TREE CONSERVATION REPORT

OFFICE BUILDING DEVELOPMENT

3026 SOLANDT ROAD

CITY OF OTTAWA

Prepared for:

Colonnade Bridgeport 16 Concourse Gate, Suite 200 Ottawa, Ontario K2E 7S8

Prepared by:

Ruhland & Associates Limited 1750 Courtwood Crescent, Suite 200 Ottawa, ON K2C 2B5 (613) 224-4744

> January 15, 2020 Revision March 31, 2020

PROJECT INFORMATION

Project Name:	Solandt Road Office Development			
Owner:	Fiera Real Estate Core Fund			
Applicant:	Colonnade Bridgeport Attn: Bonnie Martell			
Prepared By:	Ruhland & Associates Limited,			
	1750 Courtwood Crescent, Suite 200, Ottawa, ON K2C 2B5 613-224-4744 Att: Marietta Ruhland			
Contractor:	Unknown at this time.			
Municipal Address:	3026 Solandt Road, Part of Lot 7, Concession 4, Geographic Township of March, City of Ottawa			
Official Plan & Zoning Des	ignations: Site Zoning as per Ottawa Zoning By-law 2008-250 Site Designation IG 6			
Purpose for Report:	in support for an application for site plan control			
Schedule of Proposed Wor	ks: 2020-2021.			

Other Applications Affecting Subject Lands: none

TREE CONSERVATION REPORT

The subject lands are located on the northeast corner of March Road and Solandt Road located in Ottawa, ON.

The subject lands are approximately 1.58 hectares (3.9 acres) in size. The area affected by the proposed site development is 98% of the site.

It is bounded on all sides by existing commercial / office developments.

The subject lands were visited by Ruhland & Associates Ltd. on January 08, 2020.

Included in this report: 2019 aerial, Map #1 – Current Vegetation, MAP #1D – Existing Vegetation Chart, Map #2 – Proposed Development and Conserved Vegetation, and MAP #2D - Tree Preservation Notes and Details.

Note: locations of trees are from survey information and from field observations and aerial photographs. Status of existing vegetation was taken from field observations, previous site survey to confirm species (2001) and 2018 streetview to confirm status of trees along Solandt Drive.

CRZ (critical root zone) as defined by the City of Ottawa Municipal Trees and Natural Area Protection By-law as: "critical root zone" means the area of land within a radius of ten (10) cm from the trunk of a tree for every one (1) cm of trunk diameter.

Update: Andrew Boyd of IFS visited the site to assess all trees located along Solandt Drive (within the city r.o.w. or immediately adjacent) on March 27, 2020. His review and input is added to this report and maps.

GENERAL

The subject lands consists of an existing parking lot and vacant lands (previous buildings were demolished), surrounded by existing developed lands.

SURFACE WATER FEATURES

No significant water features.

STEEP SLOPES

No significant slopes were found on site. The site slopes generally to the west.

No evidence of larger mammals was found on the site during any site reviews.

SIGNIFICANT VEGETATION / SPECIES

No significant species or species at risk have been found on site during site visits.

DISTINCTIVE TREES

Seven (7) distinctive trees were found on site, refer to Map #1 – Current Vegetation, MAP #1D – Existing Vegetation Chart.

VEGETATION INVENTORY

EXISTING VEGETATION

The lands consist mainly of grassed areas, unused parking lot and entrance, used parking lot with cultured landscape along the street frontages and within the property.

Refer to Map #2 – Proposed Development and Conserved Vegetation, and MAP #2D - Tree Preservation Notes and Details for species, size condition and action.

MARCH ROAD FRONTAGE (#1-2):

No trees are located within the city road allowance. Trees #1-2 are located adjacent to the street.

Age: Semi-mature.

<u>Size:</u> 30cm DBH each. Codominant stem at 1.2 metre height on Scot's Pine. <u>Condition:</u> fairly good to good condition.

SOLANDT ROAD FRONTAGE (#7-8, 13-18):

Trees #8 and 13 are located within the city road allowance as show on the existing survey information, and tree # 17 is straddling the property line. The remainder are located adjacent to the street.

<u>Age:</u> Mature.

<u>Size:</u> 5 trees along the property line range form 50cm - 80cm DBH. The remainder range from 15cm - 20cm DBH each.

<u>Condition</u>: fairly good to good condition. Tree #17 is in poor condition with a large portion of the crown dead.

NORTH PROPERTY LINE (#34):

Informal cedar hedge straddles the property line here. Mixed with the cedars are deciduous shrubs and vines.

Age: Semi-mature.

Size: Height ranges from 2 to 4 metres.

<u>Condition:</u> the majority of the cedars are in fair to good condition and habit, but are overgrown and have not been pruned for form.

EAST PROPERTY LINE (N/A):

No vegetation on subject lands. Adjacent vegetation consists of a crab apple and 4 spruce adjacent to the building.

Age: Semi-mature.

Size: average range from 20-25cm DBH.

Condition: good condition and habit.

INTERNAL AREA (#1-6A, 9-12, 19-33):

Trees here consists of leftover cultural landscape from the demolished buildings and adjacent parking. The majority are in good condition with exceptions of overgrown mugho pine, damaged crab apple and sugar maple, refer to chart. Age: Mature and semi-mature.

Size: range for 15cm - 50cm DBH, average within 20-30 DBH.

<u>Condition:</u> tree conditions range from poor to good. Trees in poor condition include the 50cm DBH Sugar Maple - #4 (rot at trunk base and dead central leader), 40cm DBH Crab Apple - #6a (major branch dead cracked and removed) and Mugho Pine - #3. Trees in fair condition include the remainder of the Mugho Pine (all are overgrown with bad habit) and some of the crab apples which are crowded out. Trees in fairly good condition include about half of the Crab Apples, and Scot's Pine. The remainder of the trees are in good condition.

Tree	Tree Species	Condition	DBH1	Tree Condition Notes	Likelihood of
No.		(VP→E)	(cm)		long-term
					survival ²
7	Bur oak	Fair	66.1	Very broad crown – asymmetric	Very low
	(Quercus			cowards south (likely due to	
	macrocarpaj			dishash in unnar mauri an an	
				dieback in upper crown, esp. on	
				north side, scattered deadwood	
				throughout; fair root collar –	
				flares missing on south side;	
				seam on lower bole from grade to	
				1.75m; lowest scaffold branch at	
				2.5m with weak union with trunk	
				 reaction wood present; fair 	
				annual growth increment	
8	Bur oak	Very good	50.6	Upright dominant central stem	Proposed for
				for 2/3 height; co-dominant	removal
				leaders at 8.5m from grade;	
				suppressed scaffold branches at	
				4, 5.5 and 8m from grade;	
				generally symmetric crown; good	
				annual growth increment; good	
				root collar	

ADDITIONAL REVIEW BY IFS (TREES ARE NUMBERED AS PER MAP #1):

13	Sugar maple (Acer saccharum)	Good	46.8	Central stem divergent due to competition with nearby oak; crown asymmetric for same reason; competing scaffold branch at 5.5m from grade; suppressed scaffold 4m with weak union (reaction wood present); very good root collar – pronounced flares around entire circumference	Very low
14	Bur oak	Very good	57.5	Upright dominant central stem for most of height; co-dominant leaders; lower half of crown asymmetric due to competition with nearby sugar maple; good root collar	Low
17	Bur oak	Poor	49.2	Advanced dieback at crown apex; heavy loss of bark/cambial death at base – likely due to root loss related to curb installation 3.2m away; poor annual increment	Recommended for removal

¹Diameter at breast height, or 1.4m from grade (unless otherwise noted).

²Under current site plan proposed by Colonnade BridgePort

DISTINCTIVE TREES

Distinctive trees (as described in the City of Ottawa tree bylaw 2009-200: 'means any tree with a DBH of 50 centimetres or greater').

Seven (7) distinctive trees were found on site, 5 along Solandt and two within the property and are within or immediately adjacent to the building excavation extents.

VEGETATION CONSERVATION

VEGETATED AREAS TO BE RETAINED

With IFS's additional assessment, retention of the trees along Solandt Road range from very low to low.

Although retention for Trees #7 (80cm DBH Bur Oak) and #13 (50cm DBH Sugar Maple) are considered very low, these are to be considered for retention.

Although retention for Tree # 14 (58cm DBH Bur Oak) are considered low, this tree is planned for retention.

VEGETATED AREAS TO BE REMOVED

The remainder of the trees along Solandt Road are to be removed. Tree #8, (51 cm DBH Bur Oak in good condition, is located in the middle of the entrance road

and Tree # 17 (49 DBH Bur Oak in poor condition) is slated for removal due to tree condition.

The remainder of the existing vegetation located on the subject lands are to be removed. The remainder of the trees are located within the proposed development area.

Refer to 2019 aerial showing existing vegetation (tree in central portion along March Road has since been removed), Map #1 – Current Vegetation, MAP #1D – Existing Vegetation Chart, Map #2 – Proposed Development and Conserved Vegetation, MAP #2D - Tree Preservation Notes and Details, and Map # 3 – Existing trees overlain on Gradin Plan.

All removals to be done in accordance with the City of Ottawa tree bylaw 2009-200 and this Tree Conservation Report.

POTENTIAL IMPACTS AND MITIGATION MEASURES

POTENTIAL IMPACTS

It is noted that excavation for the development of the building, parking lot, roadways and/or sidewalks will be within the Critical Root Zone (CRZ) of the trees along Solandt Road, therefore the health and long term sustainability of the trees will be affected, refer to IFS assessment.

Before construction start up, the following is to be confirmed:

- Limit of excavation relating to the CRZ of the tree
- Overall health of tree and long term sustainability
- Pruning requirements for health of tree and safety of users
- Any additional mitigation measures required beyond those listed in this TCR.

Based on the above, feasibility of preserving these trees will be made in consultation with the City of Ottawa Forestry Department. If it is determined that one or both of these trees cannot be preserved, they will be replaced with 2, 80-90mm caliper deciduous trees per tree removed. Replacement trees will be of a large deciduous species conducive to the developed environment such as Bur Oak, Red Oak, Red Maple, Hackberry, American Linden street varieties, Elm varieties resistant to Dutch Elm Disease.

As the site previously contained buildings and parking lots, revisions of impervious surfaces (e.g. parking and proposed buildings) would not significantly impact the amount of water infiltrating into the site's ground.

PROTECTION MEASURES

Preliminary root cutting at the edge of proposed excavation areas prior to any on site excavation would protect the integrity of the existing root system of trees in proximity of the proposed development, refer to Map #2 and MAP #2D - Tree Preservation Notes and Details.

In accordance with the Municipal Trees and Natural Areas Protection By-law No. 2006 – 279, a protection fence is to be erected at vegetation that is to be preserved and set up along the property lines on the north and east sides of the site, as indicated on Map #2. The protection fence shall be erected as per T MAP #2D - Tree Preservation Notes and Details. The protection fence shall be maintained throughout all phases of the development. No work is to be done within the tree protection fence.

The developer is to provide necessary protection against any construction site runoff into the treed areas.

No storage, vehicular traffic or other construction activities to take place within the treed areas.

SPECIFIC PROTECTION MEASURES

All protection measures shall follow Municipal Trees and Natural Areas Protection By-law No. 2006 – 279

PLANTING RECOMMENDATIONS

Planting a mix of indigenous (or cultivars there of) deciduous street trees along March Road and Solandt Road. Where road conditions are not amenable to indigenous, non-invasive, non-indigenous species will be selected.

If any of the trees slated to remain require removal due to proximity of construction, they should be replaced at a replacement ratio of 2:1. Replace with 80-90mm diameter indigenous deciduous trees conducive to the developed environment such as Bur Oak, Red Oak, Red Maple, Hackberry, American Linden street varieties, Elm varieties resistant to Dutch Elm Disease.

Prepared by

Marietta Ruhland, OALA Senior Landscape Architect Ruhland & Associates Limited

March 31, 2020

2019 AERIAL



2017 City Aerial





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OFFICE DEVELOPMENT - 3026 SOLANDT ROAD

PLANT ID #	LOCATION	SIZE DBH* / ht. (cm)	DISTINCTIVE TREE**	ACTION	COMMON NAME	BOTANICAL NAME	COMMENTS	RATIONALE
1	PRIVATE	30		REMOVE	CRAB APPLE	MALUS VARIETY	GOOD CONDITION	WITHIN BUILDING
2	PRIVATE	30		REMOVE	SCOT'S PINE	PINUS SYLVESTRIS	FAIRLY GOOD CONDITION	WITHIN BUILDING
3	PRIVATE	4x40		REMOVE	MUGHO PINE	PINUS MUGO	POOR CONDITION	WITHIN BUILDING
4	PRIVATE	50		REMOVE	SUGAR MAPLE	ACER SACCHARUM	POOR CONDITION	WITHIN BUILDING
5	PRIVATE	40		REMOVE	SUGAR MAPLE	ACER SACCHARUM	GOOD CONDITION	WITHIN BUILDING
6	PRIVATE	40		REMOVE	CRAB APPLE	MALUS VARIETY	FAIR CONDITION	WITHIN BUILDING
6a	PRIVATE	40		REMOVE	CRAB APPLE	MALUS VARIETY	POOR CONDITION	WITHIN BUILDING
7	PRIVATE	80		RETAIN ^^	BUR OAK	QUERCUS MACROCARPA	FAIR CONDITION	Refer to assessment by IFS
8	CITY	50		REMOVE	BUR OAK	QUERCUS MACROCARPA	VERY GOOD CONDITION	WITHIN ENTRANCE ROAD
9	PRIVATE	40		REMOVE	CRAB APPLE	MALUS VARIETY	FAIRLY GOOD CONDITION	WITHIN ENTRANCE ROAD
10	PRIVATE	20		REMOVE	CRAB APPLE	MALUS VARIETY	FAIRLY GOOD CONDITION	WITHIN ENTRANCE ROAD
11	PRIVATE	3x50		REMOVE	CRAB APPLE	MALUS VARIETY	FAIRLY GOOD CONDITION	WITHIN ENTRANCE ROAD
12	PRIVATE	2x20		REMOVE	MUGHO PINE	PINUS MUGO	FAIR CONDITION	WITHIN PARKING LOT
13	CITY	50		RETAIN ^^	SUGAR MAPLE	ACER SACCHARUM	GOOD CONDITION	Refer to assessment by IFS
14	PRIVATE	60		RETAIN ^^	BUR OAK	QUERCUS MACROCARPA	VERY GOOD CONDITION	Refer to assessment by IFS
15	PRIVATE	20		REMOVE	TREE LILAC	SYRINGA RETICULATA	FAIRLY GOOD CONDITION	WITHIN PARKING LOT
16	PRIVATE	2x20		REMOVE	SCOT'S PINE	PINUS SYLVESTRIS	GOOD CONDITION	WITHIN PARKING LOT
17	CITY	60		REMOVE	BUR OAK	QUERCUS MACROCARPA	POOR - CROWN PARTIALLY DEAD	CRZ WITHIN EXCAVATION
18	PRIVATE	15		REMOVE	MUGHO PINE	PINUS MUGO	FAIR CONDITION	WITHIN PARKING LOT
19	PRIVATE	3x45		REMOVE	TREE LILAC	SYRINGA RETICULATA	GOOD CONDITION	WITHIN PARKING LOT
20	PRIVATE	20		REMOVE	SCOT'S PINE	PINUS SYLVESTRIS	FAIRLY GOOD CONDITION	WITHIN PARKING LOT
21	PRIVATE	15		REMOVE	MUGHO PINE	PINUS MUGO	FAIR CONDITION	WITHIN PARKING LOT
22	PRIVATE	15		REMOVE	MUGHO PINE	PINUS MUGO	FAIR CONDITION	WITHIN PARKING LOT
23	PRIVATE	15		REMOVE	AMERICAN LINDEN	TILIA AMERICANA CULTURAL	FAIRLY GOOD CONDITION	WITHIN PARKING LOT
24	PRIVATE	25		REMOVE	AMERICAN LINDEN	TILIA AMERICANA CULTURAL	GOOD CONDITION	WITHIN PARKING LOT
25	PRIVATE	30		REMOVE	PINE SCOT'S	PINUS SYLVESTRIS	FAIRLY GOOD CONDITION	WITHIN PARKING LOT
26	PRIVATE	25		REMOVE	CRAB APPLE	MALUS VARIETY	GOOD CONDITION	WITHIN PARKING LOT
27	PRIVATE	30		REMOVE	CRAB APPLE	MALUS VARIETY	GOOD CONDITION	WITHIN PARKING LOT
28	PRIVATE	20		REMOVE	TREE LILAC	SYRINGA RETICULATA	GOOD CONDITION	WITHIN PARKING LOT
29	PRIVATE	20		REMOVE	CRAB APPLE	MALUS VARIETY	GOOD CONDITION	WITHIN PARKING LOT
30	PRIVATE	15		REMOVE	CRAB APPLE	MALUS VARIETY	FAIR CONDITION	WITHIN PARKING LOT
31	PRIVATE	40		REMOVE	NORWAY MAPLE	ACER PLATANOIDES	GOOD CONDITION	WITHIN PARKING LOT
32	PRIVATE	35		REMOVE	NORWAY MAPLE	ACER PLATANOIDES	GOOD CONDITION	WITHIN PARKING LOT
33	PRIVATE	20		REMOVE	CRAB APPLE	MALUS VARIETY	GOOD CONDITION	WITHIN PARKING LOT
34	PRIVATE	2.0-4.0m ht.		RETAIN	THUJA OCCIDENTALIS	WHITE CEDAR HEDGE	FAIR - OVERGROWN	PRUNE FOR VINES /

^^ REFER TO ADDITONAL ASSESSMENT COMPLETED BY IFS - IN BODY OF TCR.

* DBH - Diameter at Breast Height

** $\sqrt{-1}$ - Distinctive Tree (By-Law 2009-200)

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		sc
		dr

NOTES:

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Although retention for Tree # 14 (58cm DBH Bur Oak) are considered low, this tree is planned for retention.

The remainder of the trees along Solandt Road are to be removed. Tree #8, (51 cm DBH Bur Oak in good condition, is located in the middle of the entrance road and Tree # 17 (49 DBH Bur Oak in poor condition) is slated for removal due to tree condition.

D	drawing MAP # 1 - EXISTING VEGETATION CHART						
	scale 1:750	date Mar. 31, 2020	project no. 19-1607	dwg. no.			
	drawn by M.Malkov	checked by M.Ruhland	revision no. 01	MAP #1A			





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TREE CONSERVATION NOTES:

Feasibility of retaining Trees #7 and #13 to be reviewed by a qualified arborist prior to construction start up. It is noted that excavation for the development of the building, parking lot, roadways and/or sidewalks will be within the CRZ of these trees, therefore the health and long term sustainability of the trees will be affected.

Before construction start up, the following is to be confirmed:

- Limit of excavation relating to the CRZ of the tree
- Overall health of tree and long term sustainability
- Pruning requirements for health of tree and safety of users
- Any additional mitigation measures required beyond those listed in the TCR.

Based on the above, feasibility of preserving these two trees will be made in consultation with the City of Ottawa Forestry Department. If it is determined that one or both of these trees cannot be preserved, they will be replaced with 2, 80-90mm caliper deciduous trees per tree removed. Replacement trees will be of a large deciduous species conducive to the developed environment such as Bur Oak, Red Oak, Red Maple, Hackberry, American Linden street varieties, Elm varieties resistant to Dutch Elm Disease.

38x38x2400 mm STEEL POST 1200 mm PLASTIC SNOW FENCE EXISTING TREES EXISTING TREE 38x38x2400mm 'T' RAIL 3000 O.C. MAX 1200 MM PLASTIC SNOW FENCE (ORANGE) PLACED ±300MM ABOVE GRADE. ELEVATION

NOTES

- 1. PROVIDE PROTECTION FOR TREES SHOWN AS REQUIRING PROTECTION ON CONTRACT DRAWINGS USING METHOD SHOWN. WHERE OPERATIONS THREATEN OTHER NEARBY TREES, APPLY SAME MEASURES.
- 2. PROTECT ROOTS OF ALL TREES AS SHOWN ABOVE, NO EXCAVATION, FILLING, STORAGE OF MATERIALS.
 - DISPOSAL OF CHEMICALS. VEHICLE TRAFFIC, OR OTHER ACTIVITY WHICH COULD CAUSE DISTURBANCE OF SOIL ROOT AREA. INCLUDING SOIL COMPACTION SHALL TAKE PLACE WITHIN THE PROTECTED AREA.
- THE CITY OF OTTAWA TREES BY- LAW REQUIRES THAT CONTRACTORS WORKING NEAR TREES MUST
- ERECT A FENCE AT THE CRITICAL ROOT ZONE (CRZ) OF TREES;
- NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRZ OF THE TREE;
- NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
- NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ WITHOUT APPROVAL
- TUNNEL OR BORE WHEN DIGGING WITHIN THE CRZ OF A TREE;
- NOT DAMAGE THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREE;
- ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARDS ANY TREE'S CANOPY

CRITICAL ROOT ZONE (CRZ) OF A TREE:

D (DIAMETER OF TRUNK IN CENTIMETERS) X 10CM = CRITICAL ROOT ZONE. THE CRITICAL ROOT ZONE IS ESTABLISHED AS BEING 10 CENTIMETRES FROM THE TRUNK OF A TREE FOR EVERY CENTIMETRE OF TRUNK DIAMETER, THE TRUNK DIAMETER IS MEASURED AT A HEIGHT OF 1.2 METRES FOR TREES OF 15 CENTIMETRES DIAMETER AND GREATER AND AT A HEIGHT OF 0.3 METRES FOR TREES OF LESS THAN 15 CENTIMETRES DIAMETER. THE CONTRACTOR MUST OBTAIN ALL PERMITS AND APPROVALS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CALL A CITY TREE INSPECTOR WHEN WORK IS REQUIRED NEAR A CITY TREE

TREE PROTECTION AND ROOT CUTTING DETAIL

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PLACE FENCE AT EDGE OF TREE PRESERVATION ZONE (CRZ)



ROOT CUTTING PRIOR TO EXCAVATION

D	drawing	TREE PRESERVATION NOTES & DETAILS					
	scale 1:750	date Mar. 31, 2020	project no. 19-1607	dwg. no.			
	drawn by M.Malkov	checked by M.Ruhland	revision no. 01	D-01			