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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

October 11, 2022

Gino J. Aiello
GJA Inc.
110 Didsbury Road Unit #9
Ottawa, ON
K2T 0C2

RE: TREE CONSERVATION REPORT FOR 100 TERENCE MATTHEWS CRESCENT, OTTAWA

This Tree Conservation Report (TCR) was prepared by IFS Associates Inc. (IFS) on behalf of Gifford Carr Insurance in support of the proposed addition to the rear of their existing office building at 100 Terence Matthews Crescent in Ottawa. The need for this report is related to trees protected under the City of Ottawa's Tree Protection By-law (By-law No. 2020-340). The By-law reflects Section 4.8.2. of the City of Ottawa's Official Plan which calls for the retention of the City's urban forestry canopy and, in particular, the protection of large, healthy trees.

Under the Tree Protection By-law a TCR is required for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending onto a development site. Trees of any size on adjacent City lands must also be documented in a TCR. A "tree" is defined in the By-law as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The approval of this tree conservation report by the city and the issuing of a permit authorizes the removal of approved trees. **Importantly, although this report may be used to support the application for a 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 authorizing the injury or destruction of a tree in accordance with the By-law.**

The inventory in this report details the assessment of all individual trees on the subject and adjacent private property. No trees were found on nearby City of Ottawa land. Field work for this report was completed in October 2022.

As noted on Table 1 on pages 2, 3 and 4 of this report, two maple trees will be lost as a result of conflicts with excavation for storm and sanitary water lines into the addition. Two pines will be lost as a result of lowered grades and another maple will be lost as a result of its proximity to excavation for the new addition.

TREE SPECIES, CONDITION, SIZE AND STATUS

Table 1 below details the species, condition, size (diameter) and status of the 24 individual and groups of trees on the subject and adjacent private property. Each of these trees is referenced by the numbers plotted on the tree conservation plan on page 5 of this report.

Table 1. Species, condition, size (diameter) and status of trees at 100 Terence Matthews Crescent

Tree No.	Tree Species	DBH[1] (cm)	Owner -ship[2]	Condition, Age Class, Tree Condition Notes, Species Origin & **Status (to be removed or preserved and protected)**
1	Norway maple *(Acer platanoides)*	29.9	Private	Poor; mature; central stem broken at 3m; recent root damage related to curb replacement; introduced invasive species; **to be removed** (conflicts with stormwater line excavation)
2	White spruce *(Picea glauca)*	24 avg.	Private	Fair; mature; double stemmed at 0.4m; lower crown thin due to influence of two nearby maples; fair crown density, annual increment and needle colour where exposed to direct sunlight; native species; **to be preserved and protected**
3	Norway maple *(Acer platanoides)*	34.6	Private	Fair; mature; tri-stemmed at 1.75m; central stem dead and removed due to branch cluster; introduced invasive species; **to be removed** (conflicts with sanitary line excavation)
4	Colorado spruce *(Picea pungens)*	52.3	Private	Fair; mature; scattered dead branches; root collar buried; good density, increment and needle colour; introduced species; **to be preserved and protected**
5	Austrian pine *(Pinus nigra)*	52.1	Private	Poor; mature; very poor form: co-dominant stems at 2.25m – central stem with competing lateral at 1m on southwest; competing and suppressed laterals at 0.5 on south, 1.5m on east, and 1.5 on west – broad crown; good density, increment and needle colour; introduced species; **to be preserved and protected**
6	Crab apple *(Malus* spp.*)*	36.9	Private	Good; mature; five-stemmed at 1.5m; broad, dense crown; cultivar; **to be preserved and protected**
7	Norway maple *(Acer platanoides)*	41.5	Private	Good; mature; tri-stemmed at 2m – central stem with competing laterals on east and west; introduced invasive species; **to be preserved and protected**
8	Norway maple *(Acer platanoides)*	35.7	Private	Good; mature; central stem for most of height with competing and suppressed laterals starting at 2.5m; introduced invasive species; **to be preserved and protected**
9	Norway maple *(Acer platanoides)*	42.8	Private	Good; mature; co-dominant stems at 3m with competing laterals at 1.5 and 2m on southwest; introduced invasive species; **to be preserved and protected**

Table 1. Con't

Tree No.	Tree species	DBH[1] (cm)	Owner-ship[2]	Condition, age class, tree condition notes & species origin
10	Austrian pine *(Pinus nigra)*	43.4	Private	Good; mature; single dominant stem; crown asymmetric towards north due to influence of tree #9; good density, increment and needle colour; introduced species; **to be preserved and protected**
11	Austrian pine *(Pinus nigra)*	39.3	Private	Fair; mature; mildly divergent form and crown moderately asymmetric towards southeast; good density, increment and needle colour; introduced species; **to be preserved and protected**
12	Austrian pine *(Pinus nigra)*	40.7	Private	Good; mature; single dominant stem; crown generally symmetric; good density, increment and needle colour; introduced species; **to be preserved and protected**
13	Norway maple *(Acer platanoides)*	33.7	Neigh-bour	Very poor; mature; co-dominant stem at 2m on west has failed – resulting in massive wound; major girdling root on east side of root collar; introduced invasive species; **to be preserved and protected**
14	Austrian pine *(Pinus nigra)*	43.8	Private	Good; mature; single dominant stem; crown generally symmetric; good density, increment and needle colour; introduced species; **to be removed** (conflicts with lowering of grade)
15	Austrian pine *(Pinus nigra)*	47.7	Private	Fair; mature; tri-stemmed at 1.25m – parallel; good density, increment and needle colour; introduced species; **to be preserved and protected**
16	Austrian pine *(Pinus nigra)*	48.1	Private	Fair; mature; co-dominant stems at 1.5m – parallel; poor crown density, good growth increment and needle colour; introduced species; **to be removed** (conflicts with lowering of grade)
17	Austrian pine *(Pinus nigra)*	39.7	Private	Good; mature; single dominant stem; crown generally symmetric; fair density, increment and needle colour; introduced species; introduced species; **to be preserved and protected**
18	Austrian pine *(Pinus nigra)*	43.8	Private	Good; mature; single dominant stem; crown generally symmetric; fair density, increment and needle colour; introduced species; introduced species; **to be preserved and protected**
19	White spruce *(Picea glauca)*	25.2	Neigh-bour	Fair; mature; mildly divergent and asymmetric towards southeast due to influence of tree #20; fair density, increment and needle colour; native species; **to be preserved and protected**

Table 1. Con't

Tree No.	Tree species	DBH[1] (cm)	Owner -ship[2]	Condition, age class, tree condition notes & species origin
20	Norway maple *(Acer platanoides)*	33.4	Private	Very poor; mature; co-dominant stem at 2.5m on west has failed due to weak union – resulting in massive wound; introduced invasive species; **to be preserved and protected**
21	Norway maple *(Acer platanoides)*	23.4	Private	Poor; mature; co-dominant stems at 2m – central stem with competing lateral on south; central stem topped at 2.5m; introduced invasive species; **to be removed** (due to root loss related to nearby excavation)
22	Norway maple *(Acer platanoides)*	35.7	Neigh-bour	Poor; mature; co-dominant stems 2.25m – central with competing lateral on south; laterals on north recently broken (cause unknown) - crown now asymmetric towards south; introduced invasive species; **to be preserved and protected**
23	Colorado spruce *(Picea pungens)*	25 avg.	Neigh-bour	Good; mature line of 7 trees; generally good density, increment and needle colour – except where vine and Manitoba maple growth impacting health; introduced species; **to be preserved and protected**
24	Manitoba maple *(Acer negundo)*	21 avg.	Private	Good; mature; tri-stemmed from grade; partially shading neighbouring line of spruce; originated from seed; naturalized species; **to be preserved and protected**

[1] diameter at breast height, or 1.4m from grade (unless otherwise indicated); average diameters indicate multi-stemmed trees; [2]As determined from locations plotted on topographic survey

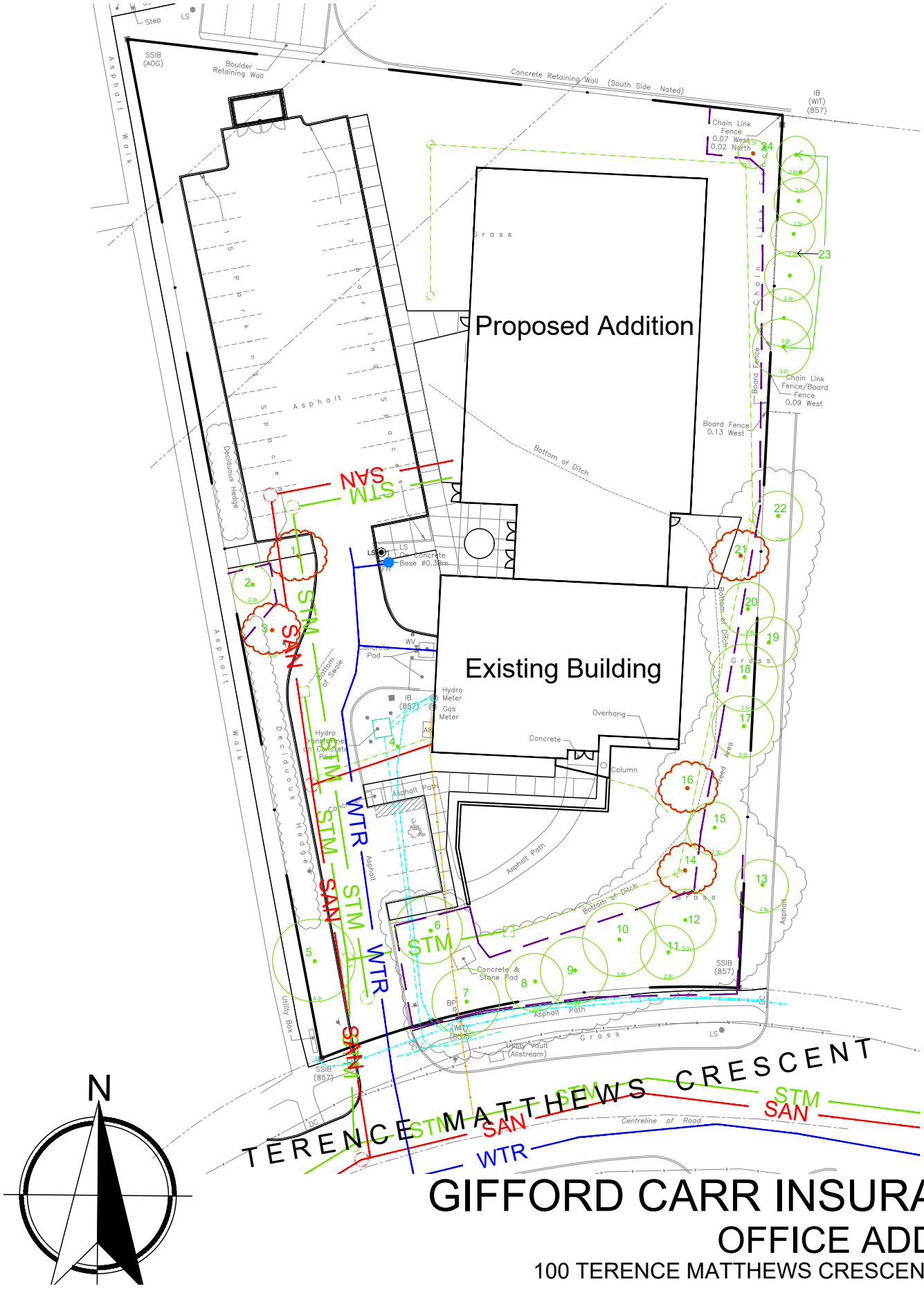
Pictures 1 to 7 on pages 8 through 11 of this report show selected trees on and adjacent to the subject property.

FEDERAL AND PROVINCIAL REGULATIONS

Federal and provincial regulations can be applicable to trees on private and public property. In particular, the following regulation has 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 are required to be performed by a suitably trained person no more than five (5) days before trees or other similar nesting habitat are to be removed.



GIFFORD CARR INSURANCE

OFFICE ADDITION

100 TERENCE MATTHEWS CRESCENT KANATA

TREE PRESERVATION MEASURES

As excavation occurs within close proximity to a number of trees, the following measures will be taken:

1. Hydro excavation along the edge of excavation in proximity to the trees so as to carefully expose roots. Exposed roots will then be cleanly cut and sealed before being reburied. Excavation can then resume using traditional mechanical means. Sealing the cleanly cut root ends with a beeswax product will help prevent the loss of moisture and facilitate healing.
2. If the excavation is to be left open for any time a covering of at least three layers of moistened burlap is to be draped over the exposed face of excavation closet to the tree. This will help reduce the loss of soil moisture (as soil dries the roots contained within die).

TREE 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 the minimum required by the City of Ottawa to ensure tree survival during and following construction:

1. As per the City of Ottawa's tree protection barrier specification (included on page 7), erect a fence as close as possible to the CRZ of the trees;
2. Do not place any material or equipment within the CRZ of the tree(s);
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 instead of trenching within the CRZ of any 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] critical root zone (CRZ) is established as being 10 centimetres from the trunk of a tree for every centimetre of DBH. The CRZ is calculated as DBH x 10 cm.

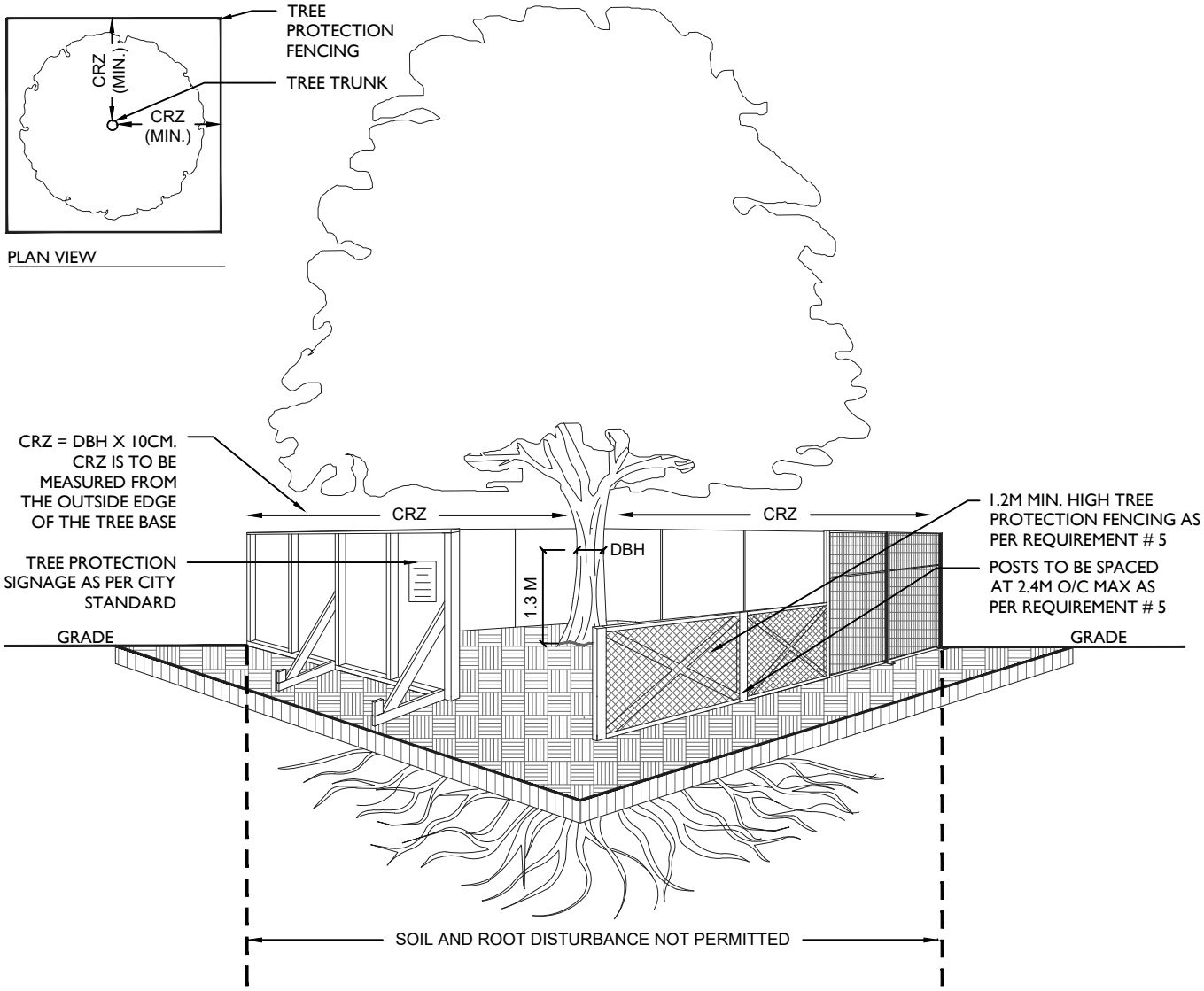
This report is subject to the attached Limitations of Tree Assessments and Liability to which the reader's attention is directed.

Please do not hesitate to contact me 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

IFS ASSOCIATES



TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY ACTIVITY IN PROXIMITY TO A PROTECTED TREE THAT COULD RESULT IN DIRECT OR INDIRECT INJURY TO THAT TREE OR ITS ROOTING AREA, TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE CRITICAL ROOT ZONE (CRZ), AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. WITHIN THE CRZ THERE MUST BE:
   - NO GRADING CHANGES
   - NO PLACEMENT OR STORAGE OF CONSTRUCTION MATERIALS OR SITE 'FURNITURE' SUCH AS OUTHOUSES
   - NO OPERATION OR STORAGE OF EQUIPMENT
   - NO EXTENSION OF HARD SURFACE OR CHANGE OF LANDSCAPING
   - NO EXCAVATION OTHER THAN APPROVED METHODS

   UNLESS OTHERWISE APPROVED BY THE CITY
3. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY A TREE CARE PROFESSIONAL AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE, IF PART OF A BUILDING PERMIT APPLICATION. THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY THE CITY PRIOR TO THE COMMENCEMENT OF WORK.
4. PLANS FOR MOVEMENT AND STORAGE OF EQUIPMENT AND MATERIALS ON SITE MUST BE DETERMINED AND DISCUSSED WITH ALL CONTRACTORS TO ACCOUNT FOR THE EXCLUSION OF THE TREE PROTECTION AREAS
5. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"X4" WOOD FRAME WITH POSTS TO BE SPACED AT A MAXIMUM OF 2.4 M APART), SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
6. IF THE TREE PROTECTION FENCING AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION ACCESS, THE CRITICAL ROOT ZONE MUST BE PROTECTED WITH PLYWOOD, WOOD CHIPS, OR STEEL PLATING OR OTHER MITIGATION TECHNIQUES PRESCRIBED BY THE TREE CARE PROFESSIONAL AND APPROVED BY THE CITY.

BY-LAWS

ALL CITY-OWNED TREES ARE PROTECTED UNDER THE MUNICIPAL TREES AND NATURAL AREAS PROTECTION BY-LAW (2006-279). PRIVATELY-OWNED TREES GREATER THAN 50CM DIAMETER ARE PROTECTED UNDER THE URBAN TREE CONSERVATION BY-LAW (2009-200).

Ottawa

TREE PROTECTION BARRIER SPEC.

SCALE:	NTS
DATE:	MARCH 2019
DRAWING NO.:	1 of 1

Picture 1. Trees #1, 2 and 3 (right to left) located at 100 Terence Matthews Crescent

Picture 2. Trees #6 and 7 (left to right) located at 100 Terence Matthews Crescent

Picture 3. Trees #7, 8, 9 and 10 (left to right) located at 100 Terence Matthews Crescent

Picture 4. Trees #10, 11, 12 and 14, 15, 16 (right to left) located at 100 Terence Matthews Crescent

Picture 5. Trees #17, 18 and 19 (left to right) located at 100 Terence Matthews Crescent

Picture 6. Trees #20, 21 and 22 (right to left) located at 100 Terence Matthews Crescent

Picture 7. Tree grouping #22 (right and background) and tree #23 (left foreground) located at 100 Terence Matthews Crescent

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 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.