

September 6, 2017

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Re: Tree Conservation Report – 551 Fairview Avenue, Ottawa

This report details a pre-construction Tree Conservation Report (TCR) for the above-noted property in Ottawa. The need for this TCR is related to the proposed construction of a 1350 ft² ground floor addition and 1700 ft² basement addition. Both additions are proposed for the rear of an existing single family dwelling.

The need for this report is related to trees protected under the Urban Tree Conservation By-law 2009-200 and the Municipal Trees and Natural Areas Protection By-law 2006-279. Tree conservation reports are required for all Plans of Subdivision and Site Plan Control Applications where there is a tree of 10 centimetres in diameter or greater on the property. The approval of this TCR by the City of Ottawa and the issuing of a permit by them authorize the removal of approved trees. No tree removal should occur before such a permit is issued.

The tree inventory and assessment detailed in this report concerns all trees on and directly adjacent to the subject property. The field work for this report was completed on August 16, 2017.

Pictures 1, 2, 3 and 4 on pages seven through ten of this report show some of the trees on the subject property. Given their location within the new pathway trees #5 (a Norway spruce) and 12 (a sugar maple) cannot be retained. Red oak #13 will likely be impacted by the excavation for the ground floor addition. However, it is hoped this tree can be retained. Several other trees will be removed due to their present poor condition. For all other trees the tree preservation and protection measures cited in this report will be undertaken to ensure they are not adversely impacted by construction.

Tree Species, Size, Ownership, Condition and Status

Table 1 on pages 2 through 5 details the species, size (diameter), ownership, condition and status of the trees on and adjacent to the subject property. Each tree is referenced by the corresponding numbers plotted on the accompanying site plan.

Table 1. Species, size, ownership, condition and status of trees located on and adjacent to 551 Fairview Avenue.

| Tree No. | Tree Species | D.B.H (cm) | Ownership | Tree condition, general health and Status (to be removed or preserved and protected) |
|----------|--|------------|-----------|--|
| 1 | Siberian elm (<i>Ulmus pumila</i>) | 56 | Private | Fair; mature; slightly divergent towards west; to be preserved and protected |
| 2 | Sugar maple (<i>Acer saccharum</i>) | 36 | Private | Good; mature; mildly divergent and asymmetrical due to completion between trees; to be preserved and protected |
| 3 | Sugar maple | 42 | Private | Good; mature; mildly divergent and asymmetrical due to completion between trees; to be preserved and protected |
| 4 | Sugar maple | 41 | Private | Good; mature; mildly divergent and asymmetrical due to completion between trees; to be preserved and protected |
| 5 | Norway spruce (<i>Picea abies</i>) | 28 | Private | Fair; mature; poor crown density due to shading from adjacent trees; fair growth increment and needle colour; to be removed |
| 6 | Sugar maple | 32 | Private | Good; mature; mildly divergent towards southeast; to be preserved and protected |
| 7 | Sugar maple | 30 | Private | Fair; mature; mildly divergent and crown asymmetrical; to be preserved and protected |
| 8 | Norway spruce | 29 | Private | Fair; mature; poor crown density due to shading from adjacent trees; fair growth increment and needle colour; to be preserved and protected |
| 9 | Norway spruce | 41 | Private | Fair; mature; poor crown density due to shading from adjacent trees; fair growth increment and needle colour; to be preserved and protected |
| 10 | Norway spruce | 30 | Private | Fair; mature; poor crown density due to shading from adjacent trees; fair growth increment and needle colour; to be preserved and protected |
| 11 | Sugar maple | 84 | Neighbour | Fair; very mature; co-dominant stems at 3.4m from grade; to be preserved and protected |
| 12 | Sugar maple | 42 | Private | Good; mature; roof of porch built around main stem; upright form but asymmetrical crown; to be removed |
| 13 | Red oak (<i>Quercus rubra</i>) | 42 | Private | Good; mature; slightly asymmetrical towards southwest; to be preserved and protected |
| 14 | White spruce (<i>Picea glauca</i>) | 32 | Private | Fair; mature; crown held high due to competition with surrounding trees; heavy cone crop in 2017; to be preserved and protected |

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|----|--|----|---------|--|
| 15 | White spruce | 20 | Private | Poor; maturing; crown very asymmetrical towards east; poor crown density due to shading from adjacent trees; fair growth increment and needle colour; to be preserved and protected (not shown on survey) |
| 16 | White elm (<i>Ulmus americana</i>) | 32 | Private | Poor; mature; crown thin and leaves chlorotic – possibly elm yellows; no outward signs of Dutch elm disease (<i>Ophiostoma novo-ulmi</i>); to be preserved and protected |
| 17 | Sugar maple | 16 | Private | Good; maturing; upright growth form due to even shading on all sides; to be preserved and protected |
| 18 | Sugar maple | 37 | Private | Fair; mature; dieback at crown apex; growing against retaining wall; sooty cankers in lower bole; to be preserved and protected |
| 19 | Sugar maple | 40 | Private | Poor; mature; no central stem above 9m, lower stem with multiple bows- very poor form; to be preserved and protected |
| 20 | White spruce | 32 | Private | Fair; mature; poor crown density due to shading from adjacent maple and needle cast; fair growth increment and needle colour; heavy cone crop in 2017; to be preserved and protected |
| 21 | Sugar maple | 95 | City | Good; very mature; central stem to 8m with co-dominant stems above; broad, dense crown; good root collar-exposed due to thin soils; to be preserved and protected |
| 22 | Sugar maple | 36 | Private | Fair; mature; poor form: no central, dominant stem – multiple competing stems instead; to be preserved and protected |
| 23 | Sugar maple | 38 | Private | Fair; mature; poor form: no central, dominant stem – multiple competing stems instead; to be preserved and protected |
| 24 | Bitternut hickory (<i>Carya cordiformis</i>) | 49 | Private | Very good; mature; dominant central stem for most of height; to be preserved and protected |
| 25 | Sugar maple | 21 | Shared | Fair; maturing; upright growth form; to be preserved and protected |
| 26 | Sugar maple | 11 | City | Good; maturing; to be preserved and protected |
| 27 | Sugar maple | 10 | City | Good; maturing; to be preserved and protected |

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| 28 | Sugar maple | 35 | City | Poor; mature; in advanced decline; to be preserved and protected |
| 29 | Sugar maple | 15 | City | Poor; maturing; top of tree broken at 5m; to be preserved and protected |
| 30 | Norway maple (<i>Acer platanoides</i>) | 14 | City | Good; maturing; upright growth form; highly invasive species; to be preserved and protected |
| 31 | Sugar maple | 36 | Private | Good; mature; upright growth form; to be preserved and protected |
| 32 | Sugar maple | 19 | Private | Good; maturing; upright growth form and symmetrical crown; to be preserved and protected |
| 33 | Sugar maple | 35 | Private | Good; mature; upright growth form and symmetrical crown; to be preserved and protected |
| 34 | Sugar maple | 29 | Private | Dead; to be removed |
| 35 | Sugar maple | 21 | Private | Dead; to be removed |
| 36 | Sugar maple | 38 | Private | Fair; mature; upright growth form, crown asymmetrical towards northwest; to be preserved and protected |
| 37 | Sugar maple | 32 | Private | Fair; mature; moderate deadwood; to be preserved and protected |
| 38 | Sugar maple | 14 | Private | Fair; maturing; co-dominant stems at 2.5m from grade; growing against private hydro line; to be preserved and protected |
| 39 | White elm | 21 | ? | Good; mature; moderately divergent towards southeast; no outward signs of Dutch elm disease; to be preserved and protected (not shown on survey) |
| 40 | Sugar maple | 32 | Neighbour | Good; mature; upright growth form; to be preserved and protected |
| 41 | Sugar maple | 44 | Shared | Dead; to be removed |
| 42 | Sugar maple | 64 | Shared | Good; very mature; divergent towards northeast; burl at on main stem 4m from grade; broad, dense crown with good branching; to be preserved and protected |
| 43 | Sugar maple | 56 | Private | Poor; crown very asymmetrical towards east; major deadwood & cavity over driveway (hazardous); wound on east side of root collar with early decay and insect activity; to be removed based on current condition |

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|----|--|-----|---------|---|
| 44 | Sugar maple | 59 | Shared | Fair, mature; co-dominant stems at 0.5m from grade with included bark; concrete in cavity at 2.5m; to be preserved and protected |
| 45 | Sugar maple | 105 | Private | Fair; very mature; co-dominant stems from grade to 2m with included bark; mildly divergent; cabled at 12m; crown held high due to previous pruning over play area; to be preserved and protected |
| 46 | Ironwood (<i>Ostrya virginiana</i>) | 16 | ? | Good; maturing; broad, low growing crown; to be preserved and protected (not shown on survey) |
| 47 | Sugar maple | 51 | Private | Fair; mature; within planting bed; co-dominant stems at 6m; good root collar; to be preserved and protected |
| 48 | Sugar maple | 29 | Private | Good; mature; within planting bed; upright growth form; to be preserved and protected |
| 49 | Sugar maple | 30 | Private | Good; mature; within planting bed; upright growth form; to be preserved and protected |
| 50 | Sugar maple | 42 | Private | Fair; mature; mildly divergent form and asymmetrical crown; to be preserved and protected |
| 51 | Basswood (<i>Tilia americana</i>) | 43 | Private | Fair; mature; mildly divergent form and asymmetrical crown; to be preserved and protected |
| 52 | Beech (<i>Fagus grandifolia</i>) | 32 | Private | Good; tri-stemmed at 2-2.5m; broad crown; to be preserved and protected |

Endangered Species

Three mature butternuts (*Juglans cinerea*) were identified on neighbouring properties. This tree species is listed as threatened under the Province of Ontario's Endangered Species Act (2007). As such, if any habitat within 50m of these trees is to be disturbed the tree will be considered harmed under the Act. Prior to any such harm a Butternut Health Assessment must be performed for each tree and submitted to the Ontario Ministry of Natural Resources and Forestry.

Tree Preservation and Protection Measures

Preservation and protection measures intended to mitigate damage during construction will be applied for the trees to be retained on and adjacent to the subject property. The following measures are recommended to ensure their survival following construction:



1. Erect a fence (snow or metal) as close as possible to the critical root zone (CRZ¹) of trees;
2. Attach signs to the fence indicating the area within is a protected space (do not attach any signs, notices or posters to any tree);
3. Do not place any material or equipment within the CRZ of trees;
4. When possible do not raise or lower the existing grade within the CRZ;
5. Tunnel or bore instead of digging or trenching within the CRZ of trees;
6. Do not damage the root system, trunk or branches of any tree – if damage does occur cut the wound cleanly and, especially in the case of roots, seal the wound with beeswax;
7. Ensure that exhaust fumes from all equipment are not directed towards any tree's crown.

¹ The critical root zone (CRZ) is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter at breast height (DBH). The CRZ is calculated as DBH x 10 cm.

Please do not hesitate to contact me with any questions concerning this tree conservation report.

Yours,

Andrew Boyd

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Picture 1. Sugar maple #12 at 551 Fairview Ave.



Picture 2. Trees #14, 16, 18, 34, 37 and 38 (in foreground, right to left) at 551 Fairview Ave.



Picture 3. Sugar maple #41, 42 and 43 (right to left) at 551 Fairview Ave.



Picture 4. Trees #5 through 10 (right to left) at 551 Fairview Ave.