



ARBORIST REPORT

Tree Conservation Report
for
3149 and 3169 Hawthorne Road, Ottawa, Ontario



by

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for

StorageVault Inc.
Owner/Applicant
Toronto, Ontario

Report 22-002

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ARBORSPIHERE
Arboriculture & Urban Forestry Consulting

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Summary

Arborsphere was retained to provide a Tree Conservation Report for trees affected by a proposed development in Ottawa, Ontario. Associated fieldwork included an enumerated tree inventory and assessment of 25 trees plus general comments on a further 17 trees. Retainable trees can be preserved and protected with temporary barrier materials or existing fencing.

PROPERTY			
Legal Description(s)	Part of Lot 2, Concession 6 (Rideau Front), Geographic Township of Gloucester, City of Ottawa		
Address	3149 and 3169 Hawthorne Road, Ottawa, Ontario		
Zoning	3149 = IL ; 3169 = IL2		
Area	3149 = 6188.53 m ² (66612.72 ft ²)(0.62 ha); 3169 = 19,898.15 m ² (214,181.69 ft ²)(1.99 ha)		
Ward	#10 (Gloucester-Southgate), Diane Deans (Councillor)		
TREES			
Provincial species-at-risk, genetically pure trees			0
Affected City-owned trees			0
Standing dead trees			0
Site trees unsuitable for preservation			6
Site trees suitable for preservation			15
Other nearby trees			21
		TOTAL:	42
CONTACTS			
Owner/Applicant	StorageVault Inc.	100 Canadian Road, Toronto, ON, M1R 4Z5	416-904-0560
Agent	Access Property Development	100 Canadian Road, Toronto, ON, M1R 4Z5	416-457-9664
Arborist	Oliver K. Reichl	18 Larue Mills Rd, Mallorytown, ON, K0E 1R0	613-213-6840

2.0 OBSERVATIONS

2.1 Methodology

Tree diameters (“dbh”) were measured at approximately 1.20 metres above grade using a Richter diameter tape. Multi-stemmed trees (i.e., codominant; trees that fork below breast height) were recorded as single trees. Each tree’s canopy spread was visually estimated to the nearest metre. I used a generalized assessment system to describe the overall condition of each tree. This system uses a 3-tier rating scale (good, fair, poor) and is based solely on non-invasive *in situ* observations. Each tree’s rating, along with its proximity to proposed construction, was considered when determining its retainability.

2.2 Field Notes

Arboriculture field work was completed on March 10, 2021, resulting in an inventory of 21 affected trees. Two adjacent treed areas, adding a further 21 trees, were also noted. Tables 1 and 2 summarize my field observations and comments. Drawings in Appendix A show the locations and status of all surveyed trees.

Table 1: Tree Inventory & Assessment						
ID	SPECIES	DBH (cm)	CANOPY (m)	CONDITION RATING	PRESERVATION RATING	COMMENTS
1304	Trembling Aspen <i>Populus tremuloides</i>	10	2	Good	Poor	MAINTENANCE: none PRESERVATION: remove tree (proximity to proposed building)
1305	Trembling Aspen <i>Populus tremuloides</i>	12	4	Good	Poor	MAINTENANCE: none PRESERVATION: remove tree (proximity to proposed building)
1306	Manitoba Maple <i>Acer negundo</i>	*	10	Good	Good	dbh=15/13/12/10/10 MAINTENANCE: none PRESERVATION: retain; CRZ
1307	Manitoba Maple <i>Acer negundo</i>	12	6	Good	Good	MAINTENANCE: none PRESERVATION: retain; CRZ
1308	Manitoba Maple <i>Acer negundo</i>	*	8	Good	Good	dbh=18/13 MAINTENANCE: none PRESERVATION: retain; CRZ
1309	Manitoba Maple <i>Acer negundo</i>	*	7	Good	Good	dbh=15/13 MAINTENANCE: none PRESERVATION: retain; CRZ
1310	Manitoba Maple <i>Acer negundo</i>	12	4	Good	Poor	dbh estimated MAINTENANCE: none PRESERVATION: remove tree (conflict with proposed parking)
1311	Manitoba Maple <i>Acer negundo</i>	11	4	Good	Poor	dbh estimated MAINTENANCE: none PRESERVATION: remove tree (conflict with proposed parking)
1312	Norway Maple <i>Acer platanoides</i>	34	9	Good	Fair	conflicts with chain link fence MAINTENANCE: prune for health; relocate fence PRESERVATION: retain; CRZ

ID	SPECIES	DBH (cm)	CANOPY (m)	CONDITION RATING	PRESERVATION RATING	COMMENTS
1313	Manitoba Maple <i>Acer negundo</i>	*	5	Good	Good	dbh=14/11 MAINTENANCE: none PRESERVATION: retain; CRZ
1314	Norway Maple <i>Acer platanoides</i>	40	8	Good	Good	future conflict with chain link fence MAINTENANCE: none PRESERVATION: retain; CRZ
1315	Manitoba Maple <i>Acer negundo</i>	*	6	Fair	Good	dbh=20/12; part of Area A MAINTENANCE: none PRESERVATION: retain; no CRZ (outside of construction area)
1316	Manitoba Maple <i>Acer negundo</i>	*	6	Fair	Good	dbh=18/13/11/10; part of Area A MAINTENANCE: none PRESERVATION: retain; no CRZ (outside of construction area)
1317	Manitoba Maple <i>Acer negundo</i>	*	8	Good	Good	dbh=12/11/10/10; part of Area A MAINTENANCE: none PRESERVATION: retain; no CRZ (outside of construction area)
1318	Manitoba Maple <i>Acer negundo</i>	*	7	Good	Good	dbh=20/13/10; part of Area A MAINTENANCE: none PRESERVATION: retain; no CRZ (outside of construction area)
1319	Manitoba Maple <i>Acer negundo</i>	20	8	Good	Poor	MAINTENANCE: none PRESERVATION: remove tree (proximity to proposed parking; anticipated root damage)
1320	Freeman's Maple <i>Acer x freemanii</i>	12	2	Poor	Poor	previously topped MAINTENANCE: none PRESERVATION: remove tree (conflicts with proposed building)
1321	Manitoba Maple <i>Acer negundo</i>	*	6	Good	Good	dbh=17/14/14; dbh estimated MAINTENANCE: none PRESERVATION: retain; CRZ
1322	Manitoba Maple <i>Acer negundo</i>	*	7	Fair	Fair	dbh=20/15/13/10/10; dbh estimated; large deadwood MAINTENANCE: risk mitigation ; remove large deadwood PRESERVATION: retain; CRZ
1323	Manitoba Maple <i>Acer negundo</i>	10	3	Good	Good	dbh estimated MAINTENANCE: none PRESERVATION: retain; CRZ
1324	Trembling Aspen <i>Populus tremuloides</i>	15	3	Good	Good	dbh estimated; shared? MAINTENANCE: none PRESERVATION: retain; CRZ
1325	Trembling Aspen <i>Populus tremuloides</i>	13	3	Good	Good	dbh estimated; off-site? MAINTENANCE: none PRESERVATION: retain; CRZ
1326	Trembling Aspen <i>Populus tremuloides</i>	12	2	Good	Good	dbh estimated; off-site? MAINTENANCE: none PRESERVATION: retain; CRZ
1327	Deltoid Poplar <i>Populus deltoides</i>	25	6	Good	Good	dbh estimated; off-site? MAINTENANCE: none PRESERVATION: retain; CRZ
1328	Deltoid Poplar <i>Populus deltoides</i>	20	5	Good	Good	dbh estimated; off-site? MAINTENANCE: none PRESERVATION: retain; CRZ

NOTES:

1. All diameter measurements were taken at approximately 1.20 metres above grade, unless otherwise noted.
2. Asterisk(*) denotes codominant stems (i.e., tree forks below 1.20 metres); stem diameters are listed in comments.
3. Canopy spreads were not measured, and are only based on a rough visual estimate to the nearest metre.

ID	TREES	DBH 10-30 cm	DBH >30 cm	COND RATING	PRESERV. RATING	COMMENT
A	1315, 1316, 1317, 1318	4	0	Good	Good	see Table 1
B	poplar, ash, sumac, Manitoba maple	17	0	various	various	dbh estimated MAINTENANCE: risk mitigation ; remove ash (EAB signs) PRESERVATION: retain; no CRZ (outside of construction area)

NOTES:

1. EAB = Emerald Ash Borer

3.0 ANALYSIS

The property at 3149 Hawthorne is mostly an open field with a few trees towards the northerly side, while 3169 Hawthorne has only a few trees along the fence lines. The site contains no wetlands, no woodlots, no high quality specimen trees, and no rare vegetation communities. A creek exists southerly to the site and appears to be the only unique ecological feature in the immediate area.

The inventory includes five deciduous species, none of which are currently listed in federal or Ontario endangered species legislation. There are no City-owned trees along Hawthorne Road. Norway maple is the only non-native species, while only tree #1319 appears to have been planted.

4.0 DISCUSSION

4.1 Tree Maintenance

Individual urban trees tend to require periodic maintenance to ensure safety and promote optimum health. Typically, most health and safety concerns can be addressed by:

- removal of dead limbs and branches (“deadwooding”)
- removal of dead codominant stems (i.e., multiple trunks)
- removal of hanging or broken branches
- removal of diseased or structurally unsound stems
- removal of branches to address clearance issues (sidewalks, buildings, utility wires)
- removal of rubbing and/or inward-growing branches
- removal or severance of parasitizing vegetation (i.e., vines)
- removal of epicormic twigs/branches
- removal of stubs from previous prunings
- removal of debris piled against trunks
- removal of excess soil or mulch burying the root collar
- removal of competing non-native woody vegetation
- removal or severance of girdling roots (where practical)
- removal of ties or other girdling items from the trunk or branches
- removal of stakes or t-bars (leftovers from initial planting)
- installing cables, threaded rod, or braces as may be needed
- periodic watering
- adding mulch

4.2 Tree Preservation

Trees within the proposed building and parking envelopes cannot be saved. Various replacement trees have been proposed (Arch49 2021). One treed area has been identified for preservation and can be protected with open and closed CRZs. All trees along the southern boundary occur between a security fence and the property line. No construction is proposed along this boundary (Hirota 2022). Areas A and B are outside of the construction area and do not appear to need a CRZ.

5.0 RECOMMENDATIONS

In the following subsections, recommended actions are numbered and are those required by the City. Additionally, some “best practices” have been included to provide a more comprehensive set of management actions with respect to the site’s future trees.

5.1 Before Construction

5.1.1 Tree Conservation Plan

(R#1) Required: Print and retain at least one copy of the Tree Conservation Plan on site during all phases of construction.

5.1.2 Hazard Mitigation & Tree Maintenance

(R#2) Required: remove any identified tree hazards and non-retainable trees. Retain a copy of any Tree Permit on the property prior to the commencement of any tree removal.

(R#3) Best practice: facilitate the treatment of all retainable trees according to the good arboricultural practices discussed in Section 4.1.

5.1.3 Tree Preservation

(R#4) Required: protect the critical roots of retained trees by establishing Critical Root Zones (CRZs).

A CRZ in the City of Ottawa is ideally ten(10) centimetres from the trunk of the tree for every centimetre of trunk at breast height. The CRZ is calculated as dbh x 10.

(R#5) Required: construct barriers to delineate CRZs.

Barriers shall be constructed under the guidance of an arborist. Neighbouring trees shall be protected with staked/anchored fencing to City standards, erected a minimum of dbh x 10 at the discretion of City staff. Barrier material shall be 1.2 metre snow fence wired to steel “T” bar posts (@2.4 metres o.c. max) 50 x 150 wood top rail bolted to posts.

- (R#6) *Best practice:* use exterior grade plywood lengthwise (i.e., 4 feet high) on any side where excavated (or other) material could spill into the CRZ.

5.2 During Construction

- (R#7) **Required:** maintain the integrity of all CRZs.

CRZ protection barriers must be kept intact and in good repair. Any missing signage must be promptly replaced. Within a CRZ, there must be no encroachments of any kind:

- No trenching, addition of fill, excavating, or scraping to change the grade without City approval
- No storage of building materials or equipment (including vehicles)
- No storage of surplus soil, construction waste, or debris over the root systems of the protected trees
- No disposal (dumping or flushing) of contaminants or liquids
- No movement of vehicles (personal or business), equipment or pedestrians
- Ensure that exhaust fumes from any equipment are not directed towards any tree canopy.

Directional micro-tunnelling, boring, and/or hand-digging within a CRZ may be permitted. Any open face cuts outside of a CRZ that are consistent with an approved plan that require root pruning, will require the services of a certified arborist or qualified tree worker under the supervision of a certified arborist.

- (R#8) **Required:** where root systems of trees are exposed directly adjacent to, or are damaged by construction work, they must be trimmed neatly with pruners or saws (do not use backhoe or other machinery) and the area promptly backfilled with appropriate material, such as top soil, burlap or mulch, to prevent dessication.
- (R#9) *Best practice:* establish and use designated storage areas, as remote as possible from any CRZ, for excavated material, equipment, vehicle parking, building materials, etc...

5.3 After Construction

- (R#10) **Required:** secure the City's permission before removing any tree protection barriers.

If a barrier needs to be removed to facilitate landscaping activity (e.g., sodding), the City must be notified. Once any landscaping is done, barriers need to be promptly re-erected pending any final inspections by the City.

- (R#11) *Best practice:* leave as much top soil as possible on site to help ensure a fertile growing environment for any new trees that may be planted.
- (R#12) *Best practice:* when replanting near or under overhead wires, plant only tree species known to be relatively small at maturity (e.g., juneberry, tree lilac).

6.0 CONCLUSION

The tree preservation methodology for this site depends on the use of tree protection zones and barriers. Any tree protection barrier is just an arbitrary line regardless of the materials used in its construction. Stronger materials and more robust barrier construction will always have greater protection potential in the event of any accidental encroachment. However, even with a minimal barrier of plastic orange fencing, the enclosed healthy trees will be adequately protected as long as that line is respected.

Municipal tree protection by-laws exist to conserve both green infrastructure and the overall urban “forest”. Wise management of urban trees includes favouring species that are suitable to their locations and tolerant of urban growing conditions.

This 13-page report was prepared by



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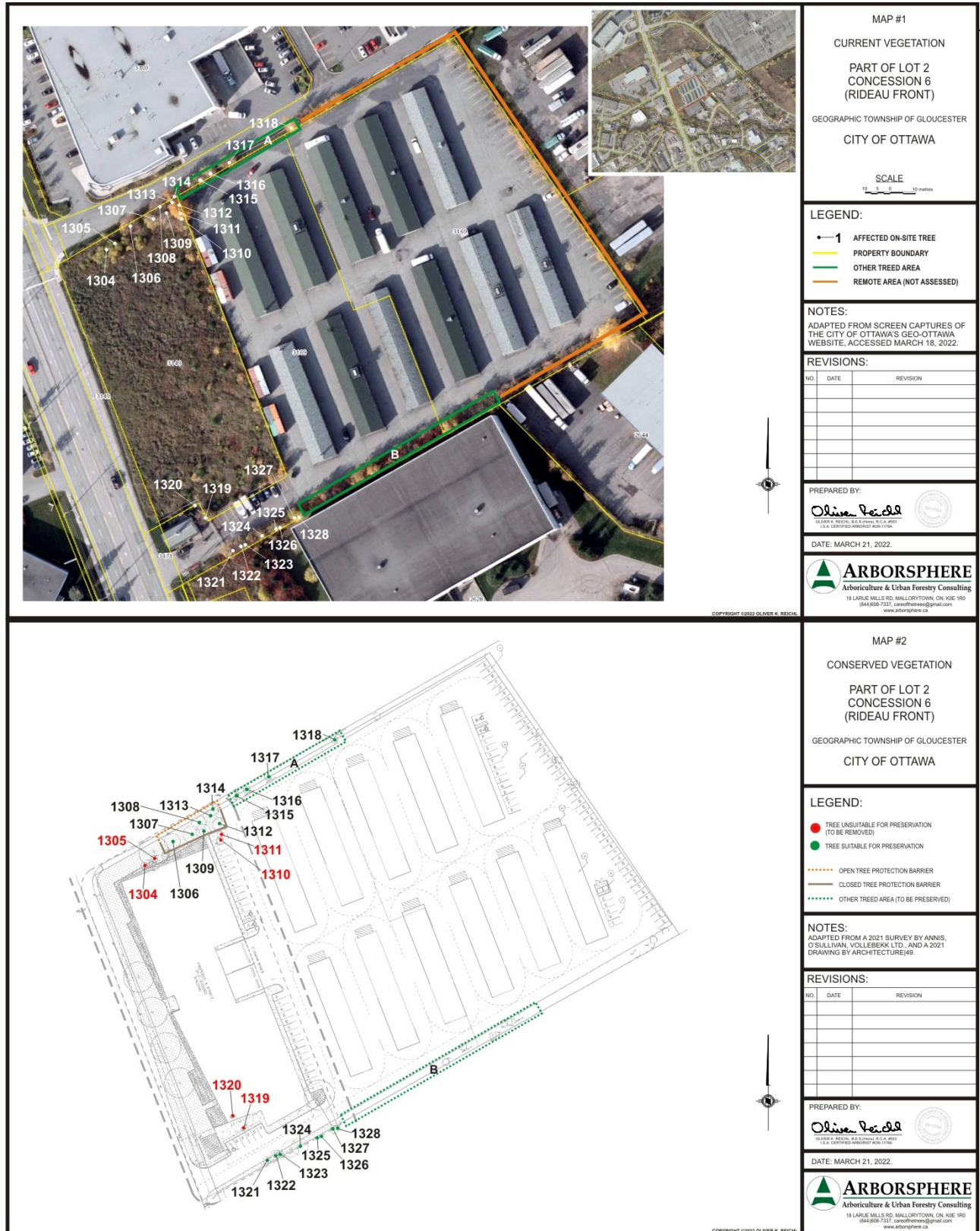
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Appendix A

Tree Conservation Planning



Appendix B

Assumptions and Limiting Conditions

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the arborist can neither guarantee nor be responsible for the accuracy of information provided by others.
2. Loss or alteration of any part of this report invalidates the entire report.
3. Possession of this report or copy thereof does not imply right of publication or use for any purpose by anyone other than the person(s) to whom it is addressed, without the prior expressed hand-written permission of the consulting arborist.
4. The consulting arborist shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Sketches, diagrams, graphs, and photographs in this report are intended as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys.
6. Unless expressed otherwise: 1) information contained in this report covers only those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

Appendix C

Certification of Performance

I, Oliver K. Reichl, certify:

- that I have personally inspected the tree(s) and/or property referred to in this report, and have stated my findings accurately;
- that I have no current or prospective interest in the plant material or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- that the analysis, opinions, and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- that my compensation is not contingent upon the reporting of a predetermined conclusion that favours the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- that my analysis, opinions, and conclusions were developed, and this report has been prepared, according to commonly accepted arboricultural practices;
- that no one provided significant professional assistance to me, except as indicated within the report.
- that I am a member in good standing of the American Society of Consulting Arborists (ASCA) and the International Society of Arboriculture (ISA), and that I am a current ASCA Registered Consulting Arborist and ISA Certified Arborist.

