Changed s☐ Shallow ☐ Comp weather Strong win Tree H	soil hydrology ☐ oacted ☐ Paven	Root cut nent over i now ■ He	s□ De roots□ avy rair	scribe	% Des	cribe								
Pests			age None (seasonal  Roots □ Describe	Abiotic			95	% C	Chloro	tic	% Ne	crotic <u></u>	5%				
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			☐ Interior branche														
	tecent or planned change in load factors  Tree Defects and Conditions Affecting the Likelihood of Failure																
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# ISA Basic Tree Risk Assessment Form

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Address	s/Tree location DU-09				Tree no	o. DU	-09-2		_ Sheet 1_	of	1
	ecies Psuedotsuga mensiezii	_ dbh_ <del>16"</del>		Height	50'		Crov	vn spi	read dia. 20	)'	
Assesso	r(s) Cory Shields	_ Time fram	e 3 Years		Tools us	ed Pr	obe, m	allet, b	inoculars		
	Ta	arget Assess	sment								
Target	Target description				:		Target tab within 1 x Ht. oz		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	House to south						<b>√</b>	✓	4	N	N
2	Shed to east					<b>√</b>	✓	<b>✓</b>	4	N	N
3	Overhead communication line	es to north				✓	✓	✓	4	N	N
4											
		Site Factor	rs								
Site cha Soil con Prevaili		il hydrology cted □ Pave Is ■ Ice ■ S alth and Sp	☐ Root cu ment over Snow ☐ He ecies Prof	ts□ De roots□ eavy rair <b>ile</b>	escribe % n <b>■</b> Desc	Describe_	cribe _ Snow	/ice o	on 2 year int	erval	
Pests R	ow □ Normal ■ High □ Foliage None (seasonal) ■ edwood to west is nearby and suppressing this tree failure profile Branches ■ Trunk □ Roots ■ Describe ○	Abioti	ic Nails in	trunk				ic	% Ned	crotic _	10%
		Load Facto									
Wind ex	posure Protected ■ Partial □ Full □ Wind funneling □	Redwood to	o west		Relative	crow	n size	Sma	II■ Mediu	m 🗆 L	arge 🗆
	lensity Sparse ■ Normal □ Dense □ Interior branches	Few■ No	rmal 🗆 De	nse 🗆	Vines/Mis	stleto	e/Mo	ss 🗆			
Recent o	or planned change in load factors										
	Tree Defects and Condit	tions Affect	ing the Lik	celihood	l of Failur	re					
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Co Sa Lig Ca Le Re M	Trunk —  Pead/Missing bark ■ Abnormal bark texture/color I  Podominant stems □ Included bark □ Cracks I  Powood damage/decay □ Cankers/Galls/Burls □ Sap ooze I  Pophtning damage □ Heartwood decay □ Conks/Mushrooms I  Povity/Nest hole % circ. Depth Poor taper I  Pean 10 ° Corrected? Yes  Pesponse growth Yes, around wounds  Pean ain concern(s) wound at base to north  Pead on defect N/A □ Minor □ Moderate ■ Significant		Dead  Ooze  Cracks  Root plat Response Main cor	ried/Not	Decay  Cavity  Cavity  Camaged r	roots Soi	pth_ <b>3</b> " ( _% cir □ Dis	Conks/cc. stance	Stem gii Mushrooms from trunk		-
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Overall tree risk rating Low ☐ Moderate ■ High ☐ Extreme ☐																		_			tesic	iual	risk	_	
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# ISA Basic Tree Risk Assessment Form

Client GSI			Date 4/	4/23		Ti	me 1755								
Address/Tree I							_ Tree no.	J-09-3 Sheet <u>1</u> of <u>1</u>							
	equoia sempervirens			dbh_ <u>5</u> ′	"	_ Height	75'	Cr	own sp	read dia. <u>4</u>	0'				
Assessor(s) Cor	y Shields			Time t	rame 3		Tools use	Probe	mallet, l	oinoculars					
				Target As	sessment										
Target number			Target descripti	ion			Target within	Target Larget		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?			
1			House to sou	ıth				7 7	1	4	N	N			
2			House to south	west			,	7 7	1	4	N	N			
3		Overhead	d communication	n lines to no	orth			7 7	7	4	N	N			
4									+						
				Site Fa	ictors				_		_	_			
Soil conditions Prevailing wind	one ■ Grade chang Limited volume □ direction west	Saturated ☐ Common w	Shallow ☐ Corveather Strong vortice	mpacted □ winds ■ Ice Health and	Pavement over ■ Snow ■ H I Species Prof	roots□ eavy rair <b>ile</b>	%   n ■ Descr	Describ ibe <u>Sn</u>	e ow/ice	on 2 year in	terval				
Pests	Normal ■ High Dorofile Branches ■			A	biotic			Chlo	otic	% Ne	crotic <u>:</u>	5%			
- P	- Congo Brancines —				actors										
Crown density	Protected ☐ Part Sparse ☐ Normal I ed change in load f	□ Dense ■ factors	Interior brand	ches Few□	Normal ■ De	nse 🗆	Vines/Mist	letoe/l							
	Tree Defects and Conditions Affecting the Likelihood of Failure														
Dead twig Broken/Ha Over-exte <b>Pruning h</b> Crown cle Reduced Flush cuts	eaned Thin	% overall	% Max. dia. 2" Max. dia. Raised Lion-tailed	Crack Codo Weak Previo Dead, Conke	attachments Cous branch failu /Missing bark C	I topping I Ires □ _ Cank	ers/Galls/Bu	urls 🗆	Cavity Simila Sapw	Included /Nest hole or branches placed ood damage/	d bark ( % cir resent ( decay (	rc.			
Load on d Likelihoo	defect N/A D		Minor □ Mod Possible ■ Prob									- -			
Codomina Sapwood Lightning Cavity/Ne Lean Response Main cond	mt stems □ damage/decay □ (damage □ Heartwoodst hole % circles of corrected? growth efect N/A □ M I of failure	Included b Cankers/Gall ood decay ☐ c. Depth	ls/Burls □ Sap o Conks/Mushroo □ Poor ta	ocks   oze   oms   per	Dead COOZE COOZE Cracks COOZE Root plate Response Main cor	rried/Not  Cut/E  te lifting l  e growth cern(s) -	N/A	Depth % nots D Soil we	Conks circ. Distance akness	Stem gi /Mushrooms e from trunk					

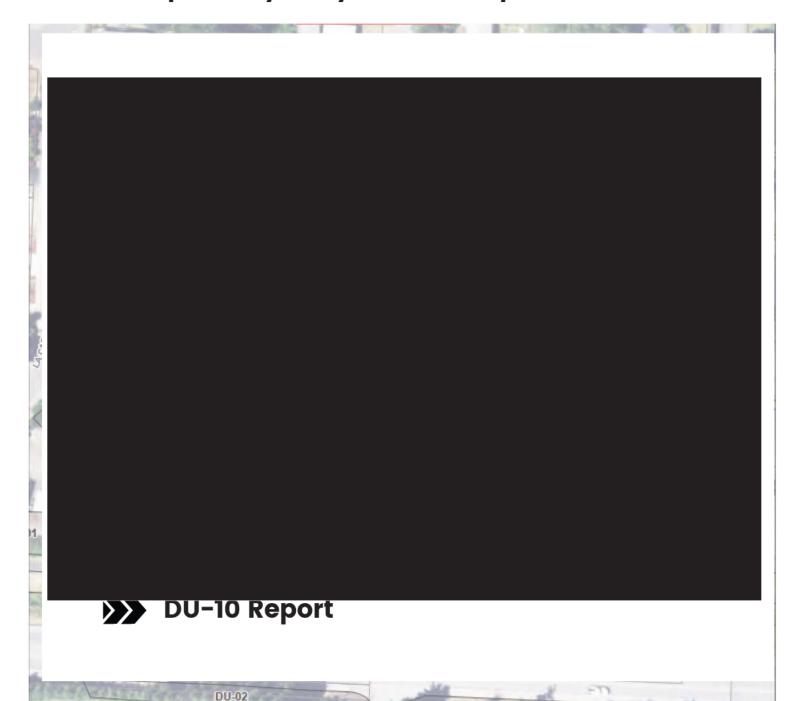
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Overall tree risk rating Low ■ Moderate □ High □ Extreme □												V	Vor	k pr	iori	ty	1 🗆	2		3 E	] 4	1 🗆				
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June 2023

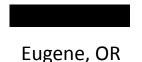
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





# **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
Certified Arborist PN-8292A
Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

### Overview

This report covers the mitigation recommendations for the trees at Street hereto referenced as DU-10. There are two total individual trees under the purview of this report, in addition to several smaller trees and shrubs not covered under the tree assessment forms. Figure 1 details the locations of the trees within DU-10. As detailed in Figure 2, soil removal on the eastern side of DU-10 will be at an 18-inch depth, which is where any potential tree impacts would be.



Figure 1

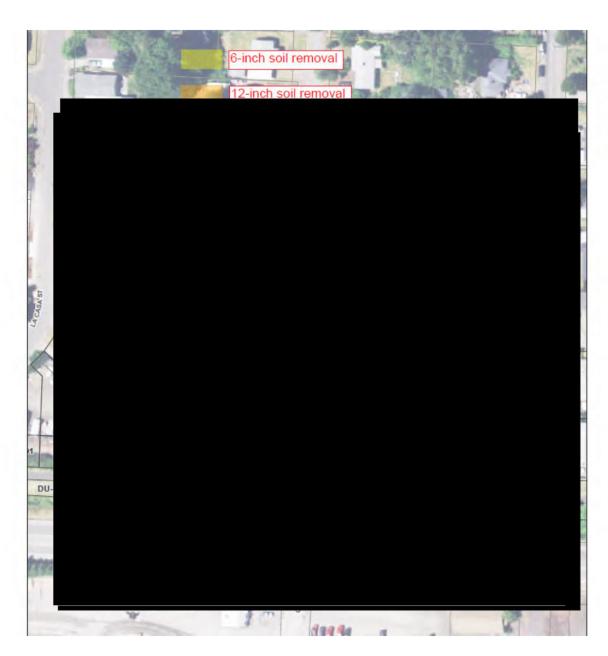


Figure 2

# DU-10-01

Located on the eastern portion of the property in the front yard (Figure 1, 01), tree 01 is a *Psuedotsuga menziesii* with a diameter of 47", height of 85', and a crown spread of 40'. This tree originates in the City of Eugene right-of-way and to make any recommendations would be a conflict of interest. The best course of action would be to determine the extent of the soil removal in and near the tree and contact the City for options and their recommendations.

### DU-09-02

Located to the north of tree 01 in the front yard near the driveway (Figure 1, 02), Tree 02 is an *Acer palmatum* with a diameter of 2", a height of 3', and a crown spread of 3' (Figures 3 and 4). Due to the species, the size, and the required soil removal depth, this tree would be best served by transplantation. This tree should be dug up to minimize root loss and once the tree is out of the ground, the soil can be washed off onsite. Care should be taken to place it in an appropriately sized container along with new planting soil. Once in the container with soil, it should be watered in to collapse air pockets and ensure the soil is covering cavities around the roots.

### Shrubs

Located on the southern end of the property in a zone that may be on the property of DU-09 are a line of shrubs (Figures 5 through 9). These shrubs should be transplanted, and the roots washed of all soil onsite.

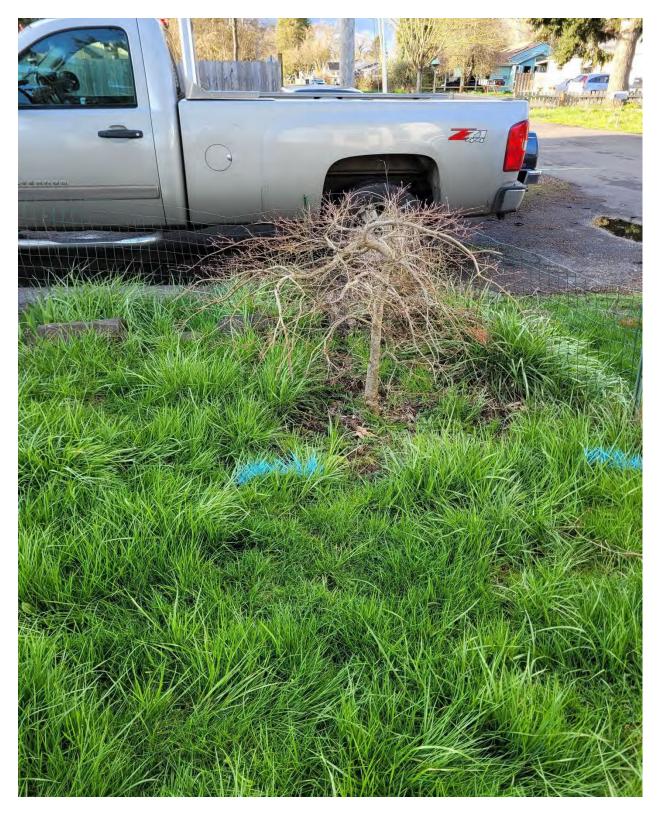


Figure 3



Figure 4

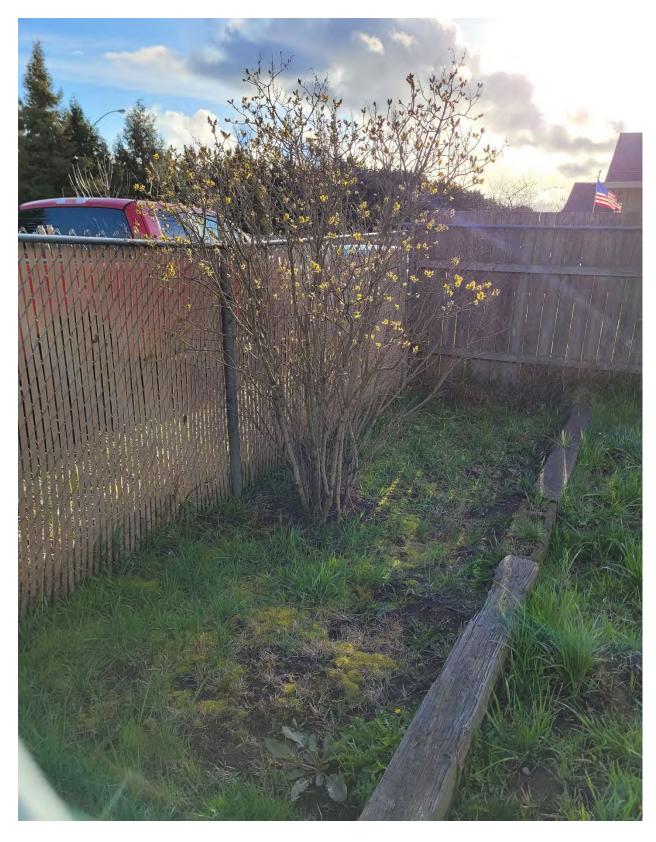


Figure 5



Figure 6



Figure 7



Figure 8



Figure 9

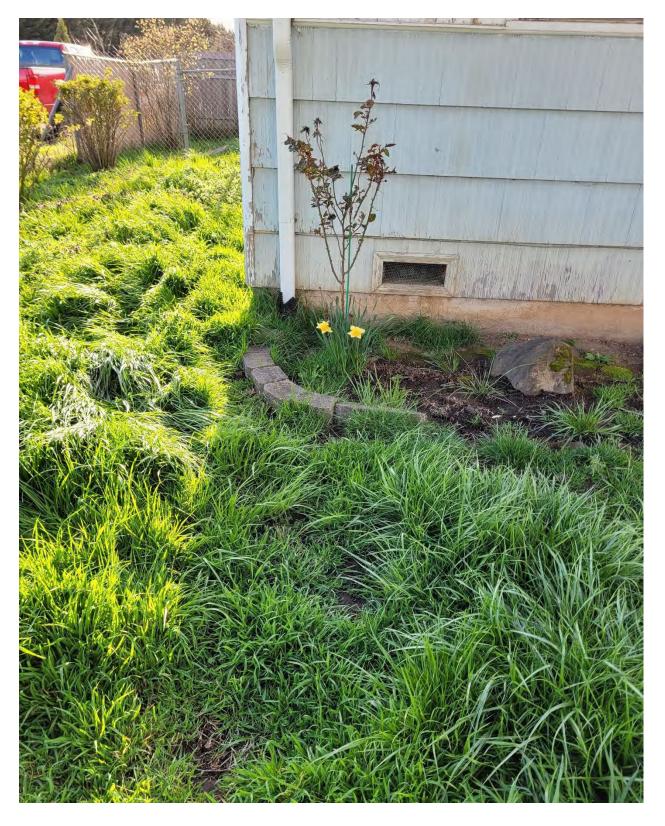


Figure 10



Client GSI		Date 4-4-23		Ti	me 1630		
Address/Tree location DU-10		Tree i	10. <u>DU-10-1</u>		Sheet _1_	of	1
Tree species Pseudotsuga menziesii	dbh_ <del>47"</del>	_ Height <u>_</u> 85'	Cro	wn sp	read dia. <u>40</u>	)'	
Assessor(s) Cory Shields	Time frame 3 years	Tools u	sed Probe, r	nallet, b	inoculars		
	Target Assessment						
Target descri	ption		Target within drip line Target Target within 1x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1 Traffic on road	d to east		1 1	1	1	N	N
2 Telecom wire:	s to east		1 1	1	4	N	N
3 House to	west		<b>✓</b>	1	4	N	N
4							
•	Site Factors			•			
Site changes None ■ Grade change □ Site clearing □ Chan Soil conditions Limited volume ■ Saturated □ Shallow □ ( Prevailing wind direction W Common weather Stron	Compacted ☐ Pavement ove g winds ■ Ice ■ Snow ■ F ee Health and Species Pro	uts □ Describe _ r roots ■ <u>~30</u> g deavy rain ■ Des <b>file</b>	% Describe scribe_ <b>lce/s</b>	Pave snow c	d road 7' to on 2 year int	east erval	
Vigor     Low     □     Normal     ■     High     □     Foliage     None (seasons)       Pests	Abiotic screws	in trunk		otic	% Ne	crotic <u></u>	5%
	Load Factors						
Wind exposure Protected ☐ Partial ☐ Full ■ Wind funner Crown density Sparse ☐ Normal ☐ Dense ■ Interior broke Recent or planned change in load factors	anches Few□ Normal□ Do	ense <b>■ Vines/N</b>	listletoe/M				
Tree Defects and	Conditions Affecting the Li	kelinood of Falli	ıre				
Unbalanced crown □ LCR 80 %  Dead twigs/branches ■ 5 % overall Max. dia. 2"  Broken/Hangers Number Max. dia  Over-extended branches ■  Pruning history  Crown cleaned □ Thinned □ Raised  Reduced □ Topped ■ Lion-tailed	Weak attachments I Previous branch fail  Dead/Missing bark I	□ures □ □ Cankers/Galls, Heartwood	/Burls □	Cavity, Simila Sapwo	Included /Nest hole r branches pr bood damage/	d bark I % cir resent I decay I	rc.
Load on defect N/A ☐ Minor ☐ N Likelihood of failure Improbable ☐ Possible ■ P	_						- - -
— Trunk —  Dead/Missing bark □ Abnormal bark texture Codominant stems ■ Included bark ■  Sapwood damage/decay □ Cankers/Galls/Burls □ Sap Lightning damage □ Heartwood decay □ Conks/Mush Cavity/Nest hole % circ. Depth Poor Lean _5 ° Corrected? Response growth Around codominant Main concern(s) Codominant  Load on defect N/A □ Minor □ Moderate □ Sign Likelihood of failure	Cracks Dead Dooze Cooms Cracks Caper Root plate Responsion Main cooms Load on	Cavity C	Depth_  Soil wea	Conks, irc. istance kness	Stem gi /Mushrooms e from trunk_ □		_

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oud	_			ndition: concerr		Part size	all d	Target	Target	Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
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2						30"	30'	2	N/A	C			$\bigcirc$	$\bigcirc$	0	0	О	⊙	0	0	0	Ю	$\odot$	0	O	Low
						30"	30'	3	N/A	C				O	O	0	O	0		O	O	O	O	O	0	Low
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Client G	SSI					Date 4	-5-23			Tir	me_1020		
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	ecies Acer palmatum			dbh_2"		_ Height	3'		Crov	vn spi	read dia. <u>3'</u>		
Assesso	r(s) Cory Shields			Time fran	ne 3 years		Tools us	sed Pro	be				
				Target Asses	sment								
Target number			Target descriptio	n					Target as within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
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	ensity Sparse□ No												
Recent o	or planned change in	load factors											
		Tree	Defects and Cor	ditions Affect	ting the Lil	kelihood	d of Failu	re					
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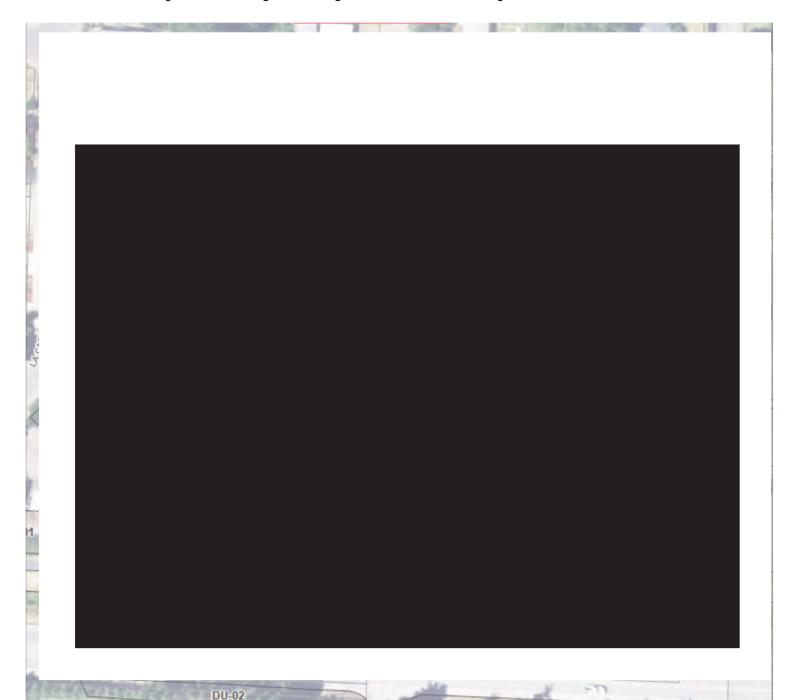
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June 2023

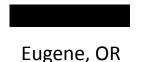
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





### **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
Certified Arborist PN-8292A
Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

#### Overview

This report covers the mitigation recommendations for the trees at Baxter Street hereto referenced as DU-11. There are five total individual trees under the purview of this report, in addition to several smaller trees and shrubs not covered under the tree assessment forms.

There is also a tree from (DU-15) to the North that would be impacted by the soil removal efforts. Figure 1 details the locations of the trees within DU-11 and the hand dig area for the tree to the north. As detailed in Figure 2, soil removal on the southern side of DU-11 will be at an 18-inch plus depth, the northern side will be excavated to 12-inch depth.



Figure 1

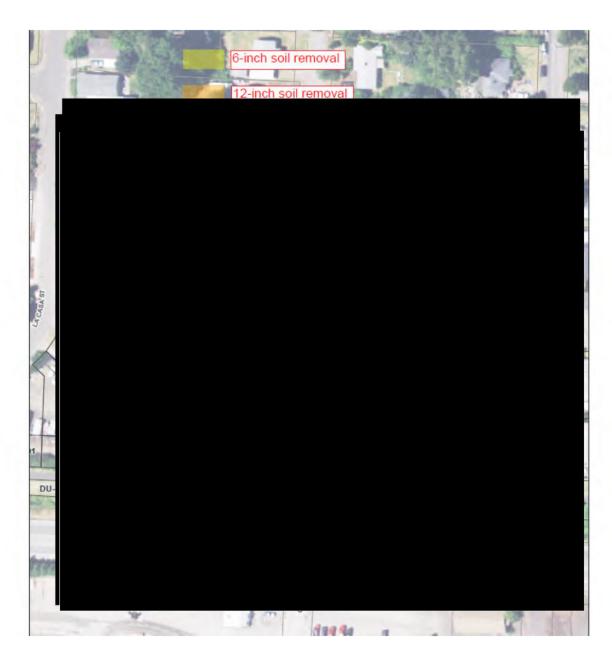


Figure 2

#### DU-11-01

Located on the western portion of the property in the front yard (Figure 1, 01), tree 01 is a *Picea pungens* with a diameter of 17", height of 40', and a crown spread of 30'. This individual has several issues and defects: it is located within 10' of the house and driveway (Figure 3), there are several wounds to the trunk, some with metal hardware, and there are codominant stems at 20' up the trunk (Figures 4 and 5). Due to the amount of soil removal, the defects in the tree,

and the proximity to targets, it is recommended that this tree is removed. The loss of soil volume would cause significant instability and/or considerable dieback in the specimen resulting in an unacceptable risk level. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### **DU-11-02**

Located to the southern side of the property, to the southeast of the house (Figure 1, 02), Tree 02 is an *Psuedotsuga menziesii* with a diameter of 24", a height of 70', and a crown spread of 75' (Figure 6). The tree has several defects including a codominant stem at 40' up the main trunk and an unbalanced canopy to the south (Figures 7 and 8). This species has a poor tolerance of root disturbances, and, due to the depth of soil removal and the preexisting defects, it is recommended that this tree be removed. Due to the amount of soil removal, the defects in the tree, and the proximity to targets, it is recommended that this tree is removed. The loss of soil volume would cause significant instability and/or considerable dieback in the specimen resulting in an unacceptable risk level. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### **DU-11-03**

Located to the southern side of the property, to the southeast of the house (Figure 1, 03), Tree 03 is a *Juglans nigra* with a diameter of 6", a height of 25', and a crown spread of 15'. The tree has a girdling branch wrapping around the main stem (Figure 9), is poorly sited next to the fence line, and is in close proximity to the road. This species has a poor tolerance of root disturbances, and, due to the depth of soil removal and the preexisting defects, it is recommended that this tree be removed. The loss of soil volume would cause significant instability and/or considerable dieback in the specimen resulting in an unacceptable risk level over the long term. The size of the tree would allow it to be removed at the same time as the soil removal action.

#### DU-11-04

Located to the eastern side of the property, to the east of the house in the backyard (Figure 1, 04), Tree 04 is an *Acer macrophyllum* with a mult-istem diameter of 26", a height of 50', and a crown spread of 40' (Figure 10). The tree has several defects including a codominant stem at the base of the tree and an unbalanced canopy to the south (Figures 11 and 12). This species has a poor tolerance of root disturbances. Due to the amount of soil removal, the defects in the tree, and the proximity to targets, it is recommended that this tree is removed. The loss of soil volume would cause significant instability and/or considerable dieback in the specimen resulting in an unacceptable risk level. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### DU-11-05

Located to the north of tree 04 in the backyard (Figure 1, 05) tree 05 is a *Crataegus laevigata* with a multi-stem diameter of 11", a height of 35', and a crown spread diameter of 50' (Figure 13). The central stem has been removed, leaving two overextended scaffold branches to the east and west (Figures 14 and 15). The eastern branch has a large decay pocket in the trunk on the southern side at 5' (Figure 16). Due to the significant defects in this tree, removal is the recommended course of action. Maintaining the tree in the landscape after the soil removal would create an unacceptable level of risk. Due to the tree's size, the tree should be removed prior to the soil removal activities.

#### DU-15-06

Located on the property at designated DU-15, along the southeastern fence line is a *Juglans nigra* (DU-15-06) with a diameter of 33" a height of 55' and a crown spread diameter of 45'. This tree's root system is incorporated by the property lines of DU-11. This tree is a high value, well established tree. While this species is typically intolerant of root disturbances, the soil removal level of 12" is within levels that should not significantly disrupt the tree specimen. The northeastern corner of DU-11 encompasses a portion of the critical root zone of DU-15-06, this zone is an approximate area of 30' to the west by 25' to the south beginning at the northeast corner. This section should be excavated by hand, an air or water assisted pressurized system, or a vactor excavator. This area can be marked by the consulting arborist and the excavation should be done with the consulting arborist onsite. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### **Shrubs**

Located on the northern side of the house, on the west side of the backyard fence are a line of shrubs and plants (Figure 17). These plants should be transplanted, with the native soil washed and removed.



Figure 3



Figure 4



Figure 5



Figure 6

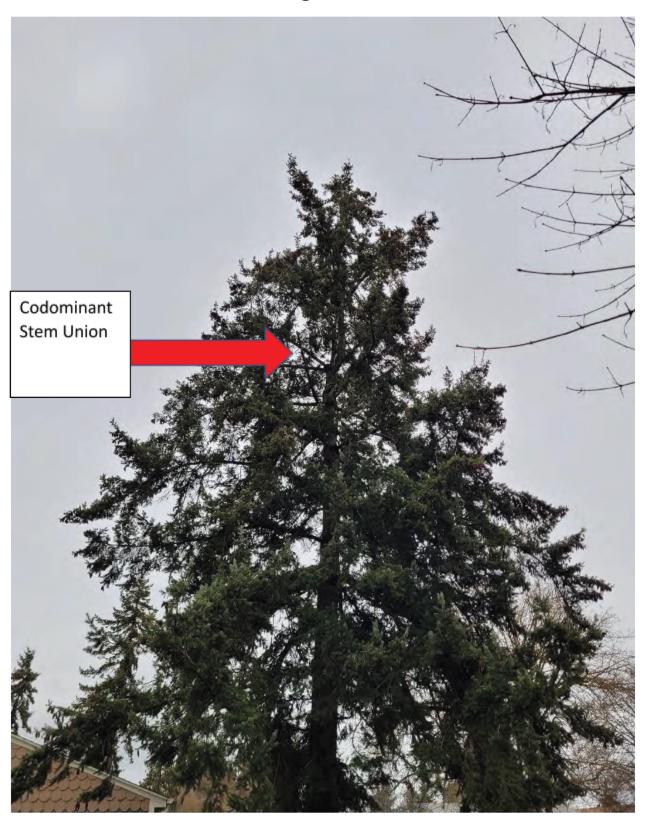


Figure 7



Figure 8

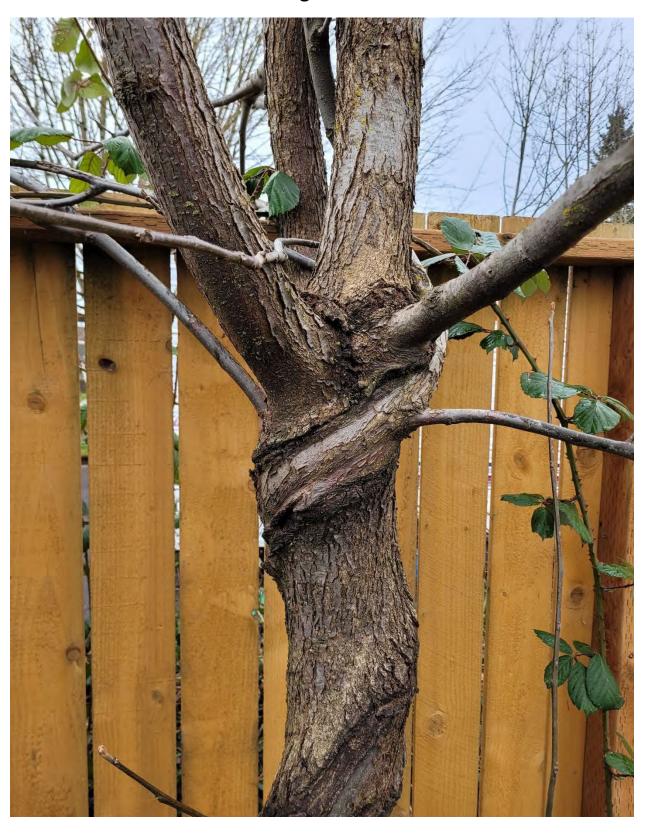


Figure 9



### Figure 10

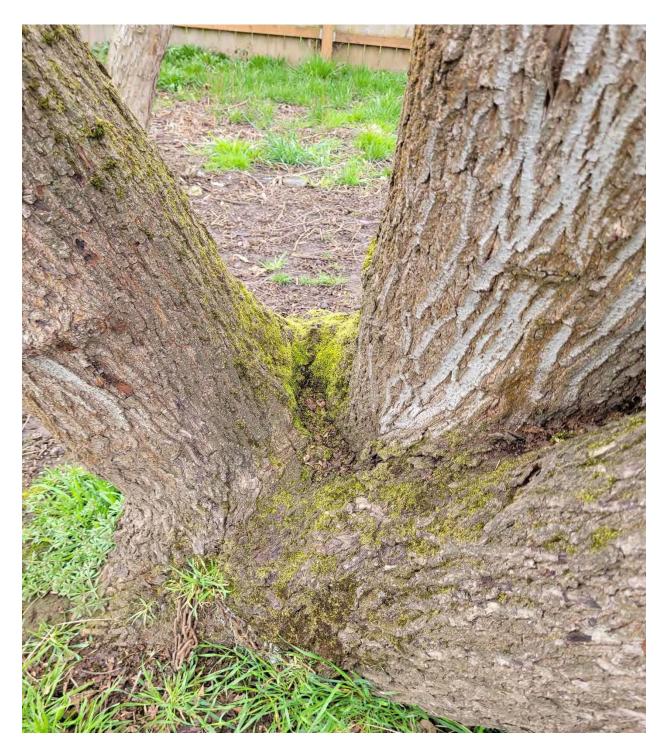


Figure 11



Figure 12

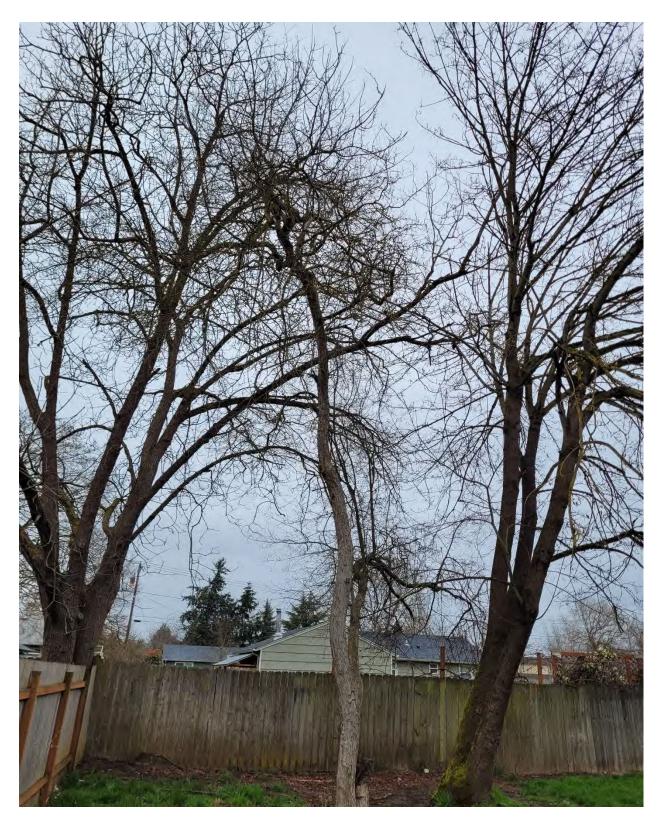


Figure 13



Figure 14



Figure 15

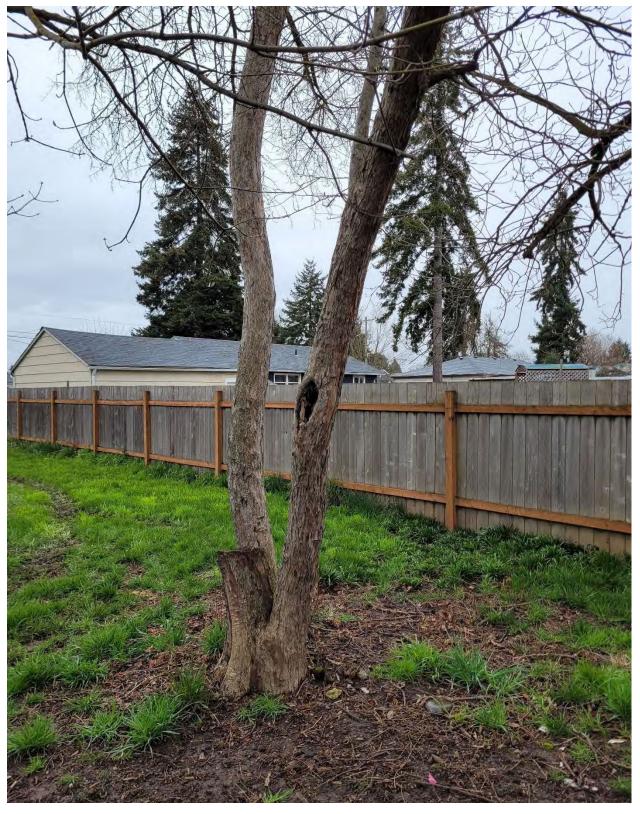


Figure 16



Figure 17



Client G	SSI		Date 4	-5-23		Tir	me 1500		
Address	/Tree location DU-11			Tree no	U-11-1		_ Sheet 1	of	1
	ecies Picea pungens	dbh_ <sup>17"</sup>	Height	40'	_ Cro	wn sp	read dia. 30	)'	
Assesso	r(s) Cory Shields	Time frame_3	3 years	Tools used	Probe, m	nallet			
		Target Assessm	ent						
<b>Target</b> number	Target descriptio	on		Target within	Target again		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	House to eas	st		<del>-  </del> -	1	1	4	N	N
2	Traffic on road to				† <del>'</del>	7	1	N	N
3					<del>                                     </del>	Ϊ́	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>
4					+			$\vdash$	
		Site Factors			_				
Site char Soil cond Prevailir	nges None ■ Grade change □ Site clearing □ Changed ditions Limited volume □ Saturated □ Shallow □ Common weather Strong weath	npacted□ Paveme vinds■ Ice□ Sno <b>Health and Speci</b>	Root cuts □ Deent over roots ■  ow ■ Heavy rai  es Profile	escribe   <mark>25</mark> % De n <b>■</b> Describ	escribe e_lce/s	Conc now o	rete 5' to S, on 2 year int	8" to I	E
Pests	ow □ Normal ■ High □ Foliage None (season:  failure profile Branches □ Trunk ■ Roots □ Describe	Abiotic _	Nails in trunk					crotic _	<u>10    </u> %
		Load Factors							
Wind ex	posure Protected ☐ Partial ■ Full ☐ Wind funneling	g □ House to east		Relative cro	wn size	<b>S</b> Sma	ıII□ Mediu	m 🔳 L	_arge □
	lensity Sparse ☐ Normal ■ Dense ☐ Interior brand		al ■ Dense □	Vines/Mistle	toe/Mo	oss 🗆			
Recent o	or planned change in load factors								
	Tree Defects and Cor	nditions Affecting	the Likelihoo	d of Failure					
	— Cr	own and Bran	iches —						
De Br Ov <b>Pr</b> Cr Re Fli	nbalanced crown □ LCR 60 % ead twigs/branches ■ 10 % overall Max. dia. 2" roken/Hangers Number _ Max. dia ver-extended branches □ runing history rown cleaned □ Thinned □ Raised □ educed □ Topped □ Lion-tailed □ ush cuts □ Other Stub cuts, tear out lain concern(s) Codominant	Cracks  Codominant Weak attachr Previous brai Dead/Missing Conks	■ Stem 20' u ments □ nch failures □ _ g bark □ Canh	p xers/Galls/Burl artwood decay	(	Cavity/ Simila Sapwo	Included 'Nest hole r branches prod damage/	d bark I % cir resent I decay I	rc.
\	oad on defect N/A ☐ Minor ☐ Mode kelihood of failure   Improbable ■ Possible ☐ Proba	-	nt 🗆						
Co Sa Lig Ca Le Re M.	— Trunk —  Pad/Missing bark □ Abnormal bark texture/color  Adominant stems □ Included bark □ Crace  Approved damage/decay □ Cankers/Galls/Burls □ Sap on the string damage □ Heartwood decay □ Conks/Mushrood to trity/Nest hole% circ. Depth Poor tage an° Corrected?  Pasponse growth Around old wounds ain concern(s)  Pad on defect N/A ■ Minor □ Moderate □ Significate tellihood of failure	cks   C	Collar buried/No Dead  Doze  Cracks  Cut/ Root plate lifting Response growth Main concern(s)  coad on defect ikelihood of fail	Decay ☐ Cavity ☐ Damaged root ☐ S  N/A ■ Mir	epth ( % ci s □ Di oil weal	Conks/ rc. stance kness	Stem gi /Mushrooms • from trunk		

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of	Failure	Very lo			<del></del>	Medium		High																	
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Data	Final	■ Prel	iminary Ad	vanced	asses	sment	neede	ed □No □Yes-	Тур	e/Re	asoı	n _													
Insp	ection lir	nitatio	<b>ns ■</b> None [	<b>⊒</b> Visibili	ty 🗆	Access	□Vin	es □Root coll	ar b	ourie	d D	escr	ibe												



Client GSI		Date 4-5-23		Ti	me 1520		
Address/Tree location DU-11		Tree r	10. DU-11-	2	Sheet 1	of	1
Tree species Psuedotsua Menziesii	dbh_ <sup>24</sup> "	_ Height _ <sup>/0</sup>	Cr	own sp	read dia. 4	5'	
Assessor(s) Cory Shields	Time frame 3 years	Tools u	sed Probe,	mallet			
	Target Assessment						
Target Target	description		Target within drip line Target		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1 House	o northwest		<b>√</b> ✓	✓	4	N	N
2 Traffic	on road to S		<b>√</b> ✓	✓	1	N	N
3							
4							
	Site Factors						
History of failures None aparent  Site changes None ■ Grade change □ Site clearing □  Soil conditions Limited volume □ Saturated □ Shallov  Prevailing wind direction W Common weather  Vigor Low □ Normal ■ High □ Foliage None	v ☐ Compacted ☐ Pavement over Strong winds ■ Ice ☐ Snow ■ H Tree Health and Species Prof	nts □ Describe roots ■ 259 leavy rain ■ Des file	6 Describ scribe lce	e <u>Conc</u> /snow c	crete 5' to S, on 2 year int	8" to I erval	<b>I</b>
Pests Trunk ☐ Roots ■	Abiotic Graffiti	on trunk		Otic	% Ne	crotic <u>s</u>	<u>J                                    </u>
Species failure profile Branches — Trunk — Noos	Load Factors						
Wind exposure Protected ☐ Partial ■ Full ☐ Wind		Relative	crown si	ze Sma	all□ Mediu	m ■ L	arge 🗆
Crown density Sparse ☐ Normal ☐ Dense ☐ Interi							
Recent or planned change in load factors							
Tree Defects	and Conditions Affecting the Li	kelihood of Failu	ıre				
	— Crown and Branches	_					
Unbalanced crown ■ LCR 90 %  Dead twigs/branches ■ 5 % overall Max. di Broken/Hangers Number Max. di Over-extended branches □  Pruning history  Crown cleaned □ Thinned □ Raisee Reduced ■ Topped □ Lion-t Flush cuts □ Other Stubbed off branch Main concern(s) Codominant stem, unbalance	Weak attachments  Previous branch failu  Dead/Missing bark Cailed Conks Care  Response growth A	At codominar ures  Cankers/Galls,	nt /Burls □	Cavity, Simila Sapwo	Included /Nest hole ir branches pi ood damage/	d bark I % cir resent I decay I	ec.
Load on defect N/A ☐ Minor ☐ Likelihood of failure Improbable ☐ Possible ■	J Woderate - Jigiiiilcant -	or both or both					- -
— Trunk —  Dead/Missing bark □ Abnormal bark to Codominant stems □ Included bark □  Sapwood damage/decay □ Cankers/Galls/Burls □ Lightning damage □ Heartwood decay □ Conks/It Cavity/Nest hole% circ. Depth □ Lean° Corrected? □ Response growth □ Main concern(s) □ Minor □ Moderate □ Likelihood of failure    Improbable □ Possible □ Probable □	Cracks ☐ Dead ☐ I Sap ooze ☐ Ooze ☐ Mushrooms ☐ Cracks ☐ Poor taper ☐ Root pla  Respons Main coi  Significant ☐ Load on	Cavity C Cavity C Cut/Damaged te lifting  e growth Around ncern(s)  defect N/A  od of failure	Depth  Minor	Conks, circ. Distance eakness d root	Stem gi /Mushrooms e from trunk	4'	- - - -

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Client GSI		Date 4-5-23		Tir	me 1600		
Address/Tree location DU-11		Tree	no. DU-11-3		_ Sheet 1	of	1
Tree species Juglans nigra	dbh <u></u> 6"	Height 25'	Crov	vn sp	read dia. 15	;'	
Assessor(s) Cory Shields	Time frame 3 years	Tools u	sed Probe				
	Target Assessment						
Target descri	ription		Target within drip line Target Target within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1 Traffic on road	d to south		<b>√</b> ✓	<b>✓</b>	1	N	N
2							
3							
4							
History of failures None aparent	Site Factors						
Site changes None ■ Grade change □ Site clearing □ Cha Soil conditions Limited volume □ Saturated □ Shallow □ Prevailing wind direction W Common weather Stro	Compacted ☐ Pavement over ng winds ■ Ice ☐ Snow ■ H ree Health and Species Prof	uts □ Describe roots ■ 25 leavy rain ■ Des file	% Describe scribe lce/s	Conc now o	rete 5' to S, n 2 year int	8" to l erval	E
Pests	Abiotic						
Species failure profile Branches ■ Trunk □ Roots ■ Des	_	ures					
Wind exposure Protected ☐ Partial ■ Full ☐ Wind funn	Load Factors	aget Deleth			II - Madiu	U	arga 🗆
Crown density Sparse ☐ Normal ■ Dense ☐ Interior bi							
Recent or planned change in load factors	uncies rew in Norman in De	, iise 🗀 Villes/IV	iistictoc, ivit	,,,,			
Tree Defects and	Conditions Affecting the Li	kelihood of Fail	ıre				
	Crown and Branches						
Unbalanced crown ■ LCR 98 % Dead twigs/branches ■ 2 % overall Max. dia. 0. Broken/Hangers Number Max. dia Over-extended branches □  Pruning history Crown cleaned □ Thinned □ Raised Reduced □ Topped □ Lion-tailed Flush cuts □ Other Girdling branch  Main concern(s) Girdling branch	5" Cracks □  Codominant ■  Weak attachments ■  Previous branch failu  Dead/Missing bark □	■ ures □ Cankers/Galls, Heartwood	/Burls □	Cavity/ Simila Sapwo	Included (Nest hole r branches prood damage/	l bark [ % cir esent [ decay [	rc.
	Moderate ■ Significant □ _ Probable □ Imminent □ _						ار-
Sapwood damage/decay ☐ Cankers/Galls/Burls ☐ Sa Lightning damage ☐ Heartwood decay ☐ Conks/Mush Cavity/Nest hole % circ. Depth Poo Lean ° Corrected? Response growth Around girdling branch Main concern(s) Girdling branch  Load on defect N/A ☐ Minor ☐ Moderate ■ Sig Likelihood of failure	Cracks	uried/Not visible  Decay  Cavity  Cavity  Cut/Damaged  te lifting  e growth Around  ncern(s)  defect N/A  od of failure	☐% cingle control contro	.5" Conks/ rc. stance kness I	Stem gii 'Mushrooms from trunk  rate Sign		- - - - -

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Client	GSI		Date 4	-5-23			Tin	ne 1615		
	s/Tree location DU-11			Tree no	o. DU-	11-4		Sheet <sup>1</sup>	of	1
	ecies Acer macrophyllum c	bh 26" Multistem	Height	50'		Crow	n spr	ead dia. 40	'	
Assesso	or(s) Cory Shields	Time frame 3 years		Tools us	ed Pro	be, bin	ocular	rs, mallet		
	Targ	get Assessment								
Target	Target description			:		Target target within 1x Ht.	Target within <sup>®</sup> 1.5 x Ht.	Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	Shed to northwest				$\neg$	<b>√</b>	<b>√</b>	4	N	N
2										
3										
4										
	S	ite Factors								
Site cha	nges None ■ Grade change □ Site clearing □ Changed soil I ditions Limited volume □ Saturated □ Shallow □ Compacte ng wind direction W Common weather Strong winds I	ed 🗖 Pavement over	ts□ De roots□ eavy rair	scribe%	Desci	ribe _				
Pests_	ow □ Normal ■ High □ Foliage None (seasonal) ■  failure profile Branches ■ Trunk ■ Roots □ Describe Cod	Abiotic Chain in	ncluded	in trunk					rotic <u></u>	5%
	•	oad Factors								
Wind ex	<b>rposure</b> Protected □ <b>Partial ■</b> Full □ Wind funneling □ <u>T</u>	rees to north		Relative	crown	ı size	Sma	II□ Mediu	m 🔳 L	arge 🗆
	density Sparse ☐ Normal ☐ Dense ☐ Interior branches F	ew□ Normal■ De	nse 🗆	Vines/Mis	stletoe	e/Mos	ss 🗆			
Recent o	or planned change in load factors									
	Tree Defects and Conditio	ns Affecting the Lik	elihood	of Failur	re					
D Bi O Pi Ci Ri FI M	nbalanced crown ■ LCR 60 % ead twigs/branches ■ 5 % overall Max. dia. 2" roken/Hangers Number Max. dia. ver-extended branches □ runing history rown cleaned □ Thinned □ Raised □ educed □ Topped □ Lion-tailed □ dush cuts □ Other	Weak attachments  Previous branch failu  Dead/Missing bark  Conks  Response growth  —	l res □ _ I Cank Hea	ers/Galls/E rtwood de	Burls E	_ Ca _ S	avity/l imilar apwo	Included Nest hole branches pr od damage/	I bark [ % cir esent [ decay [	c.
\	pad on defect       N/A □       Minor       ■ Moderate         kelihood of failure       Improbable       ■ Possible □       Probable	•								- -/
Co Sa Li <sub>l</sub> Ca Le Re M	— Trunk —  ead/Missing bark □ Abnormal bark texture/color □ codominant stems ■ Included bark ■ Cracks □ apwood damage/decay □ Cankers/Galls/Burls □ Sap ooze □ ghtning damage □ Heartwood decay □ Conks/Mushrooms □ avity/Nest hole % circ. Depth Poor taper □ can ° Corrected? cesponse growth Around girdling chain lain concern(s) Codominant  pad on defect N/A □ Minor □ Moderate □ Significant ■	Dead  Ooze  Cracks  Root plat Response Main cor	ried/Not  Cut/[ e lifting   e growth acern(s) -	Decay ☐ Cavity ☐ Damaged r ☐ Around N/A ■	roots Soil	th Cc _% circ ■ Dist weak	onks/ c. tance ness [	Stem gir Mushrooms from trunk _	4'	_
\	kelihood of failure nprobable ■ Possible □ Probable □ Imminent □	Likelihoo		<b>ıre</b> Possible □	]	Proba	able 🛭	☐ Immir	nent 🗖	

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Data	Final	■ Pre	limina	ıry <b>Adı</b>	/anced	assess	ment	neede	d □No □Yes-	Гуре	e/Reas	son													
				-					es   Root coll																



Client	esi	Date 4-5-23 Time 1630												
Address	/Tree location DU-11		of	1										
	ecies Crataegus laevigata	dbh 11" Multistem	_ Height	35'	Cro	wn sp	read dia. <u>50</u>	)'						
Assesso	r(s) Cory Shields	Time frame 3 years		Tools us	USEd Probe, mallet									
Target Assessment														
<b>Target</b> number	Target description				Target within drip line Target Target within 1x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?					
1	Fence to north and ea	ast			1 1	1	4	N	N					
2														
3														
4														
		Site Factors		·			•							
Site char Soil cond Prevailin	History of failures Central stem appears to have failed Topography Flat Slope % Aspect  Site changes None ■ Grade change □ Site clearing □ Changed soil hydrology □ Root cuts □ Describe  Soil conditions Limited volume □ Saturated □ Shallow □ Compacted □ Pavement over roots □ % Describe  Prevailing wind direction W Common weather Strong winds ■ Ice □ Snow ■ Heavy rain ■ Describe   Ice/snow on 2 year interval    Tree Health and Species Profile													
Pests	ow □ Normal ■ High □ Foliage None (seasonal) ■	Abiotic	Norma	11 <u>95 </u> %	Chiore	опс	% Ne	crotic <u>s</u>	<u> </u>					
	failure profile Branches ■ Trunk ■ Roots □ Describe <u>Co</u>		res, wea	k attache	ment									
		Load Factors												
	posure Protected ■ Partial □ Full □ Wind funneling □								_					
	lensity Sparse ■ Normal □ Dense □ Interior branches	Few□ Normal■ De	ense 🗆	Vines/Mi	istletoe/M	oss 🗆								
Recent c	or planned change in load factors													
	Tree Defects and Condit	ions Affecting the Li	kelihood	l of Failu	re									
De Br Or <b>Pr</b> Cr Re Fl	Thinned □ Raised □ Cown □ Crown □ LCR 55 %  Town cleaned □ Thinned □ Raised □ Cown □	Codominant  Weak attachments  Previous branch failu	■ ures □ _ □ Cank	ers/Galls/I	Is/Burls ☐ Sapwood damage/decay ☐									
\	oad on defect N/A ☐ Minor ☐ Moderat kelihood of failure Improbable ☐ Possible ■ Probable	•							- -					
Co Sa Lig Ca Le Re M —	Trunk —  Pead/Missing bark □ Abnormal bark texture/color loadominant stems ■ Included bark ■ Cracks loadominant stems ■ Included bark ■ Cracks loadominant stems ■ Included bark ■ Cracks loadominant stems □ Heartwood decay □ Conks/Mushrooms loadominant loado	Dead D  Dead D  Ooze D  Cracks D  Root pla  Respons  Main co	uried/Not  Cut/E  te lifting l  e growth ncern(s) -  defect	visible Decay Cavity Camaged  N/A	l% c roots □ D Soil wea	Conks/ irc. istance ikness	Stem gi 'Mushrooms from trunk		_					
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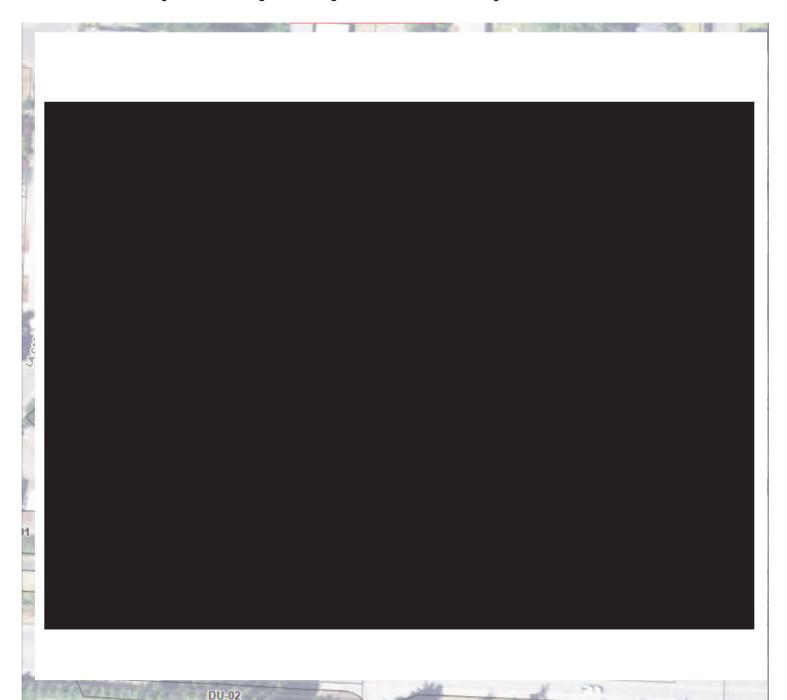
Risk Categorization																										
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Overall residual risk Low □ Moderate □ High □ Ex			Extreme 🗖			Re	ecc	mm	ien	ded	ins	pect	ion	inte	erva	I										
Data	□Final	■ Pr	elimir	nary Ad	vanced	assess	sment	neede	d □No □Yes-	Туре	e/Rea	ason														
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June 2023

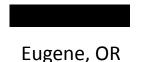
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





#### **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
Certified Arborist PN-8292A
Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

#### Overview

This report covers the mitigation recommendations for the trees at Street hereto referenced as DU-15. There are five total individual trees under the purview of this report, in addition to several smaller trees and shrubs not covered under the tree assessment forms. Figure 1 details the locations of the trees. Table 1 lists the characteristics of tree number 03 through 05 as well as trees 07 through 15. As detailed in Figure 2, soil removal on the entirety of DU-15 will be excavated to a 12-inch depth.

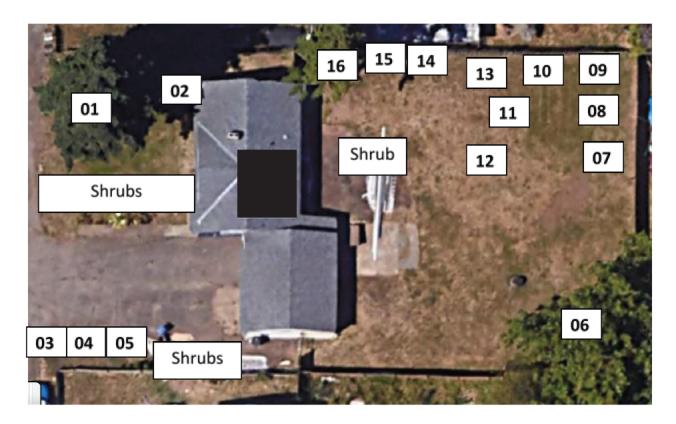


Figure 1

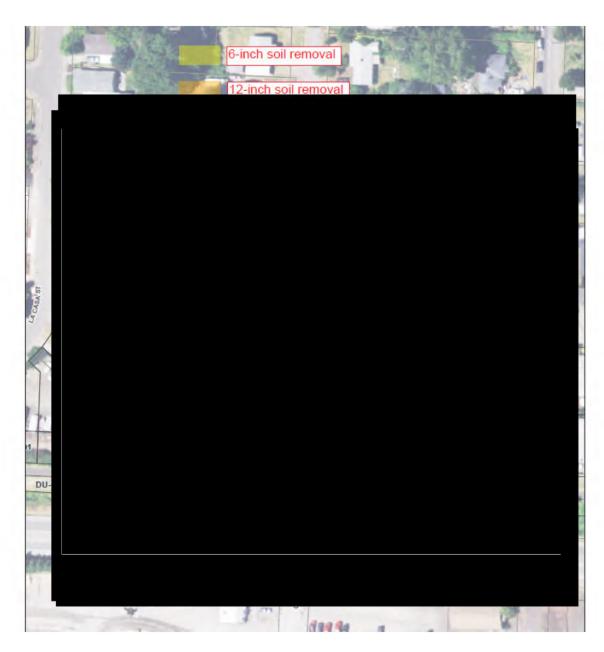


Figure 2

#### **Table 1 Recommendations**

Table 1 lists the characteristics of trees 03-05 and 07-15 since all of these individuals are close in size and mitigation activities. For each tree, transplant is the best option for long-term success. These trees should be dug up to minimize root loss and once they are out of the ground, the soil can be washed off onsite. Care should be taken to place them in an appropriately sized container along with new planting soil. Once in the container with soil, they should be watered

in to collapse air pockets and ensure the soil is covering cavities around the roots. The trees can be replanted once the fall/winter rains set in. If transplanting is not an option for any of the individual trees, a radius of 2' from the trunk should be excavated by hand, an air or water assisted pressurized system, or a vactor excavator. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, and the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The trees should be monitored for a minimum of three years after the removal activity to ensure the trees' continued survival and stability.

Table 1

Tree Number From Figure 1	Species	Diameter (Inches)	Height (Feet)	Crown Spread Diameter (Feet)
03	Sequoia sempervirens	1	5	4
04	Calocedrus decurrens	1	3	3
05	Calocedrus decurrens	1	3	3
07	Malus domestica 'Fuji'	1	5	2
08	Pyrus communis 'Bartlett'	1	4	3
09	Pyrus pyrifolia	1	5	2
10	Prunus maritima	1	3	2
11	Prunus avium 'Lapins'	1	4	2
12	Ficus carica	1	2	2
13	Prunus persica	1	5	2
14	Sequoia sempervirens	1	6	5
15	Sequoia sempervirens	1	4	3

#### DU-15-01

Located on the northwestern portion of the property in the front yard (Figure 1, 01), tree 01 is a *Psuedotsuga menziesii* with a diameter of 31", height of 75', and a crown spread of 35' (Figure 3). This tree is a high value, well established tree. While this species is typically intolerant of root

disturbances, the soil removal level of 12" is within levels that should not significantly disrupt the health or stability of the specimen. While there are some defects with the individual tree (overextended branches, hanger, root crown buried), these defects can be corrected to reduce the overall risk of the tree, and, in the case of the root crown, the soil excavation will mitigate the issue. The area within a 17' radius or a 35' diameter with the trunk as the center point should be excavated by hand, an air or water assisted pressurized system, or a vactor excavator. This area is the critical root zone, and no heavy equipment should be operated or staged within it. The excavation should be done with the consulting arborist onsite. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, and the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### DU-15-02

Located to the southern side of the property, to the southeast of the house (Figure 1, 02), Tree 02 is an *Ilex aquifolium* with a multi-stem diameter of 6", a height of 10', and a crown spread of 8' (Figure 4). The tree has several defects including codominant stems at the base, and *Ilex aquifolium* are an invasive species in Oregon, especially in, or near, riparian areas. This species has a good tolerance of root disturbances, but, due to the preexisting defects and invasive issue, it is recommended that this tree be removed. This tree is small enough that it can be removed at the same time as the soil removal activity.

#### DU-15-06

Located at the southeastern corner of DU-15, is a *Juglans nigra* (Figure 1, 06) with a diameter of 33" a height of 55' and a crown spread diameter of 45' (Figure 5). This tree's root system is incorporated by the property lines of DU-11. This tree is a high value, well established tree. While this species is typically intolerant of root disturbances, the soil removal level of 12" is within levels that should not significantly disrupt the tree specimen. The disturbances will also only encapsulate approximately 50% of the rooting area of the tree between properties DU-11 and DU-15. The southeastern corner of DU-15 encompasses a portion of the critical root zone, this zone is an approximate area of 30' to the west by 30' to the north beginning at the southeast corner. This area is the critical root zone, and no heavy equipment should be operated or staged within it. This section should be excavated by hand, an air or water assisted pressurized system, or a vactor excavator. This area can be marked by the consulting arborist and the excavation should be done with the consulting arborist onsite. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay), and weekly watering should be performed for the

following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### **DU-11-16**

Located on the northeastern corner of the house in the backyard (Figure 1, 16), tree 16 is a *Psuedotsuga menziesii* with a diameter of 27", a height of 75', and a crown spread diameter of 35' (Figure 6). There was a codominant stem that was removed to the eastern side of the tree, leaving the western stem unbalanced (Figures 7 and 8). The cut is too large for the tree to reasonably compartmentalize, and the unbalanced nature of the remaining stem creates a risk to the houses to the northwest and southwest. Due to the amount of soil removal, the defects in the tree, and the proximity to targets, it is recommended that this tree is removed. The loss of soil volume would cause significant instability and/or considerable dieback in the specimen resulting in an unacceptable risk level. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### Shrubs

Located on the western side of the house, the southern side of the driveway, and in the backyard are a series of shrubs (Figures 9-14). These plants should be transplanted, with the native soil washed and removed.



Figure 3



Figure 4



Figure 5



Figure 6

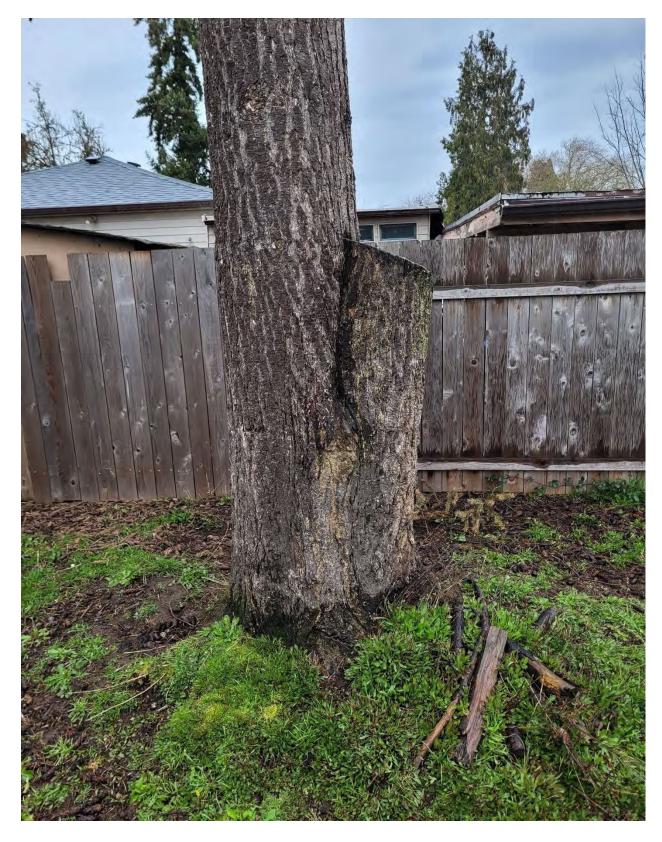


Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13



Figure 14



Client C	GSI			Date 4/	6/23			Tir	me_1545		
	/Tree location DU-15				_ Tree n	o. DU	-15-1		_ Sheet <u>1</u> _	of	1
	ecies Pseudotsuga menziesii	dbh_31"		Height	75'		Crov	vn spi	read dia. <u>3</u> 5	5'	
Assesso	r(s) Cory Shields	Time fram	e 3 Years		Tools us	sed_Pr	obe, m	allet, b	inoculars		
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						Tar	get zoı	ne			
et					[	ie "	F.	Target within 1.5 x Ht.	Occupancy rate	Practical to move target?	5~
Target	Target description					t wit	argel in 1x	t wit	1-rare 2 - occasional	ical e tar	icti Fical
-	,					Target within drip line	Target within 1 x Ht.	farge 1.5	3 – frequent 4 – constant	Praci	Restriction practical?
1	House to east				$\overline{}$		1		4	N	N
2	Traffic on road to wes	st				<b>✓</b>	· /	<u>,</u>	1	N	N
3	House to northeast						· /	<u>,</u>	4	N	N
4	Power-lines to west					$\neg \dagger$		· /	4	N	N
		Site Factor	rs				_	•	<u> </u>		
History	of failures Branch failures ~3-5"			Тор	ography	Flat 🔳	Slope	e 🗆	%	Aspect	:
	nges None ■ Grade change □ Site clearing □ Changed soil										
Soil con	ditions Limited volume ■ Saturated □ Shallow □ Compac	ted 🗖 Pave	ment over	roots 🗆	%	Desc	cribe _	Plante	er 2' from tr	unk	
Prevaili	ng wind direction west Common weather Strong winds	s∎ Ice∎ S	Snow■ H	eavy rair	Des	cribe_	Ice/sr	now o	n 2 year int	erval	
	Tree Hea	Ith and Sp	ecies Prof	ile							
	ow □ Normal ■ High □ Foliage None (seasonal) □			Norma	<u>95</u> %	6 C	hlorot	ic	% Ne	crotic <u></u>	5%
Pests_	failure profile Branches ■ Trunk □ Roots ■ Describe Ov			ailuras i	root plate	failu	ro				
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	lensity Sparse ☐ Normal ■ Dense ☐ Interior branches										
	or planned change in load factors										
	Tree Defects and Conditi	ons Affecti	ing the Lik	celihood	of Failu	re					
	— Crow	n and Br	anches	_							
( ,,	nbalanced crown □ LCR 70 %								Lightning da	тада Г	٦ ١
	ead twigs/branches 5 % overall Max. dia. 2"								Included		
Ві	roken/Hangers Number 1 Max. dia. 4"								Meddaed		
0	ver-extended branches		oranch failu						r branches pr		
1	runing history		sing bark $\square$						od damage/		
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	ush cuts   Other Stub cuts		growth								_
	lain concern(s) Overextended branches, hanger		0								
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	— Trunk —			_	Roots	and	Roo	t Co	llar —		
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1	ghtning damage ☐ Heartwood decay ☐ Conks/Mushrooms ☐	- 1	Cracks	Cut/D	amaged	roots	<b>D</b> is	tance	from trunk		_
1	avity/Nest hole % circ. Depth Poor taper C	- 1	Root plat	te lifting l		Soil	l weak	ness [			
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	Crown	⊦	lange	er		4"	50'	2	N/A	$\bigcirc$	$\bigcirc$	$\bigcirc$	$oldsymbol{\odot}$	$\circ$	0		$\bigcirc$	0	$\odot$	0	$\bigcirc$	0	$\bigcirc$	0	$\odot$	Mod
2	and Branch	_				4'	50'	3	N/A	$\bigcirc$	O	0	$\odot$	0			0	Ю		0	0	Ю	0	0	O	Mod
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Client C	GSI		Date 4	/6/23		Tir	me 1620		
	s/Tree location DU-15			Tree no. DI	J-15-2		_ Sheet <u>1</u>	of	1
	ecies llex aquifolium	dbh_6" multistem	Height	10	Crow	vn spi	read dia. <u>8</u>		
Assesso	or(s) Cory Shields	Time frame 3 Yea	rs	Tools used P	robe, ma	allet, b	inoculars		
		Target Assessment							
Target number	Target desc	ription		Target within drip line	Target Target within 1 x Ht.	Target within 6 1.5 x Ht.	Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	House to	east			<b>1</b>	✓	4	N	N
2									
3									
4									
		Site Factors							
Site cha Soil con	nges None ■ Grade change □ Site clearing □ Cha ditions Limited volume □ Saturated □ Shallow □ ng wind direction west Common weather Stro	Compacted ☐ Pavement of	t cuts□ De ver roots□ I Heavy rair	escribe% Des	cribe _				
Pests_	ow □ Normal ■ High □ Foliage None (se	Abiotic		al <u>98</u> % (				crotic <u>2</u>	2%
opecies	failure profile Branches ☐ Trunk ☐ Roots ☐ Des	Load Factors							
Wind ex	posure Protected ☐ Partial ■ Full ☐ Wind funn			Relative crov	vn size	Sma	II□ Mediu	m 🔳 l	arge C
	density Sparse□ Normal■ Dense□ Interior b								
	or planned change in load factors								
	Tree Defects and	Conditions Affecting the	Likelihood	of Failure					
	_	Crown and Branch	26 —						
D Bi O <b>P</b> i Ci Ri Fl	nbalanced crown □ LCR 100 % ead twigs/branches ■ 2 % overall Max. dia. ≤ roken/Hangers Number _ Max. dia. ≤ ver-extended branches ■ runing history rown cleaned □ Thinned □ Raised educed ■ Topped □ Lion-tailed lush cuts □ Other _ MAx.  Main concern(s) N/A	Cracks  Codominant  Weak attachment Previous branch  Dead/Missing bar	ailures 🗆 _ Cank	ers/Galls/Burls	C	Cavity/ Similar	Included Nest hole r branches prood damage/	d bark [ % cir resent [ decay [	rc.
\	oad on defect N/A ■ Minor □ ikelihood of failure Improbable ■ Possible □	_							- - -
Co Sa Li <sub>l</sub> Ca Le Re M	— Trunk —  ead/Missing bark □ Abnormal bark texture bodominant stems □ Included bark □  apwood damage/decay □ Cankers/Galls/Burls □ Sa  ghtning damage □ Heartwood decay □ Conks/Must  avity/Nest hole % circ. Depth Pool  ean ° Corrected?  esponse growth  avid on defect N/A ■ Minor □ Moderate □ Si	Cracks  Dead ap ooze  Ooze nrooms  Crack or taper  Root  Resp Main	buried/Not  Cut/E plate lifting  conse growth concern(s)	Cavity 🗖 Damaged roots	epth C % cire Dis	conks/ c. tance	_ Stem gi 'Mushrooms from trunk □		_ _ _

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per								l P					т			_	Failu	ıre &	Imp	act	Con	iseq	uence	s	
E							jc	number		Fa	ilure		╙	Imp	act	4			atrix 1		_		_	4	Risk
Condition number						ze	Fall distance			aple	.   .	ıt e	l .	Ш	١	-		hat		듷	흥		ant	1	rating
뺼			Con	dition	s	Part size	ۊ	Target	Target	Improbable	Possible	Probable Imminent	Very low		Medium	ڍ	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	severe	of part (from
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	elihood			Like	lihood	of Imp	acting	Targe	t			+			-	+			+	-		+	_		
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L	ikelihood	of			Cons	equen	ces of	Failur	9																
	lure & Im	_	Negl	igible	Min	or	Signi	ficant	Severe			+				$^{+}$			+	$\dashv$		+	+		
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Ove	rall tree	risk ra	ting	Low	Mo	derate	□ +	ligh □	Extreme			Wo	rk pr	riorit	ty :	1 🗆	2 l		3 🗆	4					
	rall resid		_	Low		derate			Extreme						_						An	nua	l afte	r wc	ork
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				-					es DRoot coll																



Client G	SSI		Date 4/6/23		Tii	me_1630		
	/Tree location DU-15		Tree	no. DU-15-3		_ Sheet 1_	of	1
	/Tree location DU-15 ecies Sequoia sempervirens	dbh_1"	Height <u>5'</u>	Cro	wn sp	read dia. <u>4</u>		
Assesso	r(s) Cory Shields	Time frame 3 Ye	ars Tools	used				
		Target Assessment						
Target number	Target description	n		drip line Target within 1x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A				+-			<del>                                     </del>
2								
3					$\top$			
4								
		Site Factors		'		<b>'</b>		•
Site cha	nges None■ Grade change□ Site clearing□ Changed ditions Limited volume□ Saturated□ Shallow□ Coming wind direction west Common weather Strong w	pacted Pavement	ot cuts ☐ Describe_ over roots ☐ ■ Heavy rain ■ D	% Describe				
Pests	ow □ Normal ■ High □ Foliage None (seasona	Abiotic			otic	% Ned	crotic <u>2</u>	2%
species	railure profile Branches  Trunk  Roots  Describe	Load Factors	odominant branch	iaiiuies				
Crown d	posure Protected □ Partial □ Full ■ Wind funneling lensity Sparse □ Normal ■ Dense □ Interior branch proplanned change in load factors □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	nes Few□ Normal■	Dense □ Vines/	Mistletoe/M				
	Tree Defects and Con	ditions Affecting th	e Likelihood of Fai	lure				
De Br O' <b>Pr</b> Cr Re Fl	— Crembalanced crown □ LCR 100 % ead twigs/branches ■ 2 % overall Max. dia. <0.5" roken/Hangers Number Max. dia ver-extended branches ■ runing history rown cleaned □ Thinned □ Raised □ educed ■ Topped □ Lion-tailed □ ush cuts □ Other	Codominant  Weak attachmer Previous branch Dead/Missing ba Conks	nts  failures  Cankers/Gal	s/Burls 🏻	Cavity/ Simila Sapwo	Included /Nest hole r branches pr	d bark [ % cir resent [ decay [	c.
\	oad on defect N/A ■ Minor □ Mode kelihood of failure Improbable ■ Possible □ Proba	-	]					- -
Co Sa Lig Ca Le Re M —	Trunk —  Pad/Missing bark □ Abnormal bark texture/color  Abnormal bark te	Resp.   Main   Load	ar buried/Not visible	□% c d roots □ D Soil wea	Conks/ irc. istance kness	Stem gir /Mushrooms e from trunk _ □		_

									Risk Cate	gorizat	ion														
		T											ı	ikeli	ihoo	d									
Condition number								ě	i i	Fail	ure			Impa	act			ure 8			Cor	nseq	uen	ces	
ă							nce	number		_	ш.е П	$\dashv$		IIIIP		$\dashv$	(f	rom N	latrix	1)	Н			Н	Risk
tion						ize	Fall distance			Improbable Possible	e	ent	3		٤		_	vhat		kely	ple		ant		rating
nd:				ondition		Part size	₽	Target	Target	Improbal Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	of part (from
ŏ	Tree pa	art	01	concer	n	<u>a</u>	120	12	protection					٩	Σ	크	$\overline{}$	s (	111	× (		Σ	Sig.	s	Matrix 2)
	N/A	1	N/A							$\overline{\mathbb{O}}$	$\bigcirc$	$\bigcirc$	Q	Q	$\bigcirc$	Q	$\odot$	O	Ō	O	<u> </u>	Q	Ō	Q	
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		inood	mauri					_		_						T			$\top$						
	elihood Failure		1		elihood	$\overline{}$		$\overline{}$		-	-	+	$\dashv$		+	+			+			+	$\dashv$		
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Imp	robable	Unlil	kely	Unlil	kely	ı	Unlikely	/	Unlikely		-	+	$\dashv$		+	+			+			+	$\dashv$		
Matr	ix 2. Risk	rating	matri	x.						_	_	_	_		-	4			_			+	_		
L	ikelihood	of			Cons	equer	ces of	Failur	9																
Fai	ure & Im	pact	Ne	gligible	Min	or	Signi	ficant	Severe																
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Data	□Final	■ Pr	elimir	nary <b>Ad</b>	vanced	asses	sment	neede	ed ■No □Yes-	Type/Re	easor	n													
				-					es   Root coll																



Client G	SI	Date 4/6/2	23		Γime_1630		
	/Tree location DU-15		Tree no. DU	J-15-4	Sheet <u>1</u>	of	1
	Ccies Calocedrus decurrens dbh 1"	Height <u>3</u>	<u>'</u>	Crown	pread dia. <u>3</u> '		
Assessoi	r(s) Cory Shields Time frame 3	Years T	ools used_				
	Target Assessmen	nt					
Target number	Target description		Target within drip line	Target as within 1 x Ht.	Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A			-1-	+		
2	,				+		$\vdash$
3							
4							
	Site Factors						
Soil cond Prevailin	Itions Limited volume ☐ Saturated ☐ Shallow ☐ Compacted ☐ Pavements wind direction west Common weather Strong winds ☐ Ice ☐ Snow Tree Health and Specie	nt over roots □ _ v ■ Heavy rain I s Profile	% Des	cribe lce/snow	on 2 year int	erval	
Pests gra	ow □ Normal ■ High □ <b>Foliage</b> None (seasonal) □ None (dea ass growing into foliage Abiotic failure profile Branches ■ Trunk □ Roots □ Describe Branch Inclusion,				% Ne	crotic <u>s</u>	5%
	Load Factors						
Wind ex	posure Protected ☐ Partial ☐ Full ■ Wind funneling ☐	R	elative crow	<b>/n size</b> Sn	nall <b>■</b> Mediu	m 🗆 L	_arge □
	ensity Sparse ☐ Normal ■ Dense ☐ Interior branches Few ☐ Normal			oe/Moss [	J		
Recent o	r planned change in load factors						
	Tree Defects and Conditions Affecting t	the Likelihood o	of Failure				
De Bri Ov <b>Pr</b> i Cri Re Flu	codominant	] ents □ ch failures □ bark □ Canker:	s/Galls/Burls wood decay	Cavit Simi D Sapv	Included y/Nest hole lar branches p wood damage/	d bark [ % cir resent [ 'decay [	rc.
\	ad on defect N/A ■ Minor □ Moderate □ Significant Relihood of failure   Improbable ■ Possible □ Probable □ Imminent						- - -
Co Sa  Lig Ca Lea Re	dominant stems □ Included bark □ Cracks □ Depended damage/decay □ Cankers/Galls/Burls □ Sap ooze □ Ochtning damage □ Heartwood decay □ Conks/Mushrooms □ Cracks □ Poor taper □ Roman° Corrected? Roman° Corrected? Reponse growth Reponse growth Reponse growth □ Reponse growt	ollar buried/Not vi ead □ □ □	Decay   Favity   maged roots  Soi	pth Conk _% circ. □ Distandil weaknes	Stem gi		

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	s/Tree location DU-15		Tre	e no. DU-15-	5	_ Sheet <u>1</u>	of	1
	S/Tree location DU-15 Pecies Calocedrus decurrens	dbh_1"	Height <u>3'</u>	Cre	own sp	read dia. <u>3'</u>		
Assesso	r(s) Cory Shields	Time frame 3 Ye	ars Too	s used				
		Target Assessment	:					
Target number	Target description	n		drip line Target		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A			<del>                                     </del>	+			
2				+ +				
3								
4								
		Site Factors		•				
Site cha	nges None ■ Grade change □ Site clearing □ Changed ditions Limited volume □ Saturated □ Shallow □ Coming wind direction west Common weather Strong w	pacted 🗖 Pavement	ot cuts □ Describe over roots □ ■ Heavy rain ■	e% Describe	e			
Pests gr	ow □ Normal ■ High □ Foliage None (seasona ass growing into foliage failure profile Branches ■ Trunk □ Roots □ Describe	Abiotic			otic	% Ned	crotic <u>5</u>	5%
opecies	Tallate profile branches - Iralik - Noots - Describe	Load Factors		114114100				
Wind ex	posure Protected ☐ Partial ☐ Full ■ Wind funneling		Rela	tive crown si	<b>ze</b> Sma	ıll∎ Mediu	m 🗆 L	arge □
	lensity Sparse ☐ Normal ■ Dense ☐ Interior branch							
Recent o	or planned change in load factors							
	Tree Defects and Con	ditions Affecting th	e Likelihood of F	ailure				
	— Cr:	own and Branch	ies —					
De Bi O' <b>Pr</b> Cr Re Fl	nbalanced crown □ LCR 60 % ead twigs/branches ■ 5 % overall Max. dia. <0.5" roken/Hangers Number _ Max. dia  ver-extended branches □ runing history rown cleaned □ Thinned □ Raised □  educed □ Topped □ Lion-tailed □  ush cuts □ Other _  lain concern(s) N/A	Cracks  Codominant  Weak attachmer Previous branch Dead/Missing ba	nts   failures   Cankers/G	alls/Burls 🗆 _	Cavity/ Simila Sapwo	Included /Nest hole r branches pr bod damage/	d bark [ % cir resent [ decay [	c.
\	oad on defect N/A ■ Minor □ Mode kelihood of failure Improbable ■ Possible □ Proba	-	]					
Co Sa Lig Ca Le Re M —	— Trunk —  ead/Missing bark □ Abnormal bark texture/color bodominant stems □ Included bark □ Crace approach approach and a stems □ Cankers/Galls/Burls □ Sap ood ghtning damage □ Heartwood decay □ Conks/Mushroon avity/Nest hole % circ. Depth Poor tap tean ° Corrected?  esponse growth  ain concern(s)  and on defect N/A ■ Minor □ Moderate □ Significate kelihood of failure	Resp.   Maii   Load	ar buried/Not visib d □ Deca e □ Cavit ks □ Cut/Dama	y   y   ged roots   Soil we	Conks/ circ. Distance akness l	Stem gir /Mushrooms  from trunk  □		_

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cs /Tree location DU-15	_ Date_ <del>-</del> /	Troo no [	DU-15-6	— '''	Shoot 1	of	1
Date 4/8/23   Time 1/30   Ti							
or(s) Cory Shields Time frame 3 Years	_ Height.	Tools used	Probe, n	nallet, b	inoculars		
Target Assessment		Т,	To react to	20	Γ	_	_
Target description					rate 1-rare 2-occasional 3-frequent	Practical to move target?	Restriction practical?
Shed to northeast			<b>√</b>	<b>1</b>	4	N	N
Fence to south and east		✓	<b>√</b>	<b>✓</b>	4	N	N
Chicken coop to northwest		✓	1	<b>1</b>	4	Υ	N
Site Factors			'			•	•
of failures Branch failures ~3-5"	Тор	ography Flat	■ Slop	e□ _	%	Aspect	t
anges None ■ Grade change □ Site clearing □ Changed soil hydrology □ Root cu	its De	scribe					
nditions Limited volume □ Saturated □ Shallow □ Compacted ■ Pavement over	roots 🗆	% De	escribe	grave	el piled alon	g soutl	h trunk
ing wind direction west Common weather Strong winds ■ Ice ■ Snow ■ H	eavy rain	Describ	e_lce/s	now o	on 2 year int	erval	
Tree Health and Species Prof	ïle						
						crotic _	<u>10</u> %
Abiotic Abiotic	ailures						
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Tree Defects and Conditions Affecting the Lil	kelihood	of Failure					
							_ \
Dead twigs/branches ■ 10 % overall Max. dia. 3"  Broken/Hangers Number Max. dia. Weak attachments ■  Pruning history  Crown cleaned □ Thinned □ Raised □ Conks □  Reduced ■ Topped □ Lion-tailed □ Conks □  Flush cuts □ Other Response growth Ar	sprou ires  Canke	ts at old cut verextender ers/Galls/Burl	sds	Cavity/ Simila Sapwo	Included /Nest hole r branches prood damage/	d bark l % cir resent l 'decay l	rc.
						nor	- - -
—Trunk —	_	Roots an	d Roc	ot Co	ollar —		
Codominant stems ■ Included bark □ Cracks □ Dead □ Sapwood damage/decay □ Cankers/Galls/Burls □ Sap ooze □ Capthing damage □ Heartwood decay □ Conks/Mushrooms □ Cavity/Nest hole % circ. Depth Poor taper □	] ] Cut/D te lifting [ e growth	Decay  Cavity  Canaged roof S	% ci ts □ Di oil wea	Conks/ rc. stance kness	/Mushrooms e from trunk	<b>.</b>	_
	Target Assessment  Target Assessment  Target Assessment  Shed to northeast Fence to south and east Chicken coop to northwest  Site Factors  Of failures Branch failures ~3-5"  anges None	Target Assessment    Target Assessment	Target Assessment  Target Assessment  Target Assessment  Target Assessment  Target Assessment  Shed to northeast  Fence to south and east  Chicken coop to northwest  Chicken coop to northwest  Site Factors  Of failures Branch failures ~3-5"  Topography Flat  Target Assessment  Topography Flat  Topography Flat  Target Assessment  Tence to south and east  Chicken coop to northwest  Site Factors  Of failures Branch failures ~3-5"  Topography Flat  Target Assessment  Topography Flat  Target Assess	Target Assessment  Topography Flat ® Slop  Assessment To	Target Assessment  Torget Carle  Solver Assessment Torget Carle  Assessment  Topography Flate Solver  Topography Flate Solver  Topography Flate Solver Topography Flate Solver  Topography Flate Solver Topography Flate Solver Topography Flate Solver Topography F	Target Assessment  Target Assess	Target Assessment  Target Assessment  Target Assessment  Target description  Shed to northeast  Shed to northeast  V V V V 4 N  Fence to south and east  Chicken coop to northwest  V V V V 4 N  Fence to south and east  Chicken coop to northwest  Site Factors  of failures Branch failures -3-5*  Inges None  Grade change  Site dearing  Aspectation  Aspectation  Tree Health and Species Profile  Inges None  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  Normal  High  Foliage None  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seadon  Normal  High  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seasonal  Normal  High  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seasonal  Normal  High  Foliage None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seasonal  Normal  High  Foliage None  Seasonal  None  Seasonal  Normal  High  Foliage  Normal  High  Foli

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Client _G	GSI		Date 4/	6/23		Tii	_Time_1810					
	s/Tree location <u>DU-15</u>			_ Tree no.	DU-15-7	of	1					
	ecies Malus domestica 'Fuji' dbh 1"		Height									
Assesso	r(s) Cory Shields Time fr	ame 3 Years		Tools used	l							
	Target Ass	essment										
Target number	Target description			Target within	drip line Target Target within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?			
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Site cha	of failures N/A  nges None ■ Grade change □ Site clearing □ Changed soil hydrolo  ditions Limited volume □ Saturated □ Shallow □ Compacted □ Pa  ng wind direction west Common weather Strong winds ■ Ice ■  Tree Health and	ogy□ Root cut avement over i ■ Snow■ He	s□ De roots□ avy rain	scribe% [	escribe							
Pests Species : Wind ex	ow ☐ Normal ■ High ☐ Foliage None (seasonal) ■ No	one (dead)  iotic clusion actors o east	Norma	Relative cr	own size	e Sma	all ■ Mediu	m 🗆 L	.arge □			
	pr planned change in load factors				etoe/ivi	oss ப						
	Tree Defects and Conditions Affe											
				Of Famure								
De Br O' <b>Pr</b> Cr Re Fl	ead twigs/branches% overall Max. dia Codom roken/Hangers Number Max. dia Weak a ver-extended branches Previous runing history  rown cleaned Thinned Raised Dead/Noted Conks	inant  attachments  us branch failur Missing bark	es 🗆 _ Canke Hea	ers/Galls/Bu rtwood dec	rls 🗆	Cavity/ Simila Sapwo	Included /Nest hole r branches prood damage/	d bark [ % cir resent [ decay [	rc.			
\	pad on defect N/A ■ Minor □ Moderate □ Sig kelihood of failure   Improbable ■ Possible □ Probable □ Im								- - -			
Co Sa Lig Ca Le Re M	— Trunk —  ead/Missing bark □ Abnormal bark texture/color □ codominant stems □ Included bark □ Cracks □ compwood damage/decay □ Cankers/Galls/Burls □ Sap ooze □ coghtning damage □ Heartwood decay □ Conks/Mushrooms □ control of the composition of the compositi	Dead  Ooze  Cracks  Root plate Response Main cone	Cut/E e lifting I growth cern(s) -		Depth% ci% ci Soil wea	Conks/ rc. stance kness	Stem gi /Mushrooms • from trunk		- - -			

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l o	Tree pa	art		concer	- I	Part size	<u>=</u>	Target	Target protection	Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from Matrix 2)
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Address/Tree location DU-15  Tree species Pyrus communis 'Bartlett' dbh 1"	Date 4/6/23 Time 1815  Tree no. DU-15-8 Sheet 1 of 1  Height 4' Crown spread dia. 3'  Tools used
Tree species Pyrus communis 'Bartlett' dbh 1"  Assessor(s) Cory Shields Time frame	Height <u>4'</u> Crown spread dia. <u>3'</u>
	3 Years Tools used
Target Assessn	10013 4364
	nent
Target description	Target within drip line drip line from within 1x H. Target within
1 N/A	<u> </u>
2	
3	
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Site Factors	
History of failures N/A  Site changes None ■ Grade change □ Site clearing □ Changed soil hydrology □  Soil conditions Limited volume □ Saturated □ Shallow □ Compacted □ Pavem  Prevailing wind direction west Common weather Strong winds ■ Ice ■ Sr  Tree Health and Spec	ent over roots □% Describe ow ■ Heavy rain ■ Describe <u>lce/snow on 2 year interval</u>
Vigor       Low       □       Normal       ■       High       □       Foliage       None (seasonal)       ■       None (seasonal)         Pests       ■       Abiotic         Species failure profile       Branches       ■       Trunk       □       Roots       □       Describe       Branch Inclusion	
Load Factor	
Wind exposure Protected ☐ Partial ■ Full ☐ Wind funneling ☐ Fence to eas	
Crown density Sparse ☐ Normal ■ Dense ☐ Interior branches Few ☐ Norm	
Recent or planned change in load factors	
Tree Defects and Conditions Affectin	g the Likelihood of Failure
— Crown and Bra	nches —
Unbalanced crown	Lightning damage □
Load on defect N/A ■ Minor □ Moderate □ Signific Likelihood of failure   Improbable ■ Possible □ Probable □ Immine	ant
Sapwood damage/decay	— Roots and Root Collar —  Collar buried/Not visible □ Depth Stem girdling □  Dead □ Decay □ Conks/Mushrooms □  Ooze □ Cavity □ % circ.  Cracks □ Cut/Damaged roots □ Distance from trunk  Root plate lifting □ Soil weakness □  Response growth  Main concern(s) Surface root  Load on defect N/A ■ Minor □ Moderate □ Significant □  Likelihood of failure

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Client GSI				Date 4	6/23			Tir	me 1820			
Address/Tree location DL	-15				Tree n	10. <u>DU</u>	-15-9		_ Sheet <u>1</u>	t <u>1</u> of <u>1</u>		
Tree species Pyrus pyrifolia		dbh_1'	'	vn spi	read dia. <u>2'</u>							
Assessor(s) Cory Shields		Time	frame 3 Years		Tools u	sed						
		Target As	sessment									
Target number	Tar	get description					Target tab within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?	
1		N/A										
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		Site Fa	ictors						•		•	
History of failures N/A  Site changes None ■ Grad  Soil conditions Limited voluments of the conditions Limited voluments of the conditions of the condition	ume Saturated Shal vest Common weath	llow ☐ Compacted ☐ er Strong winds ■ Ice Tree Health and	ogy □ Root cu Pavement over ■ Snow ■ H d Species Prof	its□ De roots□ eavy rair file	escribe% n ■ Des	6 Desc	cribe _ lce/sr	now o	n 2 year int	erval		
Pests			biotic								^	
Species failure profile Bran	iches ■ Trunk □ Roots	☐ Describe Branch Ir	clusion									
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Wind exposure Protected Crown density Sparse ☐ N											_	
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Dead twigs/branches	Thinned □ Rai Topped ■ Lio Other	. dia Codo . dia Weak Previous sed	s □ minant ■ attachments □ ous branch failu /Missing bark □	ures 🗆 _ Cank	ers/Galls/ rtwood o	Burls	_ ( _ !	Cavity/ Similar Sapwo	Included Nest hole r branches pr ood damage/	d bark [ % cir resent [ decay [	c.	
Load on defect Likelihood of failure	N/A ■ Minor Improbable ■ Possible		ignificant □ _ mminent □ _								- - -	
Lightning damage ☐ H Cavity/Nest hole  Lean° Correcte  Response growth  Main concern(s)		Is Sap ooze Say Sap ooze Poor taper Sap Poor taper Sap Sap ooze Sap	Dead D Ooze D Cracks D Root pla Respons Main cou	uried/Not  Cut/[ Cut/[ te lifting   e growth	visible C Decay C Cavity C Damaged  N/A	De  Toots  Soi	pth ( _% cir Dis	Conks/rc. stance kness [	Stem gir Stem gir Mushrooms from trunk		_	

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Client GSI		_ Date 4/6/23		Tir	ne_1825		
Address/Tree location DU-15		Tree r	10. DU-15-10	)	_ Sheet <u>1</u>	of	1
Address/Tree location DU-15 Tree species Prunus maritima	dbh_ <u>1"</u>	_ Height <u>3'</u>	Crov	wn spi	read dia. 2'		
Assessor(s) Cory Shields	Time frame 3 Years	Tools u	sed				
	Target Assessment						
Target descr	ription		Target within drip line Target Target within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1 N/A				<del>Γ</del>			<del></del>
2							
3							
4							
	Site Factors		•		•		•
Site changes None  Grade change  Site clearing  Chan Soil conditions Limited volume  Saturated  Shallow  Prevailing wind direction west Common weather Stron	Compacted ☐ Pavement oveng winds ■ Ice ■ Snow ■ Free Health and Species Pro	uts □ Describe r roots □	6 Describe cribe <b>Ice/s</b>	now o	n 2 year int	erval	
Vigor Low □ Normal ■ High □ Foliage None (sea Pests	Abiotic					crotic _	%
Species failure profile Branches I frunk in Roots in Desi	Load Factors						
Wind exposure Protected ☐ Partial ■ Full ☐ Wind funne			crown size	• Sma	II■ Mediu	m□ L	arge □
Crown density Sparse ☐ Normal ■ Dense ☐ Interior br							
Recent or planned change in load factors							
Tree Defects and	Conditions Affecting the Li	kelihood of Failu	ire				
_	Crown and Branches	_					
Unbalanced crown	Cracks □  Codominant ■  Weak attachments  Previous branch fail  Dead/Missing bark  Conks □	□ures □ □ Cankers/Galls/ Heartwood o	/Burls □	Cavity/ Similai Sapwo	Included Nest hole r branches pr ood damage/	l bark [ % cir resent [ decay [	c.
Load on defect N/A ■ Minor □ N Likelihood of failure Improbable ■ Possible □ F	ū						- -
— Trunk —  Dead/Missing bark □ Abnormal bark texture Codominant stems □ Included bark □ Sapwood damage/decay □ Cankers/Galls/Burls □ Sa Lightning damage □ Heartwood decay □ Conks/Mush Cavity/Nest hole % circ. Depth Poo Lean ° Corrected?  Response growth Main concern(s)  Load on defect N/A ■ Minor □ Moderate □ Sig Likelihood of failure	Cracks	— Roots uried/Not visible □ □ Decay □ □ Cavity □ □ Cut/Damaged ate lifting □ se growth uncern(s) defect N/A ■ od of failure	Depth ( ) ( ) % cii roots Di Soil weal	Conks/ rc. stance kness I	_ Stem gir /Mushrooms from trunk		- -

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1 2							)Ce	number		Fa	ilure	<del>.</del>	╙	Impa	ect	4			atrix 1		_		_	4	Risk
Condition number						ize	Fall distance	2		Improbable	۽ ا ه	<u></u>			٤	1		hat		듷	ple		ant	ı	rating
ng:				dition	- I	Part size	ij	Target	Target	Improbal	Possible	Imminent	Very low	l ₃ l	Medium	뉴	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant		of part (from
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Client GSI			0	ate 4/6/23			Time_1830		
	ion DU-15			Tree	no. DU	-15-11	Sheet <u>1</u>	of	1
Tree species Prunus		dbh_1"	H	leight <u>4'</u>		Crown	spread dia. 2'		
Assessor(s) Cory Shi	elds	Time fra	me 3 Years	Tools	used				
		Target Asse	ssment						
Target number	т	arget description			-	Target as within 1x Ht. or Target within	Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1		N/A			+	<del>-   -</del>			<del></del>
2					$\vdash$				
3					$\Box$	$\neg$			
4					$\Box$				
		Site Fact	ors				<u>'</u>		•
Soil conditions Limi Prevailing wind dire	Grade change ☐ Site clearing ted volume ☐ Saturated ☐ Shoction West ☐ Common weath	allow□ Compacted□ Par ther Strong winds■ Ice■ Tree Health and S	vement over ro Snow ■ Hea pecies Profile	oots□ vy rain■ De	% Desc scribe_	ribe lce/snov	w on 2 year int	erval	
Pests		Abic	otic					LIOUC_	
Species failure profi	e Branches ■ Trunk □ Root		ctors						
Wind exposure Pro	tected □ Partial □ Full ■ W				e crow	n size S	mall ■ Mediu	m□ l	arge [
	se□ Normal■ Dense□ II								
	nange in load factors					•			
	Tree Def	ects and Conditions Affec	cting the Like	lihood of Fail	ure				
		— Crown and E	Branches —						$\overline{}$
Dead twigs/br	y H □ Thinned □ R □ Topped ■ Li □ Other	Cracks E  ax. dia  ax. dia  Weak at  Previous  aised	nant  tachments  s branch failure issing bark	s 🗆Cankers/Gall:	s/Burls [	_ Cavi _ Sim _ Sap	Lightning da Included ity/Nest hole nilar branches prowood damage/	d bark [ % cir resent [ decay [	c.
Load on defective Likelihood of	t N/A ■ Mino failure Improbable ■ Possi	•							- -
Lightning dama Cavity/Nest ho Lean° C Response grov Main concern(	ems	urls  Sap ooze  nks/Mushrooms  Poor taper	Dead  Ooze  Cracks  Root plate  Response g Main conce	ed/Not visible Decay Cavity Cut/Damage lifting  growth  growth  grn(s)   fect N/A	□ Dep □ □ □ Soil	oth Con _% circ. ☐ Distar weakne	Collar — Stem gi ks/Mushrooms nce from trunk ss   derate  Sign		_

								Risk Cate	gorizat	ion										
Γ.	Ι	$\top$										Likelil	nood				т			Г
ber							ē		Fail		т			Faile	ure &	Impac	t Co	nseq	uences	ı
l E						Juce	number			ure T	╄	Impa	Ct T	(fi	rom M	atrix 1)	╄	_		Risk
Condition number					ize	Fall distance			Improbable Possible	e   t		$  \cdot  $	٤		/hat	<u></u>	음	Ш	ant	rating
ngi.			Conditi		Part size	ij	Target	Target	Improbal Possible	Probable Imminent	Very low		Medium High	Unlikely	Somewhat	Likely Very likely	Negligible	Minor	Significant Severe	of part (from
3	Tree pa	art	of conc	ern	P <sub>2</sub>	Fa	Та	protection		F	<u>ا</u> رگ	Low	Med High	5	S	<u>₹</u>   \$	+-	Σ	Se Sig	Matrix 2)
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Data	□Final	■ Prel	iminary <i>i</i>	Advanced	assess	ment i	neede	ed ■No □Yes-	Type/Re	ason _										
Insp	ection lir	nitatio	ns 🗆 None	□Visibil	itv□∆	ccess	□Vin	es   Root coll	ar burie	d Desc	ribe									



Client G	SI		Date_4	6/23		Tir	ne 1835		
	/Tree location DU-15			Tree noD	U-15-12		_ Sheet 1	of	1
	ecies Ficus carica	dbh_ <u>1"</u>	Height	2'	_ Crow	n spi	read dia. <u>2'</u>		
Assesso	r(s) Cory Shields	Time frame 3	Years	Tools used_					
		Target Assessme	ent						
Target	Target description	1		Target within drip line	Target Target within 1 x Ht.	Target within 0 1.5 x Ht.	Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A			<del>-  -</del>	+ 1	_			
2									
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		Site Factors							<u> </u>
Site char Soil cond Prevailin	nges None ■ Grade change □ Site clearing □ Changed  ditions Limited volume □ Saturated □ Shallow □ Comp  ng wind direction west Common weather Strong wi  Tree H	pacted ☐ Pavement nds ■ Ice ■ Sno lealth and Specie	Root cuts ☐ Dent over roots ☐ w ☐ Heavy raines Profile	escribe% De	scribe _ lce/sn	iow o	n 2 year int	erval	
Pests	ow □ Normal ■ High □ Foliage None (seasonal	Abiotic _						crotic _	%
opecies i	and prome branches I mank in Noots in Describe.	Load Factors							
Crown d	posure Protected ☐ Partial ☐ Full ■ Wind funneling lensity Sparse ☐ Normal ■ Dense ☐ Interior brancher planned change in load factors	<b>es</b> Few□ Norma	I■ Dense□	Vines/Mistle					
	Tree Defects and Cond	ditions Affecting	the Likelihood	of Failure					
De Br Ov <b>Pr</b> Cr Re Flu	mbalanced crown □ LCR 50 % ead twigs/branches □% overall Max. dia oken/Hangers Number Max. dia ver-extended branches □ uning history own cleaned □ Thinned □ Raised □ educed □ Topped ■ Lion-tailed □ ush cuts □ Other ain concern(s) N/A	Codominant I Weak attachm Previous bran Dead/Missing Conks	nents  ch failures  chark  Cank	ers/Galls/Burls	Ci	avity/ Similar Sapwo	Included Nest hole r branches pr ood damage/	l bark [ % cir esent [ decay [	c.
1	ad on defect N/A ■ Minor □ Mode kelihood of failure   Improbable ■ Possible □ Probal	-	t 🗆						- -
Co Sa Lig Ca Le: Re M:	Trunk —  rad/Missing bark □ Abnormal bark texture/color dominant stems □ Included bark □ Crack pwood damage/decay □ Cankers/Galls/Burls □ Sap ooz thtning damage □ Heartwood decay □ Conks/Mushroom vity/Nest hole % circ. Depth Poor tape an ° Corrected? sponse growth ain concern(s)  ad on defect N/A ■ Minor □ Moderate □ Significate stelihood of failure probable □ Possible □ Probable □ Imminent	D   D   D   D   D   D   D   D   D   D	pollar buried/Notead   oze   oze   cracks   Cut/Inpot plate lifting esponse growth lain concern(s).	Decay ☐ Cavity ☐ Damaged root ☐ So	epth Co% circo s D Dist oil weaks	onks/ c. tance ness [	Stem gir 'Mushrooms  from trunk   rate		- - - -

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						of root	distur	banc	es and is an																
									BH, a 5" radius											\					
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Client <u>G</u>	SSI		Date 4/	6/23		Tii	ne 1840		
	:/Tree location DU-15			_ Tree no	DU-15-13	3	_ Sheet <u>1</u>	of	1
	ecies Prunus persica dbh 1	1"	Height	5'	Cro	wn sp	read dia. <u>2'</u>		
Assesso	r(s) Cory Shields Time	frame 3 Years		Tools used					
	Target A	ssessment							
Target number	Target description			Target within	Target ox within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A			<del>-  </del> -	+	<u> </u>			
2					+				
3					$\top$	$\vdash$			$\vdash$
4					$\top$	$\vdash$			
	Site F	actors					l .		
Site char	of failures N/A  nges None ■ Grade change □ Site clearing □ Changed soil hydro  ditions Limited volume □ Saturated □ Shallow □ Compacted □  ng wind direction west Common weather Strong winds ■ Ico  Tree Health an	ology    Root cut Pavement over	ts□ De roots□ eavy rair	% D	escribe				
Pests	failure profile Branches ■ Trunk □ Roots □ Describe <u>Branch I</u>	Abiotic						crotic _	%
Wind ex	posure Protected □ Partial ■ Full □ Wind funneling □ Fence	to north		Relative cro	wn size	e Sma	II■ Mediu	m 🗆 L	arge 🗆
Crown d	lensity Sparse ☐ Normal ■ Dense ☐ Interior branches Few ☐	I Normal ■ Dei	nse 🗆	Vines/Mistle	toe/M	oss 🗆			
Recent o	or planned change in load factors								
	Tree Defects and Conditions A	ffecting the Lik	elihood	of Failure					
De Br Ov <b>Pr</b> Cr Re Fl	ead twigs/branches% overall Max. dia Code roken/Hangers Number Max. dia ver-extended branches runing history rown cleaned Thinned Raised Deace educed Topped Lion-tailed Conl	ks 🗆	res 🗆 _ Canko Hea	ers/Galls/Bur	s        s	Cavity/ Simila Sapwo	Included Nest hole r branches pr ood damage/	l bark [ % cir resent [ decay [	c.
\	pad on defect N/A ■ Minor □ Moderate □ kelihood of failure   Improbable ■ Possible □ Probable □	-							- - -
Co Sa Lig Ca Le Re M	— Trunk —  ead/Missing bark ■ Abnormal bark texture/color □ colominant stems □ Included bark □ Cracks □ colominant stems □ Conks/Mushrooms □ colominant stems □ Sap ooze □ colo	Dead  Ooze  Cracks  Root plate Response Main con	Cut/E e lifting l growth cern(s) -	Roots an visible   1   1   1   1   1   1   1   1   1	Depth ( % ci ts □ Di oil wea	Conks/ rc. stance kness	_ Stem gir /Mushrooms from trunk		- - -

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Condition number						ize	Fall distance	2		Improbable	۽ ا ه	<u></u>			٤	1		hat		듷	ple		ant	ı	rating
ng:				dition	- I	Part size	ij	Target	Target	Improbal	Possible	Imminent	Very low	l ₃ l	Medium	뉴	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant		of part (from
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	Failure	Very lo	ow	Lov			/lediun	_	High																
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Ove	rall resid	lual ris	k	Low	Mo	derate		ligh □	Extreme			Rec	omn	nend	led i	nsp	ecti	on i	nter	val	An	nua	afte	wo	ork
Data	Final	■ Prel	liminar	y <b>Adı</b>	/anced	assess	ment	need	ed ■No □Yes-	Type/I	Reas														
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Client GSI				Date 4/6	6/23		Tir	ne_1650		
Address/Tree location <u>DU-</u>					_ Tree noD	J-15-14		_ Sheet <u>1</u>	of	1
Tree species Sequoia semper	virens	d	bh_1"	_ Height _	6'	_ Crov	vn spi	read dia. <u>5'</u>		
Assessor(s) Cory Shields		Ti	me frame 3 Years		Tools used_					
		Targe	et Assessment							
Target number	Target desc	ription			Target within drip line	Target par within 1 x Ht.	Target within 6 1.5 x Ht.	Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	N/A	\			<u> </u>		_			
2		-								
3										
4						Ш				
		Si	te Factors							
Soil conditions Limited volu	change Site clearing Chame Saturated Shallow Common weather Stro	Compacte	ydrology□ Root cu d□ Pavement over	its□ Des roots□_ eavy rain	% De:	scribe _				
Pests	High ☐ <b>Foliage</b> None (sea	asonal) 🗖	None (dead) ☐ Abiotic	Normal			ic	% Ned	crotic <u>5</u>	5%
-passas ianara prome branc	13065 - 563		oad Factors							
Wind exposure Protected [	☐ Partial ■ Full ☐ Wind funn	eling 🗆 Fe	nce to north		Relative crov	vn size	Sma	II■ Mediu	m 🗆 L	arge 🗆
Crown density Sparse ☐ No	ormal ■ Dense □ Interior b	ranches Fe	w□ Normal■ De	nse□ \	/ines/Mistlet	oe/Mo	ss 🗆			
Recent or planned change in	load factors									
	Tree Defects and	l Condition	s Affecting the Lik	kelihood	of Failure					
	_	Crown	and Branches	_						
	■ <u>5</u> % overall Max. dia. <u>&lt;</u> nber Max. dia	0.5" (	Cracks	□ ures □ □ Canke Hear	ers/Galls/Burls	0	Cavity/ Similar Sapwo	Included Nest hole r branches pr ood damage/	d bark [ % cir resent [ decay [	rc.
Load on defect Likelihood of failure	N/A ■ Minor □ Improbable ■ Possible □		☐ Significant ☐ ☐ Imminent ☐							- - -
Lightning damage ☐ He Cavity/Nest hole Lean° Corrected Response growth	— Trunk —  Abnormal bark textur  Included bark □  ay □ Cankers/Galls/Burls □ Sa eartwood decay □ Conks/Musl  % circ. Depth Poo	Cracks  ap ooze  hrooms  or taper	Dead  Ooze  Cracks  Root plat	rried/Not	Roots and visible ■ Do Decay □ Cavity □ amaged roots □ So Bag/plastic a	epth C % cir i □ Dis	Conks/ c. stance	_ Stem gir Mushrooms from trunk _ □		

									Risk Cate	gorizat	ion														
		T											ı	ikeli	ihoo	d									
Condition number								ě	i i	Fail	ure			Impa	act			ure 8			Cor	nseq	uen	ces	
ă							nce	number		_	ш.е П	$\dashv$		IIIIP		$\dashv$	(f	rom N	latrix	1)	Н			Н	Risk
tion						ize	Fall distance			Improbable Possible	e	ent	3		٤		_	vhat		kely	ple		ant		rating
nd:				ondition		Part size	₽	Target	Target	Improbal Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	of part (from
ŏ	Tree pa	art	01	concer	n	<u>a</u>	120	<u>1</u> 2	protection					٩	Σ	크	$\overline{}$	s (	111	×		Σ	Sig.	s	Matrix 2)
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		inood	mauri					_		_						T			$\top$						
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Fai	ure & Im	pact	Ne	gligible	Min	or	Signi	ficant	Severe																
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Ove	rall tree	risk r	ating	Low	Mo	derate	- H	ligh □	Extreme		١	Wor	k pr	iorit	ty	1 🗆	2		3 □	] 4					
Ove	rall resid	lual ri	isk	Low	■ Mo	derate	- H	ligh □	Extreme		F	Reco	mm	enc	led	insp	ect	ion	inte	rval	An	nua	l aft	er w	ork
Data	□Final	■ Pr	elimir	nary <b>Ad</b>	vanced	asses	sment	neede	ed ■No □Yes-	Type/Re	easor	n													
				-					es   Root coll																



Client GSI			Date_4	1/6/23		Time_1645		
Address/Tree location <u>DU-</u>				Tree no. D	U-15-15	Sheet 1	of	1
Tree species Sequoia semper	virens	dbh_ <u>1"</u>	Heigh	t <u><b>4'</b> </u>	_ Crowi	n spread dia. <u>3</u> '	1	
Assessor(s) Cory Shields		Time frame S	3 Years	_ Tools used_				
		Target Assessm	ent					
Target number	Target descr	ription		Target within drip line	Target panox within 1 x Ht.	Occupancy rate 1-rare 2-cocasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	N/A			<u> </u>	<del>                                     </del>			
2					$\vdash$		$\vdash$	$\vdash$
3								
4					$\Box$			
•		Site Factors						
Soil conditions Limited volur Prevailing wind direction W		Compacted ☐ Pavemeng winds ■ Ice ■ Snoree Health and Speci	ent over roots ☐ ow ■ Heavy rai es Profile	]% De in ■ Describe	scribe e_ <b>lce/snc</b>	ow on 2 year int	terval	
Pests	High ☐ <b>Foliage</b> None (sea	Abiotic				c% Ne	crotic <u></u>	5%
species ianule profile Branc	inca = irunk	Load Factors			_			
Wind exposure Protected [	☐ Partial ■ Full ☐ Wind funne			Relative cro	wn size	Small ■ Mediu	ım 🗆 L	Large C
	ormal ■ Dense □ Interior br							
Recent or planned change in	load factors							
	Tree Defects and	<b>Conditions Affecting</b>	the Likelihoo	d of Failure				
	_	Crown and Bran	iches —					
	LCR <u>95</u> % ■ <u>5</u> % overall Max. dia. <u>&lt;0</u> hber Max. dia	Cracks   Codominant  Weak attachi  Previous bra  Dead/Missing  Conks   Cracks   Podeminant  Dead/Missing	ments   ments   ments   ments   menth failures   g bark   Can	kers/Galls/Burls artwood decay	Ca Sii S □ Sa	Lightning da Included wity/Nest hole milar branches po apwood damage/	d bark [ % cir resent [ /decay [	□ rc. □
\	N/A ■ Minor □ N Improbable ■ Possible □ F	Moderate Significa Probable Imminer						- - -)
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				-					es   Root coll																		



Client GSI	Date 4/6/23						
Address/Tree location DU-15		Tree i	no. DU-15-16	3	_ Sheet 1	1	
Tree species Pseudotsuga menziesii	dbh_27"	Height 75'	Cro	wn sp	read dia. <u>3</u> 5	5'	
Assessor(s) Cory Shields	Time frame 3 Years	_Time frame 3 Years Tools used Probe, mallet, binoculars					
	Target Assessment						
Target descri	ption		Target within drip line Larget Target Anithin 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1 House to sou		✓ ✓	✓	4	N	N	
2 House to sou	House to southwest						N
Fence to north	and west		✓ ✓	✓	4	N	N
4							
	Site Factors						
Site changes None ■ Grade change □ Site clearing □ Chan Soil conditions Limited volume □ Saturated □ Shallow □ C  Prevailing wind direction West Common weather Stron  Tr	Compacted ■ Pavement over g winds ■ Ice ■ Snow ■ H ee Health and Species Prof	its □ Describe9 roots □9 eavy rain ■ Des	6 Describe scribe lce/s	grave	el piled along on 2 year int	g south erval	n trunk
Vigor       Low       □       Normal       ■       High       □       Foliage       None (seas         Pests	Abiotic					crotic _	10%
Species failure profile Branches  Irunk  Roots  Desc	Load Factors	allules, 100t plat	e lallules				
Wind exposure Protected ☐ Partial ☐ Full ■ Wind funne Crown density Sparse ☐ Normal ■ Dense ☐ Interior bra Recent or planned change in load factors	nnches Few□ Normal■ De	nse <b>□ Vines/N</b>	listletoe/M				
Tree Defects and 0	Conditions Affecting the Lik	celihood of Failu	ıre				_
	Previous branch failu  □ Dead/Missing bark □  □ Conks □  Response growth A	p, east side, cut  broken s  Cankers/Galls,	tubs  /Burls □	ink Cavity/ Simila Sapwo	Included /Nest hole r branches pr bod damage/	d bark [ % cir resent [ decay [	c. =
'	iodelate = Significant = =	or both overexte					- - -
— Trunk —  Dead/Missing bark □ Abnormal bark texture, Codominant stems ■ Included bark ■ Codominant stems ■ Cankers/Galls/Burls □ Sap Lightning damage □ Heartwood decay □ Conks/Mushr Cavity/Nest hole % circ. Depth Poor Lean ° Corrected? Response growth Around codom stem Main concern(s) Load on defect N/A □ Minor □ Moderate □ Sign Likelihood of failure	Cracks ☐ Dead ☐ Ooze ☐ Ooze ☐ Cracks ☐ taper ☐ Root plat  Response Main cor	Cavity I Cut/Damaged te lifting  e growth Around ncern(s)  defect N/A  od of failure	Depth% ci roots  Di Soil wea d exposed	Conks/ rc. stance kness	Stem gii /Mushrooms e from trunk  amage  rate  Sign	3'	- - - -

#### **Risk Categorization** Likelihood Condition number Consequences number Failure & Impact Failure Impact Fall distance (from Matrix 1) Risk Improbable Part size rating Imminent Target of part **Conditions** Target (from of concern protection Tree part Matrix 2) 40' 6" 1 N/A Low Overextended Crown and branches 1 6" 40' 2 Fence Low Branches 6" 45' 3 N/A Low 1 18" 40' N/A Low Crown unbalanced crown 2 and 18" 40' 2 Fence Low branches 18" 3 45' N/A Low 3 4 Matrix I. Likelihood matrix. **Likelihood of Impacting Target** Likelihood of Failure Very low Low Medium High Unlikely Somewhat likely **Imminent** Likely Very likely Probable Unlikely Unlikely Somewhat likely Likely **Possible** Unlikely Unlikely Unlikely Somewhat likely Unlikely Improbable Unlikely Unlikely Unlikely Matrix 2. Risk rating matrix. Consequences of Failure Likelihood of Failure & Impact Negligible Significant Minor Severe Very likely Low Moderate High Extreme Likely Low Moderate High High North Somewhat likely Low Low Moderate Moderate Unlikely Low Low Low Low Notes, explanations, descriptions This species has low tolerance of root disturbances and is an immature specimen. Based on these factors and the DBH, a 27' radius from the Codominant cut trunk tree protection zone is recommended. However, due to its condition, removal is a better long term solution if any root impacts. Mitigation options 1. Prune overextended branches Residual risk Low 2. removal Residual risk None Residual risk Residual risk Overall tree risk rating Moderate ☐ High ☐ Extreme ☐ Work priority 1 \Boxed 2 \Boxed 3 \Boxed 4 \Boxed Recommended inspection interval Annual after work Overall residual risk Low ■ Moderate □ High □ Extreme □ Data ☐ Final ■ Preliminary Advanced assessment needed ■No ☐ Yes-Type/Reason Inspection limitations □None □Visibility □Access □Vines □Root collar buried Describe □



June 2023

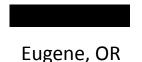
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





### **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
Certified Arborist PN-8292A
Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

#### Overview

This report covers the mitigation recommendations for the trees at Street hereto referenced as SO-06. There are eight total individual trees under the purview of this report, in addition to several smaller trees and shrubs not covered under the tree assessment forms. There are four trees to the north on the property from that would be impacted by the soil removal efforts. Figure 1 details the locations of the trees within SO-06. As detailed in Figure 2, soil removal at SO-06 will be at six inches for the entire property.



Figure 1

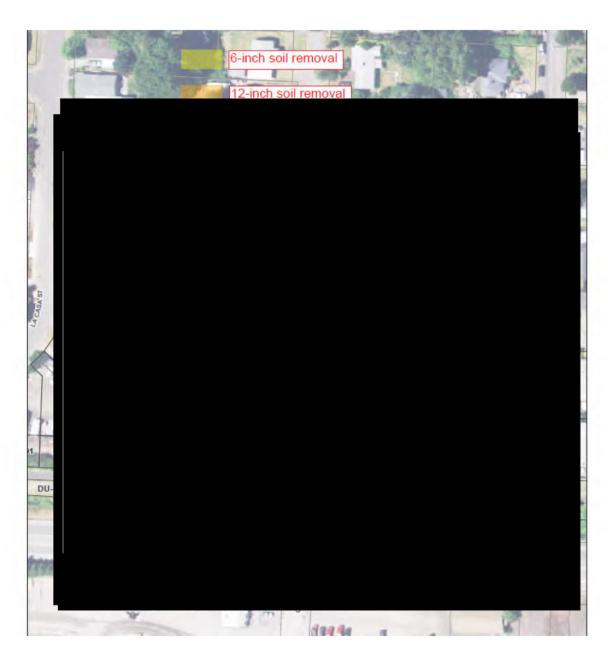


Figure 2

### SO-06-01

Located on the eastern portion of the property in the front yard (Figure 1, 01), tree 01 is a *Crataegus laevigata* with a diameter of 17", height of 25', and a crown spread of 25'. This individual has several issues and defects: rot in trunk (Figure 3), overextended branches with previous failures apparent (Figure 4) and is intertwined with the overhead communication wires to the east. Due to the condition of the tree and its proximity to targets, retention is not

warranted. This specimen should be removed as the soil removal activities would create a greater potential risk. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### SO-06-02

Located to the eastern side of the property, to the east of the house (Figure 1, 02), Tree 02 is an *Corylus avellana* with a multi-stem diameter of 16", a height of 25', and a crown spread of 25' (Figure 5). This tree has a good tolerance of root pruning and is without any significant defects. Due to the amount of soil removal and the lack of defects in the specimen, tree 02 could be maintained if soil was removed by hand in a one foot radius around the trunk. The mechanical removal of soil in the rest of the root system should be done with the consulting arborist onsite to assess damage, and if the root damage is too significant, the tree could be removed. After the excavation and if the tree is to be maintained, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay), and weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### SO-06-03

Located on the eastern portion of the property in the front yard (Figure 1, 03), tree 03 is a *Crataegus laevigata* with a diameter of 16", height of 30', and a crown spread of 30'. This individual has several issues apparent including: rot in trunk, old flush cut/failure (Figures 6 and 7), overextended branches with previous failures apparent, and is intertwined with the overhead communication wires to the east. Due to the condition of the tree and its proximity to targets, retention is not warranted. This individual should be removed as the soil removal activities would create a greater potential risk. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### SO-06-04

Located to the northeastern side of the property, to the northeast of the house on the neighboring (Figure 1, 04), Tree 04 is a *Picea pungens* with a diameter of 15", a height of 40', and a crown spread of 15'. This tree should not be impacted by the soil removal activity, but it would still be advisable to have the consulting arborist onsite while excavation occurs near this specimen.

#### SO-06-05

#### **SO-06-06**

Located to the west of tree 05 on the neighboring property (Figure 1, 06), tree 06 is a *Picea stichensis* with a diameter of 19", a height of 35', and a crown spread diameter of 25'. This species has a moderate tolerance for root pruning, however, the depth of soil removal would be minimally impactful. Despite the minimal impacts the soil removal may have, the tree has significant epicormic growth at the trunk (Figure 8). It is also shorter than tree 05 even though it has a similar growth rate and is a similar age (Figure 9). While the top was not visible from the ground, there are several signs that point to a previously topped tree. The potential topping, when combined with the overextended lower branches, indicates several defects which raise concerns about the tree's long-term risk. There are several targets within striking distance of this tree, and the risk of failure is high enough to warrant removal of this tree prior to soil removal activities. Maintaining the tree in the landscape after the soil removal activities would create an unacceptable risk level, and the stress may lead to catastrophic failures in the canopy and/or root system.

#### SO-06-07

Located to the west of tree 06 on the neighboring St. property (Figure 1, 07), tree 07 is a *Psuedotsuga menziesii* with a diameter of 21", a height of 60', and a crown spread diameter of 25'. This species has a low tolerance for root pruning, however, the depth of soil removal would be minimally impactful. A radius of 15' from the trunk of the tree (approximate dripline) should be excavated by hand under the oversight of the consulting arborist. After the excavation the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay), and weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### SO-06-06

Located to the west of tree 05 on the neighboring St. property (Figure 1, 06), tree 06 is a *Juglans nigra* with a diameter of 11", a height of 35', and a crown spread diameter of 25' (Figure 13). This species has a low tolerance for root pruning, however, the depth of soil removal would be minimally impactful. Despite the minimal impacts the soil removal may have, the tree has a couple overextended branches and an unbalanced canopy, with most of the weight extending to the west (Figures 10 and 11). There are several targets within striking distance of this tree, and the risk of failure is high enough to warrant removal of this tree prior to soil removal activities. Maintaining the tree in the landscape after the soil removal activities would create an unacceptable risk level, as the unbalanced canopy could lead to a failure to the west potentially damaging the neighboring shed or house. This tree should be removed before soil removal to minimize failures due to root instability.

### **Shrubs**

Located along the northern and southern fence line of the property is a hedge line of laurels (Figures 12, 13, 14, and 15) (*Prunus spp.*). On the southeastern corner of the property is also a small fruit tree (Figure 14). These plants can either be transplanted or, if damage can be avoided in the soil removal activity, maintained in the landscape. If they are to be transplanted, the native soil should be washed out of the roots and removed before they are placed in a new soil medium.

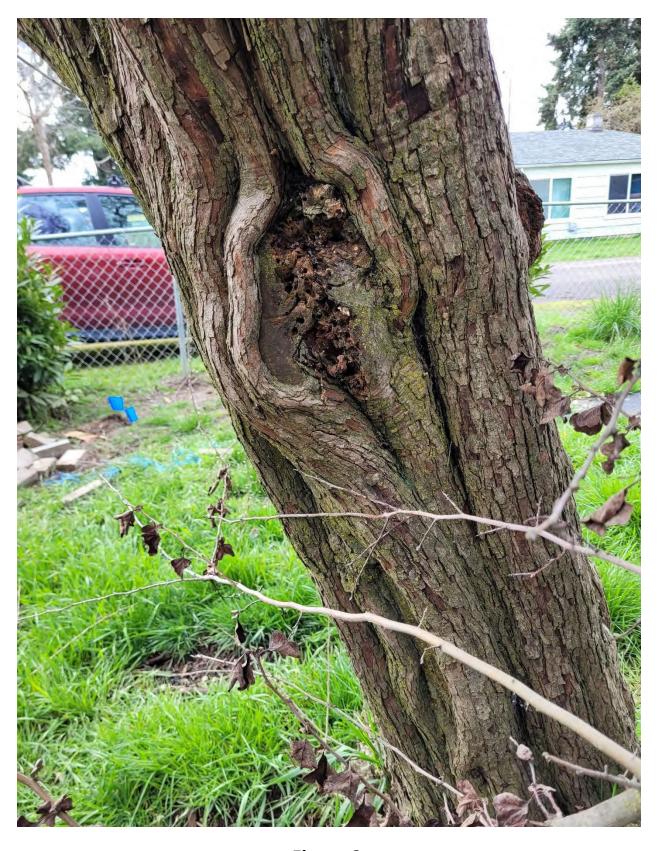


Figure 3

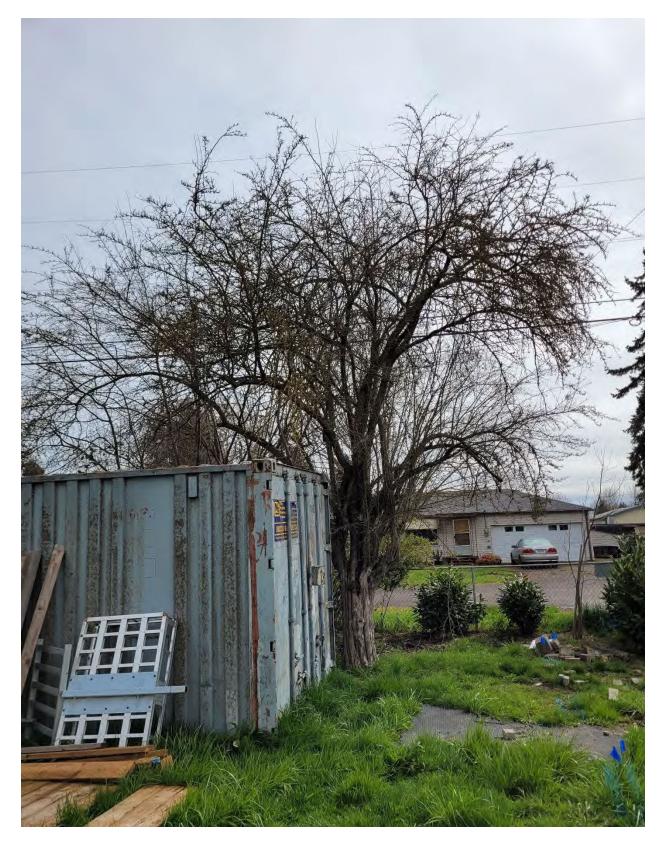


Figure 4



Figure 5



Figure 6



Figure 7

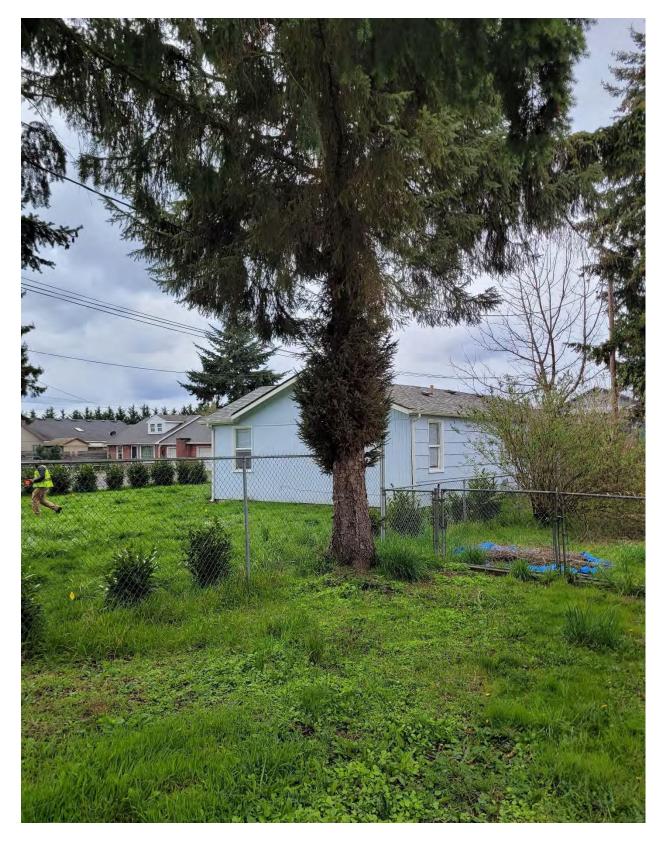


Figure 8



Figure 9

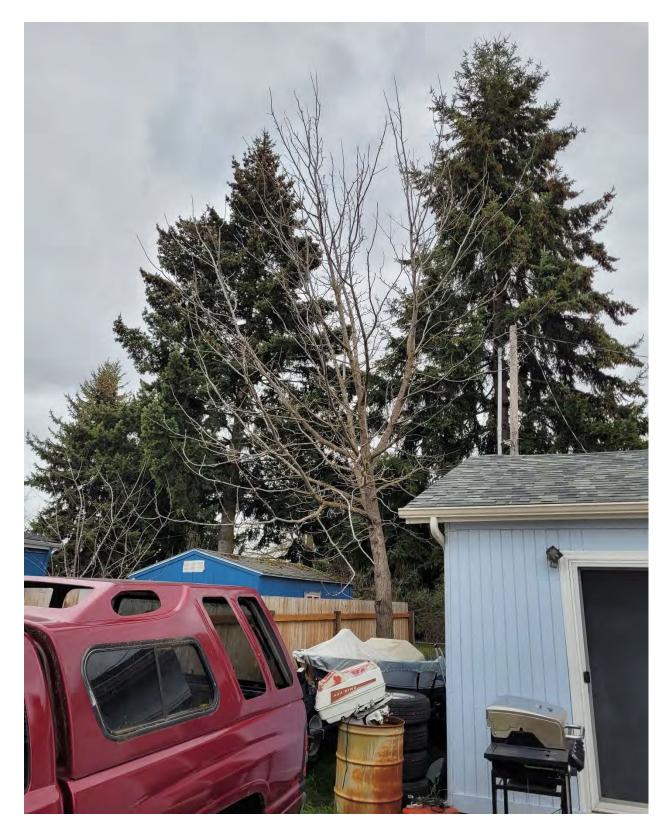


Figure 10



Figure 11



Figure 12



Figure 13



Figure 14



Figure 15



Client	GSI			Date 4	/5/23			Tir	ne 1055			
Address	/Tree location SO-06				Tree n	o. so	-06-1		Sheet 1	eet <u>1</u> of <u>1</u>		
Tree spe	/Tree location SO-06 ecies Crataegus laevigata	dbh_17"		Height	25'		Crov	vn spi	read dia. 25	;'		
Assesso	r(s) Cory Shields	_Time fram	e 3 Years		Tools us	ed Pr	obe, m	allet				
	Ta	rget Assess	ment									
Target number	Target description					Target as within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?		
1	Communication wires to	east			$\neg \neg$	·	<b>✓</b>	·	4	N	N	
2	Fence to east			$\neg$	<u> </u>	· /	<b>√</b>	4	N	N		
3	Container to west				$\neg \uparrow$	7	1	<b>√</b>	4	N	N	
4					$\overline{}$	Ť	Ť	Ť				
		Site Factor	rs							<u> </u>		
Site cha	of failures Broken branches on ground, tear-outs  Inges None □ Grade change □ Site clearing □ Changed soid  Iditions Limited volume □ Saturated □ Shallow □ Compacting wind direction W Common weather Strong winds  Tree Hea	il hydrology l cted □ Pave	□ Root cut ment over Snow ■ He	ts□ De roots□ eavy rair	scribe%	Desc	cribe _					
Pests	ow □ Normal ■ High □ Foliage None (seasonal) ■	None Abioti	(dead) 🗆	Norma						crotic _	15_%	
Species	failure profile Branches ■ Trunk ■ Roots □ Describe <u>Co</u>	_		e, overe	extended	branc	ches,	rot in	trunks			
		Load Facto		to NI								
	posure Protected ☐ Partial ■ Full ☐ Wind funneling ☐										_	
	lensity Sparse ☐ Normal ☐ Dense ■ Interior branches or planned change in load factors	FeW □ Nor	mai 🗀 Dei	nse <b>=</b>	vines/ivii	istieto	e/ivio	ss ⊔				
		ione Affecti	ina tha Lile	ممطالم	l of Failur							
	Tree Defects and Condition				or Fallul	re						
De Br Or <b>Pr</b> Cr Re Fl	nbalanced crown   LCR 65 % ead twigs/branches  15 % overall Max. dia. 3' roken/Hangers Number 4 Max. dia. 1'  ver-extended branches  runing history rown cleaned  Thinned  Raised  educed  Topped  Lion-tailed  ush cuts  Other stub cuts  lain concern(s) weak attachments, overextended branches	Codomina Weak attac Previous b Dead/Miss Conks  Response	nnt ■ <u>Muli</u> chments ■ oranch failui	tiple   Multi   res ■ _   Cank   Hea	ple ers/Galls/l rtwood d	Burls l	_ (	Cavity/ Similar Sapwo	ightning da Included Nest hole <u>10</u> r branches pr ood damage/	l bark [ )_% cir esent [ decay [	rc.	
Lo Li	oad on defect N/A ☐ Minor ☐ Moderat kelihood of failure Improbable ☐ Possible ☐ Probable	e Signifi			condition						- -	
Co Sa Lig Ca Le Re M —	Trunk —  Pead/Missing bark ■ Abnormal bark texture/color [Included bark □ Cracks [Included bark □ Cra		Dead  Ooze  Cracks  Root plate Response Main con	Cut/I e lifting e growth cern(s).	Decay  Cavity  Damaged   To west	l De l roots l Soil	pth C _% cir □ Dis I weak	Conks/ cc. stance kness [ f tree	Stem gi Mushrooms from trunk		_	
\	<b>kelihood of failure</b> probable □ Possible ■ Probable □ Imminent □		Likelihoo Improbab		<b>ure</b> Possible <b>[</b>		Prob	able [	☐ Immi	nent 🗖		

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ő	Tree pa	art		concer	- I	Part size	Fall	Target	Target protection	Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from Matrix 2)
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$\vdash$	$\vdash$	+			$\dashv$					F	H	$\approx$	퓜	$\asymp$	$\asymp$	Ħ		$\approx$	K	K	$\asymp$	K	$\asymp$	$\approx$	$\bowtie$	
4					ŀ					F	K	$\stackrel{>}{\sim}$	퓜	$\asymp$	$\asymp$	Ħ	$\stackrel{\succ}{\sim}$	$\mathbb{H}$	K	$\stackrel{\smile}{\sim}$	K	K	$\asymp$	$\mathbb{H}$	Ħ	
		-			- 1					F	K	$\preceq$	퓜		$\stackrel{\smile}{\sim}$	ă	$\stackrel{\smile}{\sim}$	$\asymp$	K	K	K	K	$\asymp$	$\stackrel{\sim}{\sim}$	Ħ	
	<u> </u>									$\subseteq$			<u> </u>	$\cup$	$\cup$	$\cup$	$\smile$	$\cup$			$\cup$	$\cup$	$\cup$	$\cup$	$\bigcirc$	
Mat	rix I. Likel	ihood r	matri	x.						_		_	+			+	+			+			+	-		
	elihood			Like	elihood	of Imp	acting	Target				_	+			+	+		-	+			+	_		
$\vdash$	Failure	Very l	$\overline{}$	Lo		_	/ledium	1	High	_																
	minent obable	Unlike Unlike	<del>-</del>	Somewh Unlil		-	Likely ewhat l	ikelv	Very likely Likely	$\dashv$																
	ossible	Unlike	$\rightarrow$	Unlil		_	Jnlikely		Somewhat like	ly			$^{\dagger}$			$^{\dagger}$	$\top$			$\top$						
Imp	robable	Unlike	ely	Unlil	kely	l	Jnlikely		Unlikely			_	+			+	+		+	+			+	$\dashv$		
Mat	rix 2. Risk	rating r	matri	x.						_		_	+			+	_		-	+			+	_		
	ikelihood				Cons	equen	ces of		!	_		_														
Fai	lure & Im			gligible	Min	$\overline{}$		ficant	Severe	_																
	Very like Likely	ly		Low Low	Mode			gh gh	Extreme High	$\dashv$	Re	spc	nns	SP (	aro	wth	<u> </u>	L					1			
So	mewhat l	ikely		Low	Lo	$\overline{}$		erate	Moderate		1 (0	,opc	<i>,</i> , , ,	,	gio	VV CI							No	orth		
	Unlikely	<i>,</i>		Low	Lo	w	Lo	w	Low										1	J	P	1				
Not	os ovni:	natio	ne d	ascrinti	one Th	is spe	cimen	is a r	nature and the	9											Y	١				
									Given these												3	J				
	tors and					the to	unk is	the m	inimum												8	1				
rec	ommend	ed tree	e pro	tection z	zone.					_				$\mathcal{I}$			\					~				
_										_														_		
Miti	gation o	ptions	·																		F	Resid	lual	risk	<b>_</b>	
																							tual	risk	<b>'</b>	
	rall tree		_						Extreme					_		-					] 4					
	rall resid								Extreme								-									
									d □No □Yes-																	
Insp	ection lir	nitatio	ns 🛮	None C	<b>J</b> Visibili	ty □/	Access	□Vin	es Root col	ar l	ourie	d De	scri	be .												



Client 6	GSI		Date 4/				Tir	ne_1130		
	s/Tree location SO-06			_ Tree no	o. so-	-06-2		_ Sheet 1_	of	1
	ecies Corylus avellana dbh 16	6" Multistem	Height	25'		Crow	n spr	read dia. 25	5'	
Assesso	r(s) Cory Shields Time f	rame 3 Years		Tools us	ed Pro	obe				
	Target As	sessment								
					Targ	get zon	e			
Target number	Target description				Target within drip line	Target within 1 x Ht.	Target within 1.5 x Ht.	Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	Communication wires to east				<b>✓</b>	<b>✓</b>	<b>✓</b>	4	N	N
2	Container to west				1	<b>✓</b>	<b>✓</b>	4	N	N
3					$\neg$					
4					$\neg$	$\neg$				$\vdash$
	Site Fa	ictors								
History	of failures N/A		Тор	ography F	lat■	Slope	<u>-</u>	%	Aspect	:
-	nges None  Grade change  Site clearing  Changed soil hydrol									
	ditions Limited volume ☐ Saturated ☐ Shallow ☐ Compacted ☐ F									
	ng wind direction W Common weather Strong winds ■ Ice									
	Tree Health and									
Vigor Lo	ow □ Normal ■ High □ Foliage None (seasonal) ■ N	lone (dead) □ biotic		95%	Cł	nlorot	ic	% Nec	crotic <u></u>	5%
Species	failure profile Branches ■ Trunk ■ Roots □ Describe Codomina	ant stem failure	es, over	extended	l bran	ches				
	Load F									
Wind ex	posure Protected ■ Partial □ Full □ Wind funneling □ Contain	ner to W, tree to	o SW	Relative	crow	n size	Sma	II□ Mediu	m 🔳 L	arge 🗆
	<b>density</b> Sparse ☐ Normal ■ Dense ☐ <b>Interior branches</b> Few ☐			-	stleto	e/Mo	ss 🗆			
Recent o	or planned change in load factors									
	Tree Defects and Conditions Aff	fecting the Like	elihood	of Failur	re					
	— Crown and	Branches -								
De Br Or <b>Pr</b> Cr Re Fl	ead twigs/branches	minant  minant  attachments  ous branch failur /Missing bark  s  onse growth  Arc	res 🗆 _ Canke	ers/Galls/E	Burls <b>I</b>	_ C	avity/ Similar Sapwo	Included Nest hole branches pr	d bark [ % cir resent [ decay [	c.
	pad on defect N/A ☐ Minor ☐ Moderate ■ Si	ignificant □ Fo	or both o	conditions	s					-
\	kelihood of failure   Improbable	mminent $\Box$ Fo	or both o	conditions	s					- ノ
Cc Sa Lig Ca Le Re M	— Trunk —  ead/Missing bark □ Abnormal bark texture/color □ codominant stems ■ Included bark ■ Cracks □ copwood damage/decay ■ Cankers/Galls/Burls □ Sap ooze □ coghtning damage □ Heartwood decay ■ Conks/Mushrooms □ covity/Nest hole % circ. Depth Poor taper □ consponse growth Around small wounds  Wound to northeast	Collar bur Dead  Ooze  Cracks  Root plate Response Main cone	Cut/De lifting [ growth cern(s) _	Roots : visible   Decay   Cavity   Damaged r	and Deproots [ Soil	oth C _% cire Dis weak	onks/c. tance ness [	_ Stem gir Mushrooms from trunk _ □		- - -
Lil	ad on defect N/A ☐ Minor ■ Moderate ☐ Significant ☐ kelihood of failure  probable ■ Possible ☐ Probable ☐ Imminent ☐	Load on d Likelihood Improbab	d of failu	ire				rate □ Sign □ Immii	ificant	,

									Risk Cate	gor	izati	ion														
Γ.		Т													Like	lihoo	d					П				
Condition number								er			Failu	ıre		Г	Imp	act					pact	Co	nseq	uen	ces	
ă							nce	number		- n	T	I	$\vdash$	H	Т	I	_	(f	from N	/latrix	1)	⊢	_	_	Н	Risk
ţį						size	Fall distance	it n		Improbable	<u> </u>	e e	ent	3		E			vhat		kely	ible		cant		rating of part
oug	_			ondition		Part size	a	Target	Target	npro	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
10	Tree pa	-		fconcer	$\overline{}$		_		protection	_				Ľ	+=	2			Š	를		Ľ	_	Si	Š	Matrix 2)
1	Crown branch		Overe oranc	extended		2"	10'	1	$\vdash$	$\overline{\odot}$		$\cong$	$\cong$	$\mathbb{R}$	O	2	$\supseteq$	O		$\mathbf{Q}$	0	$\mathbb{R}$	O	$\mathbb{Q}$	otin	Low
*	Dianch	ין פּי	лапо	1165		2"	10'	2	$\sqcup$	$\odot$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\odot$	$\bigcirc$	$\bigcirc$	$oldsymbol{\odot}$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$oldsymbol{oldsymbol{oldsymbol{eta}}}$	$\bigcirc$	$\bigcirc$	$\bigcirc$	Low
										$oldsymbol{\odot}$		$\bigcirc$	$\bigcirc$	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{O}}}$		$\bigcirc$	$\bigcirc$	<u> </u>		0	$\bigcirc$	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{O}}}$	$\bigcirc$	$\bigcirc$	O	
	Trunk		Codo	minants		2"	10'	1		$oldsymbol{\odot}$		$\circ$	$\circ$	Ю		$\bigcirc$	0	0		0	0	Ю	$\odot$	0	O	Low
2						2"	10'	2		$\overline{oldsymbol{\circ}}$		0	O	O	<b>©</b>		O	0			0	0	O	O	O	Low
					1					$\overline{\mathbb{O}}$	O	O	O	Ō		O	Ō	Ō		Ó	O	O	Ŏ	Ō	Ō	
		$\neg$								$\tilde{\subset}$	K	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	K	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	
3					ŀ				$\vdash$	$\stackrel{\sim}{\sim}$	K	$\preceq$	$\stackrel{\succ}{\sim}$	K	$\vdash$		K	K	K	K	K	ば	$\vdash$	$\tilde{c}$	Ħ	
					- 1					$\approx$	$\bowtie$	$\bowtie$	$\bowtie$	K	$\bowtie$	$\mathbb{H}$	K	$\bowtie$	$\cong$	$\bowtie$	$\bowtie$	$\bowtie$	$\bowtie$	$\approx$	$\bowtie$	
H		+			-					$\approx$	$\mathbb{H}$	$\bowtie$	$\bowtie$	$\Join$	$\cong$	$\bowtie$	$\bowtie$	$\bowtie$	$\mathbb{H}$	$\bowtie$	$\approx$	$\bowtie$	$\bowtie$	$\succeq$	$\bowtie$	
4									$\vdash$	$\cong$		$\cong$	$\cong$	$\cong$	$\cong$	$\cong$	$\cong$	$\mathbb{R}$	12	2	$\cong$	$\cong$	$\cong$	$\mathbb{R}$	$\bowtie$	
-									$\vdash$	$\bigcirc$		$\bigcirc$	$\supseteq$				$\square$	$\mathbb{Q}$		$\bigcirc$	Q	$\square$	$\bigcirc$	$\bigcirc$	$\square$	
										$\bigcirc$		$\bigcirc$	$\bigcirc$	$\cup$		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\mathbb{C}$		$\bigcirc$	$\cup$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
Mati	rix I. Likel	ihood	matri	X.									_				_		_	_			_			
Lik	elihood			Like	elihood	of Imr	acting	Targe																		
	Failure	Very	low	Lo		_	/ledium		High																	
lm	minent	Unlik	$\overline{}$	Somewh	at likely		Likely		Very likely			-	+			+	+		+	+			+	+		
_	obable	Unlik	_	Unlil		_	ewhat l		Likely			_	_			$\perp$	_		$\perp$	_			$\perp$			
<u> </u>	ossible	Unlik		Unlil		_	Jnlikely		Somewhat like	ly																
	robable	Unlik		Unlil	кегу		Jnlikely		Unlikely										T							
	rix 2. Risk		matri	IX.	-							-	+			+	+		+	+			+	_		
	ikelihood lure & Im		No	aliaibla		_	ces of			$\dashv$		-	+			+	_		-	+			+	-		
⊢	Very like		Ne	gligible Low	Min Mode	_		ficant gh	Extreme	$\dashv$																
$\vdash$	Likely	· y	$\vdash$	Low	Mode			gh	High				-			ı			1							
So	mewhat l	ikely		Low	Lo	W		erate	Moderate														N	orth		
	Unlikely	/		Low	Lo	W	Lo	w	Low																	
Nat					Th	ie ene	cimen	ie a ı	mature and the																	
	,								en these	_																
									ninimum												\					
rec	ommend	ed tre	e pro	tection z	zone.									J			\									
_										_														_		
Miti	gation o	ption	s																		F	Resid	lual	risk	(	
Ove	rall tree	risk r	ating	Low	Mo	derate		igh □	Extreme			1	Wor	k n	riori	ty	1Г	] )		3Г						
	rall resid		_						Extreme					_		-										
									ed   No   Yes-	Type	۵/P۵															
				-					es   Root coll																	



Client G	GSI			Date 4/	5/23			Tir	ne 1215		
Address	/Tree location SO-06				Tree no	o. so	-06-3		Sheet 1	of	1
Tree spe	Crataegus laevigata	dbh_16"		Height	30'		Crov	vn spi	read dia. <u>30</u>	)'	
Assesso	r(s) Cory Shields	Time fram	e 3 Years		Tools us	ed_Pro	obe, m	allet			
	Tai	rget Assess	ment								
Target number	Target description						Target as within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	Communication wires to	east				<u> </u>	1	<u></u>	4	N	N
2	Fence to east	-				<u>,</u>	·	<u>,</u>	4	N	N
3	Container to west					<b>7</b>	<u>,</u>	<u>,</u>	4	N	N
4	Container to most					•	•	<u> </u>			<u> </u>
		Site Factor	rs								
Site char	of failures Broken branches on ground, tear-outs  Inges None ☐ Grade change ☐ Site clearing ☐ Changed soil  Iditions Limited volume ☐ Saturated ☐ Shallow ☐ Compacting wind direction W Common weather Strong winds	l hydrology l ted □ Pave	□ Root cu ment over Snow ■ He	ts□ De roots□ eavy rair	scribe%	Desc	ribe _				
Vigor 10	ow ☐ Normal ■ High ☐ Foliage None (seasonal) ■				ı 90   %	C	hlorot	ic	% Nec	rotic 1	10 %
Pests		Abioti	с								
Species	<b>failure profile</b> Branches ■ Trunk ■ Roots □ Describe <u>Co</u>	dominant s	stem failure	e, overe	extended	branc	ches,	rot in	trunks		
		Load Facto									
	posure Protected ☐ Partial ■ Full ☐ Wind funneling ☐ _										
	lensity Sparse ☐ Normal ☐ Dense ■ Interior branches	Few ☐ Nor	mal□ Dei	nse 🔳	Vines/Mi	stleto	e/Mo	ss 🗆			
Recent C	or planned change in load factors										
	Tree Defects and Conditi	ons Affecti	ing the Lik	elihood	l of Failui	re					
De Br Ov <b>Pr</b> Cr Re Fl	nbalanced crown □ LCR 65 % ead twigs/branches ■ 10 % overall Max. dia. 1" roken/Hangers Number	Cracks Codomina Weak attace Previous b Dead/Miss Conks Conks Response	nt ■ Muh chments ■ oranch failu sing bark □ growth Ar	tiple  Multiple  Tes  Cank  Hea  ound we	ple Overexter ers/Galls/E rtwood de ounds	nded Burls <b>I</b> ecay [	_ (	Cavity/ Similar Sapwo	Lightning dan Included Nest hole <u>10</u> r branches pr nod damage/	l bark [ )_% cir esent [ decay [	□ rc. ■
\	oad on defect N/A ☐ Minor ☐ Moderate kelihood of failure Improbable ☐ Possible ☐ Probable	e ■ Signifi □ Immir	icant  Former Former		conditions						- -/
Co Sa Lig Ca Le Re	Trunk —  Pad/Missing bark ■ Abnormal bark texture/color □  Display to be dominant stems ■ Included bark ■ Cracks □  Display to be dominant stems ■ Included bark ■ Cracks □  Display to be dominant stems ■ Included bark ■ Cracks □  Display to be dominant stems ■ Sap ooze □  Display t		Dead  Ooze  Cracks  Root plate Response Main con	Cut/E e lifting l e growth cern(s)	Decay  Cavity  Cavity  Camaged r  To west	Deproots I Soil	pth C _% cir □ Dis I weak	Conks/ cc. stance kness [ f tree	Stem gir Mushrooms from trunk _ □		_
Lik	kelihood of failure  probable □ Possible ■ Probable □ Imminent □	$\lambda$	Likelihoo Improbab	d of fail				able [		nent 🗖	)

									Risk Cate	gor	rizati	on														
L		Т													Like	lihoo	d									
Condition number							ا ا	ber			Failu	ıre			Imp	act				& Im		Coi	nseq	uen	ces	
l a							Fall distance	number		e	П	П	$\dashv$	H	r <sup>.</sup>		Н	(1	П	Matrix	Ĺ	Н			Н	Risk
렱			_			size	list?		_	pabl	e	ple	ent	δ		重		<u>چ</u>	what	١.	ikely	gible	[	icant	a l	rating of part
) Puo	Tree pa			ondition		Part size	a   c	Target	Target protection	Improbable	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
۳	<del>-</del>	-			$\overline{}$	3"	10'	1	protection	Ē		Ħ	∄	ŕ	Ō	Á	$\dot{}$	lo	K	F		É	6			Matrix 2)
1	Crown branche			xtended nes, wea		3"	10'	<u> </u>		$\approx$	$\approx$	$\asymp$	႓	$\Join$	6	$\bowtie$	$\asymp$	∺	$\bowtie$	$\bowtie$	$\bowtie$	片	K	$\approx$	$\bowtie$	
-				ements	- 1	3"	10	2		$\cong$	$\odot$	$\cong$	႓	$\cong$	$\stackrel{\smile}{\simeq}$	$\cong$	$\cong$	$\bigcirc$		$\succeq$	$\cong$	$\bigcirc$	$\cong$	$\cong$	$\bowtie$	Low
L		+			$\dashv$					$\odot$	$\mathbb{R}$	$\cong$	늬	$\odot$	$\geq$	$\cong$	$\cong$	$\mathbb{Q}$			2	$\bigcirc$	$\cong$	$\mathbb{R}$	$\mathbb{R}$	
2	Trunk	c	avity	and wo	und	6"	10'	1		$\stackrel{\bigcirc}{\sim}$		$\cong$	늬	$\cong$	$\bigcirc$		$\cong$	$\mathbb{Q}$		$\bigcirc$	$\overline{\mathbb{Q}}$	$\cong$	$\stackrel{\smile}{\bowtie}$	$\mathbb{Q}$	$\cong$	Low
~						6"	10'	2		$\subseteq$	$\odot$	$\bigcirc$	잌	$\mathbb{Q}$	$\bigcirc$	$\odot$	$\bigcirc$	Ö	Q	$\bigcirc$	Ö	$\mathbb{Q}$	Ŏ	Q	$\square$	Low
<u> </u>		$\perp$								$\overline{\mathbb{Q}}$	$\bigcirc$	$\bigcirc$	$\supseteq$	$\bigcirc$	Q	$\bigcirc$	Ŏ	Q	Ŏ	Q	Ó	$\bigcirc$	Q	Q	Q	
					- [					$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
3										$\bigcirc$		$\bigcirc$	<u> </u>	$\bigcirc$	$\bigcirc$	$\bigcirc$	O	0			0	0	0	0	O	
										$\bigcirc$			$\bigcirc$	0	0		O	O			0	0	0	0	O	
										$\bigcirc$	Ö		O	$\circ$	0	$\bigcirc$	O	0		O	0	0	0	0	O	
4					[					$\overline{\mathbb{C}}$			O	$\overline{O}$	O	O	O	0			0	O	O	O	O	
1	İ	-			1					$\overline{C}$			O	O	O	O	O	O		O	O	O	O	O	O	
	rix I. Likel	nood r	natri)					_		_			$^{\dagger}$						$\top$							
	elihood Failure		T		lihood	_		$\overline{}$		$\dashv$		-	+			+	+		+	+						
	minent	Very lo	$\overline{}$	Low Somewh		-	<b>/ledium</b> Likely	<del>'  </del>	High Very likely	$\dashv$		_	+			+	_		+	_			+			
-	obable	Unlike	_	Unlik		_	ewhat I	ikely	Likely																	
	ossible	Unlike	_	Unlik		_	Jnlikely	$\overline{}$	Somewhat like	ly																
	robable	Unlike		Unlik	cely	l	Jnlikely		Unlikely			_	+			+	+		+	+						
Mati	rix 2. Risk	rating r	matri	X.						_		_	+			+	+		+	+			+	-		
l	ikelihood					_	ces of			4		_	+			$\perp$	_		1	_			_			
⊢	Very like	•		gligible	Min Mode	$\overline{}$		ficant	Severe	$\dashv$																
	Likely	' <del>y</del>		Low Low	Mode			gh gh	Extreme High	$\dashv$	Re	spo	ons	se	arc	wth	<u> </u>	L					T			
So	mewhat l	ikely	ı	Low	Lov	W		erate	Moderate			, op c			9.0	,,,,,	· 	,					N	orth		
	Unlikely	,	ı	Low	Lov	W	Lo	w	Low										/	N.	J.	1				
Not	os ovals	natio	ac d	oscrinti	one Th	is spe	cimen	is a n	nature and the												Y	١				
									Given these	_											}	J				
	tors and																			(	8	1				
rec	ommend	ed tree	e pro	tection z	one.					_				ノ			\				0	~				
_										_														_		
Miti	gation o	ptions																			F	Resid	lual	risl	<u> </u>	
_																					F	Resid	lual	risl	<b>.</b>	
													_								F	Resid	lual	risl	<b>.</b>	
													_								F	Resid	lual	risl	<b>_</b>	
Ove	rall tree	risk ra	ting	Low	Mo	derate	П н	igh 🗆	Extreme 🗖			v	Vor	k pr	riori	ty	1 🗆	2		3 E	] 4	1 🗆				
Ove	rall resid	lual ris	k	Low	□ Mo	derate	п н	igh 🗖	Extreme 🗖			R	ecc	omn	nen	ded	ins	pect	ion	inte	rval					
Data	Final	■ Pre	limin	ary Ad	vanced	assess	sment	neede	d □No □Yes-	Тур	e/Re	ason														
									es   Root coll																	



Client <u>C</u>								40.45		
∆ddrac•	GSI		Date_4	5/23			Tir	ne 1245		
	s/Tree location SO-06	dbh_15"		Tree n	0. 50	-06-4		_ Sheet 1	of	1
	ecies Picea pungens	dbh_ <sup>15</sup> "	_ Height	40'	. D-	Crov	vn spi	read dia. 15	).	
Assesso	or(s) Cory Shields	Time frame 3 rears		lools us	sed_Pr	obe, m	allet			
	Targ	get Assessment								
					Tar	get zor	ne			
et Ser				[	ie	뷮	hin	Occupancy rate	get?	<u>۔</u> ۔
Target	Target description				wit	rget 11χ	wit × Ht	1-rare 2 - occasional	tar	ictio
	larget description				Target within drip line	Target within 1 x Ht.	Target within 1.5 x Ht.	3 – frequent 4 – constant	Practical to move target?	Restriction practical?
				$\overline{}$	<u> </u>				_	
1	Cars in driveway to nort	tn			-	✓	✓	3	N	N
2	House to northwest			$\longrightarrow$		<b>✓</b>	✓	4	N	N
3	Power-lines to east					✓	✓	4	N	N
4										
	S	Site Factors								
History	of failures N/A		Тор	ography	Flat 🔳	Slope	e 🗆 _	%	Aspect	t
Site cha	anges None■ Grade change □ Site clearing □ Changed soil	hydrology 🗖 Root cu	ıts 🗖 De	scribe						
Soil con	ditions Limited volume ☐ Saturated ☐ Shallow ☐ Compacte	ed 🗖 Pavement over	roots 🗆	%	Des	cribe _				
Prevaili	ng wind direction W Common weather Strong winds	■ Ice■ Snow■ H	eavy rair	n■ Des	cribe_	Ice/sr	o wor	n ~2 year ir	nterval	
	Tree Healt	th and Species Prof	ile							
Vigor L	.ow ☐ Normal ■ High ☐ Foliage None (seasonal) ☐	None (dead) □	Norma	ı <u>95</u> %	6 C	hlorot	ic	% Nec	rotic <u></u>	5
Species	failure profile Branches ■ Trunk ■ Roots □ Describe <u>cod</u>		es							
		Load Factors								
	xposure Protected □ Partial ■ Full □ Wind funneling □ <u>▼</u> density Sparse □ Normal ■ Dense □ Interior branches F									
	Tree Defects and Condition	ons Affecting the Lil		l of Failu	re					
										`
U	Inbalanced crown ☐ LCR 70 %	Cracks 🗆					[	A COLOR OF THE RESERVE OF THE PERSON NAMED IN COLUMN 1997 AND THE		_
								lightning da	mage [	_
D	Dead twigs/branches 5 % overall Max. dia. 0.5"	Codominant 🗖						_ Included	l bark [	
B	roken/Hangers Number Max. dia	Codominant   Weak attachments						_ Included	l bark [	
O	oroken/Hangers Number Max. dia Over-extended branches $\square$	Codominant 🗖				_ (	avity/	_ Included	l bark [ % cir	c.
О <b>Р</b> і	oroken/Hangers Number Max. dia Over-extended branches	Codominant   Weak attachments	]			_ 0	Cavity/ Similar	Included Nest hole branches pr	l bark [ % cir esent [	c.
0 <b>P</b> i	Proven cleaned  Thinned  Raised  Nax. dia  Max. dia  Max. dia  Max. dia  Max. dia  Max. dia  Raised  Raised	Codominant  Weak attachments  Previous branch failu	□ ures □ _ □ Cank	ers/Galls/	Burls	_ (	Cavity/ Similar Sapwo	Included Nest hole branches pr	l bark [ % cir esent [ decay [	c.
O Pi Ci Ri	Proven/Hangers Number Max. dia  Pruning history  Prown cleaned	Codominant   Weak attachments   Previous branch failu  Dead/Missing bark	□ ures □ _ □ Cank Hea	ers/Galls/ rtwood d	Burls l		Cavity/ Similar Sapwo	Included Nest hole branches prod damage/	l bark [ % cir esent [ decay [	c.
O Pr Cr Rr Fl	Proven/Hangers Number Max. dia  Pruning history  Prown cleaned	Codominant   Weak attachments   Previous branch failu  Dead/Missing bark   Conks   Conks	□ ures □ _ □ Cank Hea	ers/Galls/ rtwood d	Burls l		Cavity/ Similar Sapwo	Included Nest hole branches prod damage/	l bark [ % cir esent [ decay [	c.
O Pr Cr Rr Fl	Adain concern(s)	Codominant   Weak attachments   Previous branch failu  Dead/Missing bark   Conks   Response growth	□ ires □ _ □ Cank Hea	ers/Galls/ rtwood d	Burls		Cavity/ Gimilar Gapwo	Included Nest hole r branches pr ood damage/	I bark [ % cir esent [ decay [	c.
O Pi Ci Ri Fl M	Adin concern(s)  Number Max. dia  Nervenentended branches   Truning history  Trown cleaned	Codominant  Weak attachments  Previous branch failu Dead/Missing bark  Conks  Response growth  Significant	□ ıres □ _ □ Cank Hea	ers/Galls/ rtwood d	Burls		Cavity/ Similar Sapwo	Included Nest hole r branches pr rod damage/	I bark [ % cir esent [ decay [	c.
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O Pi Ci Ri FI M	Adin concern(s)  Number Max. dia  Nervenentended branches   Truning history  Trown cleaned	Codominant  Weak attachments  Previous branch failu Dead/Missing bark  Conks  Response growth  Significant	□ ures □ _ □ Cank Hea	ers/Galls/ rtwood d	Burls		Cavity/ Gimilar	Included Nest hole r branches pr nod damage/	I bark [ % cir esent [ decay [	rc.
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PP CC RR FI	Wax. dia.   Wax.	Codominant   Weak attachments   Previous branch failu  Dead/Missing bark   Conks   Response growth   Significant   Imminent   Collar bu  Dead   Ooze	☐ Ires ☐ _ ☐ Cank Hea Hea Iried/Not	Roots  visible  Decay  Cavity	Burls   lecay   and l De	Roo	cavity/Similar Sapwo t Co Conks/C.	Included Nest hole branches pr od damage/ damage/	I bark [ _% cir esent [ decay [	
Price Co. Sea Li <sub>i</sub>	Wax. dia.   Wax.	Codominant  Weak attachments  Previous branch failu Dead/Missing bark  Conks  Response growth  Significant  Imminent  Dead  Ooze  Cracks	Cank Hea  Iried/Not  Cut/[	Roots  visible  Decay  Cavity  Damaged	and Dell	C S	Cavity/Similar Sapwo  t Co  Conks/c.	Included Nest hole branches pr od damage/ llar Stem gir Mushrooms	I bark [ _% cir esent [ decay [	
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Data	□Final	■ Pr	elimi	nary <b>Ad</b>	vanced	asses	sment	neede	ed □No □Yes-	Туре	e/Re	asor	n _													
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Client G	SSI ———————————————————————————————————			Date 4	/5/23			Tir	me_1300		
Address	/Tree location SO-06				Tree i	no. sc	-06-5		_ Sheet 1	of	1
	ecies Psuedotsuga menziesii	dbh_ <sup>20"</sup>		Height	60'		Crov	vn sp	read dia. 25	5'	
Assesso	r(s) Cory Shields	Time frame	3 Years		Tools u	ısed Pr	robe, m	allet			
		Target Assessr	nent								
Target number	Target descriptio	on				Target within drip line	Target pag within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1	House to nort	h				<i>-</i>	1	7	4	N	N
2	House to southy					Ϊ́	· /	7	4	N	N
3	Power-lines to so					1	1	7	4	N	N
4	Shed to south					1	1	1	4	N	N
	Cried to south	Site Factors	<u> </u>			_ •		•		1.4	111
Site char	nges None■ Grade change□ Site clearing□ Changed ditions Limited volume□ Saturated□ Shallow□ Com ng wind direction W Common weather Strong w	npacted 🗖 Paven	Root cut nent over now ■ He	ts□ De roots□ eavy raii	escribe	% Des	cribe _				
Pests		Abiotic									5%
Species 1	failure profile Branches ■ Trunk ■ Roots ■ Describe			allures,	codomir	nant ta	illures	, root	plate failure	es	
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	r planned change in load factors	iles rew = Non	nai 🗖 Dei	130 🗖	VIIIC3/IV	iistictt	)C/ 141C	,,,,			
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De Br Ov <b>Pr</b> Cr Re Flu	and twigs/branches ■ 5 % overall Max. dia. 2" oken/Hangers Number 3 Max. dia. 0.5"  ver-extended branches ■ ver-extended branches ■ ver-extended branches ■ ver-extended □ Thinned □ Raised ■ ver-extended □ Topped □ Lion-tailed □ ver-extended □ Ver-	Codominar  Weak attacl Previous br  Dead/Missi Conks	nt □ hments □ ranch failui ng bark □	res 🗆 _ Cank Hea	ers/Galls	/Burls decay	( :	Cavity/ Similar Sapwo	Lightning da Included (Nest hole r branches pi pod damage/	d bark l % cir resent l decay l	c.
\	ad on defect N/A □ Minor ■ Mode kelihood of failure Improbable □ Possible ■ Proba	_									- -
Co Sa Lig Ca Le Re M:	— Trunk —  rad/Missing bark □ Abnormal bark texture/col radominant stems □ Included bark □ Crac pwood damage/decay □ Cankers/Galls/Burls □ Sap oo rehtning damage □ Heartwood decay □ Conks/Mushroor rvity/Nest hole % circ. Depth Poor tap an ° Corrected? rsponse growth ain concern(s)  ad on defect N/A ■ Minor □ Moderate □ Signific relihood of failure	cks   ze   ms   oer	Dead  Ooze  Cracks  Root plate Response Main con	Cut/I e lifting e growth cern(s)	t visible [ Decay [ Cavity [ Damaged	De De	epth ( % cin Distribution	Conks/ rc. stance kness I	rate □ Sign		

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																							ıual	risk	<u> </u>	
Ove	rall tree	risk ra	ating	Low	Mo	derate	П н	igh □	Extreme			١	Nor	k pr	iori	ty	1 🗆	2		3 E		1 🗆				
Ove	rall resid	lual ri	sk	Low	Mo	derate	П н	igh □	Extreme			F	Reco	omn	nen	ded	ins	ect	ion	inte	erval					
Data	□Final	■ Pre	elimir	nary <b>Ad</b>	vanced	assess	ment	neede	ed □No □Yes-	Тур	e/Re	asor	n													
Insp	ection lir	nitatio	ons I	None D	]Visibili	ty □/	Access	□Vin	es Root coll	ar b	urie	d De	escri	ibe												



Client <sup>C</sup>	391	D-+-	4/5/23			т:.	- 1320		
	s/Tree location SO-06	Date	Troop	so 80	-06-6	_ '''	Shoot 1	of	: 1
Tracas	s/Tree location SO-06 ecies Picea stichensis dbh 19"	Haid	free f	10. 00	Crow		_ Sneet _'	oi	<u> </u>
	or(s) Cory Shields Time frame	Heigi	Tools w	ood Pr	Crov	vn spi allet	read dia. 2	,	
Assesso			100IS U	sea <u>·</u>	000, 111	unot			
	Target Assessn	nent							
Target number	Target description		,		Target as within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	House to north			✓	✓	✓	4	N	N
2	House to southwest			<b>✓</b>	✓	<b>√</b>	4	N	N
3	Power-lines to south			<b>✓</b>	✓	<b>√</b>	4	N	N
4									
	Site Factors								
History	of failures Broken branch tips	To	pography	Flat	Slope	e 🗆	%	Aspect	t
	inges None ■ Grade change □ Site clearing □ Changed soil hydrology □								
	ditions Limited volume ☐ Saturated ☐ Shallow ☐ Compacted ☐ Pavem								
	ng wind direction W Common weather Strong winds ■ Ice ■ Sn								
	Tree Health and Spec			_					
	ow □ Normal ■ High □ Foliage None (seasonal) □ None (o							crotic <u></u>	5%
Species	failure profile Branches ■ Trunk □ Roots □ Describe Overextended								
	Load Factor	s							
Wind ex	xposure Protected ☐ Partial ■ Full ☐ Wind funneling ☐ Trees to eas	t	Relative	crow	n size	Sma	II□ Mediu	m 🔳 L	_arge □
	density Sparse□ Normal■ Dense□ Interior branches Few□ Norm or planned change in load factors Tree Defects and Conditions Affectin								
	— Crown and Bra	nches —							
D B O P C R F	roken/Hangers Number 1 Max. dia. 2" Weak attach Previous bra  rown cleaned	nments □ anch failures □ ng bark □ Cai	 nkers/Galls/ eartwood c	/Burls		Cavity/ Similar Sapwo	Included Nest hole branches prod damage/	d bark [ % cir resent [ decay [	rc.
\ -	oad on defect N/A ☐ Minor ☐ Moderate ■ Significative ikelihood of failure   Improbable ☐ Possible ■ Probable ☐ Immine								- - -
Co Sa Li <sub>l</sub> Ca Le Re	odominant stems	Collar buried/NDead	Decay C Cavity C /Damaged g C th Around	De  roots  Soil	pth C _% cir □ Dis I weak	Conks/ c. stance kness [	_ Stem gi Mushrooms from trunk		_

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Condition number								ē		Н	Failu							Fail	ure 8	& Im	pact	Co	nseq	uen	ces	
ngu							l ce	number		⊢	rallu	ire	$\vdash$	⊢	Imp	T	_	(f	rom N	Matrix T	1)	⊢	_	_	$\dashv$	Risk
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									ed □No □Yes-																	
Insp	ection lir	nitatio	ons [	None ■	Visibili	ty 🗆	Access	□Vin	es Root coll	ar b	urie	d De	escr	ibe	Ca	nnot	see	e pot	tenti	ial to	ppii	ng ci	ut			



Client GSI						Date 4	/5/23			Tir	me 1340		
Address/Tre	ee location SO-	06					Tree r	no. so	-06-7		Sheet 1	of	1
Tree species	S Psuedotsuga me	nziesii		dbh_21"		Height	60'		Crov	vn spi	read dia. 25	5'	
Assessor(s)	Cory Shields			Time fran	ne 3 Years		Tools u	sed_Pr	obe, m	allet			
				Target Asses	sment								
Target number			Target descripti	on					Target as within 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1			House to south	east				<b>-</b>	1	1	4	N	N
2			House to south					Ť	· /	1	4	N	N
3			Power-lines to s	outh				1	1	1	4	N	N
4													
				Site Facto	rs								
Site changes Soil conditio	ons Limited volu	change□ Site o me□ Saturated	clearing ☐ Change ☐ Shallow ☐ Cor weather Strong v	npacted 🗖 Pave	☐ Root cuement over Snow ☐ H	roots□ eavy rai	escribe%	6 Des	cribe _				
Pests			iage None (season Roots ■ Describ	Abiot	ic <u>Lawn m</u>	ower da	amage to	sout	h				5%
				Load Fact									
			☐ Wind funneling										
	_		☐ Interior brand	hes Few□ No	rmal■ De	nse 🗆	Vines/M	listleto	e/Mo	ss 🗆			
Recent or pia	anned change in												
		Tre	e Defects and Co	nditions Affect	ing the Lik	celihood	d of Failu	ıre					_
Dead f Broker Over-e <b>Prunir</b> Crown Reduc Flush	n/Hangers Num extended branche ng history n cleaned  ced  cuts	■ <u>5</u> % overanber		Codomina Weak atta Previous Dead/Mis Conks  Response	ant   achments   branch failu ssing bark   growth	] ires D _ ] Cank Hea	ers/Galls/ artwood o	/Burls	_ ( _ ;	Cavity/ Similar Sapwo	Lightning da Included (Nest hole r branches pr pod damage/	d bark [ % cir resent [ decay [	c.
\	on defect hood of failure	N/A ■ Improbable □	Minor ☐ Mod Possible ☐ Prob	_									- -/
Codon Sapwo Lightni Cavity, Lean _ Respoi Main c	ing damage ☐ He /Nest hole ° Corrected nse growth concern(s)	Included ay □ Cankers/Ga eartwood decayl _% circ. Depth _ d?	mal bark texture/co	cks   oze   ms   per	Dead COOZE COOZE  Cracks COOZE  Root plate  Response  Main cor	ried/Nor   	Decay C Cavity C Damaged	De De De De De De De De De De De De De D	pth ( _% cii D Dis	Conks/ rc. stance kness [	Stem gi 'Mushrooms from trunk		_

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oug	_			ondition	- I	Part size		Target	Target	npro	Possible	Probable	Imminent	Very low	Low	Medium	High	Unlikely	l me	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
10	Tree pa	-		concer	-	<u>~</u>	<u> </u>	-	protection	-		<u> </u>	<u>-</u>	_		2			Š	=	~	_	2	Si	Š	Matrix 2)
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Client G	SSI			Date 4	/5/23			Tir	ne 1300		
Address	/Tree location SO-06				Tree n	10. SO	-06-8		_ Sheet _1	of	1
Tree spe	ecies Juglans nigra	dbh_ <sup>11"</sup>		Height	35"		Crov	vn spi	read dia. 25	5'	
Assesso	r(s) Cory Shields	Time fram	e 3 Years		Tools us	sed Pro	obe, m	allet			
		Target Assess	ment								
Target number	Target description	1					Target as within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	House to east				$\neg \neg$	1	<b>√</b>	1	4	N	N
2	Power-lines to no				$\neg \neg$	·	· /	1	4	N	N
3	Shed to west					1	<u> </u>	1	4	N	N
4	House to west						· /	1	4	N	l <sub>N</sub>
		Site Factor	'S				Ť	·			
Site char Soil cond Prevailir	nges None ■ Grade change □ Site clearing □ Changed ditions Limited volume □ Saturated □ Shallow □ Company wind direction W Common weather Strong wi	pacted ☐ Pave nds ■ Ice ■ S lealth and Spe	□ Root cu ment over Snow ■ He ecies Prof	ts□ De roots□ eavy rair <b>ile</b>	escribe% n ■ Des	6 Desc	ribe Ice/si	now o	n ∼2 year ir	nterval	
Pests	failure profile Branches ■ Trunk □ Roots □ Describe	Abioti	с		11 <u>30 </u>	% CI	nioroi		% Nec	crotic <u>-</u>	<u> </u>
Species	Tallure profile Branches  Trunk  Noots  Describe	Load Facto		allulus							
Crown d	posure Protected Partial Full Wind funneling I lensity Sparse Normal Dense Interior branch or planned change in load factors	•									_
	Tree Defects and Cond	ditions Affecti	ng the Lik	elihood	l of Failu	ıre					
					. 01 1 4 11 4						
De Br Ov <b>Pr</b> Cr Re Fl	nbalanced crown ■ LCR 80 % ead twigs/branches ■ 2 % overall Max. dia. <0.5" roken/Hangers Number Max. dia ver-extended branches ■ runing history rown cleaned □ Thinned □ Raised ■ reduced □ Topped □ Lion-tailed □ rush cuts □ Other	Codomina Weak atta Previous b Dead/Miss Conks	nt □ chments □ ranch failu sing bark □	] res 🗆 _ ] Cank Hea	ers/Galls/ rtwood d	/Burls [		Cavity/ Similar Sapwo	Lightning da Included Nest hole r branches pr nod damage/	d bark [ % cir resent [ decay [	c.
\	oad on defect N/A ☐ Minor ☐ Model kelihood of failure Improbable ■ Possible ☐ Probal	rate ■ Signifi ble □ Immir									- -
Co Sa Lig Ca Le Re M.	— Trunk —  Pad/Missing bark □ Abnormal bark texture/color  Addominant stems □ Included bark □ Crack  Approved damage/decay □ Cankers/Galls/Burls □ Sap ooze  Approved damage □ Heartwood decay □ Conks/Mushroom  Approved	cs   e   ns   er   ————————————————————————————————	Dead  Ooze  Cracks  Root plat Response Main cor	ried/Not	Decay Cavity Camaged	Dep	oth ( _% cir □ Dis	Conks/ rc. stance kness [	Stem gi Mushrooms from trunk		

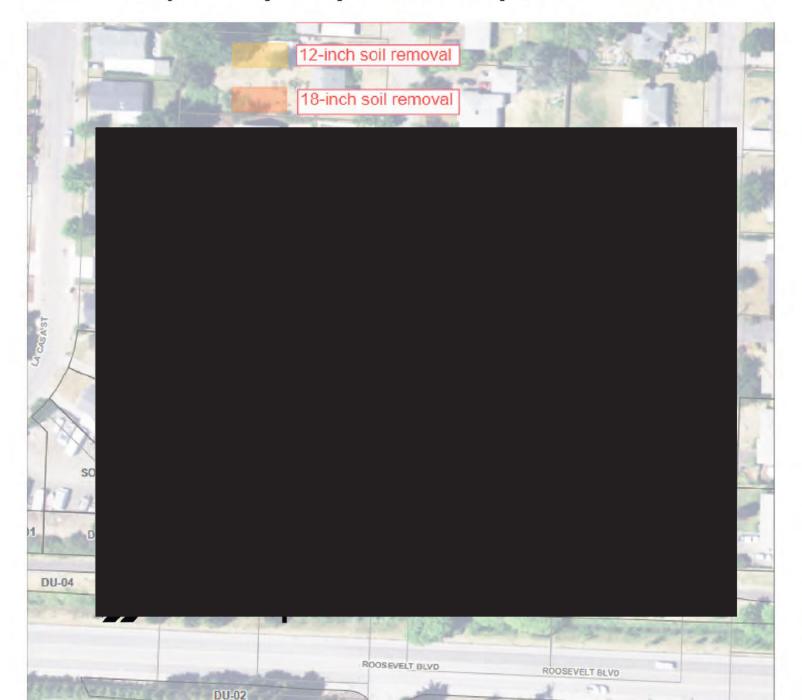
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June 2023

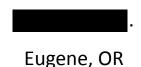
# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





### **Arborist Report**



Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

Cory Shields
Certified Arborist PN-8292A
Tree Risk Assessment Qualified
International Society of Arboriculture
29110 Sheep Head Road
Brownsville, OR 97327

#### Overview

This report covers the mitigation recommendations for the trees at Street hereto referenced as SO-07. There are 6 total individual trees under the purview of this report, in addition to several shrubs not covered under the tree assessment forms. Figure 1 details the locations of the trees withing SO-07. As detailed in Figure 2, soil removal on the entirety of SO-07 will be at a 12-inch depth.



Figure 1

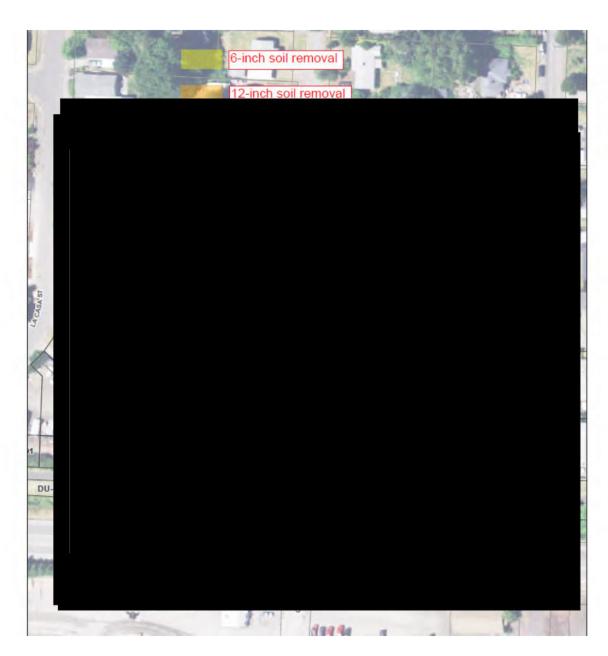


Figure 2

#### SO-07-01

Located on the western portion of the property in the front yard (Figure 1, 01), tree 01 is an *Acer saccharum* with a diameter of 14", height of 35', and a crown spread of 30' (Figure 3). This tree originates in the City of Eugene right-of-way and to make any recommendations would be a conflict of interest. The best course of action would be to determine the extent of the soil removal in and near the tree and contact the City for options and their recommendations.

#### SO-07-02

Located on the northwestern corner of the house in the front yard (Figure 1, 02), Tree 02 is a *Acer palmatum* with a diameter of 2", a height of 3', and a crown spread of 5' (Figure 4). Due to the species, the size, and the required soil removal depth, this tree would be best served by transplantation. This tree should be dug up to minimize root loss and once the tree is out of the ground, the soil can be washed off onsite. Care should be taken to place it in an appropriately sized container along with new planting soil. Once in the container with soil, it should be watered in to collapse air pockets and ensure the soil is covering cavities around the roots. It can be replanted once the fall/winter rains set in.

#### SO-07-03 and 04

Located along the the northern fence line in the backyard (Figure 1, 03 and 04), Tree 03 and 04 are *Malus pumila* both with diameters of 1", a height of 8', and a crown spread of 6' (Figure 5). These specimens can either be transplanted or, if damage can be avoided, vactor, hand, or other minimal impact excavation technique excavated within a 2' radius around the trunk. If transplanted, these trees should be dug up to minimize root loss and once the trees are out of the ground, the soil can be washed off onsite. Care should be taken to place them in an appropriately sized container along with new planting soil. Once in the container with soil, they should be watered in to collapse air pockets and ensure the soil is covering cavities around the roots. These trees can be replanted once the fall/winter rains set in.

#### **SO-07-05**

Located along the eastern fence line near the northeastern corner of the property (Figure 1, 05) is an *Acer ginnala* with multi-stem diameter of 6", a height of 20', and a crown spread of 20' (Figure 6). This tree species has a low tolerance to root impacts, is valuable enough to maintain in the landscape, and is too large to transplant. To minimize the impacts to the root system, the soil should be vactor excavated, hand dug, or other minimal impact excavation technique at a diameter of 8' from the center of the trunk. It is recommended that an arborist is onsite while the soil removal is conducted in this critical root zone to monitor potential root damage, and to ensure equipment does not damage the canopy. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### Shrubs

There are several shrub and plant specimens that would benefit from transplanting prior to soil excavation (Figures 7-10). The shrub pictured in Figure 8 (closest to the northeastern corner of the house) may prove too difficult to transplant, and it can be maintained in the landscape if at a radius of 2' from the trunk the soil is vactor excavated, hand dug, or other minimal impact excavation technique. The other plants and shrubs can be transplanted. These plants should be dug up to minimize root loss and once they are out of the ground, the soil can be washed off onsite. Care should be taken to place them in an appropriately sized container along with new planting soil. Once in the container with soil, they should be watered in to collapse air pockets and ensure the soil is covering cavities around the roots. These plants can be replanted once the fall/winter rains set in.



Figure 3

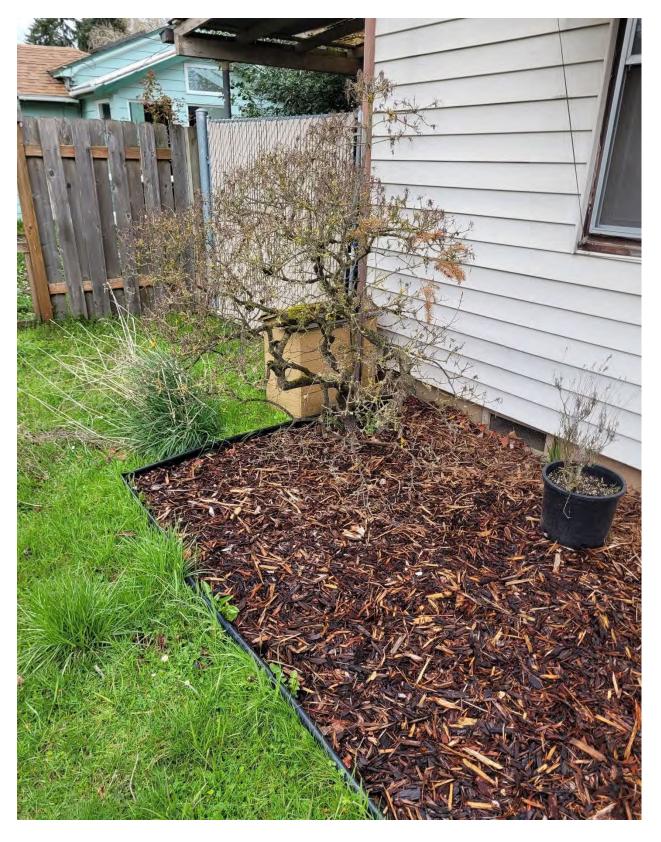


Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10



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Address/Tree location SO-07		Tree n	o. SO-07-2	Sheet <u>1</u>	of	1
Address/Tree location SO-07 Tree species Acer palmatum	dbh <u>2"</u>	_ Height <u>3'</u>	Crow	n spread dia. <u>5</u> '		
Assessor(s) Cory Shields	Time frame 3 Years	Tools us	sed Probe			
	Target Assessment					
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Address/Tree location SO-07		Tree	no. <u>SO-07-3</u>	Sheet <u>1</u>	of	1
Address/Tree location SO-07 Tree species Malus pumila	dbh_ <u>1"</u>	_ Height <u>8'</u>	Crov	vn spread dia. <u>6</u>	1	
Assessor(s) Cory Shields	Time frame 3 Years	Tools u	Ised Probe			
	Target Assessment					
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3					N	N
4						
History of failures N/A	Site Factors					
Vigor Low ☐ Normal ■ High ☐ Foliage None (sea: Pests	Compacted ☐ Pavement over ag winds ☐ Ice ☐ Snow ☐ I ee Health and Species Pro sonal) ☐ None (dead) ☐ Abiotic _	r roots ☐9 Heavy rain ■ Des file  Normal 100 9	% Describe scribe lce/si % Chlorot	now on ~ 2 year	interva	l
<b>Species failure profile</b> Branches ☐ Trunk ☐ Roots ☐ Desc	ribe Load Factors					
Wind exposure Protected □ Partial □ Full □ Wind funner  Crown density Sparse □ Normal ■ Dense □ Interior broke  Recent or planned change in load factors  Tree Defects and	anches Few□ Normal■ D	ense <b>Vines/N</b>	listletoe/Mo			
Unbalanced crown  LCR 60 % Dead twigs/branches  Max. dia.  Broken/Hangers Number  Max. dia.  Over-extended branches  Pruning history Crown cleaned  Thinned  Raised Reduced  Topped  Lion-tailed Flush cuts  Other  Main concern(s)	Weak attachments Previous branch fail  □ Dead/Missing bark □ Conks □ Response growth □	□ ures □ □ Cankers/Galls Heartwood	/Burls 🗆 :	Include Cavity/Nest hole Similar branches p Sapwood damage/	d bark [ % cir resent [ /decay [	rc.
Load on defect N/A ■ Minor □ N Likelihood of failure Improbable □ Possible □ P	•					- -
— Trunk —  Dead/Missing bark □ Abnormal bark texture Codominant stems □ Included bark □ Sapwood damage/decay □ Cankers/Galls/Burls □ Sap Lightning damage □ Heartwood decay □ Conks/Mush Cavity/Nest hole % circ. Depth Poor Lean ° Corrected? Response growth Main concern(s)  Load on defect N/A ■ Minor □ Moderate □ Sig Likelihood of failure	Cracks	uried/Not visible [	Depth C J% cir I roots Dis Soil weak	Conks/Mushrooms rc. stance from trunk kness		_

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Client GSI		Date 4/7/23		Time_1720		
Address/Tree location SO-07		Tree	no. SO-07-4	Sheet _1	of	1
Address/Tree location SO-07 Tree species Malus pumila	dbh_ <u>1"</u>	_ Height <u>8'</u>	Crov	wn spread dia.	6'	
Assessor(s) Cory Shields	Time frame 3 Years	Tools u	sed Probe			
	Target Assessment					
Target desc	ription		Target within drip line Target ab Target ab within 1 x Ht.		actical to	Restriction practical?
1					N	N
2					N	N
3					N	N
4						
History of failures N/A	Site Factors					
Vigor Low ☐ Normal ■ High ☐ Foliage None (sea	Compacted ☐ Pavement ove ng winds ■ Ice ■ Snow ■ F ree Health and Species Pro	r roots □9 Heavy rain ■ Des file  Normal 100 9	6 Describe _ scribe <u>lce/sr</u> 6 Chlorot	now on ~ 2 year	interva	l
<b>Species failure profile</b> Branches □ Trunk □ Roots □ Des	cribe Load Factors					
Wind exposure Protected ☐ Partial ☐ Full ☐ Wind funn.  Crown density Sparse ☐ Normal ■ Dense ☐ Interior by  Recent or planned change in load factors  Tree Defects and	ranches Few□ Normal■ D	ense <b>Vines/N</b>	listletoe/Mo			
Unbalanced crown	Weak attachments I Previous branch fail  Dead/Missing bark I  Conks □ Response growth □	□ ures □ □ Cankers/Galls, Heartwood o		Include Cavity/Nest hole _ Similar branches   Sapwood damage	ed bark ( % cir present ( e/decay (	rc.
Load on defect N/A ■ Minor □ I Likelihood of failure Improbable □ Possible □ I	ū					- -)
— Trunk —  Dead/Missing bark □ Abnormal bark texture Codominant stems □ Included bark □ Sapwood damage/decay □ Cankers/Galls/Burls □ Sa Lightning damage □ Heartwood decay □ Conks/Mush Cavity/Nest hole% circ. Depth Pool Lean° Corrected?  Response growth Main concern(s)  Load on defect N/A ■ Minor □ Moderate □ Signature	Cracks	uried/Not visible [	Depth CD% cir Troots Dis Soil weak	Conks/Mushroom rc. stance from trunk kness   Moderate  Sig	as 🗆	

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Client GSI			Date 4/	7/23		Tir	me 1720		
Address/Tree location SO-07				_ Tree no.	SO-07-5		_ Sheet <u>1</u>	of	1
Tree species Acer ginnala		dbh_6" Multistem	Height	20'	Cro	wn sp	read dia. 20	)'	
Assessor(s) Cory Shields		Time frame 3 Years		Tools used	Probe				
	Т	arget Assessment							
Target number	Target description			Target within	drip line Target Vithin 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	Fence to east			· ·	<b>√</b>	1	4	N	N
2								N	N
3								N	N
4									
•		Site Factors			'	•		•	<u> </u>
History of failures Broken branches  Site changes None ■ Grade change I  Soil conditions Limited volume □ Sa  Prevailing wind direction W Co	☐ Site clearing ☐ Changed so turated ☐ Shallow ☐ Compa ommon weather Strong win	acted  Pavement over	its□ De roots□ eavy rair	scribe% [	Describe				
Vigor Low  Normal  High  Pests_	Foliage None (seasonal)	■ None (dead) □ Abiotic	Norma					crotic <u></u>	5%
Species failure profile Branches ☐ T	runk 🗆 Roots 🗀 Describe_	Load Factors							
Wind exposure Protected ☐ Partial Crown density Sparse ☐ Normal ■ Recent or planned change in load fac	Dense ☐ Interior branches tors	s Few□ Normal■ De	nse 🗆	Vines/Mist					
	Tree Defects and Condi	tions Aπecting the Li	keiinood	of Failure					
Unbalanced crown  Dead twigs/branches  5 Broken/Hangers Number Over-extended branches  Pruning history Crown cleaned  Thinne Reduced  Topped Flush cuts  Other  Main concern(s)	R 75 % % overall Max. dia. 1' Max. dia  R aised  Lion-tailed	Codominant	■ Epico res □ _ I Cank Hea	ormic ers/Galls/Bu rtwood dec	rls 🗆	Cavity/ Simila Sapwo	Included Nest hole r branches pr ood damage/	l bark [ % cir resent [ decay [	c.
Load on defect N/A ☐ Likelihood of failure Improba	Minor ■ Modera	•							- -
Dead/Missing bark □	d decay □ Conks/Mushrooms Depth Poor taper wounds	Dead  Doze  Ooze  Cracks  Root plat Response Main cor	ried/Not   	Decay ☐	Depth % ci ots □ Di Soil wea	Conks/ rc. stance kness	Stem gi 'Mushrooms from trunk		_

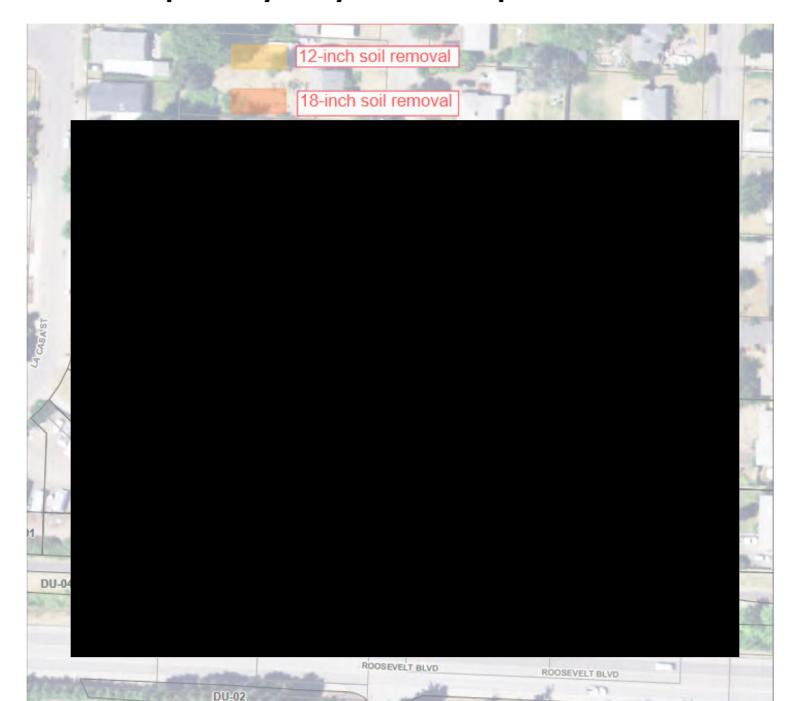
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Data	□Final	■ Pre	limina	ry Adv	/anced	asses	sment	neede	ed □No □Yes-	Гур	e/Rea	ason	ı													
Insp	ection lir	nitatio	ns <b>=</b>	None <b></b>	]Visibili	ty 🗖	Access	□Vin	es Root coll	ar b	uried	l De	escri	ibe												



June 2023

# ARBORIST REPORT

Prepared by: Cory Shields of Spade Tree Preservation





### **Arborist Report**



Eugene, OR

Prepared for:

Groundwater Solutions, Inc. dba GSI Water Solutions, Inc. 650 NE Holladay St., Suite 900 Portland, OR 97232

for

JH Baxter Removal Action
Project Number: 02060.005.004

Prepared by:

**Cory Shields** 

**Certified Arborist PN-8292A** 

**Tree Risk Assessment Qualified** 

International Society of Arboriculture

29110 Sheep Head Road

Brownsville, OR 97327

#### Overview



Figure 1

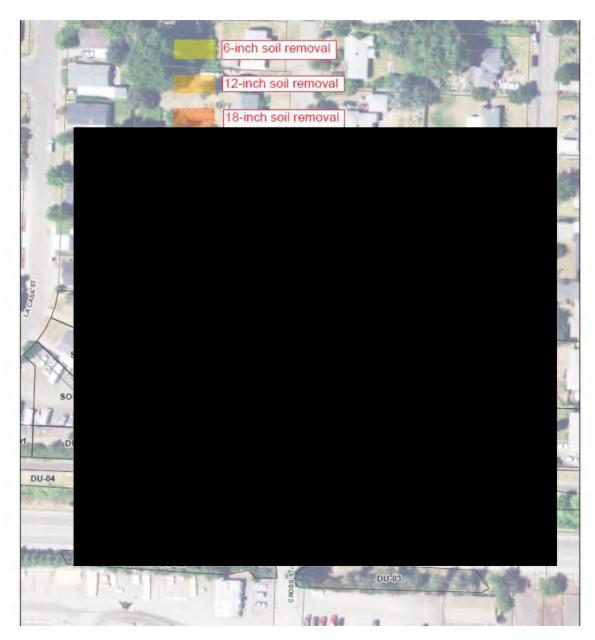


Figure 2

#### AP-01-01

Located on the eastern portion of the property in the front yard to the north of the driveway (Figure 1, 01), tree 01 is a *Chamaecyparis lawsoniana* with a diameter of 29", height of 80', and a crown spread of 40' (Figure 3). This tree originates in the City of Eugene right-of-way and to make any recommendations would be a conflict of interest. The best course of action would be to determine the extent of the soil removal in and near the tree and contact the City for options and their recommendations.

#### AP-01-02

Located in the backyard, due west of the house (Figure 1, 02), Tree 02 is a *Malus ioensis* with a multi-stem diameter of 12", a height of 15', and a crown spread of 20' (Figure 4). This tree species has a high tolerance to root impacts, is valuable enough to maintain in the landscape, and is too large to transplant. To minimize the impacts to the root system, the soil should be vactor excavated, hand dug, or other minimal impact excavation technique at a radius of 8' from the center of the trunks. It is recommended that an arborist is onsite while the soil removal is conducted in this critical root zone to monitor potential root damage, and to ensure equipment does not damage the canopy. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, and the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the soil removal activity to ensure the tree's continued survival and stability.

#### AP-01-03

Located near the southwestern corner of the property in the backyard (Figure 1, 03), Tree 03 is a *Juglans nigra* with a diameter of 18", a height of 40', and a crown spread of 35' (Figure 5). This tree species has a low tolerance to root impacts, is valuable enough to maintain in the landscape, and is too large to transplant. To minimize the impacts to the root system, the soil should be vactor excavated, hand dug, or other minimal impact excavation technique at a radius of 18' from the center of the trunk. It is recommended that an arborist is onsite while the soil removal is conducted in this critical root zone to monitor potential root damage, and to ensure equipment does not damage the canopy. After the excavation, the exposed roots should be covered as soon as possible either with a tarp, mulch, or new soil. New soil should be added within a couple of days, and the new soil should match the native soil in terms of consistency and makeup (sand, silt, clay). Weekly watering should be performed for the following two summers. The tree should be monitored for a minimum of three years after the removal activity to ensure the tree's continued survival and stability.

#### AP-01-04

Located along the northern fence line near the northwestern corner of the property (Figure 1, 04), tree 04 is a *Ligustrum ovalifolium* with a multistem diameter of 3", height of 15', and a crown spread of 20' (Figure 6). This specimen is in such poor shape removal is the best and most cost-effective option. The tree can be removed at the same time as the soil excavation.

#### AP-01-05

Located in the northwestern corner of the property (Figure 1, 05), tree 05 is a *Corylus avellana* with a multi-stem diameter of 8", height of 15', and a crown spread of 25' (Figure 7). This specimen has an old decaying trunk in the center of multiple stems (Figure 8). The tree is in such poor shape removal is the best and most cost-effective option. To reduce the risk of root failure, the tree should be removed prior to the soil removal.

#### Laurel and Juglans nigra

There is a Laurel shrub (*Prunus spp.*) located in the northwestern corner of the property (Figure 9). This shrub can be maintained if a radius of 2' is vactor excavated, hand dug, or other minimal impact excavation technique around the main trunk. Along the southern fence line in the backyard is a cluster of small *Juglans nigra*, which are immature and poorly sited (Figure 10). The trees should be removed with the soil excavation activities.



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7

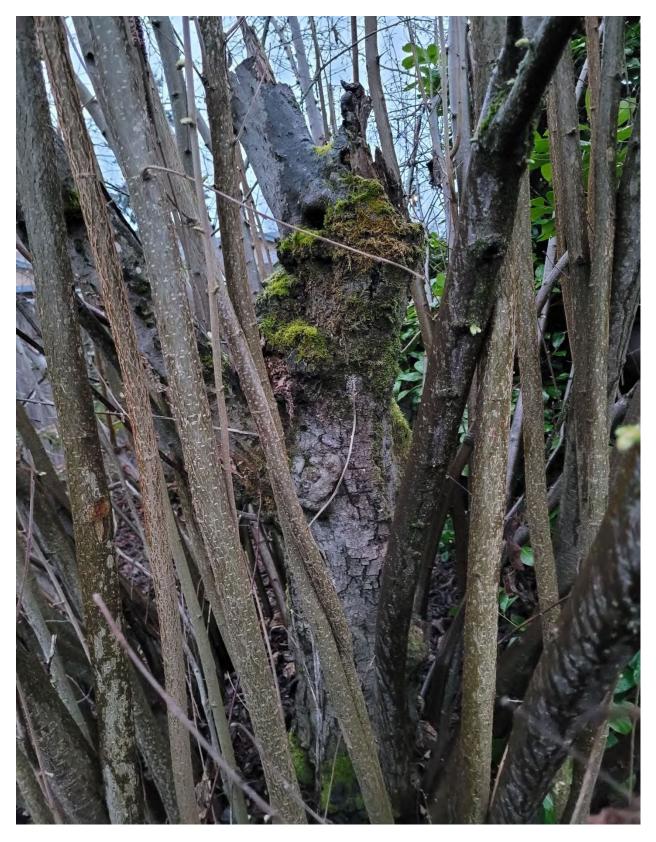


Figure 8

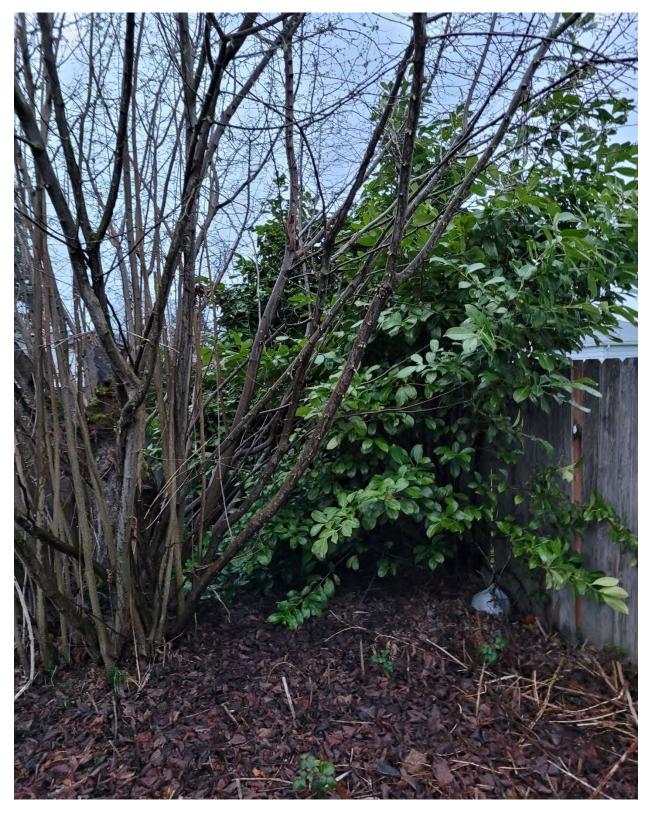


Figure 9

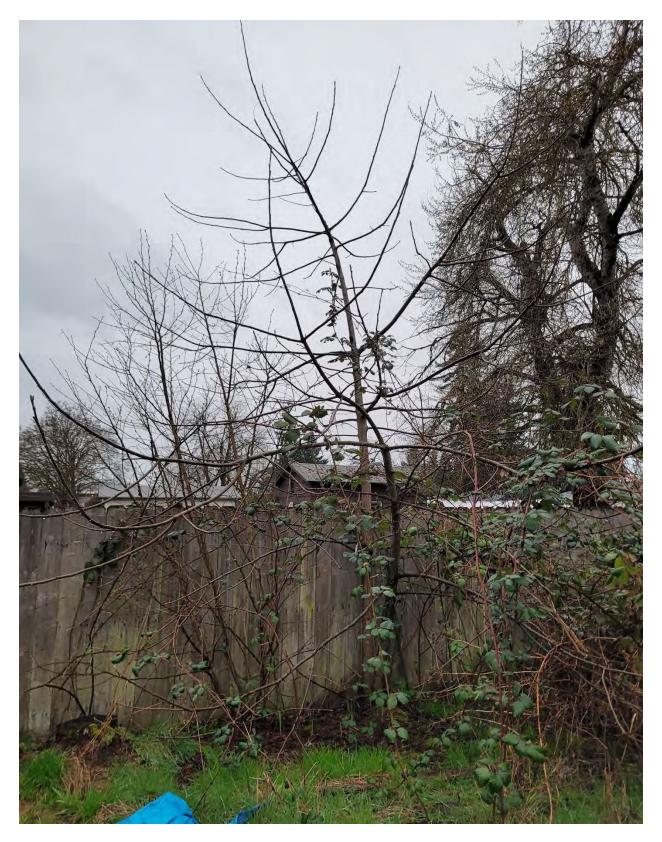


Figure 10



Client GSI					Date 4	/6/23			Tir	me 1910		
Address/Tree location						Tree n	o. <u>AP</u> -	01-1		_ Sheet <u>1</u>	of	1
Tree species Chamaecy	aris lawsoniana		_ dbh <u>29"</u>		<sub>.</sub> Height	80'		Crov	vn spi	read dia. <u>40</u>	)'	
Assessor(s) Cory Shields			_ Time fran	ne 3 Years		Tools us	sed Pro	obe, m	allet, b	inoculars		
		Ta	arget Asses	sment								
Target number		Target description				-		Target as within 1x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1		Traffic on road to ea	ast				<b>✓</b>	✓	<b>√</b>	1	N	N
2		House to west						<b>√</b>	1	4	N	N
3	Po	ower-lines to north an	d east					<b>✓</b>	1	4	N	N
4							$\neg$					
· ·			Site Facto	ors							•	
History of failures None Site changes None ■ 6 Soil conditions Limited Prevailing wind direction	rade change ☐ Site ovolume ☐ Saturated	clearing  Changed so I Shallow Compa n weather Strong wind Tree He	oil hydrology acted □ Pave ds ■ Ice ■ alth and Sp	Root cu ement over Snow ■ H Decies Prof	its□ De roots∎ eavy rain <b>ile</b>	escribe 45 % n ■ Dese	6 Desc cribe_	ribe _ lce/sr	Road now o	to west, dri n ∼ 2 year i	veway	south
Vigor Low ☐ Normal Pests Species failure profile			Abiot	tic							crotic <u></u>	<u>5</u> %
Species failure profile	oranches □ Trunk ■	Roots Describe		tors								
Wind exposure Protect Crown density Sparse I Recent or planned chan	□ Normal ■ Dense ge in load factors	□ Interior branches	Few□ No	ormal ■ De	nse 🗆	Vines/Mi	istleto					
	110					a or rana	-					
Dead twigs/branc Broken/Hangers Over-extended bra Pruning history Crown cleaned E Reduced E Flush cuts	Number 1 Inches ■ I Thinned □ I Topped ■		Codomin Weak atta Previous Dead/Mis Conks □	l nant ■ achments ■ branch failu ssing bark □	∎ <u>at co</u> res □ _ I Cank Hea	dominant ers/Galls/ ertwood d	t Burls [lecay [	_ ( _ ! _ !	Cavity/ Similar Sapwo	Lightning da Included (Nest hole r branches pr ood damage/	d bark II % cir resent II decay I	rc.
Load on defect Likelihood of fail	N/A □ ure Improbable ■	Minor ☐ Modera Possible ☐ Probable	_									- - -
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Client G	esi		Date 4/6	6/23		Tir	me_1950		
Address	/Tree location AP-01			_ Tree no	AP-01-2		Sheet <u>_</u> 1	of	1
Tree spe	ecies Malus ioensis	dbh 12" Multistem	Height	15'	Cro	wn sp	read dia. 20	)'	
Assesso	r(s) Cory Shields	_Time frame_3 Years		Tools use	d Probe				
	Ta	rget Assessment							
Target	Target description			Taroot within	drip line Target Target within 1 x Ht. oz		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	People in yard				/ /	1	1	Υ	Υ
2									
3									
4									
		Site Factors							
Site char Soil cond Prevailin	nges None  Grade change  Site clearing  Changed so ditions Limited volume  Saturated  Shallow  Company Shallow  Strong wind direction  W Common weather Strong wind Tree Hea	cted □ Pavement over Is ■ Ice ■ Snow ■ H alth and Species Prof	roots□ eavy rain	scribe% ■ Descr	Describe ibe <b>Ice/s</b>	now o	on ~ 2 year i	nterva	l
Pests_	ow □ Normal ■ High □ Foliage None (seasonal) ■  failure profile Branches ■ Trunk □ Roots □ Describe Co	Abiotic					% Ne	crotic _	<u>10</u> %
species	Tallure profile branches I frunk Li Roots Li Describe	Load Factors	os, wear	attacrime	in failure	.5			
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Recent c	or planned change in load factors								
	Tree Defects and Condit	ions Affecting the Lil	celihood	of Failure	•				_
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\	oad on defect N/A □ Minor □ Moderat kelihood of failure Improbable □ Possible □ Probable	te Significant							- -
Co Sa Lig Ca Le Re M — Lo Lil	Trunk —  Pead/Missing bark ■ Abnormal bark texture/color lead of minant stems □ Included bark □ Cracks lead on defect N/A □ Minor □ Moderate ■ Significant stems in center of failure probable ■ Possible □ Probable □ Imminent □ Included bark □ Cracks lead on it	Dead Doze Doze Doze Doze Doze Doze Doze Doze	ried/Not  Cut/D  ce lifting C  e growth  ncern(s) _  defect  od of failu	Decay  Cavity  camaged ro	Depth% ci % ci pots	Conks/ rc. stance kness	Stem gi /Mushrooms from trunk   rate  Sign		- - - - -

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Data	Final	■ Prel	iminary Ad	vanced	assess	sment	neede	d □No □Yes-	Гуре	/Reas	son _													
Insp	ection lir	nitatio	ns □None I	Visibili	tv 🗆	Access	□Vin	es   Root coll	ar bu	uried	Desc	ribe	Lo	sing	Day	/ligh	t							



Client GSI		Date_4/6/23		Ti	me 1930		
Address/Tree location AP-01		Tree	no. AP-01-3		_ Sheet <u>1</u>	of	1
Tree species Juglans nigra	dbh_ <sup>18"</sup>	Height <u>40'</u>	Cro	wn sp	read dia. <u>35</u>	5'	
Assessor(s) Cory Shields	Time frame 3 Year	s Tools ι	Ised Probe, n	nallet			
	Target Assessment						
Target d	escription		Target within drip line Target as Target swithin 1 x Ht.		Occupancy rate 1-rare 2-occasional 3-frequent 4-constant	Practical to move target?	Restriction practical?
1 Neighbor's she	ed to southwest		1 1	1	4	N	N
	shed to west		1 1	7	4	N	N
	se to east		1 1	7	4	N	N
4			<del>                                     </del>	<del>ا</del>	<del>-                                    </del>	<del>                                     </del>	· ·
	Site Factors						
History of failures None apparent  Site changes None ■ Grade change □ Site clearing □ C  Soil conditions Limited volume □ Saturated □ Shallow    Prevailing wind direction W Common weather State   Common weather   Common weather State   Common weather   Com	☐ Compacted ☐ Pavement ov	cuts □ Describe	% Describe				
Vigor     Low     □     Normal     ■     High     □     Foliage     None (       Pests     □     Species failure profile     Branches     ■     Trunk     □     Roots     □	Abiotic		% Chloro	tic	% Ne	crotic <u></u>	5%
Species failure profile Branches I Irunk Li Roots Li	Load Factors	i ialiules					
Wind exposure Protected ☐ Partial ■ Full ☐ Wind fu		Polativ	o crown size	Sma		m 🔳 l	argo 🗆
Crown density Sparse ☐ Normal ■ Dense ☐ Interior							
Recent or planned change in load factors		VIII.6911					
Tree Defects a	nd Conditions Affecting the	Likelihood of Fail	ıre				
	2" Codominant ■ _ Weak attachments Previous branch fa Dead/Missing bark  Conks □ Conks □	is —  ilures □ Cankers/Galls Heartwood	/Burls 🗆	Cavity/ Simila Sapwo	Included /Nest hole r branches prood damage/	d bark [ % cir resent [ decay [	rc.
							-
Load on defect N/A ☐ Minor ☐ Likelihood of failure Improbable ☐ Possible ■	•						- -
— Trunk —  Dead/Missing bark □ Abnormal bark text Codominant stems □ Included bark □ Sapwood damage/decay □ Cankers/Galls/Burls □ Lightning damage □ Heartwood decay □ Conks/M Cavity/Nest hole% circ. Depth F Lean° Corrected?  Response growth Main concern(s)  Load on defect N/A ■ Minor □ Moderate □ Likelihood of failure	Cracks Dead Sap ooze Ooze ushrooms Cracks oor taper Root p Respo	buried/Not visible [  Decay [ Cavity [ Cavity I	□% ci I roots □ Di Soil wea	Conks/ rc. stance kness	Stem gi /Mushrooms • from trunk □		_

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Condition number								er		_	ailur	_	Т				_	Fail	ure 8	& Im	pact	Co	nsec	quen	ces	
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ion						ize	Fall distance	J.		Improbable		e t		3		ا ۽			þat		<u>~</u>	흙		aut		rating
ndit			C	ondition	s	Part size	≅	Target	Target	prob	Possible	Probable	ŀ	Very low	,	Medium	£	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	of part (from
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Insp	ection lir	nitatio	ons [	JNone ■	Visibili	ty 🗆	Access	□Vin	es Root coll	ar bu	ıried	Desc	crib	<sub>oe</sub> I	Losi	ing s	sun	ııght								



Client GSI			Date_4/	6/23		Tii	me_1940		
Address/Tree location AP-01				_ Tree no. /	\P-01-4		_ Sheet 1	of	1
Tree species Ligustrum ovalifolium		dbh_3" Multistem	Height	15'	Cro	wn sp	read dia. <u>20</u>	)'	
Assessor(s) Cory Shields		Time frame 3 Years		Tools used	Probe				
	Ta	arget Assessment							
Target number	Target description			Target within	Target to za within 1 x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1	Fence to north			<b>√</b>	1	1	4	N	N
2					1				
3									
4									
•		Site Factors		•		•	•		<u> </u>
History of failures N/A  Site changes None Grade change   Soil conditions Limited volume Satur  Prevailing wind direction Com	Site clearing ☐ Changed so rated ☐ Shallow ☐ Compa amon weather Strong wind	cted  Pavement over	its□ De roots□ eavy rair	scribe% De	escribe				
Vigor Low ☐ Normal ■ High ☐ Pests Species failure profile Branches ☐ Tru	Foliage None (seasonal)[	□ None (dead) □ Abiotic	Norma					crotic _4	40%
Wind exposure Protected ☐ Partial ■ Crown density Sparse ☐ Normal ☐ D Recent or planned change in load factor	ense Interior branches	Few□ Normal□ De	nse 🔳	Vines/Mistle					
	Tree Defects and Condit	tions Affecting the Lik	celihood	of Failure					
Unbalanced crown ■ LCR Dead twigs/branches ■ 40 % Broken/Hangers Number Over-extended branches ■ Pruning history  Crown cleaned □ Thinned Reduced ■ Topped Flush cuts □ Other Main concern(s) Overextended	90 %  overall Max. dia. 2"  Max. dia  Raised  Lion-tailed	Codominant □	] res ■ <u>C</u> ■ Cankı Hea	Overweighte ers/Galls/Burl rtwood deca	ds □	Cavity/ Simila Sapwo	Included (Nest hole r branches prood damage/	d bark I % cir resent I decay I	rc.
Load on defect N/A Likelihood of failure Improbable	Minor ■ Moderate	•							- - -
_	lbnormal bark texture/color luded bark □ Cracks ers/Galls/Burls □ Sap ooze lecay □ Conks/Mushrooms epth Poor taper	Dead Doze Doze Doze Doze Doze Doze Doze Doze	ried/Not   	N/A ■ Mir	Depth ( % ci ts □ Di oil wea	Conks/ rc. stance kness	_ Stem gi 'Mushrooms  from trunk □		_

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Condition number							ē	1 1		ailure			Imp			Fail	ure 8	& Im	pact	Coi	nseq	uen	ces	
a l						nce	number			T	_	Н	Imp	act	$\dashv$	(f	rom N	/latrix	1)	⊢			Н	Risk
ition					size	Fall distance	ָבָּ בֿ		Improbable	<u>و</u> ا و	ent	×		٤		<u>~</u>	what		kely	ible		cant		rating of part
ondi	_		Condition	- I	Part size		Target	Target	npro	Possible Probable	Imminent	Very low	Low	Medium	High	Unlikely	Somewhat	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
0	Tree pa	$\neg$	of concer	-		_	-	protection	_	<u> </u>	- <u>-</u>	<u>^</u>		$\stackrel{\scriptstyle \sim}{\frown}$	픴	$\overline{}$	Š	<u> </u>	Š	$\overline{}$	$^{\sim}$	Si	Š	Matrix 2)
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Ove	rall tree	risk rat	ting Low	■ Mo	derate	- H	ligh 🗆	Extreme			Wor	k pr	iori	ty	1 🗆	2		3 🗆	] 4					
Ove	rall resid	ual ris	<b>k</b> Low	□ Mo	derate	- H	ligh 🗆	Extreme			Reco	omn	nend	ded	insp	pect	ion	inte	rval					
Data	□Final	■ Prel	iminary <b>Ad</b>	vanced	asses	sment	neede	ed □No □Yes-	Гуре/	Reas	on _													
Inch	action lin	nitatio	ne □None ■	\/icibili	tv 🗖/	\ccore	□\/in	es ERoot coll	ar bu	riod I	Docer	iho	Los	ina I	)av	diah	t							



Client GSI		Date 4/	6/23		Tir	me 2005		
Address/Tree location AP-01			Tree no. AF	P-01-5		Sheet 1	of	1
Tree species Corylus avellana	dbh 8" Multistem	Height	15'	Crov	vn sp	read dia. 25	5'	
Assessor(s) Cory Shields	Time frame 3 Years		Tools used P	robe				
	Target Assessment							
Target number.	t description		Target within drip line	Target taket within 1x Ht.		Occupancy rate 1-rare 2 - occasional 3 - frequent 4 - constant	Practical to move target?	Restriction practical?
1 Fence to	north and west		<b>√</b>	1	1	4	N	N
2 Peo	ple in yard		<b>√</b>	1	1	1	Υ	Y
3	•						$\vdash$	
4								
	Site Factors				_	<u> </u>		
History of failures N/A  Site changes None ■ Grade change □ Site clearing □  Soil conditions Limited volume □ Saturated □ Shalle  Prevailing wind direction W Common weather	w ☐ Compacted ☐ Pavement over	ts□ De roots□ eavy rain	scribe% Des	cribe				
Vigor     Low     □     Normal     ■     High     □     Foliage     Non       Pests	e (seasonal) ■ None (dead) □ Abiotic	Norma					crotic _	10%
Crown density Sparse ☐ Normal ☐ Dense ■ Intel Recent or planned change in load factors  Tree Defect				oe/Mo	oss 🗆			
Unbalanced crown ■ LCR 95 % Dead twigs/branches ■ 10 % overall Max. of Stroken/Hangers Number Max. of Over-extended branches ■ Pruning history Crown cleaned □ Thinned □ Raise Reduced □ Topped ■ Lione Flush cuts □ Other Main concern(s) Topped, resprouts	Weak attachments ☐  Previous branch failu  Dead/Missing bark ■  tailed ☐ Conks ☐	] res □ _ I Canke Heal	ers/Galls/Burls rtwood decay	(	Cavity/ Simila Sapwo	Included 'Nest hole r branches prood damage/	d bark l % cir resent l	rc.
Load on defect N/A ☐ Minor Likelihood of failure Improbable ☐ Possible	•							- -
Central deed stem	Cracks ☐ Dead ☐ Ooze ☐ Ooze ☐ Cracks ☐ Poor taper ☐ Response Main cor	ried/Not Cut/D e lifting [ e growth ncern(s) _ defect od of failu	N/A ■ Mino	epth ( _% cin Distribution Distribution Di	Conks/ rc. stance kness	Stem gi /Mushrooms from trunk   rate  Sign		- - - -

Risk Categorization																								
										Likelihood														
Condition number						Fall distance	number		Failure						Failure & Impac				Consequences					
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ţi,				size	ista			Improbable	를 들	ent	≥		٤			Somewhat		kely	ible		cant		rating of part	
) Judi	l_		Condition		Part size	🚆	Target	Target	Improba	Probable	Imminent	Very low	Low	Medium	High	Unlikely	me	Likely	Very likely	Negligible	Minor	Significant	Severe	(from
٥	Tree pa	art	of concer	n	3"	<del>-</del>	-	protection		_	=	چًا	-	Σ	<u> </u>	$\overline{}$	l s	트	ڳ	Ž	$\overline{}$	Sig	Se	Matrix 2)
Trunk		C	entral dead	al dead trunk		8'	1	shrub	O@		Q	Q	<u> </u>	$\bigcirc$	Ŏ	Ō	Q	Q	Q	$\overline{\mathbb{Q}}$	$\overline{\mathbb{O}}$	Ŏ	Q	Low
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Mat	rix I. Likel	ibood m	aatriv																		1			
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Likelihood of Failure		Very lo	Likelihood v low Low			Mediun			-		+			+	+		+	+				$\dashv$		
Imminent			Inlikely Somewh				+	High Very likely	-		_			+	_		-	+			+			
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Imp	robable	Unlike	nlikely Unlikely			Unlikely	,	Unlikely			_			+	+		+	+			+	$\dashv$		
Matrix 2. Risk rating matrix.																								
	Likelihood of Consequences of Failure																							
Failure & Impact			Negligible	Min		_	ficant	Severe																
Very likely Likely		ly	Low Mode		<u>_</u>			Extreme	_		+			+	_		+	+			+	_		
Somewhat likely			Low	erate High w Moderate			High Moderate	-												N	orth			
Unlikely			Low	ow Low			Low																	
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factors and the DBH, a 14' radius from the trunk is the minimum recommended tree protection zone.																								
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Mitigation options															_									
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_						- L			Wor	_		-												
Overall residual risk Low   Modera					derate	- H	ligh 🗆	Extreme		Recommended inspection interval														
Data       ☐ Final       ■ Preliminary       Advanced assessment needed       ☐ No       ☐ Yes-Type/Reason																								
Insp	ection lir	nitatio	ns □None I	Visibili	ty 🗆	Access	□Vin	es Root coll	ar buri	ied D	escr	ibe	Los	sing	Day	ligh <sup>,</sup>	t							