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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

September 30, 2021

Brad Schlegel
VP Design & Construction
RBJ Schlegel Holdings
325 Max Becker Dr. #201
Kitchener, ON
N2E 4H5

RE: TREE CONSERVATION REPORT FOR 1919 RIVERSIDE DRIVE, OTTAWA

Dear Brad,

This report details a pre-construction tree conservation report (TCR) for the above-noted property located in Ottawa. The need for this TCR is related to the proposed construction of two multiple-storey buildings on the subject property, with associated surface and below grade parking.

The need for this report is related to trees protected under the City of Ottawa's Tree Protection By-law No. 2020-340. Tree conservation reports are required for all site plan control applications for properties on which a tree of ten centimetres in diameter or greater is present. The approval of this TCR by the City of Ottawa authorizes site clearing activities, including the removal of any approved trees. **Importantly, although this report may be used to support the application for a City tree removal permit, it does not by itself constitute permission to remove trees or begin site clearing activities. No such work should occur before a tree removal permit is issued by the City of Ottawa. Further, if any trees fully on or shared with adjacent properties are to be removed permission from adjacent land owners must first be obtained.**

In terms of existing vegetation, there is a mixture of planted amenity trees and trees which would have originated from seed spread from nearby parent trees. The individual trees are located throughout the property while seeded trees are in linear groupings adjacent to unmaintained property lines.

Under the current site plan no existing trees can be retained as building layouts, excavation for the below grade parking and the necessary grade changes associated with this work will impact the entire property. The one area where tree retention may be possible is along the eastern property line. However, this assumes the extent of future parking proposed for this area roughly matches that which is existing. Field work for this report was completed in September 2020.



TREE SPECIES, SIZE AND CONDITION

All current vegetation is shown on the tree conservation plan included on page 7 of this report. By the numbers indicated on the plan, each tree and grouping of trees is detailed below:

Table 1. Species, condition, size (diameter) and status of trees at 1919 Riverside Drive

Tree No.	Tree species	Condition (VP→E)	DBH ¹ (cm)	Age class, tree condition notes & preservation status (to be removed or preserved and protected)
1	Austrian pine (<i>Pinus nigra</i>)	Fair	18.2	Mature; crown very asymmetric towards west; fair crown density, growth increment and needle colour; introduced species; to be removed
2	Austrian pine	Fair	29.2	Mature; crown asymmetric towards north; fair density, growth increment and needle colour; introduced species; to be removed
3	Bur oak (<i>Quercus macrocarpa</i>)	Poor	90.3	Overmature; continuously topped for clearance from overhead Hydro lines; located within a restricted rooting zone – parking median; significant dieback; tree is in advanced decline; native species; to be removed
4	Colorado spruce (<i>Picea pungens</i>)	Poor	28.8	Mature; lower crown asymmetric; poor crown density, growth increment and needle colour – tree is in advanced decline; introduced species; to be removed
5	Colorado spruce	Very good	36.4	Mature; lower crown asymmetric; very good density, increment and colour; introduced species; to be removed
6	Colorado spruce	Good	24.7	Mature; lower crown asymmetric; good density, increment and colour; introduced species; to be removed
7	Austrian pine	Very good	40.9	Mature; very good density, increment and colour; introduced species; to be removed
8	European larch (<i>Larix decidua</i>)	Fair	19.1	Maturing; salt spray damage to west side of crown – extensive dieback; fair density, increment and colour; introduced species; to be removed
9	Honey-locust (<i>Gleditsia triacanthos</i>)	Good	22.6	Maturing; central stem with competing lateral at 1.5m on south side; good crown density, leaf size and colour; introduced species; to be removed
10	Honey-locust	Good	19.5	Maturing; multiple competing stems at 2m – broad crown; good crown density, leaf size and colour; introduced species; to be removed

Table 1. Con't

11	White spruce (<i>Picea glauca</i>)	Good	19.9	Maturing; mildly asymmetric crown due to influence of tree #10; very good density, increment and colour; native species; to be removed
12	Colorado spruce	Very poor	22.3	Maturing; holding less than 10% living foliage; tree is in advanced decline; introduced species; to be removed
13	Siberian elm (<i>Ulmus pumila</i>)	Fair	32.7	Maturing; upright form; heavy salt spray damage to lower crown - poor crown density, leaf size and colour; introduced invasive species; to be removed
14	White spruce	Very poor	15.3	Maturing; heavily divergent towards southeast; physical damage to main stem – crown asymmetric; poor density, increment and colour; native species; to be removed
15	White spruce	Very poor	14.7	Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed
16	Colorado spruce	Very good	24.1	Mature; good growth form; very good density, increment and colour; introduced species; to be removed
17	Little-leaf linden (<i>Tilia cordata</i>)	Good	23.9	Maturing; co-dominant stems at 3m – moderately divergent; good crown density, leaf size and colour; introduced species; to be removed
18	Little-leaf linden	Good	27.1 (at 1m)	Maturing; multiple stems at 2-2.5m – broad crown; good crown density, leaf size and colour; embedded guy wire at 1.3m; introduced species; to be removed
19	Colorado spruce	Very poor	25.3	Maturing; holding less than 10% living foliage; tree is in advanced decline; embedded guy wire at 0.6m; introduced species; to be removed
20	Colorado spruce	Poor	23.6	Maturing; holding less than 50% living foliage; tree is in decline; heavy basal damage; introduced species; to be removed
21	Colorado spruce	Fair	24.9	Maturing; fair density, increment and colour; leader strongly divergent towards southeast; introduced species; to be removed
22	Colorado spruce	Fair	17.9	Maturing; fair density, increment and colour; scattered dead branches; introduced species; to be removed

Table 1. Con't

23	Scots pine (<i>Pinus sylvestris</i>)	Very poor	35.1	Mature; holding less than 10% living foliage; tree is in advanced decline – only 4 lowest branches alive; located within a restricted rooting zone – parking median; introduced invasive species; to be removed
24	Scots pine	Poor	58.4	Mature; very poor density, poor increment and colour; tree is in advanced decline; located within a restricted rooting zone – parking median; introduced invasive species; to be removed
25	White spruce	Fair	34.7	Mature; fair density, good increment and colour; dieback throughout crown - tree is in early decline; located within a restricted rooting zone – parking median; native species; to be removed
26	Colorado spruce	Fair	34.2	Mature; poor density, fair increment and colour; leader dead - tree is in early decline; located within a restricted rooting zone – parking median; introduced species; to be removed
27	Colorado spruce	Fair	27.3	Mature; poor density, fair increment and colour; leader dead - tree is in early decline; located within a restricted rooting zone – parking median; introduced species; to be removed
28	Crab apple (<i>Malus</i> spp.)	Fair	25.8	Mature; central stem with suppressed laterals at 1.5, 2.0 and 2.25m from grade; dense crown; heavy basal sprouting; ornamental variety; to be removed
29	Crab apple	Poor	20.5	Mature; holding less than 20% living foliage; major deadwood; ornamental variety; to be removed
30	White spruce	Good	38.5	Mature; upright stem, generally symmetric crown; good density, increment and colour; native species; to be removed
31	Scots pine	Good	39.8	Mature; crown asymmetric towards southeast; good density, increment and colour; introduced invasive species; to be removed
32	Colorado spruce	Very good	37.8	Mature; very good density, increment and colour; introduced species; to be removed
33	Colorado spruce	Good	28.2	Mature; good density, increment and colour; scattered dead branches; introduced species; to be removed

Table 1. Con't

34	Scots pine	Good	41.4	Mature; upright stem, crown asymmetric towards southwest; good density, increment and colour; introduced invasive species; to be removed
35	White spruce	Fair	28.2	Mature; leader dead; scattered dead and dieback, especially near crown apex; fair density, increment and colour; native species; to be removed
36	Scots pine	Good	53.3	Mature; upright stem, crown asymmetric towards west; good density, increment and colour; introduced invasive species; to be removed
37	Scots pine	Good	37.8	Mature; upright stem, crown asymmetric towards northwest; good density, increment and colour; introduced invasive species; to be removed
38	Scots pine	Fair	47.4	Mature; upright narrow crown; sweep in main stem at 6m; fair density, increment and colour; introduced invasive species; to be removed
39	Scots pine	Fair	54.4	Mature; crown asymmetric towards west; sweep in main stem at 6m; good density, increment and colour; introduced invasive species; to be removed
40	Austrian pine	Very poor	27.5	Mature; holding only 50% living foliage; poor density, increment and colour; crown very asymmetric towards northwest; located within a restricted rooting zone – parking median; introduced species; to be removed
41	Austrian pine	Poor	25.7	Mature; central stem with competing laterals starting at 1m; leader dead; fair density, increment and colour; stunted growth form; located within a restricted rooting zone – parking median; introduced species; to be removed

Tree grouping A: A line of twenty six mature Scots pine and five mature white spruce. All of these trees would have been planted. Generally they are in good condition – upright with good crown densities, growth increments and needle colour. Their crowns are held high above the understory and are often asymmetric towards the northwest due to intercompetition between trees. The understory is primarily introduced invasive buckthorn (*Rhamnus* spp.) and Norway maple (*Acer platanoides*) with scattered mountain-ash (*Sorbus* spp.), hawthorn (*Crataegus* spp.), bur oak and ash (*Fraxinus* spp.) – all of which are native species. All ash remaining on the property are either now dead or heavily infested with emerald ash borer (*Agilus planipennis*).



Tree grouping B: A line of scattered three over-mature Scots pine, one mature Norway spruce (*Picea abies*) and one naturally occurring mature bur oak. The spruce and oak are in good condition, the pines are senescent. The understory within this grouping is almost completely buckthorn.

Tree grouping C: A dense grouping of maturing planted trees (Colorado spruce and European larch), native trees (black walnut (*Juglans nigra*)), and those spread by seed - Manitoba maple (*Acer negundo*) and little-leaf linden. A large amount of equally tall buckthorn is also present.

Tree grouping D: Three planted Scots pine and two American elms (*Ulmus americana*). The pines are mature, upright in form and hold their living crowns high above the buckthorn in the understory. They are in good condition, with good crown densities, growth increments and needle colour. The elms show no outward signs of Dutch elm disease (*Ophiostoma novo-ulmi*).

Tree grouping E: In the overstory are naturalized Manitoba maple from seed, naturally occurring trembling aspen (*Populus tremuloides*) spreading via root sprouts from the adjacent forest, naturalized black locust (*Robinia pseudoacacia*) spreading similarly and dead ash. Buckthorn once again dominates the understory.

FEDERAL AND PROVINCIAL REGULATIONS

Federal and provincial regulations can be applicable to trees on private property. In particular, the following two regulations have been considered for this property:

- 1) Endangered Species Act (2007): No butternuts (*Juglans cinerea*) were identified on the subject or adjacent properties. This species of tree is listed as threatened under the Province of Ontario's Endangered Species Act (2007) and so is protected from harm.
- 2) Migratory Bird Convention Act (1994): In the period between April and August of each year nest surveys must be performed by a suitably trained person no more than five (5) days before trees or other similar nesting habitat are to be removed.



GENERAL NOTES

PLANS COMPLETED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD. (06/01/21)

LEGEND

- | | | |
|---------|---|--|
| Denotes | | |
| ○ | Survey Monument Planted | |
| ■ | Survey Monument Found | |
| SB | Standard Iron Bar | |
| SSB | Short Standard Iron Bar | |
| IB | Iron Bar | |
| CC | Cul Cross | |
| CP | Concrete Pin | |
| RP | Rock Post | |
| (WT) | Witness | |
| Meas. | Measured | |
| (AOG) | Annis, O'Sullivan, Vollebek Ltd. | |
| (P) | Plan 4R-19113 | |
| ○ | Deciduous Tree | |
| ★ | Coniferous Tree | |
| ○ | Fire Hydrant | |
| ○ | Water Valve | |
| ○ | Water Stand Post | |
| ○ | Maintenance Hole (Storm Sewer) | |
| ○ | Maintenance Hole (Sanitary) | |
| ○ | Maintenance Hole (Bell Telephone) | |
| ○ | Maintenance Hole (Traffic) | |
| ○ | Maintenance Hole (Hydro) | |
| ○ | Maintenance Hole (Gas) | |
| ○ | Maintenance Hole (Unidentified) | |
| ○ | Valve Chamber (Watermain) | |
| □ | Catch Basin | |
| □ | Catch Basin Inlet | |
| □ | Handhole | |
| ○ | Bell Terminal Box | |
| ○ | Cable Terminal Box | |
| ○ | Traffic Terminal Box | |
| ○ | Unidentified Terminal Box | |
| ○ | Traffic Signal Post | |
| ○ | Wood Pole | |
| ○ | Metal Pole | |
| ○ | Concrete Pole | |
| ○ | Traffic Light | |
| ○ | Utility Pole | |
| ○ | Anchor | |
| ○ | Light Standard | |
| ○ | Location of Elevations | |
| ○ | Top of Concrete Curb Elevation | |
| ○ | Location of Elevations at Top of Retaining Wall | |
| CL | Centreline | |
| T/G | Top of Grate | |
| SRW | Stone Retaining Wall | |
| CRW | Concrete Retaining Wall | |
| ○ | Bollard | |
| △ | Sign | |
| ○ | Parking Meter | |
| ○ | Diameter | |
| CLF | Chain Link Fence | |
| JB | Jersey Barrier | |
| C/P | Corrugated Plastic Pipe | |
| T/P | Top of Pipe | |
| ○ | TREES | |



DRAWING: Tree Conservation Plan

PROJECT: 1919 RIVERSIDE DRIVE
CITY OF OTTAWA



Andrew K. Boyd, R.P.F.

SCALE: 1:500	DRAWING NO. 1919
DATE: 2021-10-01	
DRAWN BY: SS	
SHEET NO. 1	

TREE PRESERVATION AND PROTECTION MEASURES

Preservation and protection measures intended to mitigate damage during construction will be applied for any trees to be preserved on the subject and properties. The following measures are the minimum required by the City of Ottawa to ensure tree survival during and following construction:

1. Erect a fence at the critical root zone (CRZ¹) of trees;
2. Do not place any material or equipment within the CRZ of the tree;
3. Do not attach any signs, notices or posters to any tree;
4. Do not raise or lower the existing grade within the CRZ without approval;
5. Tunnel or bore when digging within the CRZ of a tree;
6. Do not damage the root system, trunk or branches of any tree;
7. Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

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.

REPLACEMENT TREE PLANTING OR COMPENSATION

Numerous trees will be proposed for planting in the new landscape. As their numbers may not achieve parity with what was lost, monetary compensation may be required.

Pictures 1 through 8 on pages 9 to 14 of this report show selected tree groupings and individual trees on the subject property.

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 the undersigned with any questions concerning this report.

Yours,



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



Picture 1. Tree grouping A at 1919 Riverside Drive



Picture 2. Trees #4-7 (right to left) at 1919 Riverside Drive



Picture 3. Tree #3 at 1919 Riverside Drive



Picture 4. Tree grouping D (right) and trees #8 and 9 (left) at 1919 Riverside Drive



Picture 5. Trees #19-22 (right to left) at 1919 Riverside Drive



Picture 6. Tree grouping D at 1919 Riverside Drive





Picture 7. Trees #32-35 (right to left) at 1919 Riverside Drive



Picture 8. Tree grouping E at 1919 Riverside Drive

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) proposed 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 recent 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 final version of the grading plan for the project will be provided prior to completion of the report. Any further changes to this plan invalidate the report on which it is based. *IFS Associates Inc.* must be provided the opportunity to revise the report in relation to any significant changes to the grading plan. The procurement of said survey and grading plan, and the costs associated with them both, 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 or 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.

INDEMNIFICATION

An applicant for a permit or other approval based on this report shall agree to indemnify and save harmless *IFS Associates Inc.* from any and all claims, demands, causes of action, losses, costs or damages that affected private landowners and/or the City of Ottawa may suffer, incur or be liable for resulting from the issuance of a permit or approval based on this report or from the performance or non-performance of the applicant, whether with or without negligence on the part of the applicant, or the applicant's employees, directors, contractors and agents.

Further, under no circumstances may any claims be initiated or commenced by the applicant 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 activities 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.