RON KOUDYS LANDSCAPE ARCHITECTS INC

1161 OLD MONTREAL ROAD
ORLEANS, ONTARIO

ARCH CORPORATION LTC (ORLEANS) (21024)

TREE CONSERVATION REPORT
FOR SITE PLAN APPROVAL

PREPARED BY:	RON KOUDYS LANDSCAPE ARCHITECTS INC
DATE:	NOVEMBER 2021
RKLA PROJECT #:	21-164

CERTIFIED ARBORIST ISA TM

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1.0 Introduction and Executive Summary

1.1 Introduction

Ron Koudys Landscape Architects Inc. (RKLA) was retained by Arch Corporation to prepare a tree conservation report in conjunction with the proposed development of a long term care facility at 1161 Old Montreal Road in Orleans Ontario. The intent of this report is to summarize the findings of the tree assessment and make recommendations regarding tree preservation and removal based on tree health and expected construction impacts based on the site plan and grading/servicing plan for the purpose of application for site plan approval.

1.2 Executive Summary

The inventory captured 129 individual trees. Trees were identified within the subject site, within 3 meters of the legal property boundary, and within the City ROW of Famille-Laporte Ave adjacent to the site. No tree species classified as 'endangered', 'threatened', or 'at risk' under the Ontario Endangered Species Act, 2007, S.O. 2007, c. 6 of any size were observed during the tree inventory. All trees observed are common to the current land uses and can be characterized as anthropogenic or opportunistic. According to schedules F to O of the City of Ottawa Tree Protection By-law (No. 2020-340), the subject site is within the existing urban boundary limit and not in the green belt. There are several boundary trees associated with this site - refer to Section 4 of this report for detail.

The majority of trees within the subject site are located in a dense group near the South East corner of the site. Trees in this group range in size from 5cm DBH to 50cm DBH; most of the trees with a DBH <10cm are *Quercus macrocarpa* or *Fraxinus spp*. Trees with a DBH of 10cm or greater that were identified and assessed in this group are 80% Q. macrocarpa, with *Fraxinus spp*., *Ulmus spp*., *Populus tremuloides*, and *Tilia Americana* making up the remaining 20%. Overall, the stand of trees is in fair condition in terms of individual structural form and good condition in terms of structural integrity. Tree spacing is dense, with trees as close as 1m apart in many instances which has limited canopy development. No specimens in terms of size or quality were observed.

1.2.1 Tree Species Composition Chart

The following chart summarizes the amount of each tree species observed and included in the tree inventory and assessment. (trees with a DBH of 10cm or greater)

%	Qty	Botanical Name	Common Name
60%	78	Quercus macrocarpa	Bur Oak
6%	8	Acer rubrum	Native Red Maple
6%	8	Quercus rubra	Red Oak
5%	6	Acer saccharum	Sugar Maple
5%	6	Fraxinus spp	Ash
5%	6	Gleditsia triacanthos var. inermis	Honeylocust
5%	6	Ulmus spp	Elm
4%	5	Populus tremuloides	Trembling Aspen
3%	4	Celtis occidentalis	Hackberry
1%	1	Acer negundo	Manitoba Maple
1%	1	Tilia americana	Basswood
100%	129	Total	

1.2.2 Tree Removal and Preservation Recommendations Chart

The following tree preservation/removal recommendations are categorized into location/ownership.

	Subject Site		City ROW (Municipal Trees)		Private Property Beyond Subject Site		Boundary Tree - Subject Site & Adjacent Private Property		TOTAL
	QTY	ID #	QTY	ID #	QTY	ID #	QTY	ID #	QTY
Trees to be Preserved	6	233-238	22	207, 211-232	7	21, 59, 84, 85, 85b, 89 & 92	0		35
Trees to be Removed	84	1-20, 22-57, 60-83, 87, 88, 93, 94, 96-103, 105, 106 & 107	4	208, 209, 210 & 224	1	104	5	58, 86, 90, 95 & 108	94
								TOTAL	129

1.2.3 Tree Removal and Preservation Recommendations

- Acquire written consent from neighbouring land owners for removal of 5 boundary trees and 1 tree on private property beyond the subject site. Refer to section 4 of this report for details.
- Coordinate with City of Ottawa Urban Forestry for the removal of 4 trees within the Blvd along Famille-Laporte Ave.
- Remove 84 trees from the subject site due to conflict with the proposed development and required construction.
- Follow pre, during, and post construction recommendations outlined in the Construction Impact Mitigation Recommendations in this report.

2.0 Subject Site and Scope of Work

The subject site is 1161 Old Montreal Road. It is bordered on three sides by single family residential lots.

This site has no existing interior trees. Existing trees include trees within the Blvd of Famille-Laporte Ave, 6 trees along the north property line, and a dense stand of trees in the South East corner, the majority of which are Bur Oak.

The scope of this tree inventory includes the subject site as well as trees within 3m of the subject site property line. Refer to Figure 1 for scope of tree inventory.

Figure 1 - Image capture from GeoOttawa with 2019 aerial
Red dashed line - limit of tree inventory
Blue line - dense group of trees

3.0 METHODOLOGY

Field work was completed on October 14, 2021 by RKLA staff member Michelle Peeters, ISA certified arborist ON 2129A. A detailed topographic survey provided by McIntosh Perry Surveying Inc. was used as a base for the field work and determined tree location/ownership. All trees with a minimum DBH of 10cm within the given scope were identified and assessed. Trees within the City ROW (municipal trees) were not tagged or flagged. Trees on private property were flagged or painted with tree identification numbers by the surveyors. Note that some multistem trees were flagged or painted with multiple identification numbers, but were assessed by RKLA as single trees. Tree identification numbers are noted in the tree data table within this report and on the corresponding tree preservation plan(s)

Tree identification numbers for municipal trees include: 207-232 (26 total)

Tree identification numbers for trees on private property include: 1-108 (97 total)

- note that some multistem trees have multiple tree identification numbers
- note that 1 tree (tree ID #85b) which was not included in the survey was included in the inventory by RKLA

The following information was recorded for each individual tree:

Genus + specific epithet (Species)
Diameter at breast height (DBH) (centimetres)
Crown radius (metres)
Crown Condition (overall general vigour of crown)
Structural Form (excellent, good, fair, poor)
Structural Condition (good, fair, poor, hazard)
General Comments

3.1 HEALTH ASSESSMENT

Trees were assessed following accepted arboricultural techniques and best practices using a limited visual inspection. The inspection included a 360 degree visual examination of the above-ground parts of each tree for structural defects including cavities, wounds, scars, external indicators of internal decay, evidence of insect presence, discoloured or deformed foliage, canopy and root distribution, and the overall condition of the tree. Evaluation of tree health was based on visible tree health indicators including live buds, foliage condition, deadwood, structural defects, form, and signs of disease or insect infestation. Field observations were reviewed against available online imagery of the site to assist in determining tree canopy health. Quantified health assessments included in the inventory are explained here:

<u>Crown Condition Assessment</u>

5 Healthy: less than 10% crown decline
4 Slight decline: 11% - 30% crown decline
3 Moderate decline: 31% - 60% crown decline
2 Severe decline: 61% - 90% crown decline
1 Dead - No visible indication of living foliage or buds in crown

Structural Form Assessment

Excellent: An ideal expression of a specific tree species, true to form, balanced canopy, good flare, typical internode length, full crown, etc.

Good: A satisfactory and generally expected expression of a specific tree species, with only minor or typical variances from an ideal form.

Fair: Nearly satisfactory, with defects or a combination of defects such as codominant leaders, unbalanced crown, poor/no flare, shortened internodes, has been poorly pruned, etc.

Poor: Significantly flawed expression of a specific tree species

Structural Integrity Assessment

Good: Defects if present are minor (e.g. twig dieback, small wounds); defective tree part is small (e.g. 5-8 cm diameter limb) providing little if any risk.

Fair: Defects are numerous or significant (e.g. dead scaffold limbs); defective parts are moderate in size (e.g. limb greater than 5-8 cm in diameter).

Poor: Defects are severe (trunk cavity in excess of 50%); defective parts are large (e.g. majority of crown).

Hazard: Defects are severe and acute; defective part or collective defective parts render the tree a high risk threat to potential targets.

3.2 Critical Root Zones

The critical root zone of a tree is the portion of the root system that is the minimum necessary to maintain tree vitality and stability. Critical root zones are commonly prescribed by municipal bylaws based solely on DBH and/or drip line, and are typically expressed as a circular shape around the tree. There are a number of other factors, however, that are considered when establishing a critical root zone.

Factors that inform location and extent of a tree preservation barriers to protect the critical root zone include: species tolerance to root loss and other construction impacts (as established by authoritative resources and professional experience), tree trunk size (DBH), tree health and vigour, structural condition, landscape context, soil type, moisture availability, topography, ground cover, crown size (drip line) and balance, current physical root restrictions, visible root arrangement, relationship to neighbouring trees, relationship between tree and proposed construction, type of proposed construction, etc.

The City of Ottawa Tree Protection By-law (No. 2020-340) defines the Critical Root Zone as *"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".* The Tree Preservation drawing graphically represents this radius for trees on private property to be preserved. Critical root zones will be protected with tree protection fencing - see Ottawa Tree Protection Specification on sheet T1.

4.0 Boundary Tree Legislation

There are 5 boundary trees and 1 tree within private property beyond the subject site that have been recommended for removal due to conflict with the proposed development and construction. Note that, according to provincial legislation, a tree

is considered a boundary tree if any part of the trunk before the first/lowest branch crosses the property line. Boundary trees are shared property of the two (or more) adjacent land owners.

Action associated with boundary trees is governed by provincial legislation:

> *Forestry Act, R.S.O. 1990, c. F.26*
> *Boundary trees*
> *10 (1) An owner of land may, with the consent of the owner of adjoining land, plant trees on the boundary between the two lands. 1998, c. 18, Sched. I, s. 21.*
> *Trees common property*
> *(2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1998, c. 18, Sched. I, s. 21.*
> *Offence*
> *(3) Every person who injures or destroys a tree growing on the boundary between adjoining lands without the consent of the land owners is guilty of an offence under this Act. 1998, c. 18, Sched. I, s. 21.*

Consent from the neighbouring land owners is required for lawful removal of these trees. It is the responsibility of the developer to adhere to the legislation.

4.1 Boundary Tree Table

The following chart summarizes the 6 trees that fall under the umbrella of this legislation.

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION / OWNERSHIP	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES IMPACT MITIGATION CONSENT REQUIREMENTS
58	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1195 Old Montreal Rd	15	2	4	fair	good	Low branched	conflict with proposed site plan and grading	remove	Consent from owner of 1195 Old Montreal Rd required
86	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	18	3	5	fair	fair	Wire fence grown through and around trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
90/91	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	~50, 20, 15	6	5	fair	good	Multistem 3, primary union at grade, wire fence grown through trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
95	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	28	4	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
108	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	10, 8, 4	2.5	5	fair	fair	Multistem 3, branched to grade	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
104	*Acer negundo*	Manitoba Maple	1171 Old Montreal Rd	13, 10, 10	3.5	5	fair	fair	Multistem 3, primary union at grade	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required

5.0 Tree Inventory and Preservation/Removal Recommendations

5.1 Tree Data Table

The following recommendations are based on tree health/condition, and construction requirements of the site plan and grading plan.

Grey indicates recommended removal.

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES IMPACT MITIGATION CONSENT REQUIREMENTS
207	*Celtis occidentalis*	Hackberry	City ROW - Famille Laporte Ave	5	1.25	5	good	good	Blvd, full form	none	preserve	tree protection fence
208	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	9	1.5	5	fair	fair	Blvd, basal wound, significant suckering from base, flattened trunk at base	conflict with proposed site driveway	remove	coordination with City Forestry required
209	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	6	1.25	5	good	fair	Blvd, basal wound, slight trunk bend	conflict with proposed site driveway	remove	coordination with City Forestry required
210	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	6	1	5	good	fair	Blvd, significant basal wound, small vertical trunk wound	conflict with proposed site driveway	remove	coordination with City Forestry required
211	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	7	1	3	poor	poor	Blvd, dead leader, entire "crown" is epicormic growth	none	preserve	none
212	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	6	1	4	fair	fair	Blvd, basal damage, dead wood	none	preserve	none
213	*Celtis occidentalis*	Hackberry	City ROW - Famille Laporte Ave	8	1	5	good	good	Blvd, basal damage	none	preserve	none
214	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	3	0.5	5	fair	fair	Blvd, basal damage, early defoliation	none	preserve	none
215	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	7	1.25	5	good	good	Blvd, unbalanced crown	none	preserve	none
216	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	4	0.75	5	fair	good	Blvd, narrow form	none	preserve	none
217	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	9	1.25	5	fair	fair	Blvd, suckering from base, sealing vertical trunk wound	none	preserve	none
218	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	4	0.5	5	fair	fair	Blvd, trunnk wounds	none	preserve	none
219	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	9	1.5	5	fair	fair	Blvd, significant suckering from base	none	preserve	none
220	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	8	2	5	fair	fair	Blvd, minor basal damage, 3 leaders	none	preserve	none
221	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	8	2.25	5	fair	fair	Blvd, suckering from base, basal wound, diminished leader	none	preserve	none
222	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	6	1.5	5	good	good	Blvd, basal wound	none	preserve	none
223	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	6	1.25	5	good	good	Blvd, full form	none	preserve	none
224	*Celtis occidentalis*	Hackberry	City ROW - Famille Laporte Ave	7	1.5	5	excellent	good	Blvd, full form	conflict with proposed site driveway	remove	coordination with City Forestry required

225	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	/	1	1	poor	poor	Blvd, central leader dead and gone, all remaining living stems are suckers from base	none	preserve	none
226	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	7	1.25	5	excellent	good	Blvd, full form	none	preserve	none
227	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	9	1.5	5	good	fair	Blvd, basal wound, sealed vertical wounds	none	preserve	none
228	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	7	1.5	5	fair	good	Blvd, minor basal wound	none	preserve	none
229	*Celtis occidentalis*	Hackberry	City ROW - Famille Laporte Ave	10	1.5	5	fair	good	Blvd, full form	none	preserve	none
230	*Acer rubrum*	Red Maple	City ROW - Famille Laporte Ave	10	2	5	fair	good	Blvd, minor suckering from base, diminished leader	none	preserve	none
231	*Quercus rubra*	Red Oak	City ROW - Famille Laporte Ave	7	2	5	fair	good	Blvd, curved leader	none	preserve	none
232	*Acer saccharum*	Sugar Maple	City ROW - Famille Laporte Ave	7	1.5	5	good	good	Blvd, minor trunk wounds	none	preserve	none
233	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	22	3.5	5	fair	fair	Lichen on trunk, crossing branches, no flare	none	preserve	none
234	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	24	4	5	fair	good	Lichen on trunk, crossing branches	none	preserve	none
235	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	22	4	5	fair	good	Lichen on trunk, no flare, minor epicormic growth, minor dead wood	none	preserve	none
236	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	20	3.5	5	fair	good	Minor dead wood	none	preserve	none
237	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	22	4	5	fair	good	Unbalanced crown	none	preserve	none
238	*Gleditsia triacanthos var. inermis*	Honeylocust	Subject site	21	3.5	5	fair	good	Minor dead wood	none	preserve	none
1	*Quercus macrocarpa*	Bur Oak	Subject site	10	2	5	fair	good		conflict with proposed site plan and grading	remove	none
2	*Quercus macrocarpa*	Bur Oak	Subject site	20, 18	4	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
3	*Quercus macrocarpa*	Bur Oak	Subject site	15	4	5	fair	good		conflict with proposed site plan and grading	remove	none
4/5/6	*Quercus macrocarpa*	Bur Oak	Subject site	23, 20, 15, 7	5	5	fair	good	Multistem 4, primary union at grade	conflict with proposed site plan and grading	remove	none
7	*Quercus macrocarpa*	Bur Oak	Subject site	23, 10	4	5	fair	good	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
8	*Quercus macrocarpa*	Bur Oak	Subject site	15	2	5	fair	good		conflict with proposed site plan and grading	remove	none
9	*Quercus macrocarpa*	Bur Oak	Subject site	28, 20, 14	6	5	fair	fair	Multistem 3, included bark at primary union	conflict with proposed site plan and grading	remove	none
10	*Quercus macrocarpa*	Bur Oak	Subject site	20, 20	4	5	fair	fair	Multistem 2, included bark at primary union	conflict with proposed site plan and grading	remove	none

11	*Quercus macrocarpa*	Bur Oak	Subject site	29	4	5	fair	fair	Codominant leaders with included bark, primary union at 1.5m from grade	conflict with proposed site plan and grading	remove	none
12	*Quercus macrocarpa*	Bur Oak	Subject site	29	4	5	fair	fair	Codominant leaders with included bark, primary union at 1.5m from grade	conflict with proposed site plan and grading	remove	none
13	*Quercus macrocarpa*	Bur Oak	Subject site	25, 21	6	5	fair	fair	Multistem 2, included bark at primary union, low branched	conflict with proposed site plan and grading	remove	none
14	*Ulmus spp*	Elm	Subject site	22	3	5	fair	good		conflict with proposed site plan and grading	remove	none
15	*Quercus macrocarpa*	Bur Oak	Subject site	12, 11	3	4	fair	poor	Multistem 2, basal rot	conflict with proposed site plan and grading	remove	none
16	*Quercus macrocarpa*	Bur Oak	Subject site	19	6	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
17	*Quercus macrocarpa*	Bur Oak	Subject site	23, 12, 11	5	5	fair	fair	Multistem 3, included bark at primary union	conflict with proposed site plan and grading	remove	none
18	*Quercus macrocarpa*	Bur Oak	Subject site	23, 17, 9	5	5	fair	fair	Multistem 3	conflict with proposed site plan and grading	remove	none
19	*Quercus macrocarpa*	Bur Oak	Subject site	23, 9	3	5	fair	fair	Multistem 2, low branched	conflict with proposed site plan and grading	remove	none
20	*Quercus macrocarpa*	Bur Oak	Subject site	15	2	4	fair	fair	Low branched, dead wood	conflict with proposed site plan and grading	remove	none
21	*Quercus macrocarpa*	Bur Oak	681 Cartographe St	15-20	5	5	fair	fair	Multistem 5, dense crown	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
22	*Quercus macrocarpa*	Bur Oak	Subject site	16	3	5	fair	good	Unbalanced crown, supressed	conflict with proposed site plan and grading	remove	none
23	*Quercus macrocarpa*	Bur Oak	Subject site	7	1.5	5	fair	good	Unbalanced crown, supressed	conflict with proposed site plan and grading	remove	none
24	*Quercus macrocarpa*	Bur Oak	Subject site	14	2	5	fair	fair	Codominant leaders	conflict with proposed site plan and grading	remove	none
25	*Quercus macrocarpa*	Bur Oak	Subject site	18	4	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
26	*Quercus macrocarpa*	Bur Oak	Subject site	10	4	5	fair	fair	Unbalanced crown, bent leader	conflict with proposed site plan and grading	remove	none
27	*Quercus macrocarpa*	Bur Oak	Subject site	8	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
28	*Quercus macrocarpa*	Bur Oak	Subject site	9	3	5	fair	good	Brush piled against trunk	conflict with proposed site plan and grading	remove	none
29	*Quercus macrocarpa*	Bur Oak	Subject site	21, 18	6	5	fair	fair	Multistem 2, included bark at primary union	conflict with proposed site plan and grading	remove	none
30	*Quercus macrocarpa*	Bur Oak	Subject site	14	3	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
31	*Quercus macrocarpa*	Bur Oak	Subject site	13	3	5	fair	good	Curved leader	conflict with proposed site plan and grading	remove	none
32	*Quercus macrocarpa*	Bur Oak	Subject site	9	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
33	*Quercus macrocarpa*	Bur Oak	Subject site	10	2	5	fair	good	Fused at base with tree #34	conflict with proposed site plan and grading	remove	none

34	*Quercus macrocarpa*	Bur Oak	Subject site	14	2.5	5	fair	good	Fused at base with tree #33	conflict with proposed site plan and grading	remove	none
35	*Quercus macrocarpa*	Bur Oak	Subject site	16	3	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
36/37	*Quercus macrocarpa*	Bur Oak	Subject site	23, 15	5	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
38	*Quercus macrocarpa*	Bur Oak	Subject site	17, 6	4	5	fair	fair	Multistem 2, unbalanced crown	conflict with proposed site plan and grading	remove	none
39	*Quercus macrocarpa*	Bur Oak	Subject site	13	4	5	fair	fair	1 low large scaffold branch	conflict with proposed site plan and grading	remove	none
40	*Quercus macrocarpa*	Bur Oak	Subject site	10	4	5	fair	fair	Diminished leader	conflict with proposed site plan and grading	remove	none
41	*Quercus macrocarpa*	Bur Oak	Subject site	21, 9	5	5	fair	fair	Multistem 2, supressed	conflict with proposed site plan and grading	remove	none
42	*Ulmus spp*	Elm	Subject site	20	2.5	5	fair	good		conflict with proposed site plan and grading	remove	none
43	*Quercus macrocarpa*	Bur Oak	Subject site	10	3	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
44/45	*Quercus macrocarpa*	Bur Oak	Subject site	13, 12	3	5	fair	good	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
46	*Tilia americana*	Basswood	Subject site	21, 12, 9, 5	4	5	fair	fair	Multistem 4, primary union at grade, minor sap sucker trunk damage	conflict with proposed site plan and grading	remove	none
47	*Quercus macrocarpa*	Bur Oak	Subject site	10	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
48	*Quercus macrocarpa*	Bur Oak	Subject site	10	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
49	*Quercus macrocarpa*	Bur Oak	Subject site	19, 19, 18, 17, 17, 10, 8	6	5	fair	fair	Multistem 7, primary union at and just above grade	conflict with proposed site plan and grading	remove	none
50/51	*Quercus macrocarpa*	Bur Oak	Subject site	24, 21, 17	5	4	fair	fair	Multistem 3, 17DBH stem is dead with girdling chain around it at 1.5m from grade, primary union below grade	conflict with proposed site plan and grading	remove	none
52	*Quercus macrocarpa*	Bur Oak	Subject site	27	3	4	poor	hazard	Significant trunk cavity (can see through trunk) and trunk bulge	conflict with proposed site plan and grading	remove	none
53	*Quercus macrocarpa*	Bur Oak	Subject site	15	3	4	fair	fair	Trunk fused to tree #52	conflict with proposed site plan and grading	remove	none
54/55	*Quercus macrocarpa*	Bur Oak	Subject site	16, 13	3	5	fair	fair	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
56/57	*Quercus macrocarpa*	Bur Oak	Subject site	13, 12	3	5	fair	fair	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
58	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1195 Old Montreal Rd	15	2	4	fair	good	Low branched	conflict with proposed site plan and grading	remove	Consent from owner of 1195 Old Montreal Rd required
59	*Quercus macrocarpa*	Bur Oak	1195 Old Montreal Rd	21	3	4	fair	good	Low branched	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
60	*Quercus macrocarpa*	Bur Oak	Subject site	19	2	4	fair	good	Codominant leaders	conflict with proposed site plan and grading	remove	none

61/62	*Quercus macrocarpa*	Bur Oak	Subject site	18, 15	3	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
63	*Quercus macrocarpa*	Bur Oak	Subject site	13	2	5	fair	good		conflict with proposed site plan and grading	remove	none
64	*Fraxinus spp*	Ash	Subject site	11	3	4	fair	poor	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
65	*Quercus macrocarpa*	Bur Oak	Subject site	15	1.5	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
66	*Quercus macrocarpa*	Bur Oak	Subject site	13	1.5	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
67	*Quercus macrocarpa*	Bur Oak	Subject site	17	4	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
68	*Quercus macrocarpa*	Bur Oak	Subject site	18	4	5	fair	good	Adjacent to large compost pile, grapevine into crown	conflict with proposed site plan and grading	remove	none
69&71	*Quercus macrocarpa*	Bur Oak	Subject site	13, 12	3	5	fair	good	Multistem 2, primary union below grade	conflict with proposed site plan and grading	remove	none
70	*Quercus macrocarpa*	Bur Oak	Subject site	13	2	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
72	*Ulmus spp*	Elm	Subject site	15	3	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
73	*Ulmus spp*	Elm	Subject site	13	2	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
74	*Quercus macrocarpa*	Bur Oak	Subject site	30, 30	5	2	fair	fair	Multistem 2, primary union at 1m from grade, included bark at primary union, about 50% of crown is dead	conflict with proposed site plan and grading	remove	none
75	*Fraxinus spp*	Ash	Subject site	12	2	2	poor	poor	Open trunk splits with visible EAB galleries	conflict with proposed site plan and grading	remove	none
76	*Fraxinus spp*	Ash	Subject site	11, 3	2	3	fair	fair	Multistem 2, no visible EAB galleries	conflict with proposed site plan and grading	remove	none
77/78	*Quercus macrocarpa*	Bur Oak	Subject site	17, 11	3	5	fair	fair	Multistem 2, primary union just above grade, low branched, dead wood	conflict with proposed site plan and grading	remove	none
79	*Quercus macrocarpa*	Bur Oak	Subject site	28	4	4	fair	fair	Low branched, knobby unions	conflict with proposed site plan and grading	remove	none
80/81	*Fraxinus spp*	Ash	Subject site	14, 12, 6, 5	2.5	4	fair	fair	Multistem 4, clustered primary union at grade, suckering from base, minor bark splitting	conflict with proposed site plan and grading	remove	none
82	*Fraxinus spp*	Ash	Subject site	10	1.5	3	fair	fair	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
83	*Quercus macrocarpa*	Bur Oak	Subject site	51	7	2	fair	fair	Top third of canopy dead, trunk girdling by fence	conflict with proposed site plan and grading	remove	none
84	*Quercus macrocarpa*	Bur Oak	1171 Old Montreal Rd	42	5	5	fair	fair	Epicormic growth	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
85	*Quercus macrocarpa*	Bur Oak	1171 Old Montreal Rd	48	7	5	fair	poor	Codominant leaders, trunk cavity at primary union, dead wood and rot in one leader	less than 5% of critical root zone expected to be removed	preserve	tree protection barrier
85b	*Quercus macrocarpa*	Bur Oak	1171 Old Montreal Rd	18	3	5	fair	good	Supressed	none	preserve	tree protection barrier

86	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	18	3	5	fair	fair	Wire fence grown through and around trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
87	*Fraxinus spp*	Ash	Subject site	16	2	3	fair	poor	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
88	*Quercus macrocarpa*	Bur Oak	Subject site	20	4	5	fair	fair	Low branched	conflict with proposed site plan and grading	remove	none
89	*Quercus macrocarpa*	Bur Oak	1171 Old Montreal Rd	28	6	5	fair	good	Unbalanced crown	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
90/91	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	~50, 20, 15	6	5	fair	good	Multistem 3, primary union at grade, wire fence grown through trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
92	*Quercus macrocarpa*	Bur Oak	1171 Old Montreal Rd	22	4	5	good	good	Supressed	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
93	*Quercus macrocarpa*	Bur Oak	Subject site	12	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
94	*Quercus macrocarpa*	Bur Oak	Subject site	25	3.5	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
95	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	28	4	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
96	*Ulmus spp*	Elm	Subject site	11	3	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
97	*Populus tremuloides*	Trembling Aspen	Subject site	11	2	5	fair	good	S curve in trunk	conflict with proposed site plan and grading	remove	none
98	*Populus tremuloides*	Trembling Aspen	Subject site	10	1.5	5	good	good		conflict with proposed site plan and grading	remove	none
99	*Ulmus spp*	Elm	Subject site	15	2	5	fair	good	Grapevine through crown	conflict with proposed site plan and grading	remove	none
100	*Populus tremuloides*	Trembling Aspen	Subject site	14	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
101	*Populus tremuloides*	Trembling Aspen	Subject site	17	3	5	fair	good		conflict with proposed site plan and grading	remove	none
102	*Populus tremuloides*	Trembling Aspen	Subject site	10	1.5	5	good	good		conflict with proposed site plan and grading	remove	none
103	*Quercus macrocarpa*	Bur Oak	Subject site	13	1.5	5	fair	good	Low branched	conflict with proposed site plan and grading	remove	none
104	*Acer negundo*	Manitoba Maple	1171 Old Montreal Rd	13, 10, 10	3.5	5	fair	fair	Multistem 3, primary union at grade	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
105	*Quercus macrocarpa*	Bur Oak	Subject site	16	2.5	5	good	good	Low branched	conflict with proposed site plan and grading	remove	none
106	*Quercus macrocarpa*	Bur Oak	Subject site	8	1	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
107	*Quercus macrocarpa*	Bur Oak	Subject site	18	3	5	good	good	Low branched	conflict with proposed site plan and grading	remove	none
108	*Quercus macrocarpa*	Bur Oak	BOUNDARY Subject site & 1171 Old Montreal Rd	10, 8, 4	2.5	5	fair	fair	Multistem 3, branched to grade	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required

6.0 Potential Construction Impacts on Trees

Many trees have been recommended for removal due to direct conflict with the proposed development. Some trees that have been recommended for preservation may be in proximity to the proposed construction. Trees to be preserved may be affected by the construction process, or by the construction itself. It is imperative that the design team and the construction crew understand the potential for, and the causes of tree damage. Trees recommended for preservation may experience some or all of the following potential construction impacts. Strategies and methods to avoid these impacts are outlined in the Construction Impact Mitigation Recommendations section of this report.

6.1 Soil Compaction

Soil compaction is caused by heavy or repeated compression or vibration of the soil around the tree. Soil compaction reduces the amount and size of macro and micro pore space that is vital for subsurface movement of air and water. The harmful effects of soil compaction include, but are not limited to: slower water infiltration, poor aeration, reduced root growth and an overall increased susceptibility to biotic and abiotic stressors.

6.2 Root Loss

Root loss occurs when roots are severed. The majority of roots are typically located within the top 60cm of soil and can extend outward up to three times the extent of the tree drip line. Excavation of any kind within the critical root zone* can sever roots. Two categories of roots need to be considered when evaluating impacts of root loss - small, fibrous absorbing roots, and large structural roots. Significant loss of either or both of these functions can cause stress and/or affect the structural stability of the tree. Note, however, that it is commonly accepted that healthy trees can typically tolerate and recover from the removal of approximately 33% (up to a maximum of 50%) of their root mass. Thorough consideration regarding extent of acceptable root removal is dependent on individual species characteristics, root loss distribution, and site specific conditions *(ref. Trees and Development: A Technical Guide to Preservation of Trees During Land Development by Nelda Matheny and James R. Clark, 1998. Pg 72)*.

* Refer to 'Critical Root Zones" in this report for definition.

6.3 Grade Changes

Lowering of the grade around trees has immediate and long term effects on trees. Lowering of grade requires immediate root loss from cutting the roots which results in water stress from the root removal and potential reduced structural stability.

Raising the grade around a tree can be equally damaging. The addition of fill over the root zone of a tree alters the roots' ability for normal water and gas exchange that is necessary for healthy root growth and stability. Fill essentially suffocates the roots and can lead to the slow and eventual decline of the tree.

6.4 Mechanical Damage

Mechanical damage is caused by physical contact with a tree that damages the tree to any degree. During land development and construction activities, there is an increased risk of both minor and fatal mechanical damage to trees from construction equipment. Minor damage can create entry points for insects and pathogens, and fatal damage can cause irreparable structural damage.

6.5 Changes to Exposure - Sun and Wind

Trees can be negatively affected by increased exposure to sun or wind when neighbouring trees are removed. This can be of particular concern when 'interior trees' (trees that have developed surrounded by other trees) are suddenly exposed to forest edge conditions. These trees may experience higher intensity of direct sunlight resulting in leaf scald, and instability due to increased wind and snow loads.

Trees can be negatively affected by decreased exposure to sunlight. Proposed development that includes tall buildings located to the south and west of mature existing trees can greatly reduce the amount of daily direct sunlight. While this change in environment may not cause the immediate or eventual death of a tree, it can certainly slow development and alter growing habits and patterns, and must therefore be a consideration when evaluating trees for potential preservation.

6.6 Soil Contamination

Soil health around a tree can be compromised by contamination from spills or leaks of fuels, solvents, or other construction related fluids.

6.7 Water Availability

Grading and servicing requirements for development can affect water availability for trees. Trees may experience a loss of available water due to a lowered water table or the capture or redirection of subsurface and/or overland flow. Conversely, trees may experience an increase of available water due to changes in site grading and storm water retention efforts.

The successful survival of the trees to be preserved is largely dependent on adhering to the construction impact mitigation recommendations that follow.

7.0 Construction Impact Mitigation Recommendations

The following general recommendations are provided to guide the removal process, mitigate construction impacts, and ensure compliance with provincial, federal, and municipal regulatory requirements. Some of the recommendations listed below are noted to be undertaken by an ISA certified arborist.

7.1 Pre-construction recommendations

a) Prior to any construction activity, tree preservation fencing is to be installed as per the attached tree preservation drawings and detail.

b) Where high quality specimens to be preserved are adjacent to areas subject to intensive construction activities, these trees are to have additional protection measures implemented to protect their trunks from mechanical damage. These measures may include surrounding the trunk with wood planks. Trees that require additional protection will be clearly identified on the tree preservation plan with detailed information on specific protection measures.
c) Trees approved for removal are to be clearly indicated in the field (marked with spray paint or other agreed upon method) by the project arborist or landscape architect prior to any tree removal operations. All removals to be undertaken by an ISA certified arborist.
d) In accordance with the Migratory Birds Convention Act, 1994, all removals must take place between September 1st and March 31st to avoid disturbing nesting migratory birds. If tree removal occurs between April 1st and August 31st, a biologist is required to complete a search for nests. Once cleared, the contractor has 48 hours to remove. If removal does not occur within 48 hours, another search will be required.
e) Care should be taken during the felling operation to avoid damaging the branches, stems, trunks, and roots of nearby trees to be preserved. Where possible, all trees are to be felled towards the construction zone to minimize impacts on adjacent vegetation. All removals to be undertaken by an ISA certified arborist.
f) It is recommended that the existing ground-layer vegetation at the base of trees to be preserved remain intact within the critical root zone so as not to disturb the soil around the base of the existing trees.
g) Final site grading plans should ensure that the existing soil moisture conditions are maintained.

7.2 RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

a) Tree preservation fencing is to be maintained in good condition and effective for the duration of construction until all construction activity is complete or as per the project arborist or landscape architect.
b) No construction, excavation, adding of fill, stockpiling of construction material, or heavy equipment is permitted within the critical root zone/within the tree preservation fencing.
c) When excavation near a tree is required, and it is anticipated that roots will be severed and exposed, duration of exposure is to be minimized to prevent root desiccation.
d) During the excavation process, roots 25mm or larger that are severed and exposed should be hand pruned to leave a clean-cut surface. To be undertaken by an ISA certified arborist. Exposed severed roots that cannot be covered in soil on the same day as the cuts are made are to be kept moist. Exposed roots are to be kept moist by covering them with water soaked burlap or any other means available to prevent them from drying out.
e) Avoid idling heavy equipment under/within close proximity to trees to be preserved to prevent canopy damage from exposure to exhaust heat.

7.3 Post-construction recommendations

a) Avoid discharging rain water leaders adjacent to retained trees, as this may result in an overly moist environment which can cause root rot.
b) After all work is completed, tree preservation fences and any other impact mitigation paraphernalia must be removed.
c) A final review must be undertaken by the project arborist to ensure that all mitigation measures as described above have been met.

8.0 Disclaimer

The assessment of the trees presented within this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay, evidence of insect presence, discoloured foliage, the general condition of the trees and the surrounding site, as well as the proximity of property and people. None of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour is constantly changing. They are not immune to changes in site conditions or seasonal variations in the weather.

While reasonable efforts have been made to ensure the trees recommended for retention are healthy, no guarantees are offered or implied, that these trees or any part of them will remain standing.

Note that this arborist report has been prepared using the latest drawings and information provided by the client. Any subsequent design or site plan changes affecting trees may require revisions to this report. Any new information or drawings are to be provided to RKLA prior to report submission to planning authorities.

9.0 Contact Information

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ISA Tree Risk Assessment Qualified
Qualified Butternut Assessor BHA #710
OALA full member - landscape architect

10.0 Appendix A - Tree Preservation Plans

EXISTING VEGETATION PLAN

SCALE =1:250

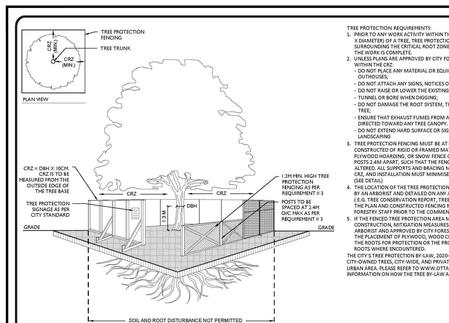
0m 5m 10m 25m

1 : 250

REFER TO TREE CONSERVATION REPORT FOR ADDITIONAL INFORMATION AND DETAIL ABOUT THE INVENTORY AND ASSESSMENT PROCESS

LEGEND

- EXISTING DECIDUOUS TREES TO REMAIN — TREE NUMBER
- EXISTING DECIDUOUS TREES TO BE REMOVED — TREE NUMBER
- EXISTING CONIFEROUS TREES TO REMAIN — TREE NUMBER
- EXISTING CONIFEROUS TREES TO BE REMOVED — TREE NUMBER
- CRITICAL ROOT ZONE - 10cm RADIUS PER 1cm DBH
- TREE PROTECTION BARRIER - SEE DETAIL



ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST

TREE PROTECTION REQUIREMENTS:

1. 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 VEHICLES
   - 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. PLYWOOD - 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. 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. MITIGATION MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCROACHING.

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.

Ottawa

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

TREES TO BE PRESERVED (35 TOTAL)

GENERAL INFORMATION				SIZE	HEALTH & CONDITION					RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION / OWNERSHIP	DBH (cm)	CANOPY RADIUS (m)	CROWN LOCATION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES IMPACT MITIGATION CONSENT REQUIREMENTS
TREES WITHIN SUBJECT SITE (6)												
233	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	5.5	5	fair	fair	Lichen on trunk, crossing branches, no flare	none	preserve	none
234	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	24	4	5	fair	good	Lichen on trunk, crossing branches	none	preserve	none
235	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	4	5	fair	good	Lichen on trunk, no flares, minor epicormic growth, minor dead wood	none	preserve	none
236	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	20	3.5	5	fair	good	Minor dead wood	none	preserve	none
237	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	4	5	fair	good	Unbalanced crown	none	preserve	none
238	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	21	5.5	5	fair	good	Minor dead wood	none	preserve	none
TREES WITHIN PRIVATE PROPERTY ADJACENT TO SUBJECT SITE (7)												
21	Quercus macrocarpa	Bur Oak	681 Cartographe St	15-20	5	5	fair	fair	Multistem 5, dense crown	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
59	Quercus macrocarpa	Bur Oak	995 Old Montreal Rd	21	3.5	4	fair	good	Low branched	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
84	Quercus macrocarpa	Bur Oak	1111 Old Montreal Rd	42	5	5	fair	fair	Epicormic growth	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
85	Quercus macrocarpa	Bur Oak	1111 Old Montreal Rd	40	7	5	fair	poor	Cotorminant leaders, trunk cavity at primary union, dead wood and rot in tree leader	approx. 10% of critical root zone expected to be removed	preserve	tree protection barrier
85b	Quercus macrocarpa	Bur Oak	1111 Old Montreal Rd	18	3.5	5	fair	good	Supressed	none	preserve	tree protection barrier
89	Quercus macrocarpa	Bur Oak	1111 Old Montreal Rd	28	6	5	fair	good	Unbalanced crown	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
92	Quercus macrocarpa	Bur Oak	1111 Old Montreal Rd	22	4	5	good	good	Supressed	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
MUNICIPAL TREES (22)												
209	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	5	1.25	5	good	good	Blvd, full form	none	preserve	tree protection fence
28	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	7	1	3	poor	poor	Blvd, dead leader, entire "crown" is epicormic growth	none	preserve	none
212	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	6	1	4	fair	fair	Blvd, basal damage, dead wood	none	preserve	none
213	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	8	1	5	good	good	Blvd, basal damage	none	preserve	none
214	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	5	0.5	5	fair	fair	Blvd, basal damage, early defoliation	none	preserve	none
215	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1.25	5	good	good	Blvd, unbalanced crown	none	preserve	none
216	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	4	0.75	5	fair	good	Blvd, narrow form	none	preserve	none
217	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.25	5	fair	fair	Blvd, suckering from base, sealing vertical trunk wound	none	preserve	none
218	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	4	0.5	5	fair	fair	Blvd, trunk wounds	none	preserve	none
219	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.5	5	fair	fair	Blvd, significant suckering from base	none	preserve	none
220	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	8	2	5	fair	fair	Blvd, minor basal damage, 1 leaders	none	preserve	none
221	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	8	2.25	5	fair	fair	Blvd, suckering from base, basal wound, diminished leader	none	preserve	none
222	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	6	1.5	5	good	good	Blvd, basal wound	none	preserve	none
223	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	6	1.25	5	good	good	Blvd, full form	none	preserve	none
225	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1	1	poor	poor	Blvd, central leader dead and gone, all remaining living stems are suckers from base	none	preserve	none
226	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	7	1.25	5	healed	good	Blvd, full form	none	preserve	none
227	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.5	5	good	fair	Blvd, basal wound, sealed vertical wounds	none	preserve	none
228	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1.5	5	fair	good	Blvd, minor basal wounds	none	preserve	none
229	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	10	1.5	5	fair	good	Blvd, full form	none	preserve	none
230	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	10	2	5	fair	good	Blvd, minor suckering from base, diminished leader	none	preserve	none
231	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	2	5	fair	good	Blvd, curved leader	none	preserve	none
232	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	7	1.5	5	good	good	Blvd, minor trunk wounds	none	preserve	none

TREES TO BE REMOVED (94 TOTAL)

GENERAL INFORMATION				SIZE	HEALTH & CONDITION					RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION / OWNERSHIP	DBH (cm)	CANOPY RADIUS (m)	CROWN LOCATION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES IMPACT MITIGATION CONSENT REQUIREMENTS
TREES WITHIN SUBJECT SITE (84)												
1	Quercus macrocarpa	Bur Oak	Subject site	10	2	5	fair	good		conflict with proposed site plan and grading	remove	none
2	Quercus macrocarpa	Bur Oak	Subject site	20, 18	4	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
3	Quercus macrocarpa	Bur Oak	Subject site	15	4	5	fair	good		conflict with proposed site plan and grading	remove	none
4/5/6	Quercus macrocarpa	Bur Oak	Subject site	20, 20, 15, 7	5	5	fair	good	Multistem 4, primary union at grade	conflict with proposed site plan and grading	remove	none
7	Quercus macrocarpa	Bur Oak	Subject site	21, 10	4	5	fair	good	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
8	Quercus macrocarpa	Bur Oak	Subject site	15	2	5	fair	good		conflict with proposed site plan and grading	remove	none
9	Quercus macrocarpa	Bur Oak	Subject site	20, 20, 14	6	5	fair	fair	Multistem 5, included bark at primary union	conflict with proposed site plan and grading	remove	none
10	Quercus macrocarpa	Bur Oak	Subject site	20, 20	4	5	fair	fair	Multistem 2, included bark at primary union	conflict with proposed site plan and grading	remove	none
11	Quercus macrocarpa	Bur Oak	Subject site	29	4	5	fair	fair	Cotorminant leaders with included bark, primary union at 15m from grade	conflict with proposed site plan and grading	remove	none
12	Quercus macrocarpa	Bur Oak	Subject site	29	4	5	fair	fair	Cotorminant leaders with included bark, primary union at 15m from grade	conflict with proposed site plan and grading	remove	none
13	Quercus macrocarpa	Bur Oak	Subject site	25, 21	6	5	fair	fair	Multistem 2, included bark at primary union, low branched	conflict with proposed site plan and grading	remove	none
14	Ulmus spp	Elm	Subject site	22	3	5	fair	good		conflict with proposed site plan and grading	remove	none
15	Quercus macrocarpa	Bur Oak	Subject site	12, 11	3	4	fair	poor	Multistem 2, basal rot	conflict with proposed site plan and grading	remove	none
16	Quercus macrocarpa	Bur Oak	Subject site	19	6	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
17	Quercus macrocarpa	Bur Oak	Subject site	21, 12, 9	5	5	fair	fair	Multistem 3, included bark at primary union	conflict with proposed site plan and grading	remove	none
18	Quercus macrocarpa	Bur Oak	Subject site	21, 17, 9	5	5	fair	fair	Multistem 3	conflict with proposed site plan and grading	remove	none
19	Quercus macrocarpa	Bur Oak	Subject site	21, 9	5	5	fair	fair	Multistem 2, low branched	conflict with proposed site plan and grading	remove	none
20	Quercus macrocarpa	Bur Oak	Subject site	15	2	4	fair	fair	Low branched, dead wood	conflict with proposed site plan and grading	remove	none
22	Quercus macrocarpa	Bur Oak	Subject site	16	3	5	fair	good	Unbalanced crown, supressed	conflict with proposed site plan and grading	remove	none
23	Quercus macrocarpa	Bur Oak	Subject site	7	1.5	5	fair	good	Unbalanced crown, supressed	conflict with proposed site plan and grading	remove	none
24	Quercus macrocarpa	Bur Oak	Subject site	14	2.5	5	fair	fair	Cotorminant leaders	conflict with proposed site plan and grading	remove	none
25	Quercus macrocarpa	Bur Oak	Subject site	18	4	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
26	Quercus macrocarpa	Bur Oak	Subject site	10	4	5	fair	fair	Unbalanced crown, bent leader	conflict with proposed site plan and grading	remove	none
27	Quercus macrocarpa	Bur Oak	Subject site	8	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
28	Quercus macrocarpa	Bur Oak	Subject site	9	3	5	fair	good	Brush piled against trunk	conflict with proposed site plan and grading	remove	none
29	Quercus macrocarpa	Bur Oak	Subject site	21, 10	6	5	fair	fair	Multistem 2, included bark at primary union	conflict with proposed site plan and grading	remove	none
30	Quercus macrocarpa	Bur Oak	Subject site	14	5	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
31	Quercus macrocarpa	Bur Oak	Subject site	15	5	5	fair	good	Curved leader	conflict with proposed site plan and grading	remove	none
32	Quercus macrocarpa	Bur Oak	Subject site	9	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
33	Quercus macrocarpa	Bur Oak	Subject site	10	2	5	fair	good	Fused at base with tree #34	conflict with proposed site plan and grading	remove	none
34	Quercus macrocarpa	Bur Oak	Subject site	14	2.5	5	fair	good	Fused at base with tree #33	conflict with proposed site plan and grading	remove	none
35	Quercus macrocarpa	Bur Oak	Subject site	16	3	5	fair	good	Unbalanced crown	conflict with proposed site plan and grading	remove	none
36/37	Quercus macrocarpa	Bur Oak	Subject site	21, 15	5	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
38	Quercus macrocarpa	Bur Oak	Subject site	17, 6	4	5	fair	fair	Multistem 2, unbalanced crown	conflict with proposed site plan and grading	remove	none
39	Quercus macrocarpa	Bur Oak	Subject site	10	4	5	fair	fair	Low large scaffold branch	conflict with proposed site plan and grading	remove	none
40	Quercus macrocarpa	Bur Oak	Subject site	10	4	5	fair	fair	Diminished leader	conflict with proposed site plan and grading	remove	none
41	Quercus macrocarpa	Bur Oak	Subject site	21, 9	5	5	fair	fair	Multistem 2, supressed	conflict with proposed site plan and grading	remove	none
42	Ulmus spp	Elm	Subject site	20	2.5	5	fair	good		conflict with proposed site plan and grading	remove	none
43	Quercus macrocarpa	Bur Oak	Subject site	10	3	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
44/45	Quercus macrocarpa	Bur Oak	Subject site	15, 12	3	5	fair	good	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
46	Tilia americana	Basswood	Subject site	21, 12, 12, 5	4	5	good	good	Multistem 4, primary union at grade, minor sap suker trunk damage	conflict with proposed site plan and grading	remove	none
47	Quercus macrocarpa	Bur Oak	Subject site	10	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
48	Quercus macrocarpa	Bur Oak	Subject site	10	2	5	fair	fair	Supressed	conflict with proposed site plan and grading	remove	none
49	Quercus macrocarpa	Bur Oak	Subject site	19, 17, 16, 6	5	5	fair	fair	Multistem 7, primary union at and just above grade	conflict with proposed site plan and grading	remove	none
50/51	Quercus macrocarpa	Bur Oak	Subject site	24, 21, 17	5	4	fair	fair	Multistem 3, 17/24in stem is dead with girdling chain around it at 15m from grade, primary union below grade	conflict with proposed site plan and grading	remove	none
52	Quercus macrocarpa	Bur Oak	Subject site	27	3	4	poor	hazard	Significant trunk cavity clear through trunk and trunk bulge	conflict with proposed site plan and grading	remove	none
53	Quercus macrocarpa	Bur Oak	Subject site	15	3	4	fair	fair	Trunk fused to tree #52	conflict with proposed site plan and grading	remove	none
54/55	Quercus macrocarpa	Bur Oak	Subject site	16, 13	3	5	fair	fair	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
56/57	Quercus macrocarpa	Bur Oak	Subject site	15, 12	3	5	fair	fair	Multistem 2, primary union at grade	conflict with proposed site plan and grading	remove	none
60	Quercus macrocarpa	Bur Oak	Subject site	19	2	4	fair	good	Cotorminant leaders	conflict with proposed site plan and grading	remove	none
61/62	Quercus macrocarpa	Bur Oak	Subject site	18, 15	3	5	fair	fair	Multistem 2, primary union just above grade	conflict with proposed site plan and grading	remove	none
63	Quercus macrocarpa	Bur Oak	Subject site	15	2	5	fair	good		conflict with proposed site plan and grading	remove	none
64	Fraxinus spp	Ash	Subject site	11	3	4	fair	poor	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
65	Quercus macrocarpa	Bur Oak	Subject site	15	1.5	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
66	Quercus macrocarpa	Bur Oak	Subject site	12	1.5	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
67	Quercus macrocarpa	Bur Oak	Subject site	17	4	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
68	Quercus macrocarpa	Bur Oak	Subject site	18	4	5	fair	good	Adjacent to large compost pile, poor canopy structure	conflict with proposed site plan and grading	remove	none
69/71	Quercus macrocarpa	Bur Oak	Subject site	15, 12	3	5	fair	good	Multistem 2, primary union below grade	conflict with proposed site plan and grading	remove	none
70	Quercus macrocarpa	Bur Oak	Subject site	15	2	5	fair	good	Adjacent to large compost pile	conflict with proposed site plan and grading	remove	none
72	Ulmus spp	Elm	Subject site	15	3	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
73	Ulmus spp	Elm	Subject site	15	2	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
74	Quercus macrocarpa	Bur Oak	Subject site	30, 30	5	2	fair	fair	Multistem 2, primary union at 1m from grade, included bark at primary union, about 50% of crown is dead	conflict with proposed site plan and grading	remove	none
75	Fraxinus spp	Ash	Subject site	12	2	2	poor	poor	Down trunk spills with visible EAB galleries	conflict with proposed site plan and grading	remove	none
76	Fraxinus spp	Ash	Subject site	11, 3	2	5	fair	fair	Multistem 2, no visible EAB galleries	conflict with proposed site plan and grading	remove	none
77/78	Quercus macrocarpa	Bur Oak	Subject site	27, 11	3	5	fair	fair	Multistem 2, primary union just above grade, low branched, dead wood	conflict with proposed site plan and grading	remove	none
79	Quercus macrocarpa	Bur Oak	Subject site	28	4	4	fair	fair	Low branched, knobby unions	conflict with proposed site plan and grading	remove	none
80/81	Fraxinus spp	Ash	Subject site	14, 12, 6, 5	2.5	4	fair	fair	Multistem 4, cluttered primary union at grade, suckering from base, minor bark splitting	conflict with proposed site plan and grading	remove	none
82	Fraxinus spp	Ash	Subject site	10	1.5	5	fair	fair	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
83	Quercus macrocarpa	Bur Oak	Subject site	13	2	5	fair	fair	Top third of canopy dead, trunk pickling by fence	conflict with proposed site plan and grading	remove	none
87	Fraxinus spp	Ash	Subject site	11	2	5	fair	poor	Visible EAB galleries, bark splitting	conflict with proposed site plan and grading	remove	none
88	Quercus macrocarpa	Bur Oak	Subject site	20	4	5	fair	fair	Low branched	conflict with proposed site plan and grading	remove	none
90	Quercus macrocarpa	Bur Oak	Subject site	12	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
94	Quercus macrocarpa	Bur Oak	Subject site	25	5.5	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
96	Ulmus spp	Elm	Subject site	15	3	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	none
97	Populus tremuloides	Trembling Aspen	Subject site	15	2	5	fair	good	S curve in trunk	conflict with proposed site plan and grading	remove	none
98	Populus tremuloides	Trembling Aspen	Subject site	10	1.5	5	good	good		conflict with proposed site plan and grading	remove	none
99	Ulmus spp	Elm	Subject site	15	2	5	fair	good	Grapevine through crown	conflict with proposed site plan and grading	remove	none
100	Populus tremuloides	Trembling Aspen	Subject site	14	2	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
101	Populus tremuloides	Trembling Aspen	Subject site	17	3	5	fair	good		conflict with proposed site plan and grading	remove	none
102	Populus tremuloides	Trembling Aspen	Subject site	10	1.5	5	good	good		conflict with proposed site plan and grading	remove	none
103	Quercus macrocarpa	Bur Oak	Subject site	15	1.5	5	fair	good	Low branched	conflict with proposed site plan and grading	remove	none
105	Quercus macrocarpa	Bur Oak	Subject site	16	2.5	5	good	good	Low branched	conflict with proposed site plan and grading	remove	none
106	Quercus macrocarpa	Bur Oak	Subject site	8	1	5	fair	good	Supressed	conflict with proposed site plan and grading	remove	none
107	Quercus macrocarpa	Bur Oak	Subject site	15	3	5	good	good	Low branched	conflict with proposed site plan and grading	remove	none
TREES WITHIN PRIVATE PROPERTY ADJACENT TO SUBJECT SITE (1)												
104	Acer negundo	Manitoba Maple	1171 Old Montreal Rd	17, 15, 10	3.5	5	fair	fair	Multistem 3, primary union at grade	conflict with proposed site plan and grading	remove	Consent from owner of 1171 Old Montreal Rd required
MUNICIPAL TREES (4)												
208	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.5	5	fair	fair	Blvd, basal wound, significant suckering from base, flattened trunk at base	conflict with proposed site plan and grading	remove	coordination with City Forestry required
210	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	6	1.25	5	good	fair	Blvd, basal wound, slight trunk bend	conflict with proposed site plan and grading	remove	coordination with City Forestry required
211	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	6	1	5	good	fair	Blvd, significant basal wound, small vertical trunk wound	conflict with proposed site plan and grading	remove	coordination with City Forestry required
224	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	7	1.5	5	healed	good	Blvd, full form	conflict with proposed site plan and grading	remove	coordination with City Forestry required
BOUNDARY TREES (5)												
58	Quercus macrocarpa	Bur Oak	BOUNDARY Subject site & 995 Old Montreal Rd	15	2	4	fair	good		conflict with proposed site plan and grading	remove	Consent from owner of 995 Old Montreal Rd required
86	Quercus macrocarpa	Bur Oak	BOUNDARY Subject site & 1111 Old Montreal Rd	18	3	5	fair	fair	Wire fence grown through and around trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1111 Old Montreal Rd required
90/91	Quercus macrocarpa	Bur Oak	BOUNDARY Subject site & 1111 Old Montreal Rd	70, 20, 15	6	5	fair	good	Multistem 3, primary union at grade, were fence grown through trunk	conflict with proposed site plan and grading	remove	Consent from owner of 1111 Old Montreal Rd required
95	Quercus macrocarpa	Bur Oak	BOUNDARY Subject site & 1111 Old Montreal Rd	28	4	5	fair	good	Supressed, unbalanced crown	conflict with proposed site plan and grading	remove	Consent from owner of 1111 Old Montreal Rd required
108	Quercus macrocarpa	Bur Oak	BOUNDARY Subject site & 1111 Old Montreal Rd	10, 8, 4	2.5	5	fair	fair	Multistem 3, branched to grade	conflict with proposed site plan and grading	remove	Consent from owner of 1111 Old Montreal Rd required

#	date:	revision:	by:
5.	DEC.02.2021	ISSUED FOR SPA & ZONING BY-LAW AMENDMENT	MCB
4.	NOV.19.2021	ISSUED FOR 100% DD	MCB
3.	NOV.19.2021	ISSUED FOR ZBA/SPA	MCB
2.	OCT.22.2021	ISSUED FOR 50% DD	MCB
1.	AUG.26.2021	ISSUED FOR 100% SD	MCB

revisions

ARCH CORP LTC ORLEANS

FAMILLE LAPORTE AVE
ORLEANS, ON

TREE PRESERVATION PLAN

scale:	AS NOTED
drawn by:	MCB
reviewed by:	MCB
job number:	21-164.e
plot date:	2021-11-30
drawing number:	T-1

PROPOSED DEVELOPMENT & CONSERVED VEGETATION PLAN

SCALE =1:250

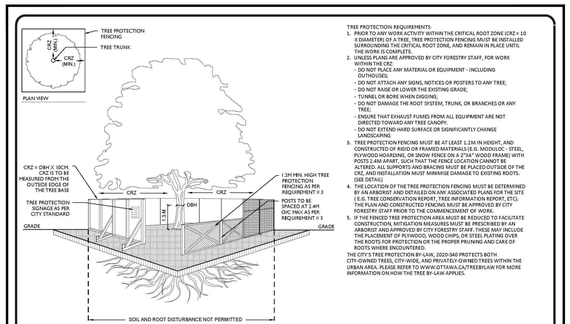
0m 5m 10m 25m

1 : 250

LEGEND

- EXISTING DECIDUOUS TREES TO REMAIN — TREE NUMBER
- EXISTING CONIFEROUS TREES TO REMAIN — TREE NUMBER
- CRITICAL ROOT ZONE - 10cm RADIUS PER cm DBH
- TREE PROTECTION BARRIER - SEE DETAIL

REFER TO TREE CONSERVATION REPORT FOR ADDITIONAL INFORMATION AND DETAIL ABOUT THE INVENTORY AND ASSESSMENT PROCESS



TREE PROTECTION REQUIREMENTS:

1. 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 VEHICLES
   - 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. NOODLOC - 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. THE INSTALLATION MUST MINIMISE DAMAGES 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. MITIGATION MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO 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

Ottawa

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

TREES TO BE PRESERVED (35 TOTAL)

GENERAL INFORMATION				SIZE	HEALTH & CONDITION					RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION / OWNERSHIP	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STEM CONDITION	ROOT FLARE & INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES: IMPACT MITIGATION CONSENT REQUIREMENTS
TREES WITHIN SUBJECT SITE (6)												
233	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	5.5	5	fair	fair	lichen on trunk, crossing branches, no flare	none	preserve	none
234	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	24	4	5	fair	good	lichen on trunk, crossing branches	none	preserve	none
235	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	4	5	fair	good	lichen on trunk, no flare, minor epicormic growth, minor dead wood	none	preserve	none
236	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	20	3.5	5	fair	good	Minor dead wood	none	preserve	none
237	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	22	4	5	fair	good	Unbalanced crown	none	preserve	none
238	Gleditsia triacanthos var. inermis	Honeylocust	Subject site	21	3.5	5	fair	good	Minor dead wood	none	preserve	none
TREES WITHIN PRIVATE PROPERTY ADJACENT TO SUBJECT SITE (7)												
21	Quercus macrocarpa	Bur Oak	681 Cartographe St	5-20	5	5	fair	fair	Multistem'd, dense crown	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
59	Quercus macrocarpa	Bur Oak	995 Old Montreal Rd	21	3.5	4	fair	good	Low branched	approx. 20% of critical root zone expected to be removed	preserve	tree protection barrier
84	Quercus macrocarpa	Bur Oak	971 Old Montreal Rd	42	5	5	fair	fair	Epicormic growth	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
85	Quercus macrocarpa	Bur Oak	971 Old Montreal Rd	48	7	5	fair	poor	Cotonmast leaders, trunk cavity at primary union, dead wood and rot in tree leader	less than 5% of critical root zone expected to be removed	preserve	tree protection barrier
85b	Quercus macrocarpa	Bur Oak	971 Old Montreal Rd	18	3	5	fair	good	Supressed	none	preserve	tree protection barrier
89	Quercus macrocarpa	Bur Oak	971 Old Montreal Rd	28	6	5	fair	good	Unbalanced crown	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
92	Quercus macrocarpa	Bur Oak	971 Old Montreal Rd	22	4	5	good	good	Supressed	approx. 5% of critical root zone expected to be removed	preserve	tree protection barrier
MUNICIPAL TREES (22)												
207	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	5	1.25	5	good	good	Blvd, full form	none	preserve	tree protection fence
211	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	7	1	3	poor	poor	Blvd, dead leader, entire "crown" is epicormic growth	none	preserve	none
212	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	9	1	4	fair	fair	Blvd, basal damage, dead wood	none	preserve	none
213	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	8	1	5	good	good	Blvd, basal damage	none	preserve	none
214	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	5	0.5	5	fair	fair	Blvd, basal damage, early defoliation	none	preserve	none
215	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1.25	5	good	good	Blvd, unbalanced crown	none	preserve	none
216	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	4	0.75	5	fair	good	Blvd, narrow form	none	preserve	none
217	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.25	5	fair	fair	Blvd, suckering from base, sealing vertical trunk wound	none	preserve	none
218	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	4	0.5	5	fair	fair	Blvd, trunk wounds	none	preserve	none
219	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.5	5	fair	fair	Blvd, significant suckering from base	none	preserve	none
220	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	8	2	5	fair	fair	Blvd, minor basal damage, 3 leaders	none	preserve	none
221	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	8	2.25	5	fair	fair	Blvd, suckering from base, basal wound, diminished leader	none	preserve	none
222	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	6	1.5	5	good	good	Blvd, basal wound	none	preserve	none
223	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	6	1.25	5	good	good	Blvd, full form	none	preserve	none
225	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1	1	poor	poor	Blvd, central leader dead and gone, all remaining living stems are suckers from base	none	preserve	none
226	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	7	1.25	5	excellent	good	Blvd, full form	none	preserve	none
227	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	9	1.5	5	good	fair	Blvd, basal wound, sealed vertical wounds	none	preserve	none
228	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	1.5	5	fair	good	Blvd, minor basal wound	none	preserve	none
229	Celtis occidentalis	Hackberry	City ROW - Famille-Laporte Ave	10	1.5	5	fair	good	Blvd, full form	none	preserve	none
230	Acer rubrum	Red Maple	City ROW - Famille-Laporte Ave	10	2	5	fair	good	Blvd, minor suckering from base, diminished leader	none	preserve	none
231	Quercus rubra	Red Oak	City ROW - Famille-Laporte Ave	7	2	5	fair	good	Blvd, curved leader	none	preserve	none
232	Acer saccharum	Sugar Maple	City ROW - Famille-Laporte Ave	7	1.5	5	good	good	Blvd, minor trunk wounds	none	preserve	none

TREES TO BE PRESERVED (35 TOTAL)

PRE-CONSTRUCTION RECOMMENDATIONS

a) PRIOR TO ANY CONSTRUCTION ACTIVITY, TREE PRESERVATION FENCING IS TO BE INSTALLED AS PER THE ATTACHED TREE PRESERVATION DRAWINGS AND DETAIL.

b) WHERE HIGH QUALITY SPECIMENS TO BE PRESERVED ARE ADJACENT TO AREAS SUBJECT TO INTENSIVE CONSTRUCTION ACTIVITIES, THESE TREES ARE TO HAVE ADDITIONAL PROTECTION MEASURES IMPLEMENTED TO PROTECT THEIR TRUNKS FROM MECHANICAL DAMAGE. THESE MEASURES MAY INCLUDE SURROUNDING THE TRUNK WITH WOOD PLANKS. TREES THAT REQUIRE ADDITIONAL PROTECTION WILL BE CLEARLY IDENTIFIED ON THE TREE PRESERVATION PLAN WITH DETAILED INFORMATION ON SPECIFIC PROTECTION MEASURES.

c) TREES APPROVED FOR REMOVAL ARE TO BE CLEARLY INDICATED IN THE FIELD (MARKED WITH SPRAY PAINT OR OTHER AGREED UPON METHOD) BY THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT PRIOR TO ANY TREE REMOVAL OPERATIONS. ALL REMOVALS TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.

d) IN ACCORDANCE WITH THE MIGRATORY BIRDS CONVENTION ACT, 1994, ALL REMOVALS MUST TAKE PLACE BETWEEN SEPTEMBER 1ST AND MARCH 31ST TO AVOID DISTURBING NESTING MIGRATORY BIRDS. IF TREE REMOVAL OCCURS BETWEEN APRIL 1ST AND AUGUST 31ST, A BIOLOGIST IS REQUIRED TO COMPLETE A SEARCH FOR NESTS. ONCE CLEARED, THE CONTRACTOR HAS 48 HOURS TO REMOVE. IF REMOVAL DOES NOT OCCUR WITHIN 48 HOURS, ANOTHER SEARCH WILL BE REQUIRED.

e) CARE SHOULD BE TAKEN DURING THE FELLING OPERATION TO AVOID DAMAGING THE BRANCHES, STEMS, TRUNKS, AND ROOTS OF NEARBY TREES TO BE PRESERVED. WHERE POSSIBLE, ALL TREES ARE TO BE FELLED TOWARDS THE CONSTRUCTION ZONE TO MINIMIZE IMPACTS ON ADJACENT VEGETATION. ALL REMOVALS TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.

f) IT IS RECOMMENDED THAT THE EXISTING GROUND-LAYER VEGETATION AT THE BASE OF TREES TO BE PRESERVED REMAIN INTACT WITHIN THE CRITICAL ROOT ZONE SO AS NOT TO DISTURB THE SOIL AROUND THE BASE OF THE EXISTING TREES.

g) FINAL SITE GRADING PLANS SHOULD ENSURE THAT THE EXISTING SOIL MOISTURE CONDITIONS ARE MAINTAINED.

RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

a) TREE PRESERVATION FENCING IS TO BE MAINTAINED IN GOOD CONDITION AND EFFECTIVE FOR THE DURATION OF CONSTRUCTION UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE OR AS PER THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT.

b) NO CONSTRUCTION, EXCAVATION, ADDING OF FILL, STOCKPILING OF CONSTRUCTION MATERIAL OR HEAVY EQUIPMENT IS PERMITTED WITHIN THE CRITICAL ROOT ZONE/WITHIN THE TREE PRESERVATION FENCING.

c) WHEN EXCAVATION NEAR A TREE IS REQUIRED, AND IT IS ANTICIPATED THAT ROOTS WILL BE SEVERED AND EXPOSED, DURATION OF EXPOSURE IS TO BE MINIMIZED TO PREVENT ROOT DESICCATION.

d) DURING THE EXCAVATION PROCESS, ROOTS 25MM OR LARGER THAT ARE SEVERED AND EXPOSED SHOULD BE HAND PRUNED TO LEAVE A CLEAN-CUT SURFACE. TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST. EXPOSED SEVERED ROOTS THAT CANNOT BE COVERED IN SOIL ON THE SAME DAY AS THE CUTS ARE MADE ARE TO BE KEPT MOIST. EXPOSED ROOTS ARE TO BE KEPT MOIST BY COVERING THEM WITH WATER SOAKED BURLAP OR ANY OTHER MEANS AVAILABLE TO PREVENT THEM FROM DRYING OUT.

e) AVOID IDLING HEAVY EQUIPMENT UNDER/WITHIN CLOSE PROXIMITY TO TREES TO BE PRESERVED TO PREVENT CANOPY DAMAGE FROM EXPOSURE TO EXHAUST HEAT.

POST-CONSTRUCTION RECOMMENDATIONS

a) AVOID DISCHARGING RAIN WATER LEADERS ADJACENT TO RETAINED TREES, AS THIS MAY RESULT IN AN OVERLY MOIST ENVIRONMENT WHICH CAN CAUSE ROOT ROT.

b) AFTER ALL WORK IS COMPLETED, TREE PRESERVATION FENCES AND ANY OTHER IMPACT MITIGATION PARAPHERNALIA MUST BE REMOVED.

c) A FINAL REVIEW MUST BE UNDERTAKEN BY THE PROJECT ARBORIST TO ENSURE THAT ALL MITIGATION MEASURES AS DESCRIBED ABOVE HAVE BEEN MET.

RON KOUDYS LANDSCAPE ARCHITECTS INC.

Ronald H. Koudys, O.A.L.A. C.S.L.A. DATE

ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO — MEMBER — OALA

#	date:	revision:	by:
5.	DEC.03.2021	ISSUED FOR SPA & ZONING BY-LAW AMENDMENT	MCB
4.	NOV.19.2021	ISSUED FOR 100% DD	MCB
3.	NOV.19.2021	ISSUED FOR ZBA/SPA	MCB
2.	OCT.22.2021	ISSUED FOR 50% DD	MCB
1.	AUG.26.2021	ISSUED FOR 100% SD	MCB

revisions

ARCH CORP LTC ORLEANS

FAMILLE LAPRITE AVE
ORLEANS, ON

TREE PRESERVATION PLAN

scale:	AS NOTED
drawn by:	MCB
reviewed by:	MCB
job number:	21-164Le
plot date:	2021-11-30

drawing number:

T-2