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Michael Bowerman

Certified Arborist PN-8381A

541-233-8712

Arborist Report and Tree Preservation Plan

Highway 217 and NW Allen Boulevard

May 14th, 2020

Purpose

This arborist report, tree preservation and removal plan for the undeveloped property on highway 217 and northwest Allen Blvd is provided pursuant to the city of Beaverton for mitigation purposes found in chapter (60.60) of city code. This report describes that existing trees located on the project site, as well as recommendations for tree removal and retention. This report is based on observations made by international society of arboriculture certified arborist during site visits on February 11th- 12th, March 6th-7th, May 2nd- 3rd and July 15th of 2019, also, a site visit was made on January 20th of 2020.

Scope of Work and Limitations

The arborist was under work contract for Howard Deitrich to collect tree inventory data for individual trees measuring 10 inches or larger in diameter and to develop an arborist report and tree preservation plan for the project. The site is planned for commercial development. A survey plan was provided illustrating the location of existing trees and natural resource areas. Visual tree assessment was performed on individual trees located across the site and tree inventory data and site plan demonstrate that old trees on the site were inspected at close range. The site inspection consisted of looking for defect symptoms and evaluating overall condition and vitality of individual trees. Trees were evaluated in terms of general condition, size, height and species. A graph provided in this report shows the species, diameter, height, percentage of species type, and general health condition.

Location

The site is located off highway 217 and northwest Allen Boulevard located in the northeast one quarter of section 22, Township 01 South, range 01 West of Willamette Meridian in the city of Beaverton, Washington County, Oregon.

Tree Inventory

In all, 108 existing trees were inventoried that were greater than 10 inches in diameter. The inventoried trees consist of 3 significant trees, community trees, and numerous landscape trees from a previous development and are classified under the city of Beaverton's tree removal categories. The trees inventoried

include 14 different specie types. All trees have been tagged on site to cross reference by numbers (1-49). Table 1 provides a summary of the number of onsite trees by species. Trees numbering (50-80) are located within the protected wetlands and are recorded to establish the total DBH measurement for all existing trees over 10” DBH on the lot. Trees numbering (80-108) are located on the wetland easement and adjacent HWY 217 to the west.

Table 1

Common Name	Species Name	#	DBH	HT	%	Condition
Ponderosa Pine	Pinus ponderosa	1	43”	85’	1%	Good
Sunset Maple	Acer rubrum	2	10”	35’	20%	Good
Sunset Maple	Acer rubrum	3	19”	35’	20%	Good
Sunset Maple	Acer rubrum	4	14”	35’	20%	Good
Sunset Maple	Acer rubrum	5	13”	30’	20%	Good
Sunset Maple	Acer rubrum	6	13”	25’	20%	Good
Sunset Maple	Acer rubrum	7	12”	30’	20%	Good
Sunset Maple	Acer rubrum	8	18”	30’	20%	Hazard
Sunset Maple	Acer rubrum	9	11”	25’	20%	Good
Sunset Maple	Acer rubrum	10	12”	30’	20%	Good
Sunset Maple	Acer rubrum	11	12”	25’	20%	Good
Sunset Maple	Acer rubrum	12	12”	25’	20%	Good

Douglas Fir	Pseudotsuga menziesii	13	13"	35'	9%	Good
Douglas Fir	Pseudotsuga menziesii	14	12"	35'	9%	Poor
Douglas Fir	Pseudotsuga menziesii	15	14"	35'	9%	Good
Douglas Fir	Pseudotsuga menziesii	15	14"	35'	9%	Good

Sweetgum Maple	Liquidamber styraciflua	17	20"	45'	3%	Good
Douglas Fir	Pseudotsuga menziesii	18	14"	35'	9%	Good
Douglas Fir	Pseudotsuga menziesii	19	13"	30'	9%	Good
Douglas Fir	Pseudotsuga menziesii	20	18"	45'	9%	Good
Douglas Fir	Pseudotsuga menziesii	21	14"	45'	9%	Good
Sunset Maple	Acer rubrum	22	10"	30'	20%	Good
Sweetgum Maple	Liquidamber styraciflua	23	24"	45'	3%	Good
Sweetgum Maple	Liquidamber styraciflua	24	24"	45'	3%	Good
Sunset Maple	Acer rubrum	25	11"	20'	20%	Good
Sunset Maple	Acer rubrum	26	13"	35'	20%	Good
Sunset Maple	Acer rubrum	27	13"	35'	20%	Good
Flowering Plum	Prunus cerasifera	28	13"	20'	1%	Good
Shore Pine	Pinus contorta	29	12"	20'	9%	Good
Red Oak	Quercus rubra	30	16"	30'	1%	Poor, hazard
Oregon White Oak	Quercus garryana	31	51"	50'	1%	Good
Norway Maple X	Acer platanoides	32	16"	25'	9%	Good
Norway Maple X	Acer platanoides	33	13"	25'	9%	Good

Norway Maple X	Acer platanoides	34	12"	25'	9%	Good
Norway Maple X	Acer platanoides	35	10"	25'	9%	Good
Norway Maple X	Acer platanoides	36	11"	25'	9%	Good
Norway Maple X	Acer platanoides	37	12"	25'	9%	Good
Norway Maple X	Acer platanoides	38	11"	25'	9%	Good
Norway Maple X	Acer platanoides	39	13"	25'	9%	Good
Norway Maple X	Acer platanoides	40	12"	25'	9%	Good

Sunset Maple	Acer rubrum	41	19"	35'	20%	Good
Sunset Maple	Acer rubrum	42	18"	35'	20%	Good
Sunset Maple	Acer rubrum	43	18"	35'	20%	Good
Sunset Maple	Acer rubrum	44	23"	35'	20%	Poor, Fungi
Sunset Maple	Acer rubrum	45	17"	35'	20%	Good
American Sycamore	Platanus occidentalis	46	20"	45'	2%	Good
Shore Pine	Pinus contorta	47	13"	35'	20%	Good
Shore Pine	Pinus contorta	48	15"	25'	20%	Good
Shore Pine	Pinus contorta	49	23"	25'	20%	Good
Douglas Fir	Pseudotsuga menziesii	50	49"	35'	9%	Good, Topped
Bitter Cherry	Prunus emarginata	51	12"	20'	1%	Good, Topped
Oregon White Ash	Fraxinus latifolia	52	15"	40'	13%	Good

Oregon White Ash	Fraxinus latifolia	53	30"	50'	13%	Moderate, anthracnose
White Alder	Alnus rhombifolia	54	10"	25'	7%	Good
English Hawthorne	Crataegus monogyna	55	52"	40'	4%	Good, Multi stemmed
Oregon White Ash	Fraxinus latifolia	56	46"	50'	13%	Good
Oregon White Ash	Fraxinus latifolia	57	24"	25'	13%	Good
Oregon White Ash	Fraxinus latifolia	58	24"	40'	13%	Good
English Hawthorne	Crataegus monogyna	59	12"	25'	4%	Good
English Hawthorne	Crataegus monogyna	60	12"	25'	4%	Good

Oregon White Ash	Fraxinus latifolia	61	11"	30'	13%	Good
White Alder	Alnus rhombifolia	62	12"	30'	7%	Good
Sweetgum Maple	Liquidamber styraciflua	63	23"	50'	3%	Good
Oregon White Ash	Fraxinus latifolia	64	20"	45'	13%	Good
Black Birch	Betula nigra	65	22"	50'	7%	Good
Black Birch	Betula nigra	66	24"	50'	7%	Good
Black Birch	Betula nigra	67	21"	50'	7%	Good
Oregon White Ash	Fraxinus latifolia	68	12"	25'	13%	Good
White Alder	Alnus rhombifolia	69	11"	25'	7%	Good
White Alder	Alnus rhombifolia	70	31"	45'	7%	Good, Multi stemmed

English Hawthorne	Crataegus monogyna	71	15"	25'	4%	Good
English Hawthorne	Crataegus monogyna	72	12"	25'	4%	Good
Oregon White Ash	Fraxinus latifolia	73	24"	45'	13%	Good
White Alder	Alnus rhombifolia	74	18"	50'	7%	Good
White Alder	Alnus rhombifolia	75	13"	45'	7%	Good
White Alder	Alnus rhombifolia	76	15"	45'	7%	Good
Oregon White Ash	Fraxinus latifolia	77	28"	50'	13%	Good
Oregon White Ash	Fraxinus latifolia	78	39"	60'	13%	Good
Oregon White Ash	Fraxinus latifolia	79	21"	45'	13%	Good
Oregon White Ash	Fraxinus latifolia	80	19"	45'	13%	Good
Black Birch	Betula nigra	81	16"	45'	7%	Good
Black Birch	Betula nigra	82	20"	50'	7%	Good
Oregon White Ash	Fraxinus latifolia	83	17"	45'	13%	Good

Black Birch	Betula nigra	84	18"	40'	7%	Good
Black Birch	Betula nigra	85	21"	45'	7%	Good
Black Birch	Betula nigra	86	20"	45'	7%	Good
Shore Pine	Pinus contorta	87	18"	40'	20%	Good
Shore Pine	Pinus contorta	88	20"	40'	20%	Good
Shore Pine	Pinus contorta	89	12"	40'	20%	Good
Shore Pine	Pinus contorta	90	14"	40'	20%	Good

Shore Pine	Pinus contorta	91	18"	40'	20%	Good
Shore Pine	Pinus contorta	92	18"	40'	20%	Good
Shore Pine	Pinus contorta	93	18"	40'	20%	Good
Shore Pine	Pinus contorta	94	16"	40'	20%	Good
Shore Pine	Pinus contorta	95	26"	40'	20%	Good
Shore Pine	Pinus contorta	96	21"	40'	20%	Good
Shore Pine	Pinus contorta	97	17"	40'	20%	Good
Shore Pine	Pinus contorta	98	25"	40'	20%	Good
Shore Pine	Pinus contorta	99	17"	40'	20%	Good
Shore Pine	Pinus contorta	100	18"	40'	20%	Good
Shore Pine	Pinus contorta	101	26"	40'	20%	Good
Shore Pine	Pinus contorta	102	15"	50'	20%	
American Sycamore	Platanus occidentalis	103	24"	50'	2%	Good
Shore Pine	Pinus contorta	104	22"	40'	20%	Good
Shore Pine	Pinus contorta	105	22"	40'	20%	Good
Shore Pine	Pinus contorta	106	15"	40'	20%	Good
Shore Pine	Pinus contorta	107	23"	40'	20%	Good
Shore Pine	Pinus contorta	108	16"	40'	20%	Good

Tree Preservation Plan

Of the 66 trees inside the construction area (#1-49, 85-98, 103 and 105-108) 47 are recommended for removal either for construction or because of poor health and hazardous conditions. The other 20 trees that will be preserved within the construction area and a total of 62 trees retained onsite. One significant tree, (#31) a mature Oregon white oak *Quercus garryana* would be suitable for preservation because of its size and distinctiveness. I would recommend that a TPZ (Tree Protection Zone) be established at the dripline (90') total diameter, (45) from center of trunk on west, north and east side before construction begins to ensure that its root zone is safeguarded from possible injury. An end weight reduction prune will be completed (per ISA and ANSI A300 standards) on the west side of the canopy to ensure lower branches will safeguarded from demolition of existing asphalt and curbs. This would include protective fencing, posted signage, and an agreement of terms for its protection with additional contractors performing work at the site until job completion. If excavation within the TPZ is unavoidable then an on-site inspection of the proposed work should be done by a certified arborist to ensure a minimized impact of the tree. Trees #46 and #47 will be retained during Phase 1: Grading Only of the project. Tree #46 (American Sycamore) will be preserved as it stands next to the southern pedestrian walking path that borders the watershed. The tree requires a 45' dripline TPZ to maintain a healthy root system. Tree #47 (Shore Pine) will be preserved and requires an 18' dripline TPZ although trees #46 and #47 will share a common TPZ from north to south as the two trees are growing very close together. During Phase 2 of the project, to commence after a Type III Design Review and Type II Tree Plan Removal, trees #46 and #47 will be removed.

The street trees along Allen BLVD are within the 20' easement setback required for future city road improvements and will need to be removed for road improvements. All trees south of the designated bike path within the natural resource area have been documented to establish a record and a total DBH (trees greater than 10" diameter and include #50 through #80) to be included in the tree preservation report. Trees #81 through #104 are located on the southwest side of the lot development and border the wetlands and lot line adjacent to HWY 217. These trees will be protected by a construction fence but if any significant

structural roots are to be affected it would be considered a hazard tree by a certified arborist and will be removed.

Trees Likely to Be Retained

Trees located on the west and southwest side of the lot that reside on the adjacent property (Peppertree PARAM INC) will need to be carefully monitored during grading excavation to ensure the structural health of the root systems are not compromised. On the Northeast side of the property line near the entrance of Beaverton School District 48 bus station are 2 mature red oak trees. These two trees will also need to be monitored during grading activities to ensure structural root health. Adjacent property owners will be notified and communicated with regarding the trees that border the lot lines to establish an understanding of our plan to monitor the trees and potential hazards.

Reasons for Consideration of Removals

The impact of excavation in and around the trees whether for a proposed building site and, or demolition of surrounding pavement, asphalt, and curbs would greatly harm the surrounding roots of the trees. Most of the trees in the report have old concrete parking planting beds installed which have caused buttress flair and girdling of the root systems. The Ponderosa pine (#1) that resides in the northwest corner of the lot would need to be removed because it is established inside the foundation for the hotel that is being developed.

All street trees along Allen BLVD will be removed for road improvements. It should be noted that 9 street trees are Norway Maples and these specific species are not recommended for street trees as they have an invasive and destructive root system that highly effects the integrity of concrete sidewalks, curbs and asphalt. Noted poor health conditions have been documented and are (#8) Split co-dominant posing dangerous hazard. (#14) Crown Dieback disease: Tree in decline. (#30) Tree in decline, hazardous tree. (#44) crown dieback with fungi infection. (street tree) #83 Oregon white ash failed due to fungus (Perenniporia fraxinophilu) heart rot during the course of this report.

Mitigation

All trees inventoried should be evaluated with the documents shown to establish a replacement plan through the landscape architect contractor. The landscape contractor shall provide the necessary replacement trees required under city code and presentable under established new development site planning.

Summary

The enclosed data provides an assessment of individual trees. The inventoried trees shall be shown on a site map to further assist the city department and, or city arborist for proposed removals and retention.

Please contact me for any additional questions or information my email address is MikeBowermanLLC@gmail.com

Thank you,

A handwritten signature in black ink, appearing to read 'M.B.', with a long, sweeping underline.

Michael Bowerman