

Certified Arborist Consultations, LLC



Jerry Hofer

ISA Certified Arborist®

PN 7901A

Tree Risk Assessment

RE: Hidden Ridge Estate
4601 Ingle Road
Camas, WA 98682

March 20, 2020

I am an ISA Certified Arborist. In addition I had a 34 year career with the US Forest Service working in timber sales and natural resource management and started and ran a Landscape construction and maintenance company for 18 years.

I was contacted by Engineering Northwest to assist in the tree survey for the development of approximately 7.88 acres into 14 building lots. The area consists of tree stands of mostly big leaf maple (=/- 442 trees) and 30 Douglas-fir trees. There are a few small (8-12") birch and alder trees in the understory. The land slopes to the southwest, being flatter adjacent to Ingle Road, and becoming steeper toward the northeast along the BPA powerline right of way (see topo map). The primary reason for removing trees is for grading, roads, homesites, and utilities.

I individually tagged, measured, verified the location on the map, and painted a white stripe on each of the Douglas-fir trees as these are the healthiest and desirable trees to keep. The size of the Douglas-fir range from 12"-43" with the average being about 22". Preliminary plans indicate that only 5 of the existing 30 Douglas-fir will need to be removed for grading and home sites. This will remove 19 Doug-fir tree units with 85 Doug-fir tree units remaining.

Few of the maples were measured and none were tagged, and the most diameters estimated at 8"+. The diameters range from 8" to 24", with a few larger trees scattered across the property. Many of the maples are touching or growing very close to each other at the base. This is probably from seeds germinating at nearly the same year and

consequently growing together. Often times there are 3-5 trees growing in a clump so you could not just remove one or two of the trees without subjecting those remaining to disease and increased likelihood of windthrow.

There are many maple trees that have decay visible. Also there are many with broken limbs or tops. As a result, the general condition of the big leaf maple trees is estimated to be: ¼ good, ¼ fair, ¼ poor and ¼ hazardous when the road is put in and homes are built. It is not possible to identify all the hazard trees until we know where the exact home and other improvements are located.

My recommendation is to retain 60 of the best big leaf maples scattered in the areas not impacted by grading, homesites, roads and utilities as shown on the tree inventory map. This will be done before final construction plans are submitted. Based on an average diameter of 15", this will leave about 240 maple tree units. The best maples would be identified, # tagged, and painted after the lots were identified on the ground. These estimated tree units coupled with the 85 Doug-fir tree units would leave 325 total tree units well above the 158 required tree units required for the project..

I recommend revisiting the site to validate the tree numbers and locations before the final construction plans is submitted. At this time the trees to be left would be tagged, numbered and marked.

/s/ Jerry L. Hofer

Jerry L. Hofer
CERTIFIED ARBORIST PN-7901A

ATTACHMENT A
LIST OF EXISTING TREES

Exhibit 20

Tree #	Tree Type	Dia	Keep/Remove
1	Maple	8	Keep
2	Maple	9	Keep
3	Maple	8	Keep
4	Maple	12	Keep
5	Maple	8	Keep
6	Maple	8	Keep
7	Maple	8	Keep
8	Maple	8	Keep
9	Maple	10	Keep
10	Maple	6	Keep
11	Maple	8	Keep
12	Maple	6	Keep
13	Maple	8	Keep
14	Maple	8	Keep
15	Maple	8	Keep
16	Maple	8	Keep
17	Maple	8	Keep
18	Maple	8	Keep
19	Maple	12	Keep
20	Maple	8	Keep
21	Maple	8	Keep
22	Doug	23	Keep
23	Maple	6	Keep
24	Maple	12	Keep
25	Maple	8	Keep
26	Doug	17	Keep
27	Doug	28	Keep
28	Doug	28	Keep
29	Doug	23	Keep
30	Maple	8	Keep
31	Doug	16	Keep
32	Doug	20	Keep
33	Maple	8	Keep
34	Maple	8	Keep
35	Maple	8	Keep
36	Maple	8	Keep
37	Doug	17	Keep
38	Maple	18	Keep
38a	Maple	18	Keep
38b	Maple	18	Keep
39	Maple	8	Keep
40	Doug	30	Keep
41	Maple	8	Remove
42	Maple	8	Keep

Exhibit 20

43	Doug	18	Keep
44	Doug	15	Keep
44A	Doug	20	Remove
44B	Doug	31	Keep
44C	Doug	33	Keep
45	Doug	18	Keep
46	Doug	20	Keep
47	Doug	18	Keep
48	Maple	6	Keep
49	Maple	8	Keep
50	Maple	8	Remove
51	Doug	20	Remove
52	Maple	8	Remove
53	Maple	8	Remove
54	Maple	8	Remove
55	Maple	8	Remove
56	Maple	8	Remove
57	Maple	10	Keep
58	Maple	10	Keep
59	Doug	21	Keep
60	Doug	26	Keep
61	Maple	8	Keep
62	Doug	32	Keep
63	Maple	8	Keep
64	Maple	8	Keep
65	Maple	8	Keep
66	Maple	8	Keep
67	Maple	8	Keep
68	Maple	10	Remove
69	Maple	8	Remove
70	Maple	8	Keep
71	Maple	10	Keep
72	Maple	8	Remove
73	Maple	8	Remove
74	Doug	16	Remove
75	Maple	8	Remove
76	Maple	8	Remove
77	Maple	8	Remove
78	Maple	8	Remove
79	Maple	8	Remove
80	Maple	8	Remove
81	Maple	8	Remove
82	Maple	8	Remove
83	Maple	8	Remove
84	Maple	8	Remove
85	Maple	8	Remove
86	Maple	8	Keep

87	Maple	10	Keep
88	Maple	8	Keep
89	Doug	24	Keep
90	Maple	6	Keep
91	Maple	8	Remove
92	Maple	8	Remove
93	Maple	8	Remove
94	Maple	8	Remove
95	Maple	8	Remove
96	Maple	8	Remove
97	Maple	8	Remove
98	Maple	8	Remove
99	Maple	8	Remove
100	Maple	8	Remove
101	Maple	8	Remove
102	Maple	8	Remove
103	Maple	8	Remove
104	Maple	8	Remove
105	Maple	8	Keep
106	Maple	8	Remove
107	Maple	8	Remove
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109	Maple	8	Remove
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112	Maple	8	Remove
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128	Maple	8	Remove
129	Maple	8	Remove
130	Maple	8	Remove
131	Maple	8	Remove
132	Maple	8	Remove
133	Maple	8	Remove

Exhibit 20

134	Maple	8	Remove
135	Maple	8	Remove
136	Maple	8	Remove
137	Maple	8	Remove
138	Maple	8	Remove
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150	Maple	8	Remove
151	Maple	8	Remove
152	Maple	8	Keep
153	Maple	10	Keep
154	Maple	6	Keep
155	Maple	8	Keep
156	Maple	8	Keep
157	Maple	8	Keep
158	Maple	12	Keep
159	Maple	8	Keep
160	Maple	8	Remove
161	Maple	8	Remove
162	Maple	8	Remove
163	Maple	8	Keep
163a	Doug	43	Remove
164	Maple	8	Remove
165	Maple	8	Remove
165a	Alder	12	Remove
166	Maple	8	Remove
167	Maple	8	Remove
168	Maple	8	Remove
169	Maple	8	Remove
170	Maple	8	Remove
171	Maple	8	Remove
172	Maple	8	Remove
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174	Maple	8	Remove
175	Maple	8	Remove
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178	Maple	8	Remove

Exhibit 20

179	Maple	8	Remove
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219	Maple	10	Keep
220	Maple	8	Keep
221	Maple	6	Keep
222	Maple	8	Remove
223	Maple	6	Keep
224	Maple	8	Remove
225	Maple	8	Remove

Exhibit 20

226	Maple	8	Remove
227	Maple	6	Keep
228	Maple	12	Keep
229	Maple	10	Keep
230	Maple	8	Remove
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Exhibit 20

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364	Maple	8	Remove
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366	Maple	10	Keep

Exhibit 20

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405b	Doug	11	Remove
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Exhibit 20

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418	Maple	8	Remove
419	Maple	8	Keep
420	Doug	20	Remove
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422	Maple	10	Keep
423	Maple	8	Remove
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430	Maple	6	Keep
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433	Maple	8	Remove
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435	Maple	8	Remove
436	Doug	18	Keep
437	Maple	8	Remove
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439			
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441	Maple	8	Remove
442	Doug	18	Remove
442b	Doug	26	Keep
443	Maple	8	Remove
444	Maple	8	Remove
445	Maple	8	Remove
446	Maple	8	Remove
447	Maple	8	Remove
448	Maple	8	Remove
448b	Doug	26	Remove
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455	Maple	8	Remove
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457	Maple	8	Remove

Exhibit 20

458	Maple	8	Remove
459	Maple	8	Remove
460	Maple	6	Keep
461	Maple	8	Remove
462	Maple	8	Remove
463	Maple	10	Keep
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465	Maple	8	Remove
466	Maple	8	Remove
467	Maple	8	Remove
468	Maple	8	Remove
469	Maple	8	Remove
470	Maple	6	Keep
471	Maple	6	Keep
472	Alder	12	Remove
473	Alder	12	Remove

**ATTACHMENT B
EXISTING TREE PLAN**

N01°53'59"E 45.50'

S89° 22' 57.00"E
362.751'

TRACT F
28,552 SF

ROW
43,465 SF

TRACT E
9,339 SF

LOT 14
14,400 SF

TRACT D
26,729 SF

LOT 1
14,106 SF

LOT 2
11,628 SF

LOT 3
14,400 SF

LOT 4
13,550 SF

LOT 5
13,550 SF

LOT 12
13,550 SF

NE INGLE RD

SEE SHEET C151

SEE SHEET C151

HIDDEN RIDGE ESTATES

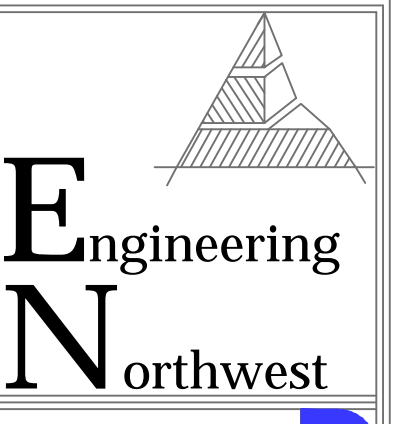
EXISTING TREES

SYMBOL	BOTANICAL/COMMON NAME
	Acer Macrophyllum/Big Leaf Maple
	Pseudotsuga/Douglas Fir

NOTES

SYMBOL	DESCRIPTION
	EXISTING TREES RETAINED
	EXISTING TREE REMOVED
	TREE PROTECTION ZONE (MINIMUM SHOWN)

NOTE: PROPERTY BOUNDARY, RIGHT OF WAY, EASEMENTS, ETC. OUTSIDE PROJECT BOUNDARY ARE SHOWN APPROXIMATE PER GIS INFORMATION.



PRELIMINARY TREE SURVEY
HIDDEN RIDGE ESTATES
Consulting Engineers & Planners | 7504 NW 10th Avenue, Vancouver, WA 98665 | PH (360) 931-3122
A Site in Clark County, Washington

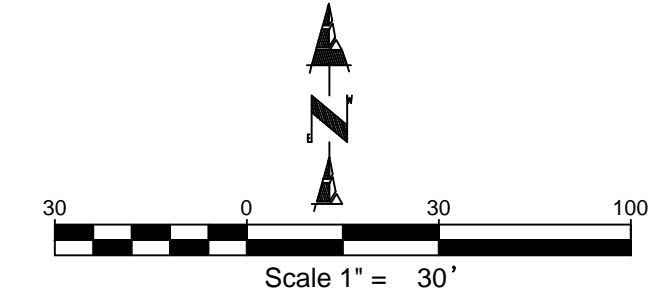
CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
NORTHWEST UTILITIES NOTIFICATION CENTER

REVISIONS:



PROJECT NO: 2018005SD
DESIGNED BY: PCW
DRAWN BY: NVS
DATE: 12/10/2019

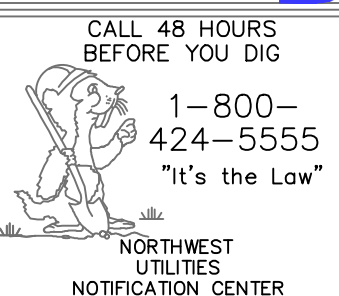
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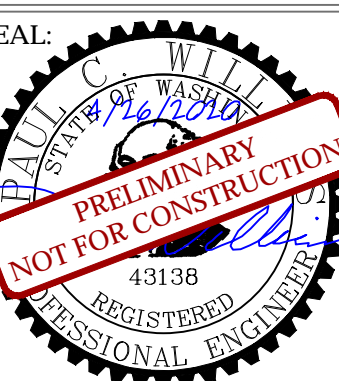
LEGEND

- CENTERLINE
- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED LOT LINE
- EASEMENT LINE
- BUILDING SETBACK LINE

20' TRACT "C" FOR ACCESS TO LOT 3 & UTILITIES TO NE INGLE RD
4,493 SF



REVISIONS:



PROJECT NO: 2018005SD
DESIGNED BY: PCW
DRAWN BY: NVS
DATE: 12/10/2019

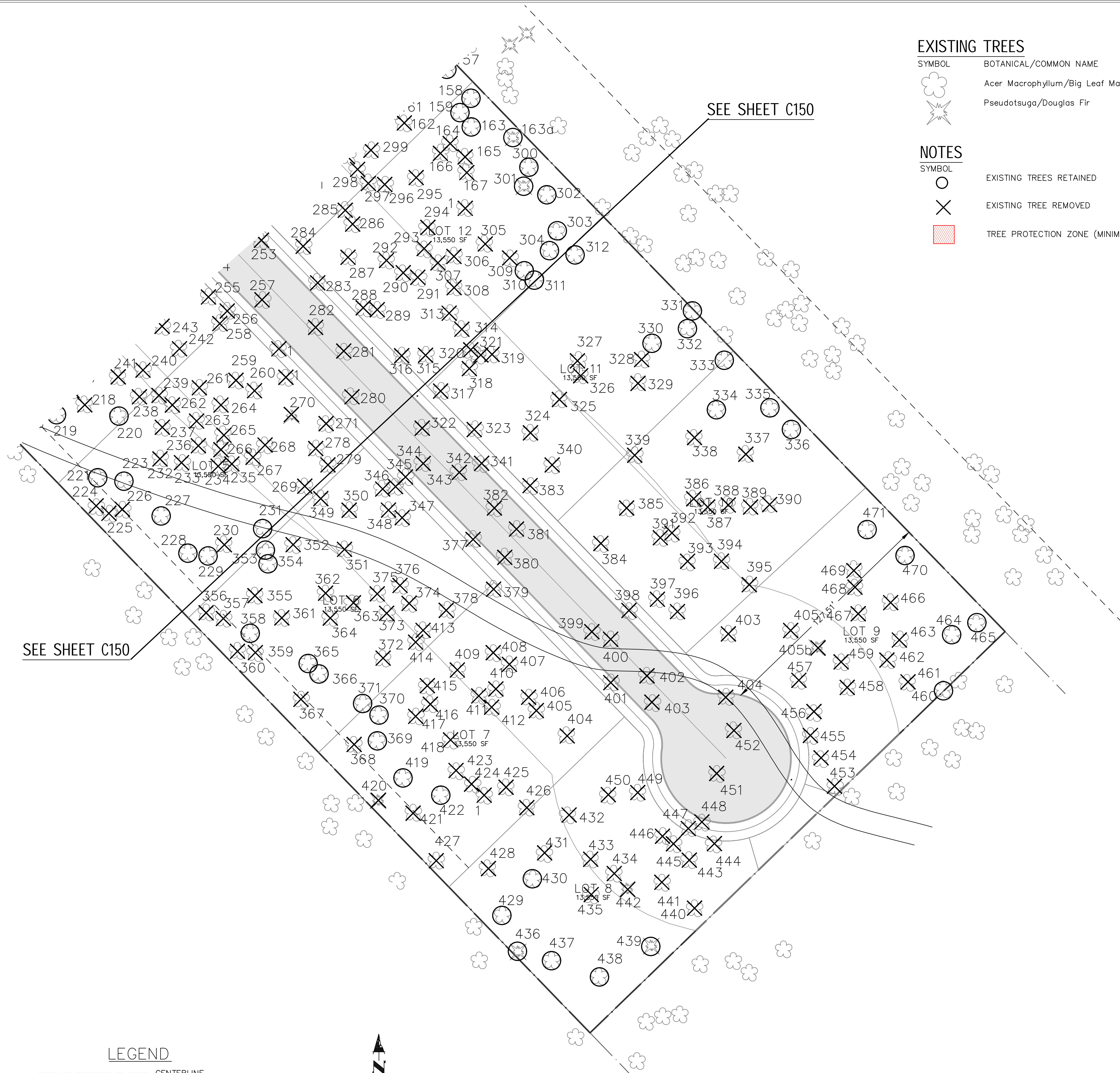
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C151

EXISTING TREES

SYMBOL	BOTANICAL/Common Name
	Acer Macrophyllum/Big Leaf Maple
	Pseudotsuga/Douglas Fir

NOTES

SYMBOL	NOTES
	EXISTING TREES RETAINED
	EXISTING TREE REMOVED
	TREE PROTECTION ZONE (MINIMUM SHOWN)

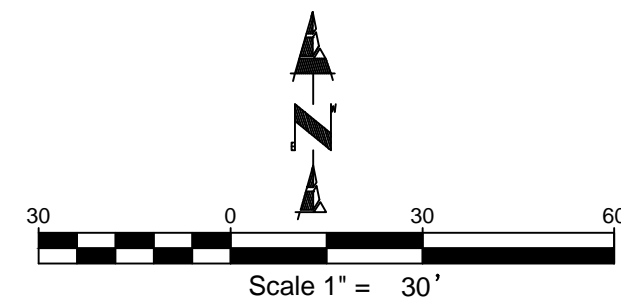


SEE SHEET C150

SEE SHEET C150

LEGEND

- CENTERLINE
- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED LOT LINE
- EASEMENT LINE
- BUILDING SETBACK LINE



HIDDEN RIDGE ESTATES