



Portland Tree Consultancy

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ARBORIST REPORT **(Tualatin Development Code 33.110)**

For: Mutual Materials Site, Tualatin, Oregon

DATE April 23rd, 2019

PROPERTY ADDRESS: adjacent - 10700 SW Tualatin-Sherwood Rd, Tualatin, OR 97062

CLIENT REFERENCE: Mutual Materials Co.

PROJECT DESCRIPTION: Tree survey and assessment required by Tualatin Development Code

Introduction

This property parcel is around 5 acres in size and its ecological category can be termed 'ruderal', that is, land highly disturbed by human activity and containing no natural or semi-natural vegetation.

Aerial photos dating back to 1994 show the site as being frequently vacant or being used for material or vehicle storage. It is evident the site was largely barren of woody vegetation during the last 35-years.

Proposed improvements to this property will result in extensive grading, paving and construction with little opportunity to preserve any of the sparse existing tree cover on the site.

At the present time there is no native vegetation ground cover on the site. Ground cover consist of pasture grasses and Himalayan blackberry. Native vegetation consists solely of young, self-sown black cottonwood, a couple of self-sown multi-stem willows and a Douglas fir that has recently been removed. Adjacent vacant property to the east is overgrown with a tangle of English hawthorn trees and, to the west and north, is developed land with landscaped tree and shrub areas adjacent to the subject parcel.

A tree inventory, site inspection and tree preservation/ assessment was completed on April 18, 2019 and all trees at, above, or just below, 8-inches DBH were tagged with metal discs as required by the Tualatin Development Code. Table 2 shows the result of this inventory.

Tree Cover on site

Tree cover is confined to the periphery and less disturbed areas of the site. The majority of trees are Western cottonwoods, a pioneer species frequently found on disturbed land. All of the cottonwood trees are young or semi-mature and are within the 10 to 30-year age range. These trees are generally in fair to good condition. There are a few Sweet cherry and English hawthorn trees. These are naturalized species and are considered invasive and undesirable within the region. These trees were generally multi-stem trees and all of them were unmaintained/ managed. The two young willow trees noted are also pioneer species common on disturbed land – these have sprouted within the last 10-years. The sweet chestnut along the west fence line is unusual and appears to be self-seeded. The tree consists of four stems fused together in linear fashion. Unfortunately, this tree is growing directly on the fence line and is starting to bulge and damage the fence itself. No trees with high value as landscape specimens exist on the parcel.

Full details of the tree cover on site are shown in Figure 1 and Table 2. A summary of all the regulated trees on-site at the time of the survey is shown in Table 1.

Table 1. Summary of regulated trees on site as of 4.18.19 (Trees 8-inches DBH and over)

SPECIES	ACTION	TOTAL
Western cottonwood <i>Populus trichocarpa</i>	Remove	10
Sweet cherry <i>Prunus avium</i>	Remove	2
English hawthorn <i>Crataegus monogyna</i>	Remove	1
Scouler willow <i>Salix scouleriana</i>	Remove	2
Spanish chestnut <i>Castanea sativa</i>	Remove	1
TOTAL		16

Tree Preservation & Assessment Report

All of the regulated trees are proposed for removal. Based on a review of the proposed site plan produced for Architectural Review submittal on 4.12.19 none of the regulated trees could be reasonably preserved.

The majority of the cottonwoods and the two willows (11 regulated trees in total) are within the footprint of the stormwater basin. This area is a low point within the parcel and will be completely regraded to accommodate required stormwater volumes making preservation of trees within the basin footprint impossible.

Tree #3887 (regulated tree) is an English hawthorn that is growing on the east fence- line. This is a multi-stem tree growing intertwined within the existing property line fence. The tree is one of dozens of similar trees that have spread towards this parcel from the adjacent vacant and unmanaged land. Grading of the site in this location will make its preservation problematic and its sprawling low stem and crown will prevent removal of the existing damaged fence on the property line and the installation of the new improvements. Given its status as a non-native invasive species within the region, removal is desirable.

Trees #3883 & #3884 (regulated trees) are young Western cottonwoods growing along the south property line adjacent to railroad land. These two trees are closely spaced with shared crown space. Tree #3884 is 70-ft from the southwest corner of the parcel and is just within the footprint of the concrete storage bin area. Tree #3883 may be around 4-feet outside the storage bin footprint, but it is recommended that it also is removed. This tree will lose a significant percentage of its root system due to the adjacent excavation and, if the tree does remain viable, it is situated too close to the storage bins to prevent damaging them. The surface roots typical of this species will almost certainly result in damage to the concrete walls of the structure.

Tree #3881 (regulated tree) is a sweet chestnut tree growing along the existing west property line fence. The woody structure of the tree is somewhat problematic in terms of future stability, with four fused stems creating an asymmetric base. The tree is semi-mature and is already causing damage to the perimeter fence. Placement of the proposed storage building along this frontage will necessitate removal of this tree as the amount of root severance will render the tree unstable, and heavy limb/ branch removal will be required to allow the vertical elevation of the building.

Tree # 3880 (regulated tree) is a mature Sweet cherry with two large stems and a wide spreading crown. The location of this tree is within a few feet of the proposed asphalt surfacing of the lot and around 10-ft from the proposed north end of the storage building. Maintaining this tree in place will require removal of part of the crown of the tree on its south side, the likely severance of some large roots on the south and east side of the tree, and the loss of a significant portion of its critical root zone under the asphalt surface to the east. The combination of these factors mean that the tree is unlikely to survive in reasonable condition on the developed site. It should also be noted that the branches of this tree are resting on the roof of an off-site building, and that the Sweet cherry is a highly invasive non-native tree in this region.

Protection of Adjacent Trees

There are a number of off-site trees that may be impacted by the construction proposed for this site:

1. Adjacent to the west fence line are three planted Norway maples and some other ornamental trees with branches stretching over the property line (see area marked in Figure 1). These trees should be carefully pruned back by an ISA Certified Arborist before any construction takes place. The three Norway maples in particular should be protected from root disturbance as much as possible: the trees are only 3-ft from the existing property line fence so the soil surface within the proposed development setback should be protected to the fullest extent possible. A radius of 10-ft from the base of the trees to any ground excavation should be adequate to protect the health of these trees.
2. Adjacent to the north boundary of the parcel is a landscaped strip fronting the parking lot associated with development on that lot. The landscape strip contains a number of newly planted trees and these should be protected from construction impacts by a 6-ft tall chain link fence securely fixed into the ground at the property line. The landscape strip is also considerably lower than the area of construction so silt fencing should be placed at the property line to prevent eroded spoil from settling within the critical root zones of these young trees.

Figure 1. Existing Tree Survey

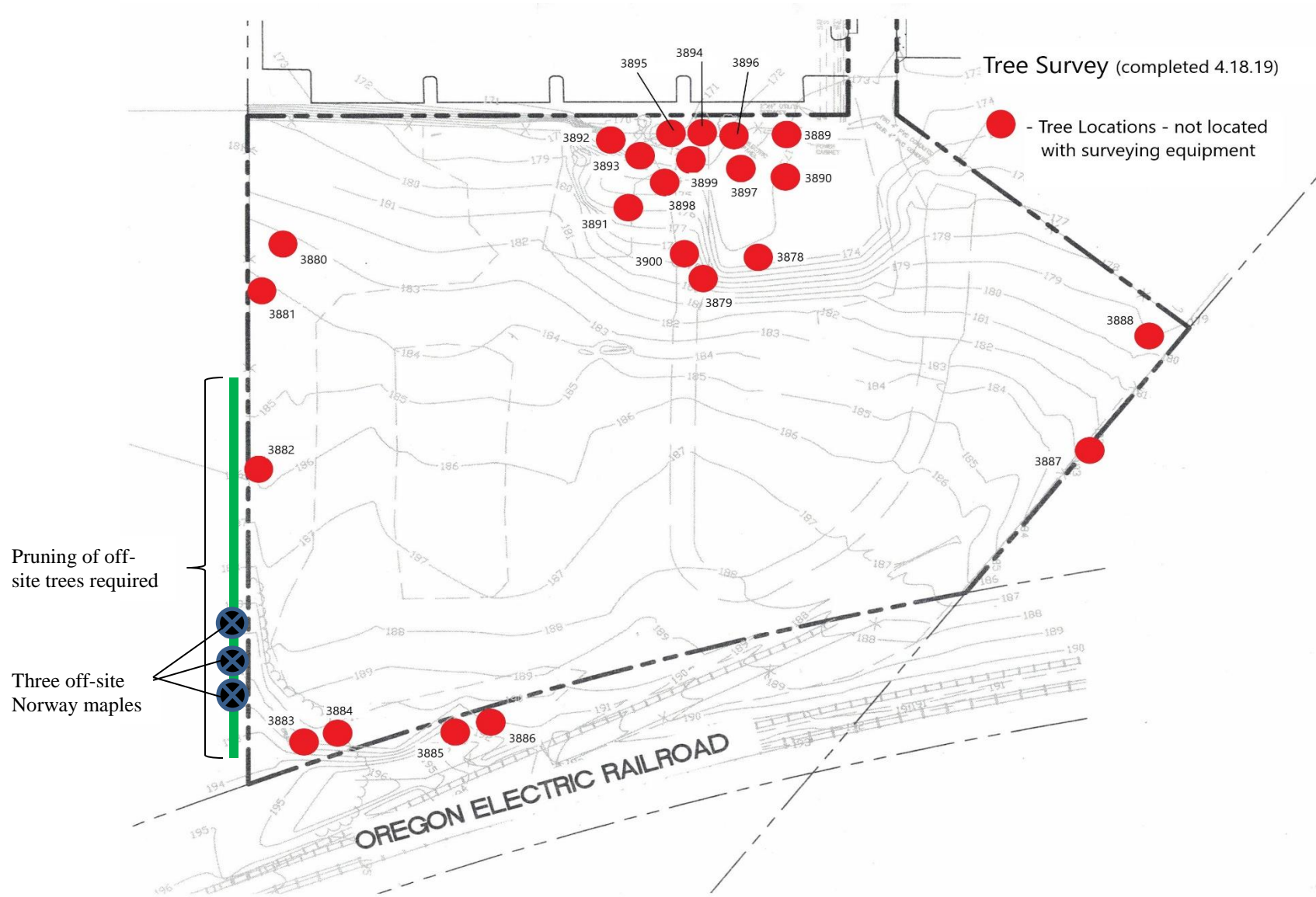


Table 2. Tree Survey of April 18th, 2019

Tag #	Tree Species	DBH	Action	Condition	Tree Condition Notes	Location Notes
3900	Douglas Fir <i>Pseudotsuga menzeisii</i>	35*	Remove	Dead	Tree recently removed. Stump remaining	*Measured at 2.5-ft
3899	Western cottonwood <i>Populus trichocarpa</i>	18*	Remove	Dead	Tree recently removed. Stump remaining	*Measured at 1.5-ft
3898	Western cottonwood <i>Populus trichocarpa</i>	14*	Remove	Dead	Tree recently removed. Stump remaining	*Measured at 1.0-ft
3897	Western cottonwood <i>Populus trichocarpa</i>	24*	Remove	Dead	Tree recently removed. Stump remaining	*Measured at 2.5-ft
3896	Western cottonwood <i>Populus trichocarpa</i>	16	Remove	Fair	Stem lean. Crown half shared with #3895	
3895	Western cottonwood <i>Populus trichocarpa</i>	17	Remove	Fair	Crown half shared with #3894	
3894	Western cottonwood <i>Populus trichocarpa</i>	9	Remove	Fair	Codominant in canopy. Treat as a grouping w/ 95 & 96	
3893	Western cottonwood <i>Populus trichocarpa</i>	16	Remove	Fair	Semi-mature tree. No sig defects	
3892	Western cottonwood <i>Populus trichocarpa</i>	8	Remove	Good/ Fair	Young tree	At top of bank
3891	Western cottonwood <i>Populus trichocarpa</i>	16	Remove	Fair	Semi mature. Twin stems (11" 10") split at ground level	
3890	Pacific madrone <i>Arbutus menziesii</i>	6	Remove	Good/ Fair	Young tree. Foliar fungal damage	
3889	Western cottonwood <i>Populus trichocarpa</i>	6	Remove	Good	Young tree	
3888	Western cottonwood <i>Populus trichocarpa</i>	7	Remove	Good	Young to semi-mature tree	
3887	English hawthorn (A) <i>Crataegus monogyna</i>	12	Remove	Fair	Multi stem tree. Numerous stems	On property line.
3886	Western cottonwood <i>Populus trichocarpa</i>	8	Remove	Good/ Fair	One of a row of semi mature cottonwoods	Tree appears to be outside surveyed parcel
3885	Western cottonwood <i>Populus trichocarpa</i>	8	Remove	Good/ Fair	One of a row of semi mature cottonwoods	Tree appears to be outside surveyed parcel

ID	Tree Species	DBH	Action	Condition	Tree Condition Notes	Location Notes
3884	Western cottonwood <i>Populus trichocarpa</i>	11	Remove	Good/ Fair	Semi-mature, vigorous growth. Species usually produces large surface roots	Tree appears to be within the surveyed parcel. Within the footprint of the storage bins
3883	Western cottonwood <i>Populus trichocarpa</i>	10	Remove	Good/ Fair	Semi-mature, vigorous growth. Species usually produces large surface roots	Tree appears to be within the surveyed parcel. Adjacent to the storage bin footprint.
3882	Sweet cherry (A) (B) <i>Prunus avium</i>	9	Remove	Fair	Three stems from grd level (5", 4", 4")	Growing against west fence line
3881	Spanish chestnut (B) <i>Castanea sativa</i>	29	Remove	Fair/ Good	Four fused stems (14,13,10,8-inches)	Growing at west fence line and damaging fence. Located in footprint of storage building.
3880	Sweet cherry (A) (B) <i>Prunus avium</i>	30	Remove	Fair	Two large stems (22 & 16 inches DBH)	Branches against adjacent building. Tree is 18-ft from west fenceline adj to building & asphalt
3879	Scouler willow (B) <i>Salix scouleriana</i>	14	Remove	Dying	Three (8,7,5-inch) stems from ground level. Damaged rotting crown	
3878	Scouler willow (B) <i>Salix scouleriana</i>	12	Remove	Good/ Fair	Four stems (6,5,4,4-inch) from ground level. Full and complex crown	

Table Notes:

(A) – Invasive Species within the Portland metro area.

(B) – Tree DBH measured by adding the DBH of the largest stem to ½ DBH of each of the other stems.

Definitions – DBH: (Diameter in inches measured at 4.5-ft from ground level)