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FORESTRY AND VEGETATION MANAGEMENT SPECIALISTS



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- Tree Protection Plan-

CARRIER

SE 8th Street & 214th Ave SE
Sammamish, WA

Prepared for: Toll Brothers

Prepared by: Washington Forestry Consultants, Inc.

Date: September 13, 2016

Introduction

The project proponent is planning to construct a 35 lot subdivision in Sammamish, Washington. The proponent has retained WFCI to:

- Evaluate and inventory all trees on the site pursuant to the requirements Chapter 21A.37 of the City of Sammamish Municipal Code.
- Make recommendations for retention of significant trees, along with required protection and cultural measures.

Observations

Methodology

WFCI has evaluated coniferous trees 8 inches diameter at breast height (DBH) and larger, and deciduous trees 12 inches DBH and larger in the proposed project area, and assessed their potential to be incorporated into the new project.

The tree evaluation phase used methodology developed by Nelda Matheny and Dr. James Clark in their 1998 publication Trees and Development: A Technical Guide to Preservation of Trees during Land Development.

Site Description

The project area includes two parcels. The topography generally slopes gently up from south to north. It is approximately 70% forested. The trees on site are between 30 and 80 years old. The eastern one-third of the site is mostly pasture land. There is also a series of small ponds in the middle of the western parcel. The site is bordered by homes on the north and east, by SE 8th Street to the south, and 214th Ave SE to the west. There are four buildings on site: an existing home in the southwest corner of the site and 3 small horse barns associated with the pasture area on the eastern portion of the site.

Soil Description

According to the USDA Natural Resource Conservation Service Web Soil Survey there is one soil type on the site, the Alderwood gravelly sandy loam. This soil type is a moderately deep, moderately well drained soil found on glacial till plains. It is formed in ablation till overlying basal till. A weakly cemented hardpan is at a depth of 20 to 40 inches. Permeability is moderately rapid above the hardpan and very slow in the pan. Available water capacity is low. The effective rooting depth for trees is 20-40 inches. A perched seasonal high water table is at a depth of 18-36 inches from November to March. The potential for windthrow of trees is moderate under normal conditions. New trees require irrigation for establishment.

In areas where grading brings the hardpan nearer to the surface, the hardpan must be fractured under new trees to provide soil volume for root development and to improve drainage around the tree.

Tree Conditions

The project area consists of approximately 10 acres of forest cover (Type I), and 4.1 acres of pasture land (Type II). An inventory of the forest on the developable area of the site (excluding the sensitive areas and their buffers) was conducted to determine the composition and health of the forest.

Type I. -- This type includes the forested area of the site. The primary species found in this type include western red cedar (*Thuja plicata*), Douglas-fir (*Pseudotsuga menziesii*), bigleaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), and western hemlock (*Tsuga heterophylla*). Minor species include Sitka spruce (*Picea sitchensis*), lodgepole pine (*Pinus contorta*), and cherry (*Prunus spp.*). The predominant understory species include sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), stinging nettles (*Urtica dioica*), salmonberry (*Rubus spectabilis*), and Himalayan blackberry (*Rubus armeniacus*).

Five hundred and thirty-four (534) trees were found in this type. The tree locations were surveyed after our tree inventory. Since the tree survey, we determined that 34 of our 568 tallied trees fall within the county road right-of-way, and will not count toward our significant tree calculations. So, 34 extra trees were initially numbered in the field.

The trees in this type range in diameter from 8 to 80 inches DBH. Four hundred and thirty-five (435) of the trees were classified as sound, healthy, long-term trees in all crown classes. The other 99 trees are not long-term trees due to structural defects or poor health (dead, diseased, or hazardous). One hundred and seventy-eight (178) of the 435 healthy trees are classified as 'heritage' trees, which are trees 22 inches or greater in diameter at breast height. Additionally, 22 of the healthy trees are classified as 'landmark' trees, which are trees 32 inches or greater in DBH.

Table 1. Summary of Trees in Type I.

Species	DBH Range (in.)	Total # of Trees	# of Healthy Trees	# of Trees in Poor Health*	# of Healthy Heritage Trees**	# of Healthy Landmark Trees***	Species Composition of Stand
Douglas-fir	8-60	356	312	44	150	17	67%
Western Red Cedar	8-80	58	56	2	20	5	11%
Bigleaf Maple	12-50	79	60	19	8	0	15%
Red Alder	12-26	29	3	26	0	0	5%
Western Hemlock	12-35	8	3	5	0	0	1%
Other	8-18	4	1	3	0	0	<1%
Sum	8-80	534	435	99	178	22	100%

*Dead, diseased, or hazardous.

**A heritage tree is defined as a tree that is 22 inches DBH or larger.

***A landmark tree is defined as a tree that is 32 inches DBH or larger.

Type II. -- This type is the non-forested pasture area on the eastern portion of the site. The three small horse barns are in this type as well.

Off-Site Impacts

Tree removal on this parcel may have some impact trees on surrounding parcels as they become newly exposed to wind and weather once clearing has taken place.

Discussion

Tree Retention

The City of Sammamish Municipal Code calls for the retention of 35% of all significant trees on undeveloped properties. Retention trees are suggested to be healthy, left in vegetated groups and/or near sensitive area buffers, with an emphasis on saving heritage trees. The proposed site plan has one such planned retention area that meets all of the above criteria. There are 216 healthy significant trees on site outside of all critical area buffers and buffer additions. Ninety-

two (92) of those trees are planned to be saved, for a total of 43%, 8% more than the requirement.

A detailed list of all trees by species, DBH, crown position, condition, average drip line (D/L) radius, and save/remove potential is provided in Attachment #3.

Tree Density Calculations

Chapter 21A.37, Tree Retention Requirements, of the Sammamish Municipal Code (SMC) requires that, for an undeveloped parcel, 35% of the total significant trees in the developable area be retained or replaced. The following is a summary of the required and planned tree retention:

Total Number of Significant Trees on Site:	534 trees
Trees that are Dead Diseased or Dangerous:	99 trees
Significant Trees <i>Inside</i> Critical Area Buffers:	<u>222 trees</u>
Number of Healthy, Significant Trees in Developable Area:	216 trees

Required Tree Retention:

35% of the significant trees:	76 trees
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Planned Tree Retention	92 trees
Save Tree Credits (Landmark & Heritage Trees)	<u>31 credits</u>
Total Tree Retention Save Credits	123

Surplus of Retained Trees Above the Requirement	47 trees
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The SMC states that retained heritage trees can be counted toward retention at 175% per saved heritage tree; and landmark trees can be counted at 200% per saved landmark tree. For example, if 4 heritage trees are saved, they actually count as 7 save trees (3 extra credits). Therefore, with 33 heritage trees to be saved, and 7 landmark trees to be saved, the total tree retention credits amount to 126.

Chapter 21A.37 of the SMC states that each significant tree removed (including those that are dead or in ‘poor’ condition) must be replaced at a 1:1 ratio; each heritage tree removed must be replaced at a 2:1 ratio; and landmark trees must be replaced at a 3:1 ratio. In total, 212 significant trees will be removed: 15 Legacy trees, 68 Heritage trees, and 84 other significant trees, and 45 dead or ‘poor’ condition trees. Therefore 310 replacement trees will be needed. Conifers must be replaced with minimum 8-foot tall conifers native to Washington, and deciduous trees must be replaced with minimum 1.5-inch DBH deciduous trees native to Washington. The tree replacement plan will be prepared by others.

Recommendations

Tree Protection Measures

Trees to be saved must be protected during construction by a six foot high chain link fencing (Attachment #7), located at the edge of the critical root zone (CRZ). Placards shall be placed on the fencing every 50 feet indicating the words, "NO TRESPASSING - Protected Trees". The individual CRZ are a radius of one foot for each one inch of DBH (6 feet minimum), unless otherwise delineated by WFCI (see Attachment #2).

Tree protection fences should be placed around the edge of the critical root zone (CRZ). The fence should be erected after logging but prior to the start of clearing. The fences should be maintained until the start of the landscape installation.

There should be no equipment activity (including rototilling) within the critical root zone. No irrigation lines, trenches, or other utilities should be installed within the CRZ. Cuts or fills should impact no more than 20% of a tree's root system. If topsoil is added to the root zone of a protected tree, the depth should not exceed 2 inches of a sandy loam or loamy fine sand topsoil and should not cover more than 20% of the root system.

If roots are encountered outside the CRZ during construction, they should be cut cleanly with a saw and covered immediately with moist soil. Noxious vegetation within the critical root zone should be removed by hand. If a proposed save-tree must be impacted by grading or fills, then the tree should be re-evaluated by WFCI to determine if the tree can be saved with mitigating measures, or if the tree should be removed.

Pruning and Thinning

All individual trees to be saved near or within developed areas should have their crowns raised to provide a minimum of 8 feet of ground clearance over sidewalks and landscape areas, 15 feet over parking lots or streets, and at least 10 feet of building clearance.

All pruning should be done according to the ANSI A300 standards for proper pruning, and be completed by an International Society of Arboriculture Certified Arborist[®], or be supervised by a Certified Arborist[®].

Conclusions and Timeline for Activity

1. At least 92 trees are planned to be retained in vegetated retention area groups.
2. The final, approved tree protection plan map should be included in the construction drawings for bid and construction of the project and should be labeled as such.
3. Stake and heavily flag the clearing limits.
4. Contact WFCI to attend pre-job conference and discuss tree protection issues with contractors. WFCI can verify all trees to be saved and/or removed are adequately marked for retention.

5. Complete logging. Complete necessary hazard tree removals and invasive plant removals from the tree protection areas. No equipment should enter the tree protection areas during logging.
6. Install tree protection fences along the 'limits of construction'. The fences should be located at the limits of construction or 5 feet outside of the dripline of the save tree or as otherwise specified by WFCI. Maintain fences throughout construction.
7. Complete clearing of the project.
8. Do not excavate stumps within 10' of trees to be saved. These should be individually evaluated by WFCI to determine the method of removal.
9. Complete all necessary pruning on save trees or stand edges to provide at least 8' of ground clearance near sidewalks and trails, and 15' above all driveways or access roads.
10. Complete grading and construction of the project.

Summary

The City of Sammamish Municipal Code requires that 76 out of 216 significant trees be retained on the developable area of the site. This plan retains 92 significant healthy trees within the proposed retention area, and has 31 extra credits for saved heritage and landmark trees for total retention credits equaling 123. Therefore, the requirements of the SMC will be met according to this plan. However, 310 replacement trees will need to be planted for the significant (healthy and otherwise), heritage, and landmark trees that will be removed.

Please give me a call if you have further questions.

Respectfully submitted,

Respectfully submitted,



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ISA Bd. Certified Master Arborist PN-129BU
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ISA Tree Risk Assessor Qualified







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attachments

**Attachment #1:
Aerial Photo of Toll Brothers – Carrier Site
(King County Parcel Viewer 2.0)**



-  Approximate Site Boundary
-  Type Boundary
-  Small Pond
-  Existing Home

Attachment #3: Inventory list of project area trees.

A detailed list of all trees by species, DBH, condition, crown position, drip line (D/L) radius, root protection zone (RPZ), planned save/remove status, heritage/landmark tree notation, and whether it falls within the critical area buffers or not:

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
1	Douglas-fir	38	Good	Dominant	25	30	Yes	Landmark	Remove	No
2	Douglas-fir	20	Good	Intermediate	20	20	Yes		Remove	No
3	Douglas-fir	20	Very-Poor	Suppressed			No		Remove	No
8	Douglas-fir	22	Good	Co-dominant	20	20	Yes	Heritage	Remove	No
9	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Remove	No
10	Douglas-fir	12	Poor	Suppressed			No		Remove	No
11	Douglas-fir	19	Fair	Co-dominant	12	15	Yes		Remove	No
12	Douglas-fir	20	Good	Co-dominant	16	16	Yes		Remove	No
13	Douglas-fir	22	Good	Dominant	16	16	Yes	Heritage	Remove	No
14	Douglas-fir	14	Fair	Intermediate	15	14	Yes		Remove	No
15	Cedar	13	Fair	Suppressed	12	12	Yes		Remove	No
16	Douglas-fir	24	Good	Co-dominant	15	20	Yes	Heritage	Remove	No
17	Douglas-fir	13	Fair	Intermediate	12	12	Yes		Remove	No
23	Douglas-fir	22	Fair	Co-dominant	18	18	Yes	Heritage	Remove	No
24	Douglas-fir	30	Fair	Dominant	16	25	Yes	Heritage	Remove	No
25	Douglas-fir	28	Good	Dominant	16	20	Yes	Heritage	Remove	No
26	Douglas-fir	15	Fair	Co-dominant	15	15	Yes		Remove	No
27	Red Alder	13	Poor	Intermediate			No		Remove	No
28	Red Alder	13	Poor	Intermediate			No		Remove	No
29	Douglas-fir	10	Very-Poor	Suppressed			No		Remove	No
30	Douglas-fir	11	Very-Poor	Suppressed			No		Remove	No
37	Red Alder	16	Dead	Co-dominant			No		Remove	No
38	Red Alder	20	Dead	Dominant			No		Remove	No
39	Red Alder	16	Dead	Dominant			No		Remove	No
40	Douglas-fir	12,12	Poor	Intermediate			No		Remove	No
41	Douglas-fir	28	Fair	Dominant	18	22	Yes	Heritage	Remove	No
42	Douglas-fir	16	Very-Poor	Suppressed			No		Remove	No
45	Douglas-fir	38	Fair	Dominant	16	30	Yes	Landmark	Remove	No
46	Douglas-fir	17	Fair	Intermediate	17	17	Yes		Remove	No
47	Douglas-fir	28	Good	Co-dominant	15	22	Yes	Heritage	Remove	No
55	Cedar	18	Fair	Intermediate	12	15	Yes		Remove	No
56	Douglas-fir	16	Poor	Intermediate			No		Remove	No
57	Maple	50	Poor	Co-dominant			No	Poor Health	Remove	No
59	Hemlock	22	Poor	Co-dominant			No	Poor Health	Remove	Yes
60	Red Alder	16	Poor	Intermediate			No		Save	Yes
61	Douglas-fir	26	Good	Dominant	20	25	Yes	Heritage	Save	Yes
63	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Remove	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
64	Maple	13	Poor	Suppressed			No		Save	No
65	Douglas-fir	15	Fair	Co-dominant	12	12	Yes		Save	No
66	Douglas-fir	8	Poor	Suppressed			No		Save	No
67	Douglas-fir	21	Fair	Dominant	15	15	Yes		Save	No
68	Maple	14	Poor	Suppressed			No		Save	No
69	Douglas-fir	30	Fair	Dominant	20	25	Yes	Heritage	Remove	No
70	Douglas-fir	21	Fair	Co-dominant	12	20	Yes		Remove	No
71	Douglas-fir	19	Fair	Co-dominant	10	15	Yes		Remove	No
72	Douglas-fir	22	Fair	Co-dominant	10	15	Yes	Heritage	Remove	No
73	Douglas-fir	23	Fair	Co-dominant	15	18	Yes	Heritage	Remove	No
74	Douglas-fir	26	Fair	Dominant	15	20	Yes	Heritage	Remove	No
75	Maple	35	Very-Poor	Suppressed			No	Poor Health	Save	No
76	Douglas-fir	16	Fair	Co-dominant	12	15	Yes		Save	No
77	Douglas-fir	22	Fair	Co-dominant	16	20	Yes	Heritage	Save	No
78	Douglas-fir	14	Fair	Co-dominant	10	14	Yes		Save	No
79	Douglas-fir	13	Fair	Co-dominant	12	14	Yes		Save	No
80	Douglas-fir	10	Fair	Intermediate	8	10	Yes		Save	No
81	Maple	12	Fair	Intermediate	12	12	Yes		Save	No
82	Maple	13	Fair	Intermediate	12	12	Yes		Save	No
83	Douglas-fir	18	Fair	Co-dominant	15	15	Yes		Save	No
84	Douglas-fir	11	Fair	Intermediate	10	10	Yes		Save	No
85	Maple	13,21	Fair	Intermediate	25	20	Yes		Save	No
86	Douglas-fir	17	Fair	Co-dominant	15	15	Yes		Save	No
87	Douglas-fir	8,9	Fair	Intermediate	10	10	Yes		Save	No
88	Douglas-fir	40	Good	Dominant	30	30	Yes	Heritage	Save	Yes
89	Douglas-fir	18	Fair	Co-dominant	15	15	Yes		Save	No
90	Maple	16	Dead				No		Save	Yes
91	Douglas-fir	40	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
92	Cedar	28	Good	Co-dominant	20	20	Yes	Heritage	Save	Yes
93	Douglas-fir	9	Fair	Suppressed	8	8	Yes		Save	Yes
94	Douglas-fir	36	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
95	Maple	18	Fair	Intermediate	25	20	Yes		Save	Yes
96	Douglas-fir	12	Fair	Intermediate	15	12	Yes		Save	Yes
97	Douglas-fir	22	Good	Co-dominant	20	20	Yes	Heritage	Save	Yes
98	Maple	18	Fair	Intermediate	20	20	Yes		Save	Yes
99	Douglas-fir	32	Fair	Dominant	20	25	Yes	Heritage	Save	Yes
100	Douglas-fir	16	Fair	Intermediate	12	12	Yes		Save	Yes
101	Douglas-fir	8	Fair	Suppressed	8	8	Yes		Save	Yes
102	Douglas-fir	21	Fair	Co-dominant	16	16	Yes		Save	Yes
103	Douglas-fir	18	Fair	Co-dominant	15	15	Yes		Save	Yes
104	Maple	14	Fair	Suppressed	22	18	Yes		Save	Yes
105	Douglas-fir	24	Fair	Co-dominant	20	20	Yes	Heritage	Save	Yes
106	Douglas-fir	9	Fair	Suppressed	6	8	Yes		Save	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
107	Douglas-fir	18	Good	Co-dominant	16	16	Yes		Save	Yes
108	Maple	26	Fair	Co-dominant	30	25	Yes	Heritage	Save	Yes
109	Maple	17	Poor				No		Save	Yes
110	Douglas-fir	21	Fair	Co-dominant	15	15	Yes		Save	Yes
111	Douglas-fir	21	Fair	Co-dominant	15	15	Yes		Save	Yes
112	Douglas-fir	20	Fair	Co-dominant	15	15	Yes		Save	Yes
113	Douglas-fir	12	Fair	Suppressed	8	10	Yes		Save	Yes
114	Red Alder	18	Dead				No		Save	Yes
115	Douglas-fir	13	Poor	Suppressed			No		Save	Yes
116	Maple	16	Fair	Intermediate	20	20	Yes		Save	Yes
117	Douglas-fir	24	Good	Dominant	20	20	Yes	Heritage	Save	Yes
118	Douglas-fir	22	Good	Dominant	16	16	Yes	Heritage	Save	Yes
119	Douglas-fir	12	Fair	Suppressed	10	10	Yes		Save	Yes
120	Douglas-fir	23	Good	Dominant	20	20	Yes	Heritage	Save	Yes
121	Douglas-fir	8	Fair	Suppressed	10	8	Yes		Save	Yes
122	Maple	17	Fair	Intermediate	20	20	Yes		Save	Yes
123	Douglas-fir	17	Fair	Co-dominant	12	15	Yes		Save	Yes
124	Douglas-fir	14	Fair	Co-dominant	12	14	Yes		Save	Yes
125	Douglas-fir	16	Fair	Co-dominant	14	15	Yes		Save	Yes
126	Douglas-fir	34	Good	Dominant	22	30	Yes	Heritage	Save	Yes
127	Maple	13	Fair	Intermediate	20	15	Yes		Save	Yes
128	Cedar	18	Good	Intermediate	16	16	Yes		Save	Yes
129	Red Alder	12	Dead				No		Save	Yes
130	Douglas-fir	12	Fair	Intermediate	10	10	Yes		Save	Yes
131	Douglas-fir	9	Fair	Suppressed	10	10	Yes		Save	Yes
132	Douglas-fir	24	Fair	Dominant	16	20	Yes	Heritage	Save	Yes
133	Douglas-fir	10	Fair	Intermediate	10	10	Yes		Save	Yes
134	Cedar	8	Good	Suppressed	10	10	Yes		Save	Yes
135	Douglas-fir	23	Good	Dominant	20	20	Yes	Heritage	Remove	Yes
136	Douglas-fir	14	Fair	Co-dominant	12	12	Yes		Save	Yes
137	Douglas-fir	28	Good	Co-dominant	20	22	Yes	Heritage	Save	Yes
138	Douglas-fir	30	Good	Co-dominant	22	25	Yes	Heritage	Remove	Yes
139	Maple	13	Fair	Intermediate	25	15	Yes		Remove	Yes
140	Maple	18	Fair	Intermediate	25	20	Yes		Remove	No
141	Douglas-fir	13	Fair	Suppressed	12	12	Yes		Remove	Yes
142	Douglas-fir	10	Fair	Suppressed	12	12	Yes		Remove	Yes
143	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Remove	Yes
144	Cedar	32	Good	Co-dominant	20	25	Yes	Landmark	Remove	No
145	Cedar	16	Good	Intermediate	12	15	Yes		Remove	No
146	Douglas-fir	11	Fair	Intermediate	12	12	Yes		Remove	No
147	Cedar	9	Good	Suppressed	10	10	Yes		Remove	No
148	Douglas-fir	38	Good	Dominant	25	30	Yes	Landmark	Remove	No
149	Douglas-fir	21	Good	Co-dominant	16	16	Yes		Remove	No

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
150	Red Alder	13	Fair	Co-dominant	16	15	Yes		Remove	No
151	Red Alder	15	Fair	Co-dominant	16	15	Yes		Remove	No
152	Douglas-fir	60	Fair	Dominant	20	45	Yes	Landmark	Remove	No
153	Cedar	72	Poor	Co-dominant			No	Poor Health	Remove	No
154	Douglas-fir	16	Fair	Co-dominant	16	16	Yes		Remove	No
155	Douglas-fir	20	Good	Dominant	20	20	Yes		Remove	No
156	Red Alder	26	Very-Poor	Intermediate			No	Poor Health	Remove	No
157	Cedar	48	Very-Good	Co-dominant	20	30	Yes	Landmark	Remove	No
158	Douglas-fir	32	Fair	Dominant	25	25	Yes	Landmark	Remove	No
159	Douglas-fir	16	Poor	Co-dominant			No		Remove	No
160	Douglas-fir	23	Poor	Co-dominant			No	Poor Health	Remove	No
161	Douglas-fir	35	Poor	Co-dominant			No	Poor Health	Remove	No
162	Douglas-fir	42,32	Poor	Dominant			No	Poor Health	Remove	No
163	Douglas-fir	34	Good	Co-dominant	25	25	Yes	Landmark	Remove	No
164	Douglas-fir	26	Good	Co-dominant	20	20	Yes	Heritage	Remove	No
165	Douglas-fir	25	Good	Dominant	20	20	Yes	Heritage	Save	Yes
166	Cedar	14	Fair	Suppressed	12	12	Yes		Save	Yes
167	Douglas-fir	10	Fair	Suppressed	8	8	Yes		Save	Yes
168	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Remove	No
169	Cedar	10	Fair	Suppressed	8	8	Yes		Save	Yes
170	Douglas-fir	18	Fair	Intermediate	10	15	Yes		Save	Yes
171	Douglas-fir	9	Poor	Suppressed			No		Save	Yes
172	Maple	38	Fair	Dominant	40	35	Yes	Heritage	Save	Yes
173	Red Alder	14	Poor	Co-dominant			No		Save	Yes
174	Douglas-fir	13	Fair	Intermediate	12	12	Yes		Save	Yes
175	Red Alder	17	Poor	Co-dominant			No		Save	Yes
176	Douglas-fir	9	Poor	Suppressed			No		Save	Yes
177	Maple	13	Good	Intermediate	20	15	Yes		Save	Yes
178	Douglas-fir	32	Good	Dominant	20	25	Yes	Heritage	Save	Yes
179	Douglas-fir	24	Fair	Co-dominant	16	20	Yes	Heritage	Save	Yes
180	Douglas-fir	28	Fair	Co-dominant	16	22	Yes	Heritage	Save	Yes
181	Douglas-fir	34	Good	Co-dominant	20	25	Yes	Heritage	Save	Yes
182	Cedar	34	Good	Intermediate	18	25	Yes	Heritage	Save	Yes
183	Maple	13	Fair	Intermediate	20	15	Yes		Save	Yes
184	Maple	20	Poor	Intermediate			No		Save	Yes
185	Maple	12	Poor	Suppressed			No		Save	Yes
186	Douglas-fir	28	Fair	Dominant	20	22	Yes	Heritage	Save	Yes
187	Douglas-fir	14	Dead				No		Save	Yes
188	Douglas-fir	20	Fair	Co-dominant	20	20	Yes		Save	Yes
189	Douglas-fir	17	Fair	Co-dominant	18	18	Yes		Save	Yes
190	Maple	13	Poor	Co-dominant			No		Save	Yes
191	Maple	16	Fair	Intermediate	20	20	Yes		Save	Yes
192	Maple	18	Poor	Intermediate			No		Save	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
193	Maple	15	Poor	Intermediate			No		Save	Yes
194	Maple	18	Poor	Intermediate			No		Save	Yes
195	Douglas-fir	36	Fair	Dominant	22	25	Yes	Heritage	Save	Yes
196	Douglas-fir	20	Fair	Co-dominant	22	20	Yes		Save	Yes
197	Hemlock	16	Fair	Co-dominant	15	15	Yes		Save	Yes
198	Douglas-fir	21	Fair	Co-dominant	20	20	Yes		Save	Yes
199	Douglas-fir	12	Fair	Intermediate	12	12	Yes		Save	Yes
200	Douglas-fir	23	Fair	Dominant	20	20	Yes	Heritage	Save	Yes
201	Douglas-fir	18	Fair	Co-dominant	20	20	Yes		Save	Yes
202	Red Alder	14	Poor	Intermediate			No		Save	Yes
203	Red Alder	16	Dead				No		Save	Yes
204	Red Alder	18	Fair	Co-dominant	16	16	Yes		Save	Yes
205	Douglas-fir	14	Poor	Intermediate			No		Save	Yes
206	Cedar	10	Fair	Suppressed	12	10	Yes		Save	Yes
207	Cedar	16	Good	Suppressed	12	14	Yes		Save	Yes
208	Cedar	10	Fair	Suppressed	10	10	Yes		Remove	Yes
209	Douglas-fir	27	Good	Dominant	20	20	Yes	Heritage	Remove	Yes
210	Douglas-fir	13	Fair	Suppressed	10	10	Yes		Save	Yes
211	Cedar	18	Good	Intermediate	12	15	Yes		Save	Yes
212	Douglas-fir	32	Good	Co-dominant	18	25	Yes	Heritage	Remove	Yes
213	Douglas-fir	30	Good	Co-dominant	18	25	Yes	Heritage	Remove	Yes
214	Douglas-fir	10	Fair	Suppressed	10	10	Yes		Save	Yes
215	Douglas-fir	32	Fair	Dominant	20	25	Yes	Heritage	Remove	Yes
216	Douglas-fir	8	Poor	Suppressed			No		Save	Yes
217	Maple	15	Fair	Intermediate	20	20	Yes		Remove	Yes
218	Cedar	13	Fair	Suppressed	12	12	Yes		Remove	Yes
219	Red Alder	14	Poor	Intermediate			No		Remove	Yes
220	Douglas-fir	40	Fair	Dominant	20	30	Yes	Heritage	Remove	Yes
221	Maple	18	Fair	Intermediate	15	15	Yes		Remove	Yes
222	Douglas-fir	10	Fair	Suppressed	12	10	Yes		Remove	Yes
223	Douglas-fir	17	Fair	Co-dominant	15	15	Yes		Remove	Yes
224	Cedar	28	Good	Co-dominant	15	20	Yes	Heritage	Remove	Yes
225	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Save	Yes
226	Maple	17	Fair	Co-dominant	20	20	Yes		Save	Yes
227	Douglas-fir	22	Fair	Co-dominant	15	18	Yes	Heritage	Save	Yes
228	Douglas-fir	10	Poor	Suppressed			No		Save	Yes
229	Douglas-fir	11	Fair	Intermediate	10	10	Yes		Save	Yes
230	Cedar	19	Fair	Co-dominant	16	16	Yes		Save	Yes
231	Cedar	20	Poor	Co-dominant			No		Save	Yes
232	Cedar	28	Fair	Co-dominant	15	20	Yes	Heritage	Save	Yes
233	Douglas-fir	9	Fair	Suppressed	8	8	Yes		Save	Yes
234	Cedar	27	Good	Intermediate	15	20	Yes	Heritage	Save	Yes
235	Red Alder	15,18	Poor	Intermediate			No		Save	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/Remove	In Buffer ?
236	Cedar	17	Fair	Intermediate	12	15	Yes		Save	Yes
237	Douglas-fir	22	Fair	Dominant	15	20	Yes	Heritage	Save	Yes
238	Cedar	28	Good	Co-dominant	15	20	Yes	Heritage	Save	Yes
239	Hemlock	12	Poor	Intermediate			No		Save	Yes
240	Douglas-fir	16	Poor	Intermediate			No		Save	Yes
241	Red Alder	16	Dead	Intermediate			No		Save	Yes
242	Maple	14	Fair	Co-dominant	20	20	Yes		Save	Yes
243	Cedar	24	Good	Co-dominant	15	20	Yes	Heritage	Save	Yes
244	Douglas-fir	16	Fair	Intermediate	12	12	Yes		Save	Yes
245	Douglas-fir	32	Good	Dominant	20	25	Yes	Heritage	Save	Yes
246	Douglas-fir	16	Fair	Intermediate	12	12	Yes		Save	Yes
247	Cedar	18	Good	Intermediate	15	15	Yes		Save	Yes
248	Douglas-fir	17	Fair	Co-dominant	12	12	Yes		Save	Yes
249	Cedar	8	Good	Suppressed	10	10	Yes		Save	Yes
250	Douglas-fir	30	Fair	Dominant	20	25	Yes	Heritage	Save	Yes
251	Douglas-fir	24	Poor	Co-dominant			No	Poor Health	Save	Yes
252	Maple	15	Fair	Intermediate	20	15	Yes		Save	Yes
253	Douglas-fir	32	Fair	Dominant	20	25	Yes	Heritage	Save	Yes
254	Maple	16	Fair	Intermediate	25	20	Yes		Save	Yes
255	Maple	12	Fair	Intermediate	20	15	Yes		Save	Yes
256	Douglas-fir	34	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
257	Cedar	46	Fair	Co-dominant	20	30	Yes	Heritage	Save	Yes
258	Cedar	36,10	Fair	Co-dominant	14	20	Yes	Heritage	Save	Yes
259	Douglas-fir	12	Fair	Intermediate	10	10	Yes		Save	Yes
260	Cedar	40	Fair	Co-dominant	16	30	Yes	Heritage	Save	Yes
261	Maple	12	Fair	Intermediate	15	12	Yes		Save	Yes
262	Douglas-fir	44	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
263	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Save	Yes
264	Cedar	32	Fair	Co-dominant	15	25	Yes	Heritage	Save	Yes
265	Douglas-fir	32	Fair	Dominant	20	25	Yes	Heritage	Save	Yes
266	Cedar	23,22,20	Fair	Co-dominant	20	20	Yes	Heritage	Save	Yes
267	Douglas-fir	12	Fair	Intermediate	10	10	Yes		Save	Yes
268	Cedar	28	Good	Co-dominant	16	20	Yes	Heritage	Save	Yes
269	Douglas-fir	20	Fair	Co-dominant	15	15	Yes		Save	Yes
270	Cedar	20	Fair	Intermediate	18	15	Yes		Save	Yes
271	Cedar	40	Good	Dominant	20	30	Yes	Heritage	Save	Yes
272	Cedar	21	Good	Intermediate	15	15	Yes		Save	Yes
273	Douglas-fir	28	Fair	Dominant	20	20	Yes	Heritage	Save	Yes
274	Cedar	16	Good	Intermediate	15	15	Yes		Save	Yes
275	Cedar	14	Good	Intermediate	15	14	Yes		Save	Yes
276	Cedar	10	Fair	Suppressed	8	8	Yes		Save	Yes
277	Douglas-fir	36	Good	Co-dominant	22	25	Yes	Heritage	Save	Yes
278	Douglas-fir	10	Fair	Suppressed	10	10	Yes		Save	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
279	Douglas-fir	26	Good	Co-dominant	20	20	Yes	Heritage	Save	Yes
280	Cedar	30	Good	Co-dominant	15	20	Yes	Heritage	Save	Yes
281	Red Alder	18	Very-Poor	Intermediate			No		Save	Yes
282	Red Alder	17	Poor	Intermediate			No		Save	Yes
283	Douglas-fir	40	Good	Dominant	25	30	Yes	Heritage	Save	Yes
284	Cedar	8	Good	Suppressed	10	10	Yes		Save	Yes
285	Cedar	9	Good	Suppressed	10	10	Yes		Save	Yes
286	Cedar	26	Fair	Co-dominant	16	20	Yes	Heritage	Save	Yes
287	Maple	16	Fair	Intermediate	25	20	Yes		Save	Yes
288	Douglas-fir	32	Fair	Co-dominant	22	25	Yes	Heritage	Save	Yes
289	Douglas-fir	32	Fair	Co-dominant	20	25	Yes	Heritage	Save	Yes
290	Douglas-fir	33	Fair	Co-dominant	20	25	Yes	Heritage	Save	Yes
291	Maple	12	Fair	Intermediate	20	12	Yes		Save	Yes
292	Douglas-fir	30	Fair	Co-dominant	20	25	Yes	Heritage	Save	Yes
293	Cedar	28	Good	Co-dominant	16	20	Yes	Heritage	Save	Yes
294	Douglas-fir	28	Dead				No	Poor Health	Save	Yes
295	Cedar	14	Fair	Suppressed	12	12	Yes		Save	Yes
296	Douglas-fir	32	Fair	Co-dominant	20	25	Yes	Heritage	Save	Yes
297	Douglas-fir	33	Fair	Co-dominant	20	25	Yes	Heritage	Save	Yes
298	Douglas-fir	34	Fair	Co-dominant	20	26	Yes	Heritage	Save	Yes
299	Douglas-fir	36	Fair	Co-dominant	20	28	Yes	Heritage	Save	Yes
300	Douglas-fir	32	Fair	Co-dominant	25	25	Yes	Heritage	Save	Yes
301	Douglas-fir	30	Poor	Co-dominant			No	Poor Health	Save	Yes
302	Douglas-fir	36	Fair	Co-dominant	25	28	Yes	Heritage	Save	Yes
303	Douglas-fir	18	Fair	Intermediate	20	18	Yes		Save	Yes
305	Douglas-fir	36	Fair	Dominant	25	28	Yes	Heritage	Save	Yes
306	Maple	14	Fair	Intermediate	20	15	Yes		Save	Yes
307	Douglas-fir	34	Fair	Dominant	20	25	Yes	Landmark	Save	No
309	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Save	No
310	Douglas-fir	18	Poor	Co-dominant			No		Save	No
311	Douglas-fir	24	Fair	Co-dominant	20	20	Yes	Heritage	Save	No
312	Douglas-fir	27	Fair	Co-dominant	20	22	Yes	Heritage	Save	No
313	Douglas-fir	11	Fair	Intermediate	10	10	Yes		Save	No
314	Douglas-fir	10	Fair	Intermediate	10	10	Yes		Save	No
315	Douglas-fir	32,11	Fair	Co-dominant	20	25	Yes	Landmark	Save	No
316	Douglas-fir	30	Fair	Co-dominant	20	25	Yes	Heritage	Save	No
317	Douglas-fir	18	Fair	Intermediate	12	15	Yes		Save	No
318	Douglas-fir	16	Fair	Intermediate	12	12	Yes		Save	No
319	Douglas-fir	11	Dead	Suppressed			No		Save	No
320	Douglas-fir	23	Fair	Co-dominant	16	20	Yes	Heritage	Save	No
321	Douglas-fir	25	Fair	Co-dominant	20	20	Yes	Heritage	Save	No
322	Douglas-fir	8	Dead				No		Save	No
323	Douglas-fir	8	Dead				No		Save	No

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
324	Douglas-fir	18	Fair	Co-dominant	15	15	Yes		Save	No
325	Douglas-fir	21	Fair	Co-dominant	12	15	Yes		Save	No
327	Douglas-fir	10	Fair	Suppressed	8	8	Yes		Remove	No
328	Douglas-fir	24	Poor	Co-dominant			No	Poor Health	Save	No
329	Douglas-fir	15	Poor	Intermediate			No		Save	No
330	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Remove	No
331	Douglas-fir	15	Fair	Intermediate	12	12	Yes		Remove	No
333	Douglas-fir	28	Fair	Co-dominant	18	20	Yes	Heritage	Remove	No
334	Douglas-fir	28	Fair	Co-dominant	20	22	Yes	Heritage	Remove	No
335	Douglas-fir	26	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
336	Douglas-fir	13	Fair	Intermediate	12	12	Yes		Remove	No
338	Douglas-fir	26	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
339	Douglas-fir	32	Fair	Co-dominant	12	25	Yes	Landmark	Remove	No
340	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Remove	No
341	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Remove	No
342	Douglas-fir	10	Dead	Suppressed			No		Remove	No
344	Douglas-fir	26	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
345	Douglas-fir	25	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
346	Douglas-fir	20	Fair	Co-dominant	12	15	Yes		Save	No
347	Douglas-fir	8	Dead				No		Save	No
348	Douglas-fir	25	Fair	Co-dominant	16	20	Yes	Heritage	Save	No
349	Douglas-fir	11	Fair	Intermediate	10	10	Yes		Save	No
350	Douglas-fir	14	Fair	Co-dominant	12	12	Yes		Save	No
351	Douglas-fir	22	Good	Co-dominant	16	16	Yes	Heritage	Save	No
352	Douglas-fir	23	Good	Co-dominant	15	15	Yes	Heritage	Save	No
353	Douglas-fir	18	Good	Co-dominant	15	15	Yes		Save	No
354	Douglas-fir	24	Fair	Co-dominant	18	20	Yes	Heritage	Save	No
355	Douglas-fir	9	Poor	Suppressed			No		Save	No
356	Douglas-fir	28,28	Fair	Co-dominant	20	25	Yes	Heritage	Save	No
357	Cedar	20	Fair	Intermediate	12	15	Yes		Save	No
358	Douglas-fir	28	Fair	Co-dominant	18	22	Yes	Heritage	Save	Yes
359	Douglas-fir	28	Fair	Dominant	20	22	Yes	Heritage	Save	Yes
360	Maple	12	Fair	Intermediate	20	15	Yes		Save	Yes
361	Red Alder	12	Dead				No		Save	Yes
362	Maple	22	Fair	Co-dominant	30	25	Yes	Heritage	Save	Yes
363	Douglas-fir	17	Fair	Co-dominant	15	15	Yes		Save	Yes
364	Douglas-fir	16	Fair	Intermediate	15	15	Yes		Save	Yes
365	Douglas-fir	34	Good	Dominant	20	25	Yes	Heritage	Save	Yes
366	Douglas-fir	14	Fair	Intermediate	12	12	Yes		Save	Yes
367	Maple	18	Fair	Intermediate	22	15	Yes		Save	Yes
368	Maple	17,14	Fair	Intermediate	25	15	Yes		Save	Yes
369	Douglas-fir	42	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
370	Red Alder	20	Dead				No		Save	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
371	Red Alder	19	Poor	Co-dominant			No		Save	Yes
372	Douglas-fir	15	Fair	Intermediate	15	15	Yes		Save	Yes
373	Cedar	48	Good	Co-dominant	18	30	Yes	Heritage	Save	Yes
374	Douglas-fir	34	Good	Dominant	20	25	Yes	Heritage	Save	Yes
375	Maple	40	Poor	Co-dominant			No	Poor Health	Save	Yes
376	Douglas-fir	20	Fair	Co-dominant	16	16	Yes		Save	Yes
377	Douglas-fir	19	Very-Poor	Co-dominant			No		Save	Yes
378	Douglas-fir	32	Fair	Dominant	20	25	Yes	Landmark	Save	No
379	Douglas-fir	18	Fair	Intermediate	14	15	Yes		Save	No
380	Douglas-fir	21	Fair	Co-dominant	15	15	Yes		Save	No
381	Douglas-fir	32	Fair	Dominant	20	28	Yes	Landmark	Save	Yes
382	Red Alder	24	Poor	Co-dominant			No	Poor Health	Save	Yes
383	Cedar	22	Good	Intermediate	12	15	Yes	Heritage	Save	Yes
384	Douglas-fir	34	Good	Dominant	15	25	Yes	Landmark	Save	No
385	Douglas-fir	16	Fair	Co-dominant	12	15	Yes		Save	No
386	Douglas-fir	16	Fair	Co-dominant	12	15	Yes		Save	No
387	Douglas-fir	25	Good	Co-dominant	15	20	Yes	Heritage	Save	No
388	Douglas-fir	13	Fair	Intermediate	10	10	Yes		Save	No
389	Douglas-fir	20	Fair	Co-dominant	12	15	Yes		Save	No
390	Douglas-fir	25	Good	Dominant	20	20	Yes	Heritage	Save	No
391	Douglas-fir	16	Fair	Intermediate	12	15	Yes		Save	No
392	Douglas-fir	14	Fair	Intermediate	10	12	Yes		Save	No
393	Douglas-fir	14	Fair	Intermediate	10	12	Yes		Save	No
394	Douglas-fir	18	Fair	Co-dominant	12	15	Yes		Save	No
395	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Save	No
396	Douglas-fir	16	Fair	Intermediate	10	15	Yes		Save	No
397	Douglas-fir	12	Fair	Intermediate	8	10	Yes		Save	No
398	Douglas-fir	23	Fair	Co-dominant	12	18	Yes	Heritage	Save	No
399	Douglas-fir	13	Fair	Intermediate	8	10	Yes		Save	No
400	Douglas-fir	15	Fair	Intermediate	8	12	Yes		Save	No
401	Douglas-fir	19	Fair	Co-dominant	12	15	Yes		Save	No
402	Douglas-fir	23	Fair	Co-dominant	15	18	Yes	Heritage	Save	No
403	Douglas-fir	26	Good	Co-dominant	16	20	Yes	Heritage	Save	No
404	Douglas-fir	25	Fair	Co-dominant	12	20	Yes	Heritage	Save	No
405	Douglas-fir	26	Fair	Co-dominant	15	20	Yes	Heritage	Save	No
406	Douglas-fir	12	Fair	Intermediate	8	10	Yes		Save	No
407	Cedar	14	Fair	Suppressed	14	14	Yes		Save	No
408	Douglas-fir	33	Fair	Dominant	20	25	Yes	Landmark	Save	No
409	Douglas-fir	36	Fair	Dominant	18	28	Yes	Landmark	Save	No
410	Douglas-fir	20	Fair	Co-dominant	12	15	Yes		Save	No
411	Douglas-fir	22	Good	Co-dominant	18	20	Yes	Heritage	Save	No
412	Douglas-fir	23	Fair	Co-dominant	20	20	Yes	Heritage	Save	No
413	Douglas-fir	8	Fair	Suppressed	8	8	Yes		Save	No

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
414	Maple	12	Fair	Intermediate	18	15	Yes		Save	No
415	Douglas-fir	24	Fair	Co-dominant	18	20	Yes	Heritage	Save	No
416	Douglas-fir	23	Fair	Co-dominant	18	20	Yes	Heritage	Save	No
417	Cedar	20	Fair	Suppressed	15	15	Yes		Save	No
418	Douglas-fir	26	Good	Dominant	20	20	Yes	Heritage	Save	No
419	Douglas-fir	22	Fair	Co-dominant	18	18	Yes	Heritage	Save	No
420	Douglas-fir	14	Fair	Intermediate	10	10	Yes		Save	No
421	Douglas-fir	9	Fair	Suppressed	8	8	Yes		Save	No
422	Douglas-fir	20	Fair	Intermediate	12	15	Yes		Save	No
423	Douglas-fir	22	Good	Co-dominant	15	16	Yes	Heritage	Save	No
424	Douglas-fir	9	Fair	Suppressed	8	8	Yes		Save	No
425	Cedar	22,9	Good	Intermediate	15	15	Yes	Heritage	Save	No
426	Douglas-fir	20, 10	Poor	Co-dominant			No		Save	No
427	Douglas-fir	26	Good	Co-dominant	20	20	Yes	Heritage	Save	No
428	Douglas-fir	26	Good	Co-dominant	20	20	Yes	Heritage	Save	No
429	Douglas-fir	13	Poor	Intermediate			No		Save	No
430	Douglas-fir	11	Fair	Intermediate	10	10	Yes		Save	No
431	Douglas-fir	23	Fair	Co-dominant	16	18	Yes	Heritage	Save	No
432	Douglas-fir	20	Fair	Co-dominant	15	15	Yes		Save	No
433	Douglas-fir	25	Good	Dominant	20	20	Yes	Heritage	Save	No
434	Douglas-fir	12	Fair	Intermediate	10	10	Yes		Save	No
435	Douglas-fir	22	Fair	Co-dominant	15	16	Yes	Heritage	Save	No
436	Douglas-fir	29	Fair	Dominant	15	25	Yes	Heritage	Save	Yes
437	Maple	12	Fair	Intermediate	20	15	Yes		Save	Yes
438	Maple	12	Fair	Intermediate	20	15	Yes		Save	Yes
439	Maple	15	Fair	Co-dominant	20	15	Yes		Save	Yes
440	Maple	16	Fair	Co-dominant	25	18	Yes		Save	Yes
441	Maple	13	Fair	Intermediate	18	15	Yes		Save	Yes
442	Douglas-fir	11	Fair	Intermediate	12	10	Yes		Remove	Yes
443	Douglas-fir	24	Fair	Co-dominant	16	20	Yes	Heritage	Remove	Yes
444	Lodgepole Pine	18	Poor	Co-dominant			No		Remove	Yes
445	Douglas-fir	34	Good	Dominant	25	30	Yes	Heritage	Remove	Yes
446	Hemlock	15	Good	Intermediate	20	15	Yes		Remove	Yes
447	Douglas-fir	24	Good	Dominant	20	20	Yes	Heritage	Remove	Yes
448	Douglas-fir	17	Good	Co-dominant	16	15	Yes		Remove	Yes
449	Douglas-fir	27	Fair	Co-dominant	20	22	Yes	Heritage	Remove	Yes
450	Douglas-fir	23	Fair	Co-dominant	15	20	Yes	Heritage	Remove	Yes
451	Douglas-fir	13	Fair	Co-dominant	12	12	Yes		Remove	Yes
452	Douglas-fir	12	Fair	Co-dominant	12	12	Yes		Remove	Yes
453	Douglas-fir	26	Fair	Co-dominant	20	20	Yes	Heritage	Remove	Yes
454	Douglas-fir	20	Good	Co-dominant	15	15	Yes		Remove	Yes
455	Douglas-fir	20	Good	Co-dominant	15	15	Yes		Remove	Yes

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
456	Douglas-fir	26	Good	Dominant	25	25	Yes	Heritage	Remove	Yes
457	Douglas-fir	14	Good	Co-dominant	12	12	Yes		Remove	Yes
458	Douglas-fir	20	Good	Co-dominant	15	15	Yes		Remove	Yes
459	Douglas-fir	18	Fair	Co-dominant	15	15	Yes		Remove	Yes
460	Douglas-fir	12	Fair	Co-dominant	10	10	Yes		Remove	Yes
461	Douglas-fir	20	Fair	Co-dominant	12	15	Yes		Remove	Yes
462	Douglas-fir	14	Fair	Co-dominant	12	12	Yes		Remove	Yes
463	Douglas-fir	26	Fair	Co-dominant	18	22	Yes	Heritage	Remove	Yes
464	Douglas-fir	26	Fair	Co-dominant	20	22	Yes	Heritage	Remove	Yes
465	Douglas-fir	26	Good	Co-dominant	22	22	Yes	Heritage	Remove	No
466	Cedar	80	Fair	Dominant	25	30	Yes	Landmark	Remove	No
467	Douglas-fir	24	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
468	Douglas-fir	26	Good	Dominant	20	20	Yes	Heritage	Remove	No
469	Douglas-fir	26	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
470	Cedar	42	Fair	Co-dominant	22	30	Yes	Landmark	Remove	No
471	Hemlock	25,23	Poor	Co-dominant			No	Poor Health	Remove	No
472	Cedar	44	Good	Dominant	22	30	Yes	Landmark	Remove	No
473	Cedar	10	Fair	Suppressed	12	10	Yes		Remove	No
474	Unknown Evergreen	16	Poor	Intermediate			No		Remove	No
475	Douglas-fir	27	Fair	Dominant	25	25	Yes	Heritage	Remove	No
476	Unknown Deciduous	15	Fair	Dominant	25	20	Yes		Remove	No
478	Douglas-fir	14	Fair	Co-dominant	15	15	Yes		Remove	No
479	Douglas-fir	15	Good	Co-dominant	15	15	Yes		Remove	No
480	Hemlock	14	Good	Intermediate	15	15	Yes		Remove	No
481	Douglas-fir	16	Good	Co-dominant	15	15	Yes		Remove	No
482	Douglas-fir	25	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
483	Douglas-fir	26	Fair	Co-dominant	22	20	Yes	Heritage	Remove	No
484	Douglas-fir	27	Good	Co-dominant	16	22	Yes	Heritage	Remove	No
485	Hemlock	32	Poor	Dominant			No	Poor Health	Remove	No
486	Douglas-fir	33	Poor	Dominant			No	Poor Health	Remove	No
487	Hemlock	35	Poor	Dominant			No	Poor Health	Save	Yes
488	Douglas-fir	28	Fair	Dominant	20	22	Yes	Heritage	Remove	No
489	Red Alder	13	Poor	Co-dominant			No		Remove	No
490	Red Alder	13	Poor	Co-dominant			No		Remove	No
491	Red Alder	12,16	Poor	Co-dominant			No		Remove	No
492	Red Alder	14	Poor	Co-dominant			No		Remove	No
493	Douglas-fir	30	Poor	Co-dominant			No	Poor Health	Remove	No
494	Douglas-fir	26	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
495	Douglas-fir	32	Fair	Dominant	25	25	Yes	Landmark	Remove	No
496	Douglas-fir	30	Poor	Co-dominant			No	Poor Health	Remove	No
497	Maple	17	Fair	Intermediate	25	20	Yes		Remove	No

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
498	Douglas-fir	40	Fair	Dominant	25	30	Yes	Heritage	Save	Yes
499	Maple	14	Fair	Intermediate	25	15	Yes		Remove	No
500	Douglas-fir	28	Poor	Dominant			No	Poor Health	Remove	No
501	Maple	30	Fair	Co-dominant	30	30	Yes	Heritage	Remove	No
502	Maple	26	Poor	Co-dominant			No	Poor Health	Remove	No
503	Maple	50	Poor	Co-dominant			No	Poor Health	Remove	No
504	Maple	13	Fair	Co-dominant	20	15	Yes		Remove	No
505	Maple	15	Fair	Co-dominant	25	15	Yes		Remove	No
506	Maple	14	Fair	Co-dominant	20	15	Yes		Remove	No
507	Maple	22	Fair	Dominant	30	25	Yes	Heritage	Remove	No
508	Cherry	14	Poor	Co-dominant			No		Remove	No
509	Maple	16	Poor	Co-dominant			No		Remove	No
510	Maple	40,20	Very-Poor	Dominant			No	Poor Health	Remove	No
511	Douglas-fir	11	Poor	Suppressed			No		Remove	No
512	Douglas-fir	11	Poor	Suppressed			No		Remove	No
513	Douglas-fir	21	Good	Dominant	20	20	Yes		Remove	No
514	Maple	13	Poor	Suppressed			No		Remove	No
515	Maple	23	Fair	Dominant	30	25	Yes	Heritage	Remove	No
516	Maple	14	Fair	Intermediate	20	15	Yes		Remove	No
517	Maple	20	Fair	Co-dominant	25	20	Yes		Remove	Yes
518	Maple	21	Fair	Dominant	25	20	Yes		Remove	No
519	Maple	14	Fair	Intermediate	25	15	Yes		Remove	Yes
520	Maple	12	Fair	Co-dominant	20	15	Yes		Remove	No
521	Maple	12	Fair	Co-dominant	20	15	Yes		Remove	No
522	Douglas-fir	16	Fair	Co-dominant	12	12	Yes		Remove	No
523	Maple	15	Fair	Co-dominant	20	15	Yes		Remove	No
524	Maple	26	Fair	Dominant	30	25	Yes	Heritage	Remove	No
525	Maple	13	Fair	Co-dominant	20	15	Yes		Remove	No
526	Maple	13	Fair	Co-dominant	20	15	Yes		Remove	No
527	Douglas-fir	32	Good	Dominant	30	30	Yes	Landmark	Remove	No
528	Douglas-fir	17	Fair	Co-dominant	15	15	Yes		Save	Yes
529	Douglas-fir	17	Fair	Co-dominant	15	15	Yes		Save	Yes
530	Douglas-fir	26	Fair	Co-dominant	20	20	Yes	Heritage	Save	Yes
531	Douglas-fir	27	Good	Co-dominant	22	22	Yes	Heritage	Save	Yes
532	Douglas-fir	20	Poor	Co-dominant			No		Save	Yes
533	Douglas-fir	22	Fair	Co-dominant	12	18	Yes	Heritage	Save	Yes
534	Douglas-fir	22	Fair	Co-dominant	12	18	Yes	Heritage	Save	Yes
535	Douglas-fir	25	Fair	Co-dominant	20	20	Yes	Heritage	Save	Yes
536	Douglas-fir	25	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
537	Cedar	8	Fair	Suppressed	8	8	Yes		Remove	No
538	Douglas-fir	16	Poor	Co-dominant			No		Remove	No
539	Douglas-fir	14	Fair	Co-dominant	12	12	Yes		Remove	No
540	Douglas-fir	22	Fair	Dominant	20	20	Yes	Heritage	Remove	No

Tree #	Species	DBH (in)	Condition	Crown Position	Drip Line Radius (ft)	Root Protection Zone (ft)	Healthy Tree?	Heritage or Landmark	Planned Save/ Remove	In Buffer ?
541	Douglas-fir	28	Fair	Dominant	25	25	Yes	Heritage	Remove	No
542	Douglas-fir	24	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
543	Douglas-fir	18	Fair	Co-dominant	12	15	Yes		Remove	No
544	Douglas-fir	36	Fair	Dominant	25	25	Yes	Landmark	Remove	No
545	Maple	15	Fair	Intermediate	20	15	Yes		Remove	No
546	Douglas-fir	28	Good	Dominant	22	22	Yes	Heritage	Remove	No
547	Maple	15	Fair	Intermediate	20	15	Yes		Remove	No
548	Douglas-fir	30	Good	Dominant	25	25	Yes	Heritage	Remove	No
549	Maple	15,14	Fair	Co-dominant	25	20	Yes		Remove	No
550	Douglas-fir	8	Fair	Suppressed	10	10	Yes		Remove	No
551	Maple	28	Fair	Dominant	35	25	Yes	Heritage	Remove	No
553	Cedar	17	Fair	Intermediate	12	15	Yes		Remove	No
554	Maple	13	Fair	Intermediate	20	15	Yes		Remove	No
555	Douglas-fir	28	Fair	Co-dominant	20	22	Yes	Heritage	Remove	No
556	Douglas-fir	24	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
557	Douglas-fir	26	Fair	Co-dominant	16	20	Yes	Heritage	Remove	No
558	Douglas-fir	20	Fair	Co-dominant	15	15	Yes		Remove	No
559	Douglas-fir	25	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
560	Douglas-fir	24	Good	Co-dominant	20	20	Yes	Heritage	Remove	No
561	Douglas-fir	16	Fair	Co-dominant	15	15	Yes		Remove	No
562	Douglas-fir	12	Fair	Intermediate	10	10	Yes		Remove	No
563	Douglas-fir	10	Fair	Intermediate	8	8	Yes		Remove	No
564	Douglas-fir	24	Good	Co-dominant	20	20	Yes	Heritage	Remove	No
565	Douglas-fir	22	Fair	Co-dominant	15	18	Yes	Heritage	Remove	No
566	Douglas-fir	25	Fair	Co-dominant	20	20	Yes	Heritage	Remove	No
567	Maple	13	Poor	Suppressed			No		Remove	No
568	Douglas-fir	9	Poor	Suppressed			No		Remove	No

Attachment #4: Individual Tree Rating Key for Tree Condition

RATING	SYMBOL	DEFINITION
Very Good	VG	<ul style="list-style-type: none"> • Balanced crown that is characteristic of the species • Normal lateral and terminal branch growth rates for the species and soil type • Stem sound, normal bark vigor • No root problems • No insect or disease problems • Long-term, attractive tree
Good	G	<ul style="list-style-type: none"> • Crown lacking symmetry but nearly balanced • Normal lateral and terminal branch growth rates for the species and soil type • Minor twig dieback O.K. • Stem sound, normal bark vigor • No root problems • No or minor insect or disease problems – insignificant • Long-term tree
Fair	F	<ul style="list-style-type: none"> • Crown lacking symmetry due to branch loss • Slow lateral and terminal branch growth rates for the species and soil type • Minor and major twig dieback – starting to decline • Stem partly unsound, slow diameter growth and low bark vigor • Minor root problems • Minor insect or disease problems • Short-term tree 10-30 years
Poor	P	<ul style="list-style-type: none"> • Major branch loss – unsymmetrical crown • Greatly reduced growth • Several structurally important dead or branch scaffold branches • Stem has bark loss and significant decay with poor bark vigor • Root damage • Insect or disease problems – remedy required • Short-term tree 1-10 years
Very Poor	VP	<ul style="list-style-type: none"> • Lacking adequate live crown for survival and growth • Severe decline • Minor and major twig dieback • Stem unsound, bark sloughing, previous stem or large branch failures, very poor bark vigor • Severe root problems or disease • No or minor insect or disease problems • Mortality expected within the next few years
Dead	DEAD	<ul style="list-style-type: none"> • Dead

Cultural Care Needs:

ABBRV.	ACTIVITY	DESCRIPTION
CC	Crown Cleaning	Pruning of dead, dying, diseased, damaged, or defective branches over 1/2 inch in diameter –includes removal of dead tops
CT	Crown Thinning	Pruning of branches described in crown cleaning, plus thinning of up to 20% of the live branches over 1/2 inch diameter. Branch should be 1/3 to 1/2 the diameter of the lateral branch. Thinning should be well distributed throughout crown of tree, and should release healthy, long-term branches.
RC	Crown Reduction	Reduction of the crown of a tree by pruning to lateral branches. Generally used to remove declining branches or to lighten end weight on long branches.
CR	Crown Raising	Pruning of lower branches to remove deadwood or to provide ground or building clearances.
RMV	Remove	Remove tree due to decline or hazardous conditions that cannot be mitigated by pruning.
RS	Remove Sprouts	Remove basal sprouts from stem of tree.
Rep	Replace	Tree is small – is in decline or dead. Replace with suitable tree species.
HT	Hazard Tree	Tree is hazardous and cannot be mitigated by pruning. Recommendation is to remove tree.
None	No Work	No work necessary at this time.

Attachment #5: Description of Tree Evaluation Methodology

The evaluation of the tree condition on this site included the visual assessment of:

1. Live-crown ratio,
2. Lateral and terminal branch growth rates,
3. Presence of dieback in minor and major scaffold branches and twigs,
4. Foliage color,
5. Stem soundness and other structural defects,
6. Visual root collar examination,
7. Presence of insect or disease problems.
8. Windfirmness if tree removal will expose this tree to failure.

In cases where signs of internal defect or disease were suspected, a core sample was taken to look for stain, decay, and diameter growth rates. Also, root collars were exposed to look for the presence of root disease.

In all cases, the overall appearance of the tree was considered relative to its ability to add value to either an individual lot or the entire subdivision. Also, the scale of the tree and its proximity to both proposed and existing houses was considered.

Lastly, the potential for incorporation into the project design is evaluated, as well as potential site plan modifications that may allow otherwise removed tree(s) to be both saved and protected in the development.

Trees that are preserved in a development must be carefully selected to make sure that they can survive construction impacts, adapt to a new environment, and perform well in the landscape. Healthy, vigorous trees are better able to tolerate impacts such as root injury, changes in soils moisture regimes, and soil compaction than are low vigor trees.

Structural characteristics are also important in assessing suitability. Trees with significant decay and other structural defects that cannot be treated are likely to fail. Such trees should not be preserved in areas where damage to people or property could occur.

Trees that have developed in a forest stand are adapted to the close, dense conditions found in such stands. When surrounding trees are removed during clearing and grading, the remaining trees are exposed to extremes in wind, temperature, solar radiation, which causes sunscald, and other influences. Young, vigorous trees with well-developed crowns are best able to adapt to these changing site conditions.

Attachment #6: Glossary of Forestry and Arboricultural Terminology

DBH: Diameter at Breast Height (measured 4.5 ft. above the ground line on the high side of the tree).

Caliper: Caliper is referring to diameter measurement at DBH.

Live Crown Ratio: Ratio of live foliage on the stem of the tree. Example: A 100' tall tree with 40 feet of live crown would have a 40% live crown ratio. Conifers with less than 30% live crown ratio are generally not considered to be long-term trees in forestry.

Crown: Portion of a trees stem covered by live foliage.

Crown Position: Position of the crown with respect to other trees in the stand.

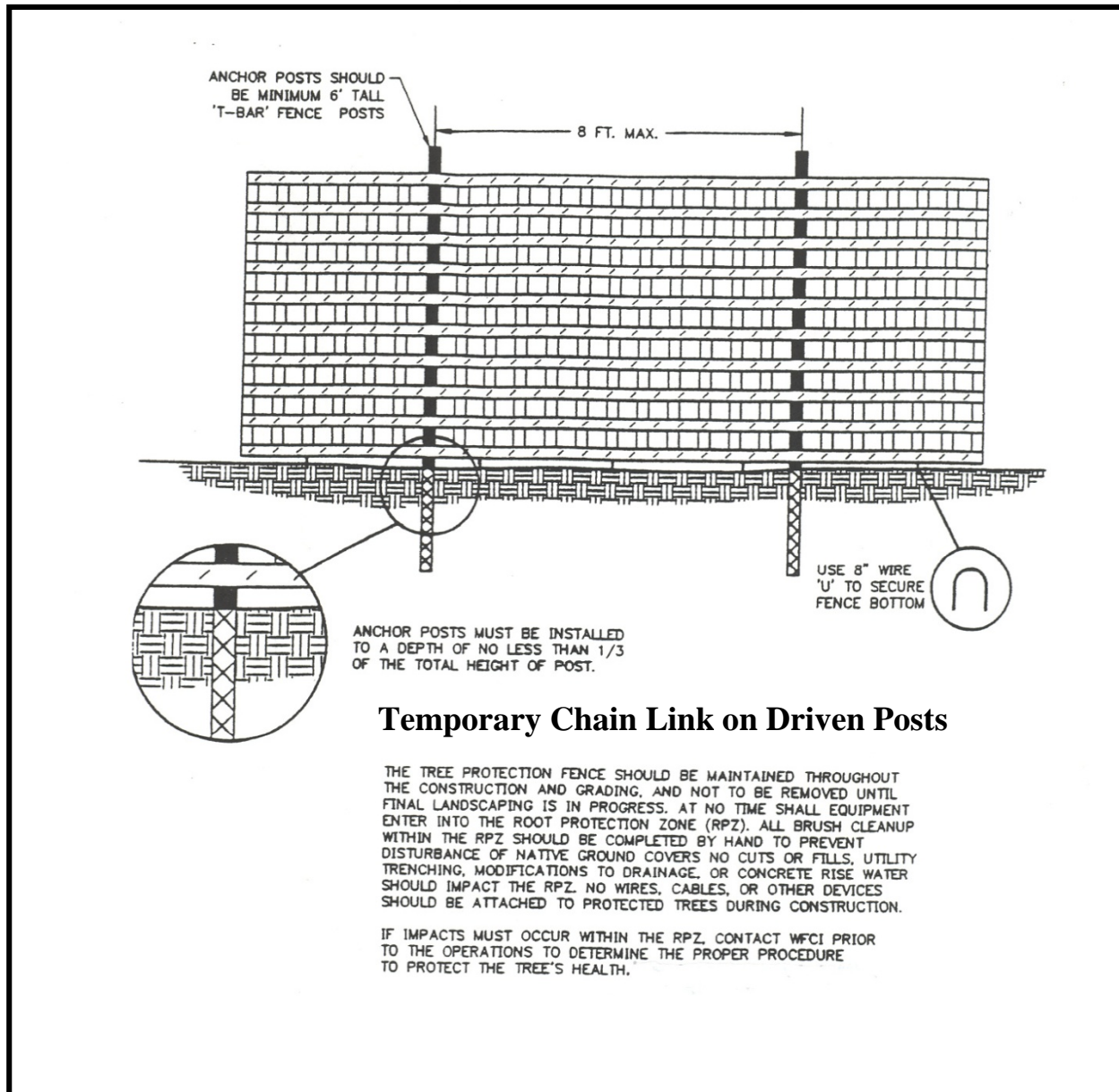
Dominant Crown Position: Receives light from above and from the sides.

Codominant Crown Position: Receives light from above and some from the sides.

Intermediate Crown Position: Receives little light from above and none from the sides. Trees tend to be slender with poor live crown ratios.

Suppressed Crown Position: Receives no light from above and none from the sides. Trees tend to be slender with poor live crown ratios.

Attachment #7: Tree Protection Fence Detail



Attachment #8: Assumptions and Limiting Conditions

- 1) Any legal description provided to the Washington Forestry Consultants, Inc. is assumed to be correct. Any titles and ownership's 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 though free and clear, under responsible ownership and competent management.
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- 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 no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree or other plant or property in question may not arise in the future.

Note: Even healthy trees can fail under normal or storm conditions. The only way to eliminate all risk is to remove all trees within reach of all targets. Annual monitoring by an ISA Certified Arborist or Certified Forester will reduce the potential of tree failures. It is impossible to predict with certainty that a tree will stand or fail, or the timing of the failure. It is considered an 'Act of God' when a tree fails, unless it is directly felled or pushed over by man's actions.