

May 11, 2015

Matt Perkins
 Corey Watson
 Land Development Managers
 Quadrant Homes
 14725 SE 36th, Ste. 200
 Bellevue, WA 98006

Re: TPN: 252605-9023; 6.89 acres

Dear Matt and Corey:

Thank you for requesting my services. I was initially contacted by Trish Clements of Goldsmith Land Development Services who referred me to you and was I was subsequently hired to perform a Visual Risk Assessment (VRA) for all the significant* trees growing on the site above.

The Quadrant team had previous hired Shoffner Consulting to prepare the Tree Preservation Plan which had been submitted, however, I was asked to perform a more detailed examination, and to provide photo-documentation of the trees.

On January 19, 20, 21 and 22, 2015, I assessed in detail each tree in the field. If any tree was not suitable for retention, it was photographed. Every effort was made to be as thorough as possible on an unmaintained site this size. Although every non-viable tree was photographed, not everyone was included in this report. Often time's major tree damage was in located in scaffolds high up in the tree and photographing into the light resulted in poor quality photographs. Where I could, I light enhanced the subject so damage could be better seen; however, not all the photographs were clear enough to submit.

Many of those non-photo represented trees had a large quantity of pileated woodpecker damage, that destruction cannot be photographed from an opposing side, however, it is easily identified by the square shaped holes they bird pecks, the presence of carpenter ants in the trunk, and the very large decayed wood chips that are pecked out present on the ground around the root crown.

The information gathered and included in this report is a necessary part of the City of Redmond's requirement for a Tree Preservation Plan to be submitted as part of a proposed site development. This report is not considered to be an "amendment" to the previous report by Shoffner Consulting; it is an independent assessment.

In summary:

Total # of significant and landmark trees	217
Total non-viable trees	117
Total viable	100
35% required retention	35
Actual retained trees	37
Under/Overage	+2

The Limits of Disturbance (LOD) are noted on the Tree Inventory Spreadsheet and are specific to each tree based on species, tolerance to construction and site conditions.

There is a Native Growth Protective Easement on site; Significant and Landscape trees in this area will not be removed regardless of their health, trees rated as being in "Fair" condition are counted towards the tree

I have included a detailed report of my findings, if you have any questions please contact me. I can be reached on my cell phone: 425.890.3808 or by email: sprince202@aol.com.

Warm regards,



Susan Prince
Creative Landscape Solutions
ISA Certified Arborist #1481
TRAQ Certified Arborist #481
Landscape Designer
425.890.3808

Onsite trees:

1	2	3	5	6	7	8	9				10				11	12	13
#	Tag	ID	Adj. DBH inches	Dripline Radius feet	Health	Defects/Comments	PROPOSED ACTION				CRZ/TPZ/LOD				Value	Pic #	NGPE ²
							Remove		Retain		Radius in feet						
							Not Viable	For improvements	Impacted	Non impacted	N	W	E	S			
1	7004	Red alder	0	0	Poor	Dead	1				0	0	0	0		81	
2	7218	Red alder	14	12	Poor	Dead top, pileated woodpecker, dead scaffold	1				12	12	12	12		78	
3	7224	Red alder	13	12	Poor	Lean to west, exposed roots, moss and lichen indicates wet soil	1				12	12	12	12		4	
4	7225	Bigleaf maple	11	10	Poor	Typical of species, dead wood, dead scaffold, moss and lichen indicates poor drainage, large limb failure	1				10	10	10	10			
5	7226	Bigleaf maple	13	14	Good	Self-corrected lean, exposed roots		1			14	14	14	14			
6	7227	Red alder	7	12	Poor	Exposed roots, dead wood, , dead scaffold	1				12	12	12	12		3	
7	7228	Bitter cherry	13	12	Poor	Falling onto and supported by 7227	1				12	12	12	12		3	
8	7230	Red alder	13	11	Poor	Self-corrected lean, exposed roots, dead top, dead wood, vertical crack	1				11	11	11	11			
9	7420	Red alder	11	11-17	OK	Typical of species, dead wood, broken branch's, lichen				1	17	17	17	11			
10	7251	Bigleaf maple	17	25	Poor	Exposed roots, self-corrected lean, dead wood, decay @ root crown, carpenter ants	1				25	25	25	25		5	
11	7252	Bigleaf maple	15	25	Fair	Co-dominant leaders wit included bark, typical of species, dead scaffold, dead branch's, exposed roots, decay at root crown	1				25	25	25	25		2	
12	7253	Western red cedar	16	12	Fair	Exposed roots, thin canopy, self-corrected lean, nurse tree	1				12	12	12	12		1	
13	7280	Red alder	13	14	Poor	Dead top, pileated woodpecker, dead scaffold	1				14	14	14	14			

14	7281	Cottonwood	14	15	OK	Typical of species		1			15	15	15	15			
15	7285	Red alder	10	14	OK	Typical of species, dead wood, moss and lichen indicated high Humidity		1			14	14	14	14			
16	7286	Red alder	12	14	OK	Exposed roots, failing to north		1			14	14	14	14			
17	7289	Bigleaf maple	15	13	OK	Typical of species		1			13	13	13	13			
18	7290	Douglas fir	33	13	Fair	Dead wood, poor pruning with decay, epicormic branch formation previous top loss, column of decay no North side, metal building impacting roots 1' away	1				13	13	13	13	Landmark	82	
19	7299	Red alder	16	18	Poor	Co-dominant leaders with included bark X3 @ 6', spur @ 1', column of decay, decay @root crown, column of decay @ scaffold	1				18	18	18	18		41	
20	7310	Red alder	22	24	Poor	Pileated woodpecker	1				24	24	24	24		39	
21	7312	Red alder	14	16	OK	Self-corrected lean, exposed roots, broken branch's, dead wood, Typical of species		1			16	16	16	16			
22	7313	Red alder	9	12	OK	Exposed roots, dead wood, Typical of species, hanger		1			12	12	12	12			
23	7314	Red alder	12	26	Poor	Typical of species, lean to north, column of decay @ 35'	1				26	26	26	26		40	
24	7320	Red alder	12	15	OK	Typical of species		1			15	15	15	15			
25	7321	Bigleaf maple	14	14	OK	Typical of species		1			14	14	14	14			
26	7322	Red alder	10	14	OK	Exposed roots, column of decay north, Typical of species		1			14	14	14	14			
27	7324	Douglas fir	22	18	OK	Abnormal shedding, popping bark, self-corrected lean to east co-dominant leaders with included bark @60'		1			18	18	18	18			
28	7325	Douglas fir	20	18	OK	Shares canopy area with 7324, dead wood, broken branch's some exposed roots, soil fill over root crown		1			18	18	18	18			
29	7330	Red alder	11	22	Fair	Exposed roots, self-corrected lean, to SE, decay in Scaffold	1				22	22	22	22		43	
30	7331	Bigleaf maple	13	20	Poor	Dead scaffold, vertical crack, pileated woodpecker	1				20	20	20	20		42	

31	7343	Red alder	14	12	Fair	Dead wood, column of decay dead top, dead scaffold typical of species	1				12	12	12	12			
32	7348	Douglas fir	30	15	Fair	Dead wood, previous top loss, unhealed wounds	1				15	15	15	15	Landmark	83	
33	7349	Douglas fir	35.5	20	Good	Broken branch's, dead wood, exposed roots, some abnormal shedding bark, typical of species		1			20	20	20	20	Landmark		
34	7350	Bigleaf maple	12	14	Fair	Typical of species, asymmetric canopy, previous top loss, exposed roots, typical of species	1				14	14	14	14			
35	7351	Bigleaf maple	18	15	OK	Typical of species, asymmetric canopy to north and south, blackberries		1			15	15	15	15			
36	7352	Red alder	9	12	Fair	Column of decay to SE corner, dead wood, typical of species, previous top loss	1				12	12	12	12		17	
37	7353	Cottonwood	10	8	Poor	Non-self-corrected lean 10 degrees to west, column of decay at 5'	1				8	8	8	8			
38	7354	Cottonwood	25	17	OK	Typical of species		1			17	17	17	17			
39	7355	Cottonwood	18	16	Fair	Typical of species, asymmetric canopy to the north, exposed roots, column of decay on north	1				16	16	16	16			
40	7356	Cottonwood	16	16	Fair	Typical of species, exposed roots, carpenter ants, self-correct lean	1				16	16	16	16			
41	7357	Cottonwood	15	16	OK	Typical of species, asymmetric canopy, exposed roots		1			16	16	16	16			
42	7358	Bigleaf maple	16	20	Fair	Exposed roots, self-corrected lean to west, dead wood, dead scaffold, co-dominant leader with included bark X3, girdling root	1				20	20	20	20			
43	7360	Douglas fir	19	23	Fair	Epicormic branch formation, dead wood, stress crop of cones, previous top loss, lead 5 degrees to west	1				23	23	23	23			

44	7361	Douglas fir	16	23	OK	Dead wood, broken branch's, Hanger, thin canopy, asymmetric canopy to NW		1			23	23	23	23			
45	7362	Douglas fir	8	8	Fair	Dead wood, suppressed canopy	1				8	8	8	8			
46	7363	Douglas fir	12	13	OK	Typical of species, asymmetric canopy to SE, shared canopy space with 7362, lean to northeast, top soil at root crown		1			13	13	13	13			
47	7366	Red alder	13	16	OK	Asymmetric canopy, precious top loss, dead wood, broken branch's, exposed roots		1			16	16	16	16			
48	7367	Yew	9	8	Poor	Failing to west	1				8	8	8	8			
49	7368	Bigleaf maple	15	14	Poor	Column of decay, broken tops, mostly dead	1				14	14	14	14		8	
50	7369	Western red cedar	41	20	Good	Large column of decay, carpenter ants, typical of species				1	20	20	20	20	Landmark		
51	7375	Red alder	12	12	Poor	Co-dominant leaders with included bark @6', twisted trunk with decay, exposed roots, Typical of species, pileated woodpecker	1				12	12	12	12		6	
52	7376	Red alder	15	14	Poor	Pileated woodpecker, dead scaffolds, carpenter ants	1				14	14	14	14		7	
53	7381	Douglas fir	17	15	OK	Dead wood, blisters from stress, dead twigs, typical of species				1	15	15	15	15			
54	7382	Douglas fir	17	13-17	Fair*	Co-dominant leader with included bark @ 12' abnormal bark, dead wood, low live crown ratio				1	17	17	13	17		9	
55	7384	Douglas fir	20	13-17	Fair*	Dead wood, epicormic branch's formation, abnormal bark, low live crown ratio, co-dominant leaders with included bark @30'				1	17	17	13	17		10	
56	7385	Douglas fir	20	18	OK	Abnormal bark, epicormic branch formation, dead wood, dead twigs, abnormal bark, soil fill @ root crown				1	18	18	18	18			
57	7388	Douglas fir	21	18	OK	Dead wood, thin canopy, broken branch's, abnormal thin canopy				1	18	18	18	18			

58	7392	Red alder	12	12	Poor	Dead scaffolds, dead top, moss and lichen indicating poor air circulation	1				12	12	12	12			
59	7394	Red alder	12	10-16	OK	Column of decay on east side, dead wood, carpenter ants				1	16	16	10	16			
60	7395	Douglas fir	17	16	OK	Ivy, column of decay @ root crown, carpenter ants, dead wood, dead twigs, thin canopy				1	16	16	16	16			
61	7428	Western red cedar	12	8	Good	3" spur at ground level, typical of species				1	8	8	8	8			
62	7433	Western red cedar	11	6	Good	Slight self-corrected lean				1	6	6	6	6			
63	7435	Western red cedar	10	10	Good	Exposed roots, typical of species				1	10	10	10	10			
64	7436	Western red cedar	9	10	Good	Typical of species				1	10	10	10	10			
65	7437	Western red cedar	10	10	Good	Exposed roots, typical of species				1	10	10	10	10			
66	7442	Red alder	11.5	13	OK	Typical of species, self-corrected lean to south dead wood, broken branch's		1			13	13	13	13			
67	7444	Red alder	13	18	OK	Typical of species, asymmetric canopy to north, dead wood		1			18	18	18	18			
68	7445	Red alder	11	12	Fair	Non self-corrected lean, dead wood, previous top loss	1				12	12	12	12			
69	7450	Cottonwood	16	12	OK	Typical of species, asymmetric canopy to east exposed roots		1			12	12	12	12			
70	7451	Cottonwood	17	15	OK	Typical of species, epicormic branch formation @50', moss indicates high humidity in area		1			15	15	15	15			
71	7452	Cottonwood	12	12	OK	Typical of species, asymmetric canopy to north, typical of species		1			12	12	12	12			
72	7455	Cottonwood	11	12	Poor	Co-dominant leaders with included bark, failed decay @ root crown , carpenter ants	1				12	12	12	12		13	
73	7457	Red alder	14	14	Poor	Typical of species, dead scaffolds	1				14	14	14	14			
74	7458	Cottonwood	15	16	Fair	Exposed roots, typical of species	1				16	16	16	16		12	
75	7481	Bigleaf maple	21	26	Good	Exposed roots, typical of species, dead wood, dead scaffold, Co-dominant leaders with included bark @ 3'		1			26	26	26	26			
76	7482	Cottonwood	21	18	OK	Self-corrected lean, typical of species, moss, carpenter ants		1			18	18	18	18			

77	7483	Bigleaf maple	19	24	Good	Dead wood, typical of species		1			24	24	24	24			
78	7484	Cottonwood	16	5-14	OK	Dead wood, broken branch's, low live crown ratio				1	5	14	14	14			
79	7485	Cottonwood	18	12	OK	Typical of species, dead wood				1	12	12	12	12			
80	7488	Cottonwood	11	10	OK	Typical of species, previous top loss, self-corrected lean, exposed roots				1	10	10	10	10			
81	7489	Cottonwood	21	16	Fair	Typical of species, previous top loss @40", decay in scaffold, 2 strong laterals	1				16	16	16	16		44	
82	7490	Cottonwood	13	24	Fair	Dead wood, previous top loss, broken branch's	1				24	24	24	24			
83	7491	Cottonwood	19	14	Fair	Typical of species, column of decay north side, exposed roots, dead wood	1				14	14	14	14			
84	7492	Cottonwood	12	12	Ok	Typical of species		1			12	12	12	12			
85	7493	Cottonwood	14	12	Ok	Typical of species		1			12	12	12	12			
86	7500	Cottonwood	17	14	Ok	Typical of species		1			14	14	14	14			
87	7501	Cottonwood	15	12	OK	Typical of species		1			12	12	12	12			
88	7502	Cottonwood	19	14	OK	Typical of species		1			14	14	14	14			
89	7503	Cottonwood	10	10	OK	Typical of species, dead wood, self-corrected lean, previous top loss		1			10	10	10	10			
90	7504	Cottonwood	15	14	Fair	Exposed roots, self-corrected lean, broken branch's, dead wood, typical of species, slight lean to north	1				14	14	14	14			
91	7505	Cottonwood	13	12	Fair	Dogleg, multi leaders, asymmetric canopy	1				12	12	12	12		15	
92	7506	Cottonwood	18	14	OK	Typical of species		1			14	14	14	14			
93	7507	Bitter cherry	15	12	Fair	Typical of species, some decay @ root crown	1				12	12	12	12			
94	7508	Cottonwood	18	12	Fair	Exposed roots, typical of species, asymmetric canopy dead wood, column of decay on west side	1				12	12	12	12			
95	7509	Cottonwood	23	14	Fair	Exposed roots, carpenter ants, decay@ root crown, column of decay to northwest, previous top loss	1				14	14	14	14			

96	7510	Cottonwood	14	14	OK	Typical of species		1			14	14	14	14			
97	7513	Cottonwood	11	10	OK	Dogleg, typical of species, dead wood		1			10	10	10	10			
98	7514	Cottonwood	23	15	OK	Typical of species, dead wood, exposed roots		1			15	15	15	15			
99	7515	Cottonwood	15	15	OK	Typical of species, asymmetric canopy, exposed roots		1			15	15	15	15			
100	7516	Cottonwood	16	14	OK	Exposed roots, typical of species, asymmetric canopy, broken branch's		1			14	14	14	14			
101	7518	Bigleaf maple	17	18	OK	Column of decay from root crown to 4', typical of species, Hanger, dead wood		1			18	18	18	18			
102	7519	Bitter cherry	11	0	Poor	Mostly dead	1				0	0	0	0			
103	7521	Bitter cherry	16	10	Poor	Column of decay on north side, co-dominant leader with included bark @ 7' ,gummosis	1				10	10	10	10		14	
104	7522	Cottonwood	13	12	OK	Exposed roots, typical of species, previous top loss		1			12	12	12	12			
105	7523	Cottonwood	18	16	OK	Typical of species, asymmetric canopy, dead wood		1			16	16	16	16			
106	7524	Cottonwood	17	16	OK	Exposed roots, typical of species, moss indicated poor air circulation		1			16	16	16	16			
107	7525	Cottonwood	13	12	Fair	Exposed roots typical of species, asymmetric canopy to north, decay at root crown	1				12	12	12	12			
108	7526	Cottonwood	17	15	OK	Exposed roots, typical of species		1			15	15	15	15			
109	7527	Cottonwood	11	10	Poor	Previous top loss @ 30', dogleg	1				10	10	10	10			
110	7530	Bigleaf maple	18	27	Good	Exposed roots, dead wood, dead scaffold, typical of species, growing as a nurse tree, hangers		1			27	27	27	27		11	
111	7531	Bigleaf maple	10	14	Fair	Asymmetric canopy, dead wood, typical of species	1				14	14	14	14			
112	7533	Pacific willow	16	12	Poor	Mostly dead	1				12	12	12	12			
113	7536	Hemlock	16	15	Poor	Canker, Pileated woodpecker, torque crack	1				15	15	15	15		20	
114	7537	Red alder	10	10	Poor	Lean to south	1				10	10	10	10		19	
115	7540	Bitter cherry	11	14	OK	Dead wood, typical of species		1			14	14	14	14			

116	7542	Cottonwood	14	14	OK	Dead wood, Typical of species		1			14	14	14	14			
117	7548	Red alder	14	12	Poor	Co-dominant leaders, one fully decayed and nearly dead	1				12	12	12	12		12	
118	7549	Western red cedar	13	9	Good	Typical of species		1			9	9	9	9			
119	7550	Cottonwood	24	17	Fair	Typical of species, previous top loss, multi trunk @ 60'	1				17	17	17	17		80	
120	7551	Cottonwood	17	14	OK	Typical of species		1			14	14	14	14			
121	7552	Cottonwood	15	16	OK	exposed roots, Typical of species		1			16	16	16	16			
122	7553	Pacific Willow	11	14	Fair	Self-corrected lean, dogleg, Typical of species, asymmetric canopy	1				14	14	14	14		21	
123	7557	Douglas fir	41	18	Fair	Dead wood, broken branch's, exposed roots, nurse log, probable laminated root rot, sap, co-dominant leaders with included bark, epicormic branch formation @ 5' with sap, healed wound @ root crown	1				18	18	18	18	Landmark	22	
124	7558	Red alder	14	14	Poor	Co-dominant leaders with included bark, twisted trunks, exposed roots, fused, decay	1				14	14	14	14		27	
125	7561	Red alder	13.5	0	Poor	Dead, falling over	1				0	0	0	0		30	
126	7562	Bigleaf maple	36	22	Poor	Exposed roots, large fracture, 18" diameter failure, carpenter ants, slight self-corrected lean, dead wood, dead scaffolds, Typical of species	1				22	22	22	22		46	
127	7570	Bigleaf maple	22	22	Fair	Previous top loss, dead wood, Typical of species, broken branch's, lichen, Hypoxylon canker	1				22	22	22	22		34	
128	7578	Red alder	16	17	Fair	Exposed roots, dead wood, dead scaffolds, hangers	1				17	17	17	17		37	
129	7579	Red alder	12	16	Poor	Pileated woodpecker, carpenter ants, decay @ 20'	1				16	16	16	16		36	
130	7580	Red alder	13	15	Poor	Decay, carpenter ants, dead scaffolds, pileated woodpecker at 30'	1				15	15	15	15		35	
131	7581	Red alder	9	6	Poor	Mostly dead	1				6	6	6	6		32	

132	7582	Red alder	16	12	Poor	Co-dominant leaders with included bark X3 @ 6', carpenter ants, dead wood, dead scaffolds, dead top	1				12	12	12	12		33	
133	7583	Bitter cherry	12.5	15	Poor	Co-dominant leaders with included bark @1' ,1 failed leader, decay	1				15	15	15	15		31	
134	7584	Red alder	9	16	Fair	Exposed roots, dead wood, dead scaffolds	1				16	16	16	16			
135	7587	Red alder	10	13	Fair	Typical of species, broken branch's, dead wood, dead scaffold, self-corrected lean to west, lichen	1				13	13	13	13			
136	7588	Red alder	10	18	Fair	Typical of species, lichen and moss = low air circulation high moisture content, exposed roots, dead wood, lean to north	1				18	18	18	18			
137	7589	Bitter cherry	9	16	Poor	co-dominant leaders with included bark @ 1', dead wood, dead scaffolds, dead twigs	1				16	16	16	16		24	
138	7590	Bitter cherry	9	16	Poor	Failing to south	1				16	16	16	16		23	
139	7592	Douglas fir	13	17	OK	Dead wood, broken branch's low live crown ratio, asymmetric canopy, canopy thin		1			17	17	17	17			
140	7593	Douglas fir	11	16	OK	Dead wood, broken branch's, thin canopy, low live crown ratio		1			16	16	16	16			
141	7594	Douglas fir	7	10	OK	Suppressed canopy, broken branch's, dead wood, asymmetric canopy to south		1			10	10	10	10			
142	7595	Douglas fir	20	14	OK	Dogleg, typical of species, exposed roots, dead wood, dead twigs, previous top loss		1			14	14	14	14			
143	7596	Douglas fir	11	15	OK	Broken branch's, dead wood, thin canopy to south		1			15	15	15	15			
144	7597	Red alder	10	0	Poor	Dead, pileated woodpecker	1				0	0	0	0		25	
145	7598	Red alder	12	0	Poor	Carpenter ants, pileated woodpecker, dead	1				0	0	0	0		26	
146	7601	Bigleaf maple	26	28	Poor	Exposed roots, decay @ root crown, co-dominant leaders with included bark @ 30' X3, dead	1				28	28	28	28		63	
147	7612	Bigleaf maple	13	14	OK	Typical of species				1	14	14	14	14			X

148	7614	Red alder	16	14	Poor	Dead, pileated woodpecker	1				14	14	14	14		62	X
149	7626	Red alder	14	14	Fair	Exposed roots, undermined by creek, vertical crack s' to 6', spur 4" at root crown, co-dominant leaders with included bark @ root crown, carpenter ants, decay	1				14	14	14	14		59	X
150	7633	Red alder	18	17	Fair	Lean to west, slightly self-corrected lean, main scaffold decayed, carpenter ants, pileated woodpecker, ferns growing out of decay	1				17	17	17	17		60	X
151	7636/7416	Red alder	11	16	Poor	Dead, pileated woodpecker, tagged in field 7416 on map as 7636	1				16	16	16	16		61	X
152	7639	Bigleaf maple	20	26	Good	Typical of species, dead wood			1	26	26	26	26				X
153	7650	Red alder	14	16	Fair	Lean to west, dead wood, Typical of species	1				16	16	16	16		28	
154	7652	Red alder	14	17	Fair	Dead wood, broken branch's, previous top loss	1				17	17	17	17		29	
155	7663	Bigleaf maple	46	28	Good	Exposed roots, Typical of species, decay in southern root, dead wood			1	28	28	28	28	Landmark			X
156	7668	Red alder	15	15	Fair	Exposed roots, self-corrected lean, broken branch's, dead wood, undermined roots over streambed	1				15	15	15	15		49	X
157	7670	Red alder	13	16	OK	Typical of species, self-corrected lean, undermined roots,		1			16	16	16	16			X
158	7680	Red alder	16	14	Poor	Dead, pileated woodpecker	1				14	14	14	14		55	X
159	7681	Bitter cherry	12	15	Fair	Exposed roots, self-corrected lean, slight lean to west, dead scaffolds, dead wood, Typical of species	1				15	15	15	15		54	X
160	7684	Hemlock	13	12	Fair	Exposed roots, dead wood, growing as a nurse tree, dead twigs, probable girdled root, unhealed wound @ root crown	1				12	12	12	12		50	X
161	7688	Red alder	16	14	Poor	Pileated woodpecker	1				14	14	14	14		51	X
162	7689	Red alder	14	16	OK	Dead wood, carpenter ants, Typical of species, hanger, exposed roots		1			16	16	16	16			X

163	7691	Red alder	12	12	Fair	Lean to west, asymmetric canopy, dead wood, exposed roots	1				12	12	12	12			X
164	7696	Douglas fir	20	18	OK	Exposed roots, dead wood, asymmetric canopy, abnormal shedding bark, hanger, reaction wood @ 35'				1	18	18	18	18			X
165	7698	Bigleaf maple	13	16	OK	Typical of species, girdled root @ root crown, self-corrected lean, co-dominant leaders with included bark @ 5' with decay				1	16	16	16	16			X
166	7704	Bitter cherry	14	12	OK	Dead spur @ 1' exposed roots, fused trunks, dead wood, Typical of species, asymmetric canopy				1	12	12	12	12			X
167	7705	Douglas fir	18	18	OK	Exposed roots, abnormal bark, shedding bark, epicormic branch formation, self-corrected lean, dead wood, broken branch's, asymmetric canopy				1	18	18	18	18			X
168	7706	Bigleaf maple	13	16	Fair	Previous top loss, dead wood, carpenter ants, exposed roots	1				16	16	16	16		56	X
169	7707	Douglas fir	20	22	Fair	Exposed roots, abnormal bark, shedding bark, dead wood, Crack @ 20', leans to west, asymmetric canopy, epicormic branch formation, popping bark	1				22	22	22	22		57	X
170	7712	Douglas fir	17	14	OK	Broken branch's, asymmetric canopy, dead wood, dead twigs, self-corrected lean, low live crown ratio				1	14	14	14	14			X
171	7713	Red alder	13	13	OK	spur @ 2', asymmetric canopy, dead wood, Typical of species, very wet saturated soil				1	13	13	13	13			X
172	7714	Bigleaf maple	26	26	OK	Typical of species, dead wood, previous top loss with strong lateral attached leaders				1	26	26	26	26			X
173	7715	Red alder	18	14	Fair	Typical of species, co-dominant leaders with included bark @ 25' west, leader decayed	1				14	14	14	14		58	X
174	7727	Red alder	23	23	Poor	Large failed scaffold, column of decay, conks	1				23	23	23	23		47	X
175	7732	Red alder	14	12	Poor	Exposed roots, dead wood, previous top loss, mostly dead	1				12	12	12	12		75	

176	7733	Red alder	14	19	OK	Dead wood, previous top loss, self-corrected lean, co-dominant leaders with included bark @ 13', Typical of species, column of decay north				1	19	19	19	19			
177	7734	Red alder	21	20	Poor	Exposed roots, dead scaffold, dead wood, dead top, Typical of species	1				20	20	20	20		76	
178	7735	Bigleaf maple	25	21	OK	Typical of species, dead wood, broken branch's, moss and lichen from moist conditions, exposed roots				1	21	21	21	21			
179	7737	Red alder	16	19	OK	Asymmetric canopy, dead wood, previous top loss Typical of species				1	19	19	19	19			
180	7742	Red alder	12	12	Fair	Dead scaffolds, pileated woodpecker	1				12	12	12	12		70	
181	7745	Red alder	15.5	18	Poor	Co-dominant leaders with included bark, one side dead (west), carpenter ants, lean, pileated woodpecker @30' on main trunk	1				18	18	18	18		48	X
182	7746	Red alder	20	18	OK	Dead wood, column of decay to east, broken branch's				1	18	18	18	18			X
183	7747	Bitter cherry	18	17	OK	Sapsucker, girdling, exposed roots, dead wood, Typical of species				1	17	17	17	17			X
184	7748	Red alder	8.5	16	Poor	Exposed roots, dead scaffold, dead wood, dead top, Typical of species	1				16	16	16	16		64	X
185	7749	Red alder	16	10	Poor	Dead - pileated woodpecker	1				10	10	10	10		77	X
186	8000	Bigleaf maple	16	26	OK	Co-dominant leaders with included bark X3, Typical of species, dead wood, dead scaffold,		1			26	26	26	26			
187	8001	Red alder	0	0	Poor	Dead, pileated woodpecker	1				0	0	0	0		45	
188	8004	Red alder	13	22	Fair	Typical of species, exposed roots, self-corrected lean, slight lean to east	1				22	22	22	22			
189	8005	Red alder	15	16	Poor	Previous top loss, decay	1				16	16	16	16			
190	8006	Red alder	11	21	Fair	Exposed roots, lean to east, slight self- corrected	1				21	21	21	21			
191	8017	Cottonwood	18	21	OK	Typical of species, dead wood, dead scaffold		1			21	21	21	21			
192	8041	Red alder	12	14	OK	Self-corrected lean to south, dead wood, Typical of species		1			14	14	14	14			

193	8042	Bitter cherry	10	8	Poor	Gummosis, low live crown ratio	1				8	8	8	8			
194	8043	Bigleaf maple	19	24	Good	Decay, dead scaffold, dead wood, hanger, pileated woodpecker		1			24	24	24	24			
195	8045	Bigleaf maple	15	25	Poor	Co-dominant leaders with included bark X3 decay @ root crown, Typical of species	1				25	25	25	25		38	
196	8060	Bitter cherry	15	15	Poor	Decay @ root crown, self-corrected lean	1				15	15	15	15		71	
197	8061	Bitter cherry	14	12	OK	Typical of species, dead wood, gumosis			1		12	12	12	12			
198	8068	Cottonwood	16	18	Fair	Typical of species, dead wood, spur @ 17', very exposed roots, column of decay @ root crown	1				18	18	18	18			
199	8069	Cottonwood	12	24	OK	Typical of species, co-dominant leaders with included bark, exposed roots		1			24	24	24	24			
200	8070	Deodora cedar	8	12	Good	Typical of species		1			12	12	12	12			
201	8088	Bigleaf maple	10	16	Good	Asymmetric canopy, co-dominant leaders with included bark @ root crown, dead wood, asymmetric canopy, Typical of species,			1		16	16	16	16			
202	8090	Red alder	13	16	Poor	Vertical crack on SE side, crack with decay, asymmetric canopy to west	1				16	16	16	16		72	
203	8092	Red alder	13	15	Fair	Co-dominant leaders with included bark @ 11', 1 dead scaffold with decay, dead wood	1				15	15	15	15		74	
204	8094	Bigleaf maple	23	22	Good	Exposed roots, dead wood, self-corrected lean, dead scaffolds, Typical of species			1		22	22	22	22			
205	8097	Bigleaf maple	13	27	Fair	Self-corrected lean, asymmetric canopy to south, dead wood, dead trunk, dead scaffold	1				27	27	27	27			
206	8098	Bigleaf maple	56	30	Fair	Exposed roots, Typical of species, dead wood, large column of decay with water spouts, dead scaffold, decay in scaffold, reaction wood with decay	1				30	30	30	30	Landmark	69	

207	8100	Douglas fir	35.5	18	Poor	Sap, exposed roots, popping bark, asymmetric canopy, epicormic branch formation, probable armillaria root rot, sap all around the trunk base	1				18	18	18	18	Landmark	68	
208	8103	Red alder	18	16	Fair	Carpenter ants, decay @ root crown, crack, decay on west side, spur @ 12', broken branch's, dead wood, Typical of species	1				16	16	16	16		67	X
209	8164	Red alder	14	16	OK	Self-corrected lean, broken branch's, dead wood, exposed roots			1		16	16	16	16			X
210	8211	Red alder	14	21	Fair	Lean to east 10 degrees, dead wood, vertical crack, carpenter ants, undermined roots from stream bed	1				21	21	21	21		52	X
211	8215	Red alder	20	0	Poor	Dead, decayed, conks, carpenter ants	1				0	0	0	0		53	X
212	8224	Red alder	18	21	Fair	Carpenter ants, pileated woodpecker, previous top loss, column of decay to east multiple failures	1				21	21	21	21		66	X
213	8225	Red alder	21	18	Fair	Self-corrected lean, dead wood, broken branch's, Typical of species, column of decay @ 3.5'	1				18	18	18	18		65	X
214	8232	Bigleaf maple	16	20	Poor	exposed roots, self-corrected lean, co-dominant leaders with included bark X2, Hypoxylon canker, failure @ root crown, Typical of species	1				20	20	20	20		73	
215	8420	Bitter cherry	11	14	Good	Co-dominant leaders with included bark @ ground level, typical of species, dead wood, asymmetric canopy, broken branch's			1		14	14	14	14			
216	7881	Red alder	12	15	Poor	Dead top, pileated woodpecker, dead scaffold	1				15	15	15	15			
217	7317	Red alder	20	20	Poor	Typical of species	1				20	20	20	20			

* Prune to shape and remove dead wood

117 63 0 37

217

¹Landmark Trees: Bold²NGPE: Fair is retainable³Misread tag, but present in field

Proposed Action and Brief Definition				
Tree Type	Removal	Impacted	Retained	Total
Landmark (>30" DBH)	Number of removed landmark trees	Number of impacted landmark trees	Number of retained landmark	Total Landmark Trees
	1	0	2	3
	% of Removed Landmark Trees of All Trees	% of impacted Landmark Trees of all Trees	% of Retained Landmark Trees of All Trees	% Landmark Trees of All Trees
	1/100=1%	0%	2/100= 2%	3/100= 3%
Significant (6" - 30")	Number of removed significant trees	% Impacted of all significant trees	Number of Retained Significant Trees	Total Significant Trees
	62	0	35	97
	% Significant removed of all significant trees	% impacted of all significant	% retained of all significant	% significant trees of all trees
	62/97= 64%	0%	35/97=36%	97/100= 97%
Totals	Number of Landmark + Significant removed trees	Number of Landmark + significant impacted	Number of Landmark + significant retained	Total Number of ALL Trees
	63	0	37	100
	% removed of all trees	% impacted of all Trees	% Retained of all Trees	
	63/100= 63%	0%	37/100= 37%	

Replacement Trees		
Type of tree	# removed trees	Replacement
Removed Landmark (3:1)	1	1*3 = 3
Removed Significant (1:1)	62	62*1=62
Total # of Replacement trees		3+62= 65

35% Tree Retention
RMC required 35% of significant trees be retained 100 X 35% = 35 trees
Proposed improvements retain 37 Trees

Photo documentation:

1



#7253 Nurse tree, exposed roots, self-corrected lean

2



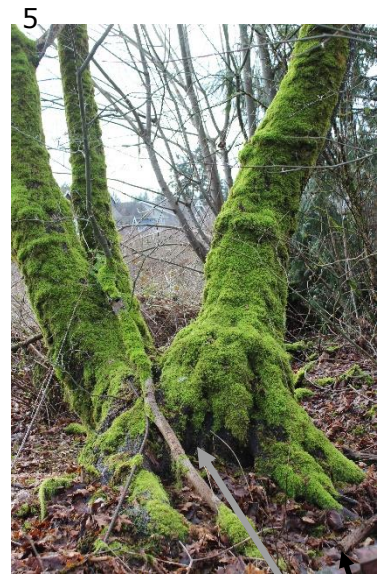
7252 Dead scaffold, dead wood, Decay in root crown,



7228 Cherry falling onto and supported by 7227 Red alder, exposed roots, moss from wet soil and low air circulation



#7224 Red alder, previous dead leader, falling to west



7251 Bigleaf maple; Decay @ root crown, exposed roots, wet soil, leaning

6



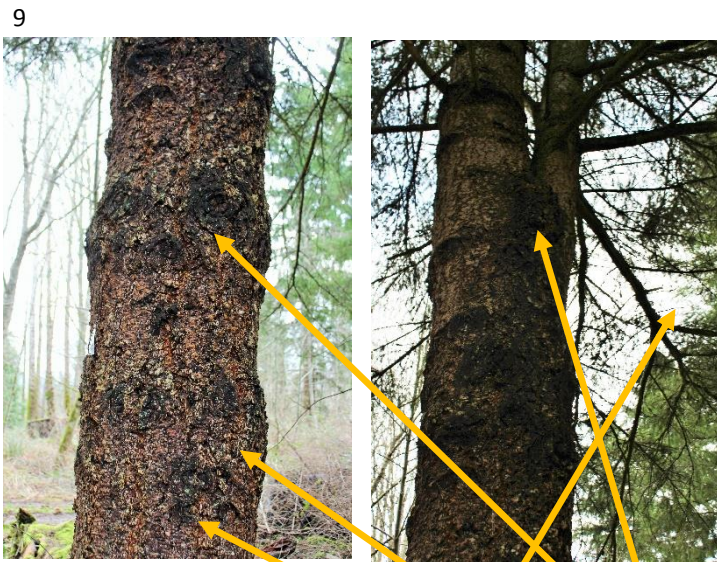
7376 Red alder, crack, decay pileated woodpecker



7375 Red alder, decay, carpenter ants, pileated



7368 Bigleaf crack with decay, mostly dead

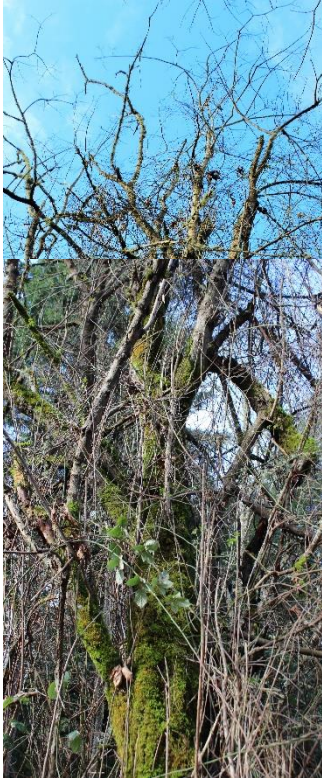


7382 Douglas fir, abnormal bark, headed wound, canker, co-dominant leaders with included bark, dead branches



7384 Douglas fir abnormal bark, epicormic branch's, low live crown ratio, column of decay, vertical crack

10



7533 P. willow mostly dead



7530 Very large multi trunked maple, nurse tree, less decay than normal exposed roots, etc. but healthy

12



7458 Red alder, Pileated woodpecker (carpenter ants, decay)

14



7521 Cherry, Cracks w decay

15



7505 Cottonwood, top failure, multiple weak doglegs

13



7455 Cottonwood, decay at root crown, previous co-dom, currently 1/2 of tree failed

17



7352 Red alder, large area of decay, cracks

16



7359 Bigleaf maple, large girdling root, decay at root crown

18



7353 Cottonwood, lean to west, (poor photo) Column of decay @ root crown (indent) 21

19



7537 Red alder, soil failure—falling to south

20

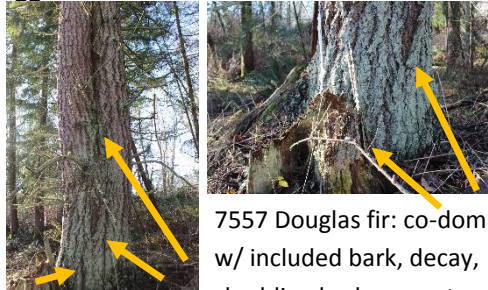


7536 Hemlock, perennial canker, torques crack with decay and pileated woodpecker



7553 Cottonwood, previous failure, left dogleg with decay

22



7557 Douglas fir: co-dom w/ included bark, decay, shedding bark, nurse tree

23



7590 Cherry: falling to south (soil failure)

24



7589 Cherry: Co-dom failure, decay throughout

25



7597 Red alder, Previous top failure, mostly dead

26



7598 Red alder: Co dom leaders, carpenter ants, pileated woodpecker, mostly dead

27



7558 Red alder: Multiple trunks, fused, cracked, decay

28



7650 Red alder, soil failure, + crown decay, falling to west (>10 degrees)

29



7652 Red alder: Multiple top failure, decay throughout, dead, broken branches

30



7561 Red alder: decay, fallen over

31



7583 Cherry: Co-dom w included bark, 1/2 failed, decay @ root crown

32



7581 Red alder: mostly dead

33



7582 Red alder: Co-dom X3
Poor attachments, decay

34



7570 Bigleaf maple: dead leader, previous top failure, hypoxylon canker

37



7578 Red alder: dead wood, dead scaffold, hanger



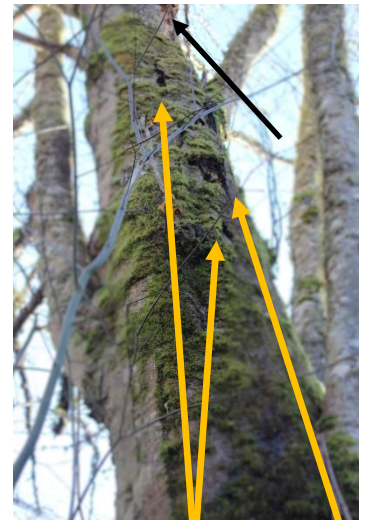
7580 Red alder: multiple top failures, large pileated woodpecker holes @30'

36



7579 Red alder: previous failure of a large portion of top, decay throughout

39



7314 Red alder: cracks, decay, pileated woodpecker

38

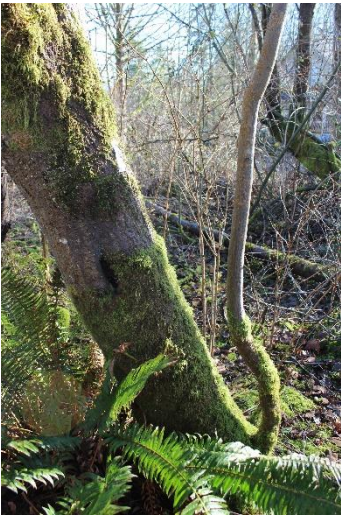


8045/8046 Bigleaf maple, multi trunk, decay at co-dom leaders, decay in major leaders



7310 Red alder, fresh wood chips from pileated woodpecker, carpenter ants

40



7314 Red alder: failing to north (decay at root crown)

42



7331: Bigleaf: multiple co-dom trunks with included bark and decay

41



7299: Red alder: Large scaffold with underside decay, previous top loss, exposed roots, with decay, dead branches at base



42



7331 Bigleaf: pileated wood pecker, vertical cracks

43

45



8001 Red alder: dead

43



7489 Cottonwood, Previous top failure, column of decay, cavities of decay, dead branch's,



7331, 7330 Red alder, decay, dead wood, hangers, decay at rot crown



46



7562 Bigleaf maple: large fracture, decay, carpenter ants

47



7727 Red alder: 1/2 tree failed, carpenter ants, decay

48



7745 Red alder: Co-dom leaders, decay, carpenter ants, pileated woodpecker

49



7668 Red alder: undermined roots, lean to east

50



7634 Hemlock: Hemlock, nurse tree, decay, perennial canker, in standing water

51



7688 Red alder: mostly dead, pileated woodpecker, decay, carpenter ants

52



8211 Red alder: vertical crack 10 degree lean to east, deadwood

53



8215 Red alder: mostly dead, previous failure, some conks

54



7681" Cherry: Failing to west,

57



7707 Douglas fir, abnormal popping bark

61



7416 Red alder: decay @ root crown

55



7680 Red alder: Dead, carpenter ants, pileated woodpecker

58



7715 Red alder, filled with decay, top loss, lean to west

56



7706 Bigleaf maple, previous top loss, dead wood, carpenter ants

60



7626 Red alder: co dom, undermined roots, decay @ root crown, vertical crack

62



7614 Previous top loss, decay, carpenter ants, pileated woodpecker holes

63



7601 Bigleaf maple, large column of decay, carpenter ants

64



7748 Red alder, co-dominant leaders' one failing, decay @ root crown, large cavity of decay

65



8225 Red alder: decay at root crown, carpenter ants



8224 Red alder, broken tops, carpenter ants, pileated woodpecker



8100 Douglas fir: sap circumventing trunk at 4' - probable armillaria root rot

67



8103 Red alder: cavity of decay, vertical crack with decay

69



8098 Bigleaf maple: cavities of decay, filled with water, dead scaffolds, previous failures

71



70



7742 Red alder: Co-dom, or e dead, pileated woodpecker

73



8060 Cherry: self-corrected lean, decay at root crown

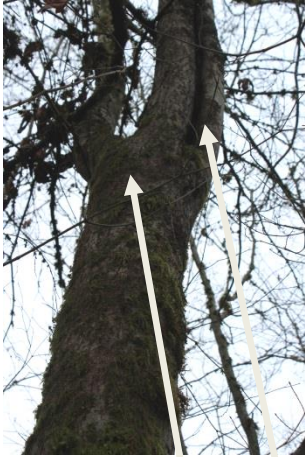


8232 Bigleaf maple: Hypoxylon Canker, decay at root crown, previous failure @ root crown



8090 Red alder: Vertical crack

74



8092 Red alder: previous top failure @ 11', one leader with cavity of decay, carpenter ants

75



7732 Red alder: Previous top loss, mostly dead

76



7734 Red alder: Dead scaffolds, dead top, large column of decay on north scaffold

77



7749 Red alder: Dead, pileated woodpecker

78



7218 Red alder: dead top, decay, pileated woodpecker



79



7367 Yew: fallen to west

80



7550 Cottonwood: Crack at base, decay, carpenter ants

81



7004 Red Alder: Dead, falling to south

82



7290 Douglas fir: growing against a large outbuilding. Birdholes in trunk abnormal vertical cracks, previous top failure, dead wood

83



9348 Douglas fir: Girdling root, sap flow from lower trunk and branch collars, probable early fungal root infection, previous to failure

Discussion:

The information gathered and reported above is provided to satisfy the city of Redmond's requirements for a tree preservation plan (RMC 20D.80.20) of the Redmond Community Development Guide. The trees were surveyed and tagged by a survey crew prior to my evaluation. Each tree was measured at approximately four and a half feet above grade. Each trunk of trees whose normal growth habit is characterized by multiple trunks as well as those trees whose structure arose out of co-dominant leaders were also measured at 4.5' above grade and the average of the leaders were taken to be the adjusted DBH sited on the matrix.

Trees whose adjusted DBH were less than 6" (the diameter necessary to be considered significant) were recorded but not counted toward the total number of significant trees. Likewise, dead trees were eliminated from the overall tree count. Any trees that were dying, but still had living tissue were assessed as being in "poor" condition.

The dripline of each tree was measured using a laser recording device. One measurement was taken on each tree with a "normal" balanced canopy that was approximately equal in radius in all directions. Trees with asymmetric canopies are generally located on the outside edges of groves. The radius of their canopies can vary a great deal. When describing the radius of those canopies, measurements were taken of the canopy in the four directions (NESW) are recorded.

Driplines were also revised to more adequately reflect the location of buttress roots located on the opposite side of an asymmetric canopy – so where there may not be a dripline present, one was prescribed.

Landmark trees per Redmond municipal code (20A.20.120) are identified in this report by a bolder typeface and described under the "value" column as **LM**.

As much as possible retained trees were left in groves and retained in areas where they would not experience changes in wind impact.

Currently, the proposed site development includes 25 lots. There is a large "protected native growth area" (NGPE) of mixed species trees located on the east side of the property where a small creek transverses the land. There is a storm detention tract located on the southeast side of the site.

Mitigation:

Per the RCDG, all healthy significant trees removed are to be replaced at a 1:1 ratio. Landmark trees (DBH >30") are to be replaced at a 3:1 ratio.

Replacement Trees			
Replacement Quota	Number of removed trees	Number of replacement trees	Total number of replacement trees
Removed Landmark (3:1)	1	3	3
Removed Significant (1:1)	60	60	57
Total # of Replacement trees			63

RCDG code specifies that the replacement trees meet or exceed the American Nursery and Landscape Standard and that the minimum sizes for replacement be:

- 2.5" caliper at breast height for a deciduous tree
- 6-8' tall for an evergreen replacement

Tree Protection Fencing:

First, protect the roots that lie in the path of construction. Approximately 90-95% of a tree's root systems lie in the top three feet of soil and more than ½ of them are in the top 1'. Construction activities should be avoided in this area. Protect as much of the area beyond the tree's dripline as possible. Some healthy trees survive after losing ½ of their roots. However, other species are extremely sensitive to root damage even outside the dripline.

Do not disturb the critical root zone (CRZ). The CRZ is defined by its critical root radius. It is more accurate than the dripline for determining the CRZ of trees growing in forests or that have narrow growth habits. To calculate the critical root radius, measure the tree's diameter (DBH) 4.5' above the ground. For each inch, allow for 1- 1.5' of critical root radius. If a tree's DBH is 10", its critical root radius is 10-15'.

In addition to the CRZ, it is important to determine the limits of disturbance (LOD) for preserved trees. Generally this approximates the CRZ; however, in previously excavated areas around the dripline the LOD may be smaller or in the case of a tree situated on a slope the LOD may be larger. The determination of the LOD is also subject to the particular tree species. Some tree species do better than others after root disturbance.

Tree protection is advised throughout the duration of any construction activities whenever the critical root zone or leaf canopy may be encroached upon by such activities.

The CRZ or LOD should be protected with fencing adequate to hinder access to people, vehicles and equipment. Fencing detail should be provided. It should consist of continuous 4' high temporary chain-link fencing with post sections @ 10' on center, polyethylene laminar safety fencing or similar materials. The fencing must contain fencing signage detailing that the tree protection area cannot be trespassed on.

Soil compaction is one of the most common killers of urban trees. Stockpiled materials, heavy machinery and excessive foot traffic damage soil structure by reducing pore space. The affected tree roots suffocate. When construction takes place close to the protected CRZ, cover the site with 4" of bark to reduce soil compaction.

Tree protection fencing must be erected prior to soil excavation, boring, grading or fill operations. It is erected at the LOD. If it is necessary to run utilities within the LOD, the utilities should be combined into one cut as practical. Trenching should not be done in the LOD. In the event that roots greater than 1" diameter near the LOD are damaged or torn, it is necessary to hand trim them to a clean cut. Any roots that are exposed during construction should be covered with soil as soon as possible.

During drought conditions, trees must be adequately watered. Site should be visited regularly by a qualified ISA Certified Arborist to ensure the health of the trees. Tree protection fencing is the last item to be removed from the site after construction is completed.

After construction has been completed, please contact an ISA Certified arborist to evaluate the remaining trees looking for signs and symptoms of damage or stress. It may take several years for severe problems to appear. In the event that fencing around portions of the CRZ of a tree to be retained are not practical to erect due to construction or obstacles, tree protection fencing should be placed 3' laterally from the obstruction (ex. 3' back of a curb, building, or other existing or planned permanent infrastructure.)

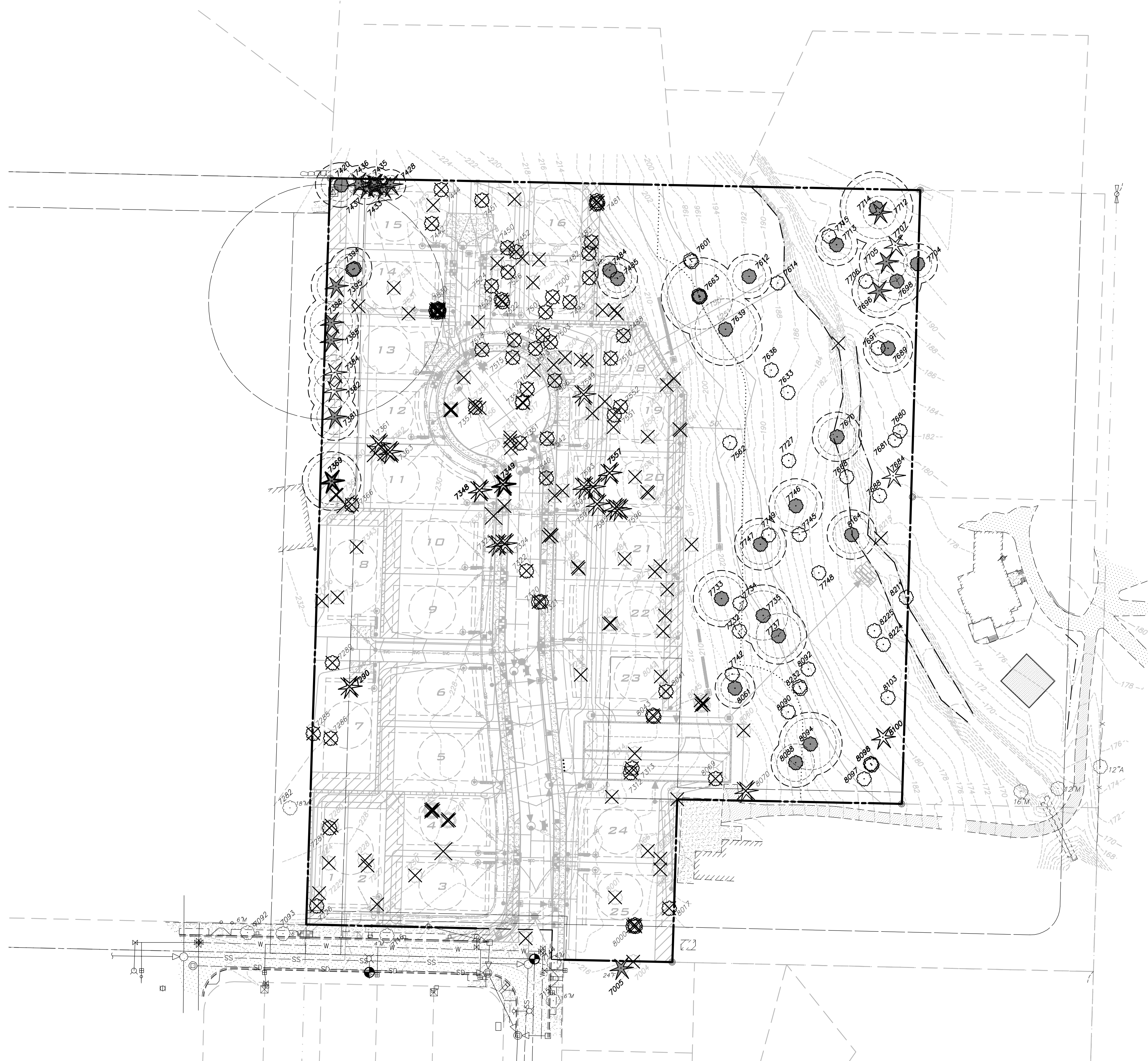
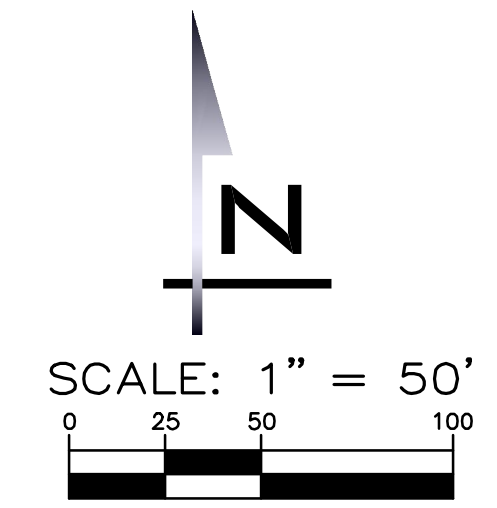
Monitoring:

The tree protection fencing should be assessed prior to development by an ISA Certified Arborist to ensure that it complies with the parameters described in this report prior to individual lot development. The overall health of the retained trees should be assessed annually and the maintenance adjusted accordingly. Adjustments include but are not limited to additional watering during periods of drought, removal of visible dead wood and fertilization.

Assumptions and Limiting Conditions

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as thou free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of the report unless subsequent contractual arrangements are made including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.
7. Neither all nor any part of the contents of the report, nor copy thereof, shall be conveyed by anyone, including the client to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser – particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or instate or to any initialed designation conferred upon the consultant/appraiser as stated in her qualification.
8. The report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs and photographs in this report, being intended as visual aid, are not necessarily to scale and should not be construed as engineering or architectural reports or survey.
10. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2: the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. There is not warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

EDGEWOOD EAST TREE PRESERVATION PLAN



TREE LEGEND			
	Viable/Deciduous & Coniferous Trees to be Saved		Viable/Landmark Deciduous & Coniferous Trees to be Saved
	5' Tree Buffer		Viable/Landmark Deciduous & Coniferous Trees to be Removed
	Tree Dripline		Nonviable/Landmark Deciduous & Coniferous Trees to Remain (Not Counted)
	Viable/Deciduous & Coniferous Trees to be Removed		Nonviable/Landmark Deciduous & Coniferous Trees to Remain (Not Counted)
	Nonviable/Deciduous & Coniferous Trees to Remain (Not Counted)		Nonviable/Landmark Deciduous & Coniferous Trees to be Removed
	Nonviable/Deciduous & Coniferous Trees to be Removed		