

P.O. Box 13593, Stn. Kanata, Ottawa, ON K2K 1X6

Telephone: (613) 838-5717

Website: www.ifsassociates.ca

URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

June 21, 2023

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 few 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. A proposed crash wall along the eastern property line will result in the loss of most of the planted trees there as well. 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 9 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	Tree species	Condition	DBH <sup>1</sup>	Age class, tree condition notes &
No.	aree species	(VP→E)	(cm)	<b>preservation status</b> (to be removed or
110.		( ( 1 2)	(6111)	preserved and protected)
1	Austrian pine	Fair	18.2	Mature; crown very asymmetric towards
1	(Pinus nigra)	1 411	10.2	west; fair crown density, growth increment
	(1 tittles titigrat)			and needle colour; introduced species; <b>to be</b>
				preserved and protected
2	Austrian pine	Fair	29.2	Mature; crown asymmetric towards north; fair
_	Trostrium priit	2 444	_>	density, growth increment and needle colour;
				introduced species; to be preserved and
				protected
3	Bur oak	Poor	90.3	Overmature; continuously topped for
	(Quercus	1 001	70.0	clearance from overhead Hydro lines; located
	macrocarpa)			within a restricted rooting zone – parking
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			median; significant dieback; tree is in
				advanced decline; native species; <b>to be</b>
				removed
4	Colorado spruce	Poor	28.8	Mature; lower crown asymmetric; poor crown
	(Picea pungens)			density, growth increment and needle colour –
	(= 100 F G)			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	Fair	19.1	Maturing; salt spray damage to west side of
	(Larix decidua)			crown – extensive dieback; fair density,
				increment and colour; introduced species; to
				be removed
9	Honey-locust	Good	22.6	Maturing; central stem with competing lateral
	(Gleditsia			at 1.5m on south side; good crown density,
	triacanthos)			leaf size and colour; introduced species; to be
				removed



Table 1. Con't

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	Tree	Troo enocios			
Preserved and protected   Provided   Provi		Tiee species		DBH <sup>1</sup>	
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	No.		$(VP \rightarrow E)$	(cm)	•
broad crown; good crown density, leaf size and colour; introduced species; to be removed  11 White spruce (Picea glauca)  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 (Ulmus pumila)  14 White spruce Very poor 15.3 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					
and colour; introduced species; to be removed  11 White spruce (Picea glauca)  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 (Ulmus pumila)  14 White spruce Very poor 15.3 Maturing; holding less than 10% living foliage; tree is in advanced decline; introduced species; to be removed  14 White spruce Very poor 15.3 Maturing; upright form; heavy salt spray damage to lower crown - poor crown density, leaf size and colour; introduced invasive species; to be removed  15 White spruce Very poor 14.7 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	10	Honey-locust	Good	19.5	Maturing; multiple competing stems at 2m –
Temoved   19.9   Maturing; mildly asymmetric crown due to influence of tree #10; very good density, increment and colour; native species; to be removed					broad crown; good crown density, leaf size
11   White spruce (Picea glauca)   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 (Ulmus pumila)   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					and colour; introduced species; to be
Colorado spruce   Very poor   22.3   Maturing; holding less than 10% living foliage; tree is in advanced decline; introduced species; to be removed					removed
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 (Ulmus pumila) 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	11	White spruce	Good	19.9	Maturing; mildly asymmetric crown due to
Colorado spruce   Very poor   22.3   Maturing; holding less than 10% living foliage; tree is in advanced decline; introduced species; to be removed		(Picea glauca)			influence of tree #10; very good density,
12					increment and colour; native species; to be
foliage; tree is in advanced decline; introduced species; to be removed  13 Siberian elm (Ulmus pumila)  14 White spruce  15 White spruce  16 White spruce  17 Very poor  18 White spruce  19 Very poor  10 White spruce  10 Very poor  11 White spruce  11 White spruce  12 Very poor  13 Maturing; heavily divergent towards southeast; physical damage to main stem — crown asymmetric; poor density, increment and colour; native species; to be removed  18 White spruce  19 Very poor  10 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed  19 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed  10 Colorado spruce  11 Very good  12 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed  19 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed  10 Colorado spruce  11 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed  19 Maturing; divergent towards southeast; leader is dead; tree is in decline; poor density, increment and colour; native species; to be removed					removed
Siberian elm (Ulmus pumila)   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	12	Colorado spruce	Very poor	22.3	Maturing; holding less than 10% living
Siberian elm (Ulmus pumila)   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					foliage; tree is in advanced decline;
damage to lower crown - poor crown density, leaf size and colour; introduced invasive species; to be removed  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  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  Colorado spruce Very good 24.1 Maturing; good growth form; very good					introduced species; to be removed
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	13	Siberian elm	Fair	32.7	Maturing; upright form; heavy salt spray
Species; to be removed  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		(Ulmus pumila)			damage to lower crown - poor crown density,
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					leaf size and colour; introduced invasive
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					species; to be removed
crown asymmetric; poor density, increment and colour; native species; <b>to be removed</b> 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; <b>to be</b> removed  16 Colorado spruce Very good 24.1 Mature; good growth form; very good	14	White spruce	Very poor	15.3	Maturing; heavily divergent towards
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					southeast; physical damage to main stem –
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					crown asymmetric; poor density, increment
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					and colour; native species; to be removed
increment and colour; native species; <b>to be</b> removed  Colorado spruce Very good 24.1 Mature; good growth form; very good	15	White spruce	Very poor	14.7	Maturing; divergent towards southeast; leader
removed  16 Colorado spruce Very good 24.1 Mature; good growth form; very good					is dead; tree is in decline; poor density,
16 Colorado spruce Very good 24.1 Mature; good growth form; very good					increment and colour; native species; to be
					removed
density increment and colours introduced	16	Colorado spruce	Very good	24.1	Mature; good growth form; very good
density, increment and colour, introduced					density, increment and colour; introduced
species; to be removed					
17 Little-leaf Good 23.9 Maturing; co-dominant stems at 3m –	17	Little-leaf	Good	23.9	
linden moderately divergent; good crown density,					
(Tilia cordata) leaf size and colour; introduced species; to be		(Tilia cordata)			leaf size and colour; introduced species; to be
removed					
18 Little-leaf Good 27.1 Maturing; multiple stems at 2-2.5m – broad	18		Good		
linden (at crown; good crown density, leaf size and		linden		(at	
1m) colour; embedded guy wire at 1.3m;				1m)	,
introduced species; to be removed					-
19   Colorado spruce   Very poor   25.3   Maturing; holding less than 10% living	19	Colorado spruce	Very poor	25.3	
					foliage; tree is in advanced decline; embedded
guy wire at 0.6m; introduced species; <b>to be</b>					
removed					removed
20   Colorado spruce   Poor   23.6   Maturing; holding less than 50% living	20	Colorado spruce	Poor	23.6	
foliage; tree is in decline; heavy basal	1	1	I	1	folioga, trag is in dealing, heavy basel
damage; introduced species; to be removed					_

Table 1. Con't

Table I	. Con t			
Tree	Tree species	Condition	DBH <sup>1</sup>	Age class, tree condition notes &
No.		$(VP \rightarrow E)$	(cm)	<b>preservation status</b> (to be removed or
				preserved and protected)
21	Colorado spruce	Fair	24.9	Maturing; fair density, increment and colour;
	1			leader strongly divergent towards southeast;
				introduced species; to be removed
22	Colorado spruce	Fair	17.9	Maturing; fair density, increment and colour;
	1			scattered dead branches; introduced species;
				to be removed
23	Scots pine	Very poor	35.1	Mature; holding less than 10% living foliage;
	(Pinus	J 1		tree is in advanced decline – only 4 lowest
	sylvestris)			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
- '	2 TO to Pine	2 001		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
	, , inte spraee	1 411	3,	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
	Colorado sprace	1 411	32	colour; leader dead - tree is in early decline;
				located within a restricted rooting zone –
				parking median; introduced species; <b>to be</b>
				removed
27	Colorado spruce	Fair	27.3	Mature; poor density, fair increment and
	Sprace			colour; leader dead - tree is in early decline;
				located within a restricted rooting zone –
				parking median; introduced species; <b>to be</b>
				removed
28	Crab apple	Fair	25.8	Mature; central stem with suppressed laterals
==	(Malus spp.)			at 1.5, 2.0 and 2.25m from grade; dense
	(1.20.000 SPP.)			crown; heavy basal sprouting; ornamental
				variety; <b>to be removed</b>
29	Crab apple	Poor	20.5	Mature; holding less than 20% living foliage;
	Crue uppie	1 301	25.5	major deadwood; ornamental variety; <b>to be</b>
				removed
30	White spruce	Good	38.5	Mature; upright stem, generally symmetric
	Proceedings			crown; good density, increment and colour;
				native species; to be preserved and
				protected
	l		1	protected

Table 1. Con't

Table I	. Con't			
Tree	Tree species	Condition	DBH <sup>1</sup>	Age class, tree condition notes &
No.		$(VP \rightarrow E)$	(cm)	<b>preservation status</b> (to be removed or
				preserved and protected)
31	Scots pine	Good	39.8	Mature; crown asymmetric towards southeast;
	•			good density, increment and colour;
				introduced invasive species; to be preserved
				and protected
32	Colorado spruce	Very good	37.8	Mature; very good density, increment and
	1	3 8		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
34	Scots pine	Good	41.4	Mature; upright stem, crown asymmetric
	See as pine	000		towards southwest; good density, increment
				and colour; introduced invasive species; <b>to be</b>
				removed
35	White spruce	Fair	28.2	Mature; leader dead; scattered dead and
	vviinte spruce	1 un	20.2	dieback, especially near crown apex; fair
				density, increment and colour; native species;
				to be removed
36	Scots pine	Good	53.3	
30	Scots pine	Good	33.3	Mature; upright stem, crown asymmetric
				towards west; good density, increment and
				colour; introduced invasive species; <b>to be</b>
27	g , ;	C 1	27.0	removed
37	Scots pine	Good	37.8	Mature; upright stem, crown asymmetric
				towards northwest; good density, increment
				and colour; introduced invasive species; to be
20	g .	<b>.</b>	45.4	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



Table 1. Con't

Tree	Tree species	Condition	DBH <sup>1</sup>	Age class, tree condition notes &
No.		$(VP \rightarrow E)$	(cm)	<b>preservation status</b> (to be removed or
				preserved and protected)
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

<sup>&</sup>lt;sup>1</sup>Diameter at breast height, or 1.4m from grade.

<u>Tree grouping A1</u>: A line of eleven mature Scots pine **to be preserved and protected**. 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 (*Agrilus planipennis*).

<u>Tree grouping A2</u>: A line of fourteen mature Scots pine and five mature white spruce **to be removed** due to conflicts with the proposed crash wall. 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 (*Agrilus planipennis*).

<u>Tree grouping B</u>: A line of scattered three over-mature Scots pine, one mature Norway spruce (*Picea abies*) and one naturally occurring mature bur oak **to be removed** due to conflicts with the proposed crash wall. The spruce and oak are in good condition, the pines are senescent. The understory within this grouping is almost completely buckthorn.

<u>Tree grouping C</u>: 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 **to be removed** due to conflicts with the footprint of the proposed building, walkways and site servicing. A large amount of equally tall buckthorn is also present.

<u>Tree grouping D</u>: Three planted Scots pine and two American elms (*Ulmus americana*) **to be removed** due to conflicts with the proposed west parking lot. 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*).

<u>Tree grouping E1</u>: 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. **To be preserved and protected** except for a small linear area which conflicts with a proposed walkway (E2).

### 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) <u>Migratory Bird Convention Act (1994)</u>: 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.

### 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 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, erect a fence as close as possible to the CRZ of each tree (see City of Ottawa Tree Protection Barrier specifications on page 10).
- 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.
  - <sup>1</sup> 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 11 to 16 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 me with any questions concerning this report.

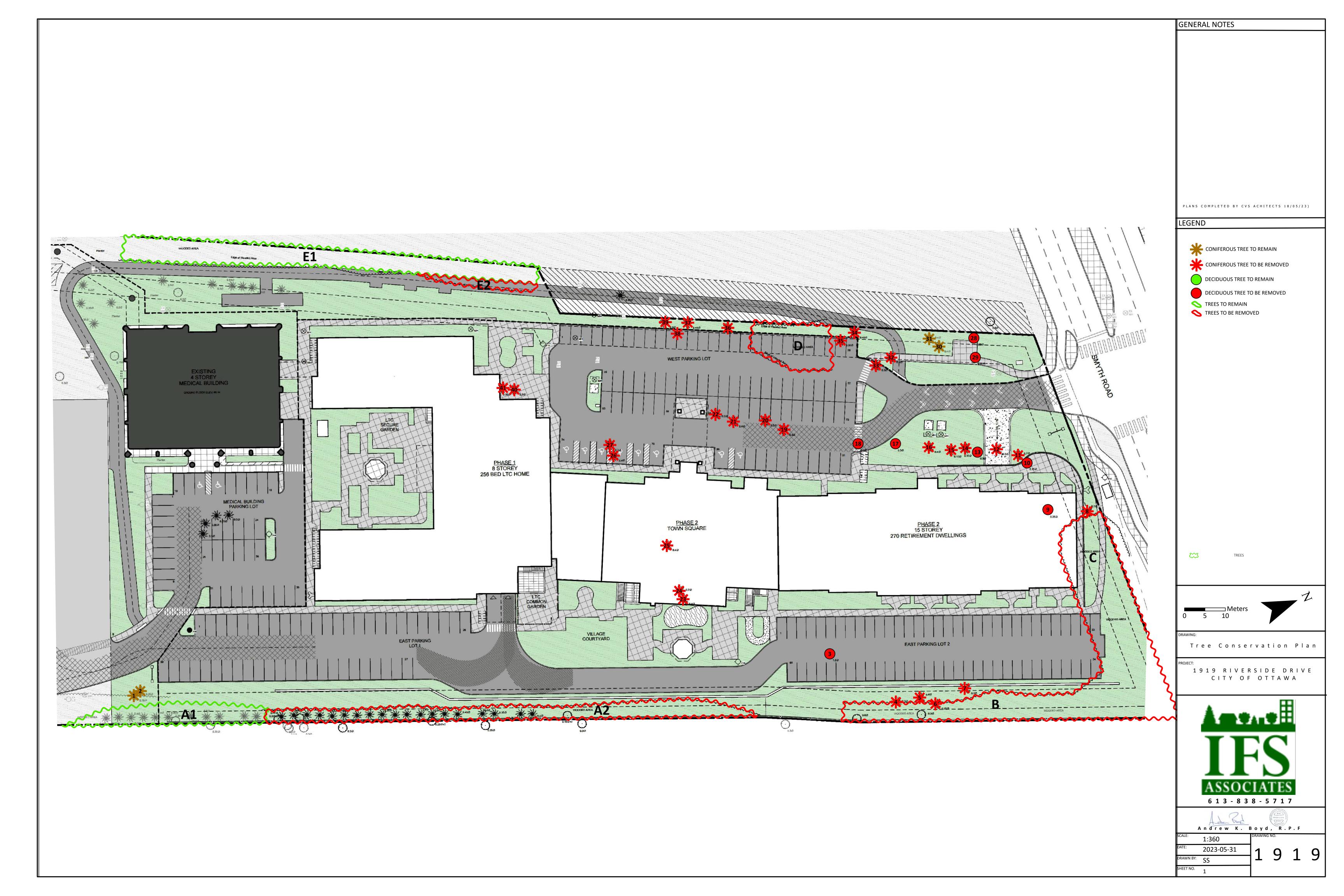
Yours,

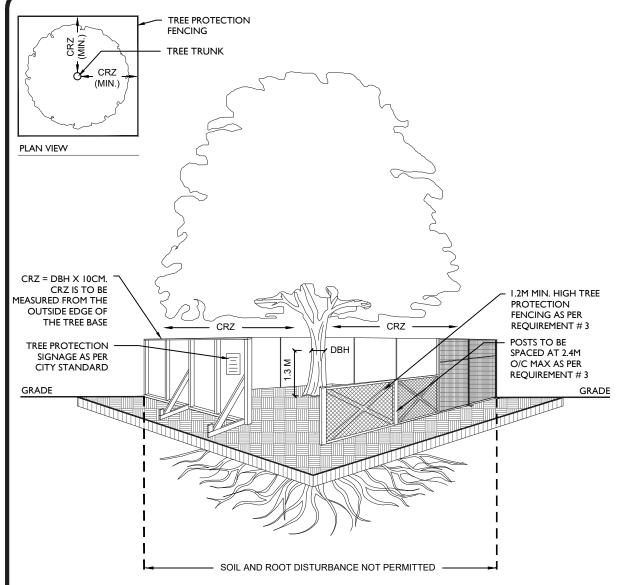
Andrew K. Boyd, B.Sc.F, R.P.F. (#1828)

Certified Arborist #ON-0496A and TRAQualified

Consulting Urban Forester







#### TREE PROTECTION REQUIREMENTS:

- PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
- 2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
  - DO NOT PLACE ANY MATERIAL OR EQUIPMENT INCLUDING OUTHOUSES;
  - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
  - DO NOT RAISE OR LOWER THE EXISTING GRADE;
  - TUNNEL OR BORE WHEN DIGGING;
  - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE:
  - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
  - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
- 3. 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 2.4M 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)
- 4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
- 5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

THE CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO WWW.OTTAWA.CA/TREEBYLAW FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST



## TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MARCH 2021

DRAWING NO.: 1 of 1



Picture 1. Portion of tree grouping A2 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

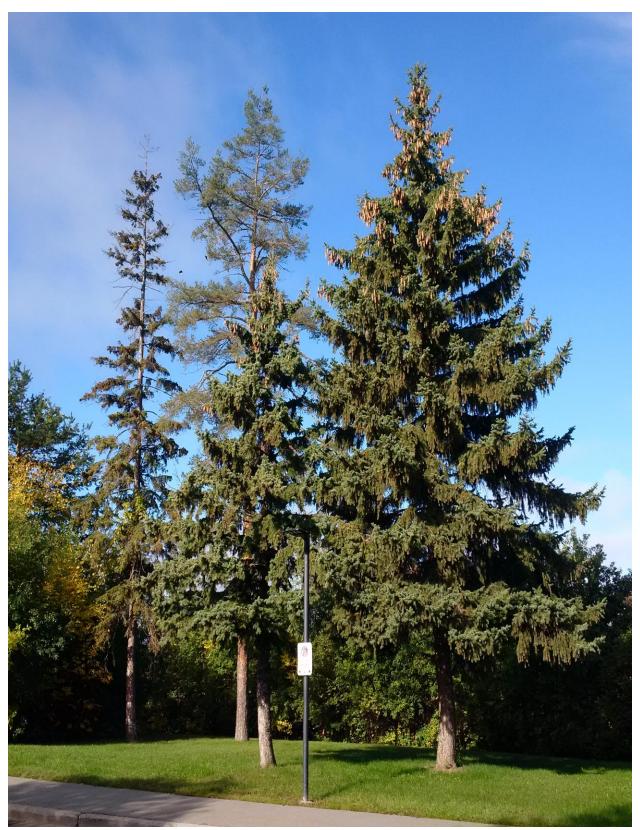


Picture 5. Trees #19-22 (right to left) at 1919 Riverside Drive



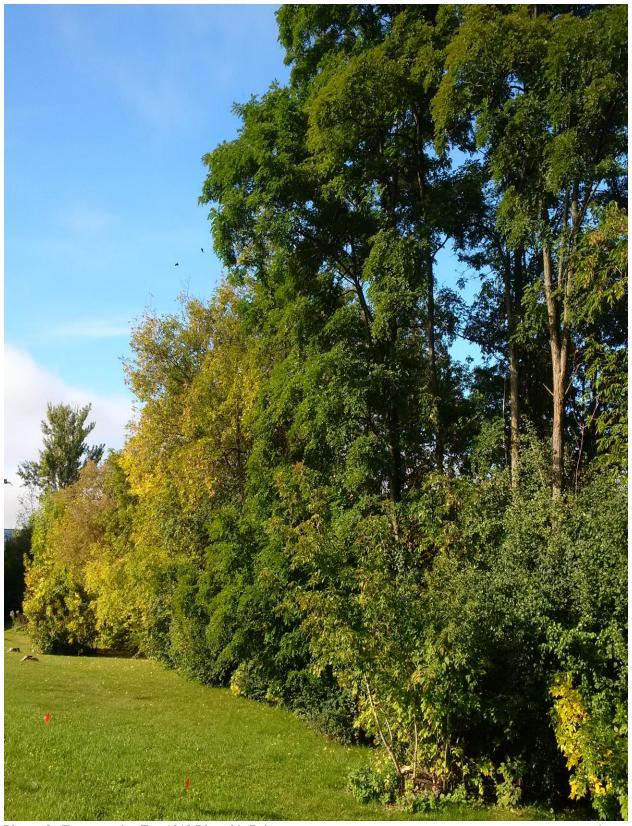
Picture 6. Tree grouping D at 1919 Riverside Drive

14



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 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.

