

ARBORIST REPORT

Date:

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Prepared for:

Kristi Lanier
David Pfleeger

Site Address:

7107 78th Ave SE
Mercer Island, WA

Prepared by:

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NARRATIVE

Scope of Work

You have asked me to assess the current condition of the trees located on the above referenced site and to assist your architect in preparing the necessary submittals with regard to the trees and related development code for the City of Mercer Island.

Methodology

The methods and techniques used for this assessment are as outlined in *Tree Risk Assessment* by Julian Dunster and as adopted by the International Society of Arboriculture (ISA). Additional standards, practices and specifications are as detailed in *ANSI Standard A300 (Part 9)-2017 Tree Risk Assessment a. Tree Failure*. The end goal of most assessments is to provide the owner or manager of the tree(s) with factual information, enabling them to make decisions about the management of the tree(s). For this particular assessment, I used a Level II Assessment that includes inspection of the root collar, lower trunk, and canopy of the tree as can be seen from the ground. Basic assessment does not include climbing the tree or excavation of soils to inspect root structure or condition.

I used a wood mallet to 'sound' certain trees that I suspected of wood decay and I used field glasses to look at the upper limbs and canopy of certain trees. I used a metal probe to explore one or more columns of wood decay. Each tree was measured for its Diameter at Breast Height (DBH), an industry standard of measuring trees at 4.5' above grade.

A Tree Inventory was created that lists each tree by Tree Tag #, Botanical and Common Name, Size, Dripline Radius, Condition, with Comments as needed. Trees that were assessed and inventoried, but growing off-site, were so designated as 'Off-site' trees. Each tree was listed for its Retention/Removal status.

Each tree was tagged with a metal numbered tag for future reference. City code provides that non-exceptional trees less than 10.0" DBH are unregulated with regard to removal. Trees were tagged with a reference number if there was any doubt about the tree being close to the 10.0" DBH parameter. The attached Tree Inventory reflects the tagging of a number of trees smaller than 10.0" DBH.

You have provided a Site Tree Plan that includes a detailed Tree Inventory (T-1), Tree Retention and Protection sheet (T-2), as well as a Tree Re-planting sheet(T-3), all dated October 25, 2019.

Findings and Observations

The subject property is a densely forested vacant residential property with a mix of hardwood and coniferous trees. Seventy-two trees were assessed; sixteen of them off-site with overhanging canopies or off-site in the right-of-way (ROW). The assessment includes three (3) on-site dead trees as well as two (2) on-site invasive English Holly trees.

A number of the smaller evergreen trees are in Poor condition due to being out-competed by their more mature and dominant neighbors. There are individual maple trees with pockets of decay with associated deadwood in the canopy. Because the property is vacant, there appears to have been little, if any, routine tree maintenance or thinning.

Considerations

The following trees are noteworthy.

Tree # 416 is Exceptional by size and is located in the ROW and will be retained.

Tree #419 is a 9.2" DBH Oregon White Oak, Exceptional by size, growing in the ROW. It will be retained.

Tree #415 and #436 are both English Holly, an invasive species. Both will be removed. Both are less than 10.0" DBH.

Tree #471, #474, #475 – The excavation for the storm water tank and related piping will likely require intrusion inside the Tree Canopy or Dripline of these trees. Excavation in this area should be monitored in order to provide tree root protection and care.

Tree Site Plan T-2 details the location of the Tree Protection Fencing (TPF). TPF should be placed prior to any clearing or grading and the following protection and mitigation measures should be incorporated into the site development plan.

- Tree Protection Fencing (TPF) should consist of 4' tall orange polyethylene fence, or equivalent, installed to create a tree protection area as detailed in Mercer Island Tree Protection Fencing pdf.
- Signage should be placed every 20' along the fence-line stated that the area is a 'Tree Protection Area' and that "No soils, Building Materials, or Equipment is to be Stored Inside the Protection Area". Signage should be 8.5" X 11" and made to be weather-resistant.
- TPF should be installed at the dripline of individual or groves of trees. If the TPF needs to be placed inside the dripline in order to provide construction access, a professional tree person should be on-site when excavation is scheduled for these areas. Tree #471, #474, #475 are noted above. Site conditions or discoveries may require additional trees to be monitored during excavation.
- When roots are exposed by excavation, care should be taken to cut or prune these exposed roots, using proper pruning equipment and practices. Pruning practices are as detailed in *ANSI A300 (Part 1)-2017 Pruning* and *ANSI A300 (Part8)-2013 Root Management*.
- Exposed roots and severed roots should be covered with moist soil or soil/compost mixture as soon as is reasonable following excavation and completion of the associated work in the excavated area. The tree protection detail provided by the City requires 5" of mulch inside the tree protection area. This would not be needed or be practical on this site, provided that areas of exposed soil be covered as stated within this bulleted point.
- Replacement trees should be planted per Mercer Island planting practices.

Conclusions

This subject property is densely populated with trees which creates a special challenge when it comes to mitigating for the tree removal that is needed in order to develop the property. Eighteen (18) trees will be removed, which will require that thirty-six trees get re-planted. This appears to be a case where the standard formula used to calculate the number of replacement trees fails to consider the number of viable trees that will remain on-site prior to re-planting. Even without re-planting a single tree, the property will have nearly 100% canopy coverage, less the footprint of the proposed structure. I have reviewed the re-planting plan, which details the planting of thirty-six (36) replacement trees. While the re-placement trees are located at least twelve feet (12') apart and from existing trees, the long-term effect of planting so many trees on-site will be over-crowding which will result in diminished benefits over time. The number one rule of good urban forest planning and care is the 'Right tree in the right place'. If it becomes obvious that planting thirty-six replacement trees is not practical, a payment in lieu of planting may be required by existing code.

This report is factual in nature, as much as tree assessment can be; but I add my opinion here. If ever a scenario calls for consideration of the intent or purpose of the tree code as it relates to the development of this residential parcel, this is the case. Literal application of the code appears to defy the intent of the code, which is to provide good canopy coverage and to retain trees on residential sites. Existing canopy coverage, retained canopy coverage, and the number of retained trees must certainly surpass that of a more typical Mercer Island parcel. The goals and intent of the code can be met without such demanding re-planting requirements. Application of best management practices should rule the case.

This report was prepared by Thomas Quigley, ISA certified arborist PN0655A. Tree Risk Assessment Qualified (TRAQ) by the International Society of Arboriculture (ISA).