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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

August 7, 2020

JB Holdings Inc.
107 Pretoria Avenue
Ottawa, ON
K1S 1W8
Attn. John Bassi – President

RE: TREE PRESERVATION REPORT FOR SILVER MAPLE AT 28 PRETORIA AVENUE, OTTAWA

Dear John,

As per your request, this letter report details an assessment of the city owned silver maple *(Acer saccharinum)* located adjacent to the front yard of 28 Pretoria Avenue in Ottawa. This property is one of four currently proposed for redevelopment – in their place a six-storey apartment building with underground parking is proposed. The purpose of this report is to discuss the impacts of the proposed construction on the tree and detail specific mitigation measures to ensure its health and longevity are maintained in light of the upcoming changes to its growing environment.

While the footprint of the proposed apartment will be much greater than that of the combined floor space of the four dwellings now present, the building's foundation and parking garage will not be any closer to the tree than the front of the foundations of the existing dwellings. This is being achieved via a 'blind pour' which does not require the usual over dig necessary for concrete forming. Also, instead of the usual 'T'-shaped footing, an 'L'-shaped one is being used to reduce the extent of excavation. The use of these two innovative measures will allow the tree's rooting area to remain largely unaltered by excavation. Recent excavations on either side of the tree to work on Bell lines, and future excavations necessary to shut off gas lines are the only two instances where limited excavation within the tree's rooting zone will be necessary.

Visual inspections of the tree were completed in June 2019 and July 2020. Details of the 2019 inspection can be found in the Tree Conservation Report prepared by *IFS Associates Inc.* on June 28, 2019. In terms of the tree's growing environment, it is located nearby to the city sidewalk and between private driveways (asphalt and interlock brick). The tree's effective rooting zone is approximately 7.5m x 22m in size and is presently covered by both hard surfaces (drive- and walkways) and soft ones (turf and garden areas). As of June 2020 the tree's crown had been pruned in anticipation of the planned construction.

From the perspective of the projected longevity of the tree in relation to the proposed construction, it is felt that root loss will not have a major impact on its long-term physiological health. This is due to the fact that the excavation for the new building will not disturb more than 10% of the tree's current effective rooting area (undoubtedly some roots have grown between the existing dwellings while others will be lost for the services to be installed at the furthest distance possible from the tree – below the driveway at 24 Pretoria Avenue. Furthermore, the required excavation will not impact the tree's larger structural roots. With the tree's root plate remaining unaffected the stability of the tree should not be an issue going forward. The majority of the tree's feeding roots will also remain intact due to the limited degree of soil disturbance.

The rooting area available to the tree is projected to increase following the proposed redevelopment as most of the driveways and walkways presently within the tree's effective rooting zone will be changed into soft surfaces favouring root growth and development, namely mulch-covered garden beds. The soil below such beds is far superior for rooting than is that under asphalt or turf. Such improvements will help the tree overcome stresses related to the proposed construction.

TREE PRESERVATION AND PROTECTION MEASURES

Aside from ensuring an adequate distance from excavation, a number of other measures are recommended to promote the survival of the maple following construction:

PRE-CONSTRUCTION MEASURES

1) Tree Protection Barrier: Following the City of Ottawa's tree protection barrier specifications, tree protection fencing will be installed prior to the start of any site works and at the furthest distance possible from the tree. Some adjustments in the fencing with be required as the removal of front porches, poured concrete walkways and gas shut offs are completed. However, the eventual location of the fencing will be in line with the foundations, where it will stay for the duration of construction. All of the supports and bracing for the barrier should be installed in such a way as to minimize root damage. The barrier should also have signage attached to it indicating its purpose as a tree protection barrier. Lastly, neither the repair or refueling of machinery, nor the storage or stockpiling of materials should take place within this area.

2) Surface Treatment: Where construction traffic passes near the protected area a root buffer is required outside of the tree protection barrier. This buffer is unnecessary where asphalt driveways are used as access points. Where asphalt is not present the buffer will consist of woodchips spread to a thickness of 10 cm covered by a layer of granular 'A' gravel deep enough to stabilize steel plates or multiple layers of 2-cm thick (¾ inch) plywood. This will help prevent the compaction of soil surrounding the tree's fine feeding roots.

3) Excavation & Exposed Roots: The use of hydro vacuuming to excavate around the tree will be required in order to carefully expose roots. Roots greater than 1cm in diameter should be cleanly cut at the furthest limits of the driveway. Bypass shears or a hand saw should be used for this work. Each cut root end should be sealed immediately with a beeswax compound. Once the exposed roots are properly treated excavation using traditional equipment can be used to complete the work.

4) Watering: Roots exposed during excavation should be immediately reburied with soil or temporarily covered with burlap, filter cloth or woodchips and kept moist (*i.e.* watering with a soft-spray nozzle at least three times a week). A covering of plastic should be used in order to retain moisture during an extended period when watering may not be possible (*i.e.* over long weekends).

CONSTRUCTION MATERIALS

The base material for future walkways should be composed of CU-Structural soil underlain with a woven (*i.e.* perforated) geotextile liner. CU-structural soil is unique in that it provides a load-bearing base which can also serve as a rooting medium even once compacted. Stone dust as leveling course and granular A stone as a subgrade should be avoided as once compacted they are not permeable (thus preventing the movement of air and moisture into soil). A permeable brick paver should be used for the surface of the driveway. If this is unsuitable for any reason the use of a permeable product such as VersiGrid or Ecoraster should be explored instead.

POST-CONSTRUCTION MEASURES

In terms of future maintenance, the maple should be monitored regularly and any dieback or dead branches be pruned out of the crown if warranted. Pruning of diseased, weakly attached and superfluous branches could help in order to help compensate for the loss of roots. Periodic deep root fertilization is also recommended. Since the tree could show signs of root-related stress, a fertilizer with a high-phosphorus formulation should be used.

This report is subject to the attached Limitations of Tree Assessments to which the reader's attention is directed. Please do not hesitate to contact me with any questions.

Yours,

Andrew K. Boyd, B.Sc.F, R.P.F. (#1828)
Certified Arborist #ON-0496A and TRAQualified
Consulting Urban Forester

IFS ASSOCIATES

Picture 1. Silver maple on City of Ottawa property in front of 30 Pretoria Avenue (taken July 2019)

Picture 2. Recent root damage within maple's critical rooting zone due to work on Bell lines (taken July 2020)

LIMITATIONS OF TREE ASSESSMENTS & LIABILITY

GENERAL

It is the policy of *IFS Associates Inc.* to attach the following clause regarding limitations. We do this to ensure that our clients are clearly aware of what is technically and professionally realistic in assessing trees for retention.

This report was carried out by *IFS Associates Inc.* at the request of the client. The information, interpretation and analysis expressed in this report are for the sole benefit and exclusive use of the client. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the client to whom it is addressed. Unless otherwise required by law, neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through public relations, news or other media, without the prior expressly written consent of the author, and especially as to value conclusions, identity of the author, or any reference to any professional society or institute or to any initialed designation conferred upon the author as stated in his qualifications.

This report and any values expressed herein represent the opinion of the author; his fee is in no way contingent upon the reporting of a specified value, a stipulated result, nor upon any finding to be reported.

Details obtained from photographs, sketches, *etc.*, are intended as visual aids and are not to scale. They should not be construed as engineering reports or surveys.

Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be reassessed at least annually.

The assessment presented in this report is valid at the time of the inspection only.

The loss or alteration of any part of this report invalidates the entire report.

LIMITATIONS

The information contained in this report covers only the tree(s) in question and no others. It reflects the condition of the assessed tree(s) at the time of inspection and was limited to a visual examination of the accessible portions only. *IFS Associates Inc.* has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the forestry and arboricultural professions, subject to the time limits and physical constraints applicable to this report. The assessment of the tree(s) presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground portions of each tree for structural defects, scars, cracks, cavities, external indications of decay such as fungal fruiting bodies, evidence of insect infestations, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the proximity of people and property.

Except where specifically noted in the report, the tree(s) examined were not dissected, cored, probed or climbed to gain further evidence of their structural condition. Also, unless otherwise noted, no detailed root collar examinations involving excavation were undertaken.

While reasonable efforts have been made to ensure that the tree(s) recommended for retention are healthy, no warranty or guarantee, expressed or implied, are offered that these trees, or any parts of them, will remain standing. This includes other trees on or off the property not examined as part of this assignment. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or groups of trees or their

component parts in all circumstances, especially when within construction zones. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of root loss due to excavation and other construction-related impacts. This risk can only be eliminated through full tree removal.
Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions, or seasonal variations in the weather. It is a condition of this report that *IFS Associates Inc.* be notified of any changes in tree condition and be provided an opportunity to review or revise the recommendations within this report. Recognition of changes to a tree's condition requires expertise and extensive experience. It is recommended that *IFS Associates Inc.* be employed to re-inspect the tree(s) with sufficient frequency to detect if conditions have changed significantly.

ASSUMPTIONS

Statements made to *IFS Associates Inc.* in regards to the condition, history and location of the tree(s) are assumed to be correct. Unless indicated otherwise, all trees under investigation in this report are assumed to be on the client's property. A survey prepared by a Licensed Ontario Land Surveyor showing all relevant trees, both on and adjacent to the subject property, will be provided prior to the start of field work. The procurement of said survey, and the costs associated with it, are the responsibility of the client, not IFS Associates Inc.

LIABILITY

Without limiting the foregoing, no liability is assumed by *IFS Associates Inc.* for:
1) any legal description provided with respect to the property;
2) issues of title and/or ownership with respect to the property;
3) the accuracy of the property line locations or boundaries with respect to the property;
4) the accuracy of any other information provided by the client of third parties;
5) any consequential loss, injury or damages suffered by the client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and,
6) the unauthorized distribution of the report.

Further, under no circumstances may any claims be initiated or commenced by the client against *IFS Associates Inc.* or any of its directors, officers, employees, contractors, agents or assessors, in contract or in tort, more than 12 months after the date of this report.

ONGOING SERVICES

IFS Associates Inc. accepts no responsibility for the implementation of any or all parts of the report, unless specifically requested to supervise the implementation or examine the results of activates recommended herein. In the event that examination or supervision is requested, that request shall be made in writing and the details, including fees, agreed to in advance.