



Submitted to: Megha Holdings Inc. 1558 Blhom Drive Ottawa, Ontario K1G 4R7 **Tree Conservation Report Proposed Commercial Development** 1243 Teron Road Ottawa (Kanata), Ontario

May 13, 2020 Project: 64742.02 - V02

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Report to: Megha Holdings Inc. Project: 64742.02 - V02 (May 13, 2020)

1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Ltd. (GEMTEC) was retained by Megha Holdings Ltd., to carry out a Tree Conservation Report (TCR) for the property located at 1243 Teron Road, in the City of Ottawa (Kanata), Ontario, hereafter referred to as the "subject property". The site location is provided in Figure A.1 in Appendix A.

1.1 Purpose

The proponent is seeking to sever a 2.2 hectare (ha) parcel, from an existing 6.81 ha property, for future commercial development. In preparation for submission for a lot severance and Site Plan Approval, and in accordance with the City of Ottawa's Urban Tree Conservation By-Law (No. 2009-200), a Tree Conservation Report (TCR) is required to identify trees to be retained and protected under future development scenarios and, where feasible, identify opportunities to offset the loss of trees that cannot be retained or contribute to the City's forest cover targets.

The proposed development concept includes the creation of an 9,281m² commercial building, with an 8,900 m² parking lot and associated landscaping. A stormwater management pond is proposed for the northeast corner of the property, as illustrated on the Site Servicing and Grading Plan from D. B. Gray Engineering Inc. The existing site layout and proposed development is provided in Figure A.2 in Appendix A.

1.2 Definitions

Terms and abbreviations used throughout the remainder of this report are summarized below.

Diameter at Breast Height (DBH), is defined as the diameter of the tree trunk measured at a height of 1.2 metres above ground surface for trees of 10 centimeters in diameter and greater.

Critical Root Zone (CRZ), is defined as the ground area within a circumference around the tree trunk calculated as 10 centimetres from the trunk of the tree for every one centimetre of tree truck diameter at breast height.

Distinctive Tree, a distinctive tree within the City of Ottawa is defined as any tree with a trunk calculated as 10 centimetres in diameter at breast height.



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2.0 METHODOLOGY

2.1 Desktop Review

To complete the TCR, digital color air photos of the site available from GeoOttawa were reviewed from 1976 to 2017 to identify natural features, including historical trees, present on-site and in the vicinity of the site.

2.2 Field Investigations

In addition to the completion of a desktop review of historical air photos, two site visits were conducted on July 18 and 19, 2019, to document and identify all trees on-site with a DBH greater than 10 cm. The site investigation utilized transects bisecting the property to document the health of each tree greater than 10 cm in DBH, the trees location and the tree species. To determine the presence or absence of species at risk on-site and adjacent to site, butternut were searched for during the transect surveys. Site conditions during the site investigation are summarized in Table 2.2 below.

Table 2.2 Summary of Filed Investigations

Date	Time	Weather	Purpose
July 18, 2019	08:10-15:50	17°C, partly cloudy, Beaufort wind 3, no precipitation	Tree Inventory
July 19, 2019	10:00-13:20	26°C, clear, Beaufort wind 4, no precipitation	Tree Inventory

Site photographs taken during the field investigations are provided in Appendix B.



3.0 RESULTS

3.1 Existing Conditions

The site is currently occupied by two buildings of approximately 6,302 m² (0.63 ha) and 1,495 m² (0.15 ha), occupying approximately 11% of the 6.81 ha property. Other existing features on the property include the driveways and parking lots, providing access to Teron Road in three locations. Impermeable surfaces comprise approximately 46% of the 6.81 ha property. The remainder of the property consists of manicured lawn surrounding the existing infrastructure, and a large vacant area in the eastern portion of the property consisting of cultural meadow, thicket and woodland habitat.

The proposed land severance and development is to take place within the vacant eastern portion of the site, the existing vegetation communities in this area are illustrated on Figure A.3 in Appendix A. Numerous trees are present on the property, a summary of all trees on-site is provided in Section 3.2 below.

The vicinity of the site is characterized by commercial office properties. The nearest significant feature is the Ottawa Green Belt located approximately 400 m east of the site. There are no other natural environmental features in the vicinity of the project, as summarized in Table 3.1 below.

Table 3.1 Summary of Natural Features Present On-site or Adjacent to Site

Natural Feature	Present On-site or Adjacent
Surface water or wetlands present	None
Steep slopes, valleys or escarpments	None
Urban Natural Features or Natural Environment Areas	None
Significant Woodlands	None
Greenspace Linkages	None
High Quality Specimen Trees	None
Rare plant communities or unique environmental features	None
Presence of Species at Risk	None

Based on a review of historical air photos the site, the site has undergone no significant alteration since 1991, when the lot had the same configuration as today. In 1965 the lot was completely vacant, consisting of agricultural fields. The first building closest to Teron Road, was built between 1965 and 1976. The second building was built between 1976 and 1991.

Per the City of Ottawa's Significant Woodlands Guidelines, woodlands within the urban policy area are considered significant if they meet the size threshold of greater than 0.8 hectares and if they meet an age exemption of greater than 60 years old. While woodlands are present on the adjacent property to the east and south, review of historical air photos indicates that the



woodlands do not meet the age exemption criteria for urban woodlands. Review of the 1965 aerial photo from GeoOttawa indicates that the areas presently identified as woodland adjacent to site, consisted of patchy thicket habitat, not woodland habitat 55 years ago. As the adjacent woodlands do not meet the minimum age criteria of 60 years, no significant woodlands have been identified on-site or adjacent on site.

3.2 Tree Inventory Summary

A tree inventory was conducted on July 18 and July 19, 2019. Trees on-site were identified, enumerated and assessed for visual signs of distress and disease. Table C.1 in Appendix C provides a summary of all tree specimens on-site whose DBH was greater than 10 cm. CRZ values for trees with DBH greater than 10 cm are also present in Table C.1 in Appendix C Critical Root Zones were not calculated for dead trees. For trees with multiple stems greater than 10 cm DBH, the largest DBH was used to calculate the CRZ. All trees with a DBH greater than 10 cm and their CRZ are illustrated on Figure A.4, A.5 and A.6, in Appendix A. In general, the tree community assemblage can be described as containing a few semi-mature and immature opportunistic trees.

Per the City of Ottawa By-law No. 2009-200, no distinctive trees (DBH > 50 cm) were identified on-site.

During the site investigation, no butternut trees were identified on-site or adjacent to site. None of the trees identified on-site are listed under the provincial Endangered Species Act.



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4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on a review of the information summarized in Section 3.2, Table C.1 in Appendix C and the proposed development concept illustrated on Figure A.2, the following conclusions are provided:

- 296 trees were identified as non-retainable under the proposed development concept,
- Due to the proposed grading changes and stormwater management pond, retention along Teron Road, is not possible;
- Due to the proposed grading changes for the site, and the proposed retaining wall, tree retention along the east property boundary and southern property boundary is not possible;
- Consideration was given to move the roadway to minimize tree loss, however the re-siting
 of the road entrance impacts the proposed stormwater management pond, and minimizes
 the landscape buffer required for the project.
- No distinctive trees, meeting the City of Ottawa By-Law No. 2009-200 requirements, were identified on-site;
- Trees on-site are of a typical urban and opportunistic or early successional species;
- 168 trees are in good/healthy condition and 131 trees are dead, dying or poor condition;
- No Butternut trees were identified on-site or adjacent to site;
- None of the 299 trees present on-site represent exceptional native tree specimens, nor do they provide any conservation value; and
- Trees 298 and 299 are located in the Right-of-Way, and are therefore owned by the city.
 In accordance with the City of Ottawa By-Laws compensation is required for removal of city-owned trees. Tree 298 will require compensation. Tree 299 is dead and will not require compensation.

4.1 Tree Conservation Recommendations

Opportunities exist along the perimeter of the proposed development along Teron Road, the rear property line and the western property line to offset the loss of trees that are not retainable under the proposed development concept. As discussed above, the trees present on-site do not represent exceptional tree specimens, nor do they provide any conservation value or great ecological benefit. In effort to offset the effect of vegetation clearing, consideration should be given to landscape planting with native tree species indicative of the Great Lakes – St. Lawrence Forest Region, such as white cedar, white spruce, red maple and red oak. The proposed landscape plan completed by Civitas is provided in Appendix D.

4.2 Recommended Mitigation Measures

The following mitigation measures and best practice recommendations are provided by GEMTEC in order to minimize and eliminate negative impacts to trees identified in Appendix C as retainable.



Construction contractors shall apply the following measures below to prevent damages to trees identified to be retained in the redevelopment plan for the site;

- All trees identified to be retained should be clearly marked and the CRZ delineated with fencing to prevent encroachment and damage during construction;
- Tree protection should follow the tree protection specification provided by the City of Ottawa (2019). The Specification is provided in Appendix E.
- If existing pavement surface around trees to be retained is going to be removed than temporary fencing should be installed to delineate the CRZ of each tree;
- If trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the retained CRZ and grind down stumps after tree removal, do not pull out stumps. If roots must be cut, roots 20 cm or larger should be cut at right angles with clean, sharp, horticultural tools, without tearing, crushing, or pulling;
- Do not place any material or equipment within the CRZ of any tree identified to be retained;
- Do not attach any signs, notices or posters to any tree identified to be retained;
- Do not damage the root system, trunk, or branches or any tree identified to be retained;
- Ensure that exhaust fumes from all equipment are directed away from tree canopy; and
- Tree removal shall occur outside of the key breeding bird period (typically April 15 to August 15) as identified by Environment Canada for the protection of migratory birds and to avoid contravention of the Migratory Bird Convention Act. If vegetation clearing activities must take place outside of the aforementioned timing window than a nest survey shall be conducted by a qualified professional.



5.0 CLOSURE

This letter and the work referred to within it have been undertaken by GEMTEC Consulting Engineers and Scientists Ltd. (GEMTEC), and was prepared for Megha Holdings Inc., and is intended for the exclusive use of Mega Holdings Inc. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and Mega Holdings Inc. Nothing in this report is intended to provide a legal opinion.

The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared.

This letter has been prepared for the application notes and it is based in part, on visual observations made at the site, all as described in the report. Unless otherwise states, the findings contained in this report cannot be extrapolates or extended to previous or future site conditions or for portions of the site that were unavailable for direct investigation.

Should new information become available during future work, or other studies, GEMTEC should be requested to review the information and, if necessary, re-assess the conclusions present herein.

We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Sincerely,

Taylor Warrington, B.Sc.

/Warringson

Biologist

Drew Paulusse, B.Sc.

Senior Biologist



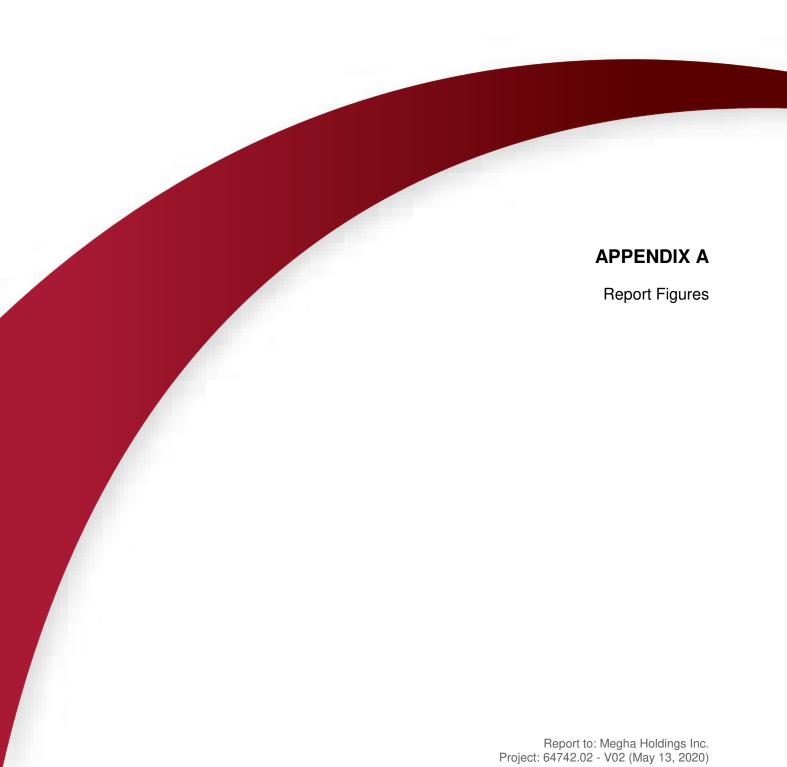
6.0 REFERENCES

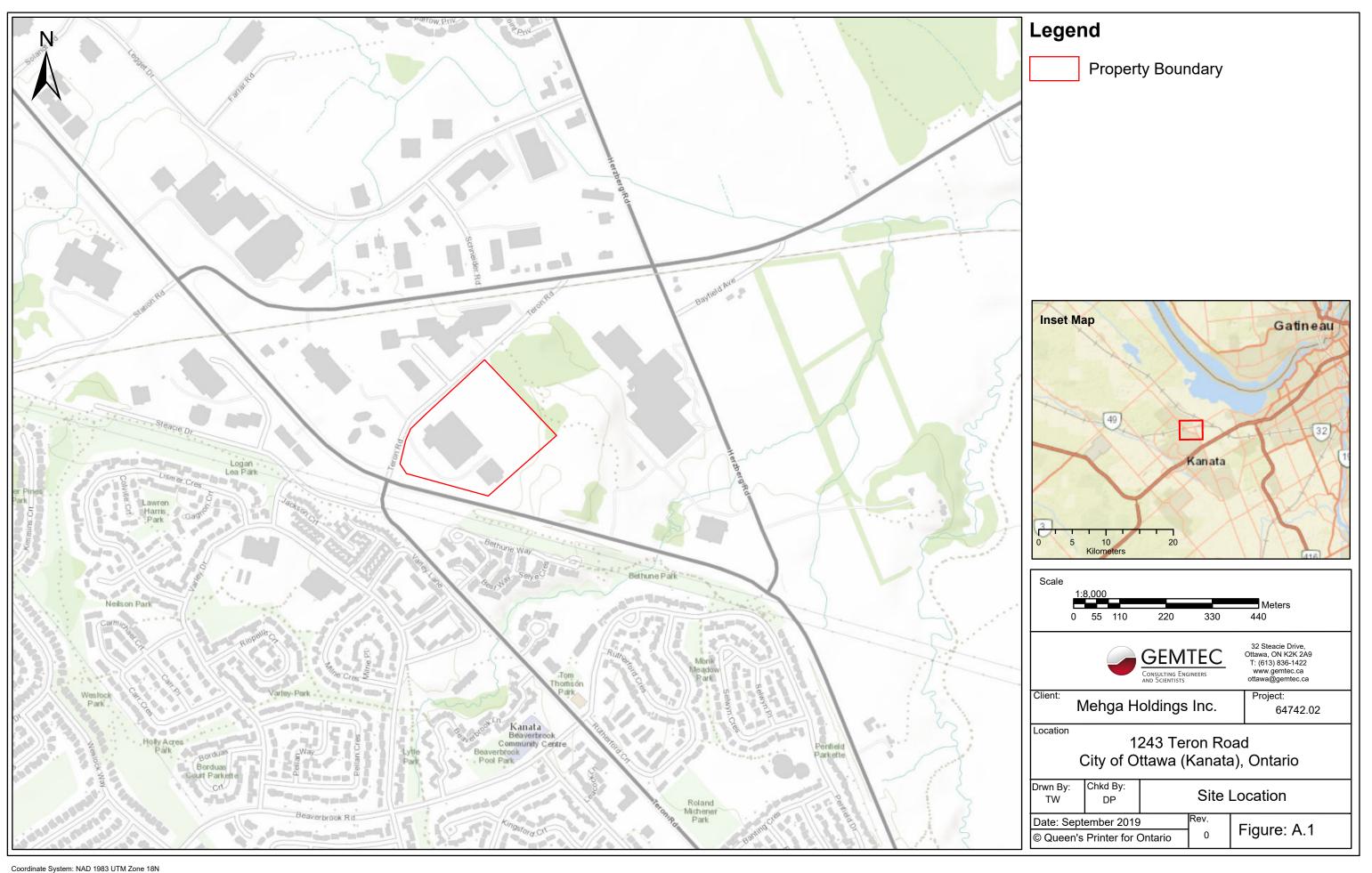
Ottawa, City of (Ottawa). 2003. City of Ottawa Official Plan. May

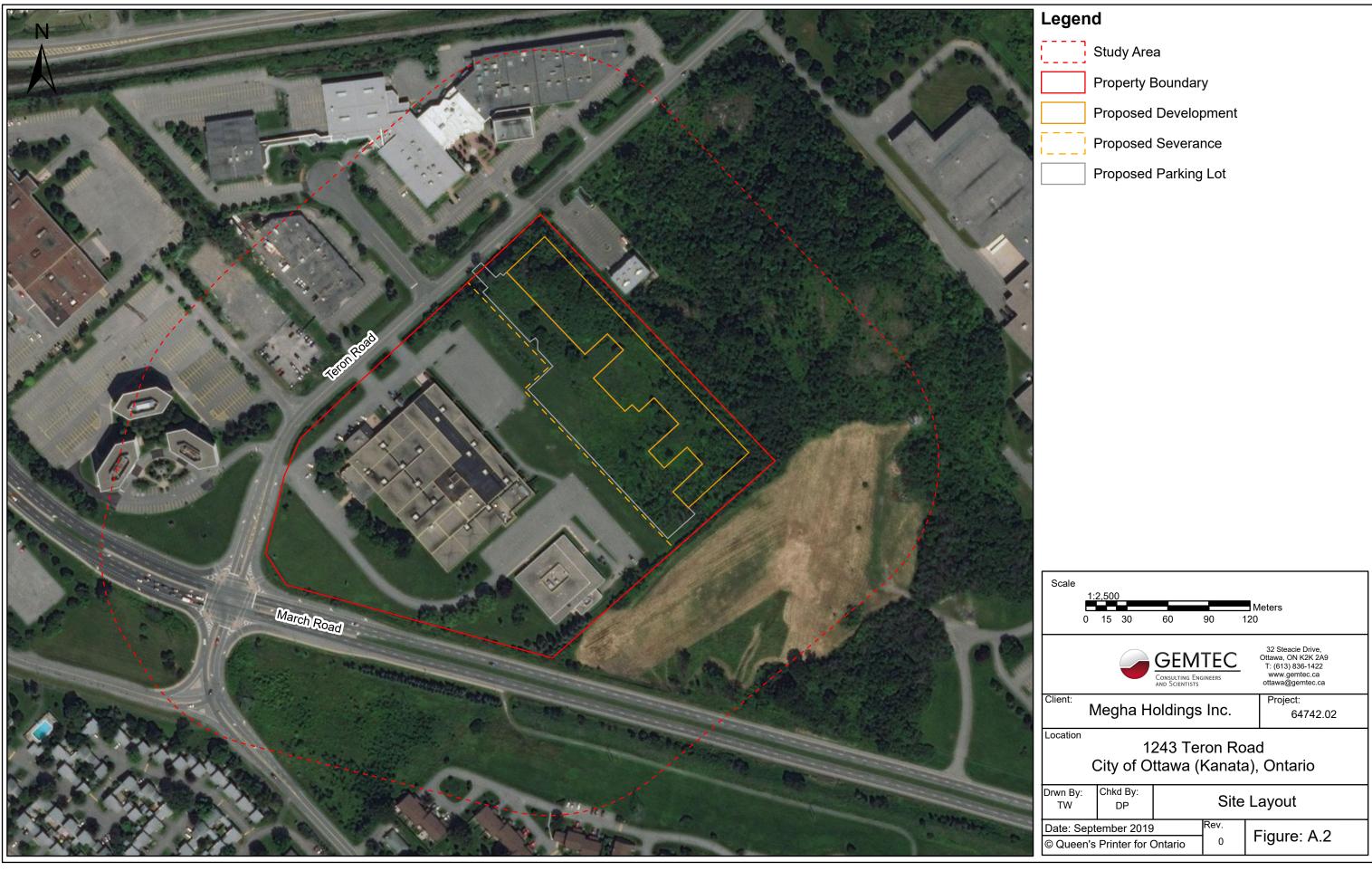
Ottawa, City of (Ottawa), By-law No. 2009-200, Tree Conservation – Urban (Updated June 2018).

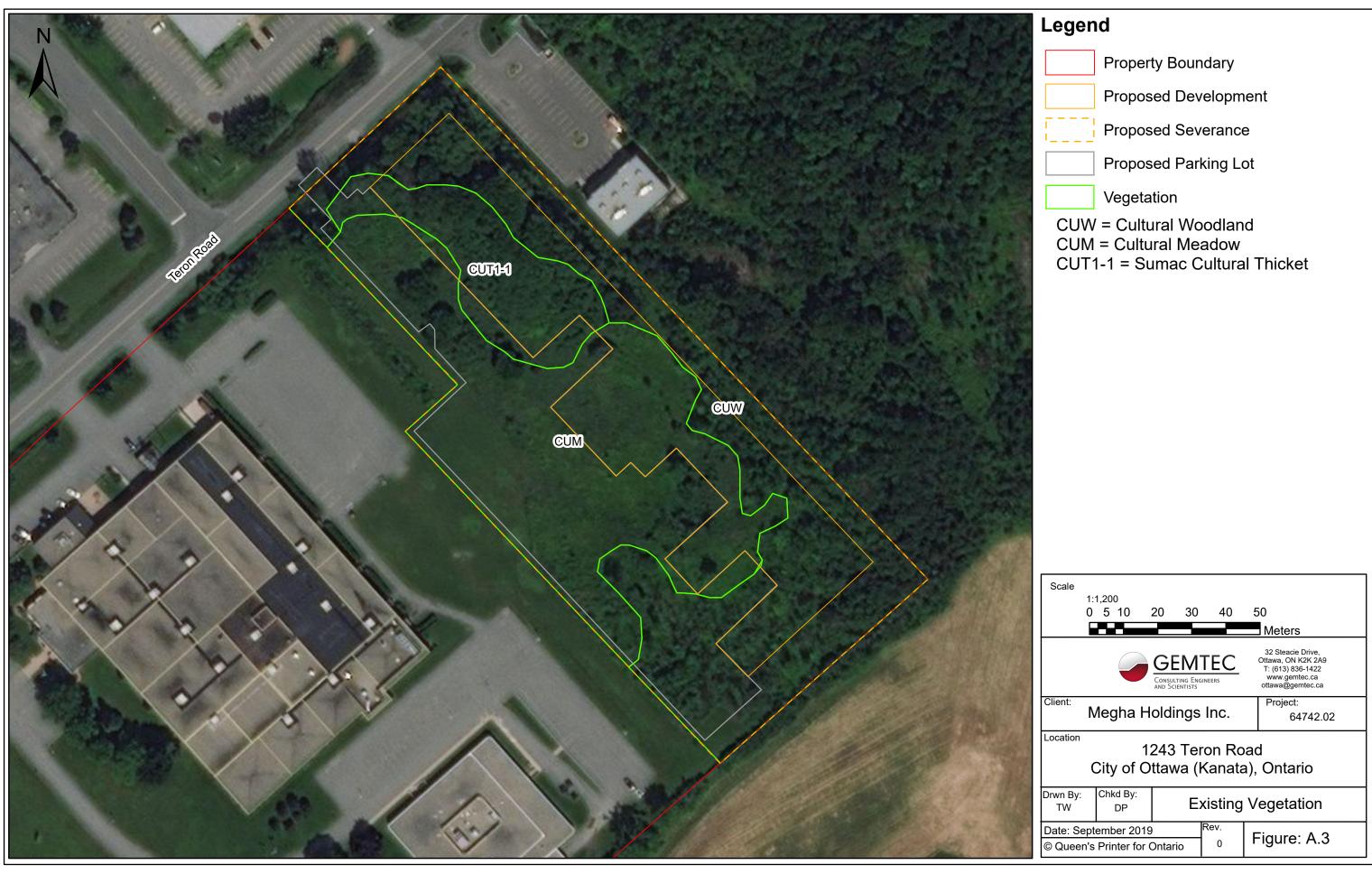


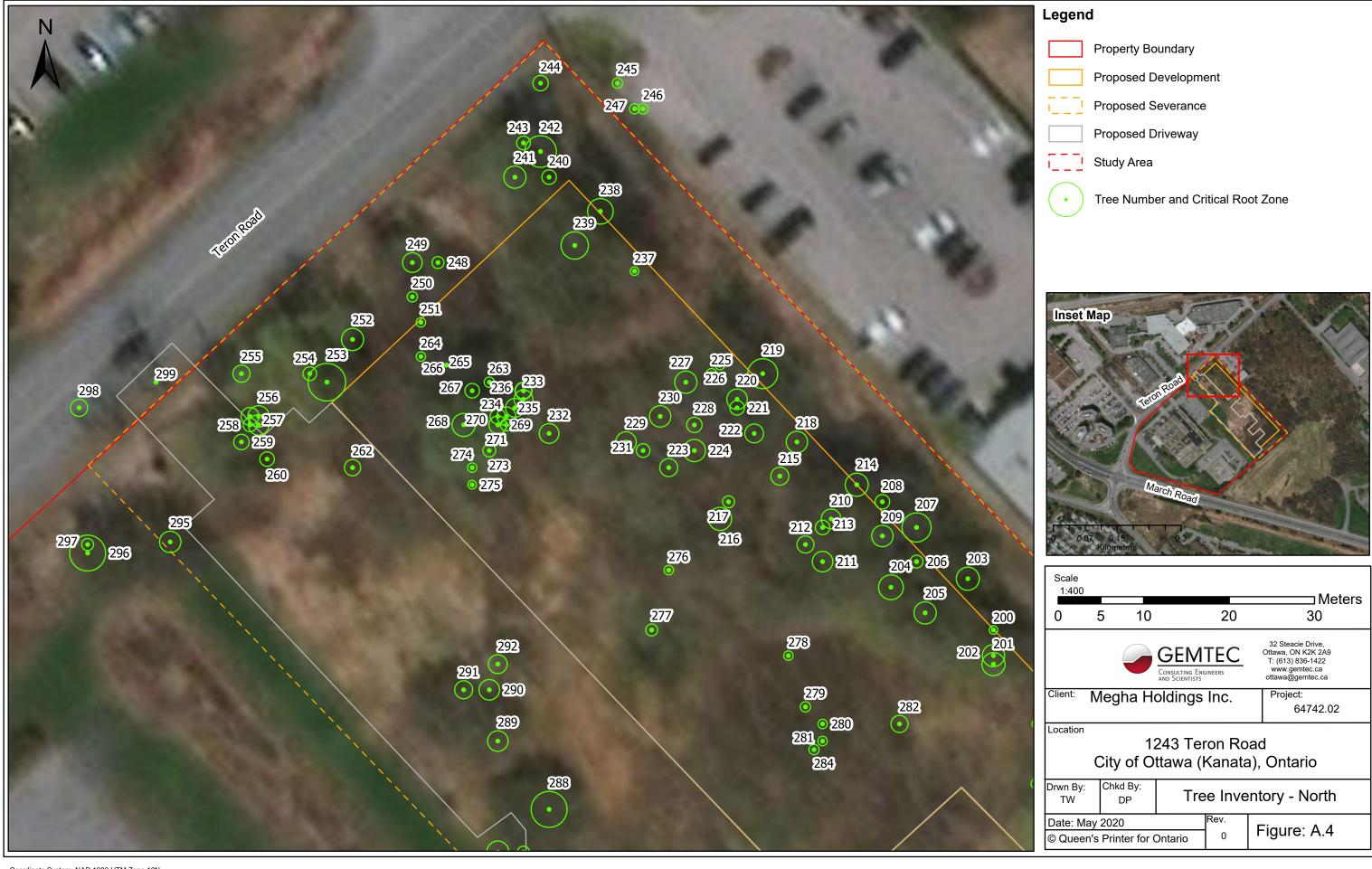
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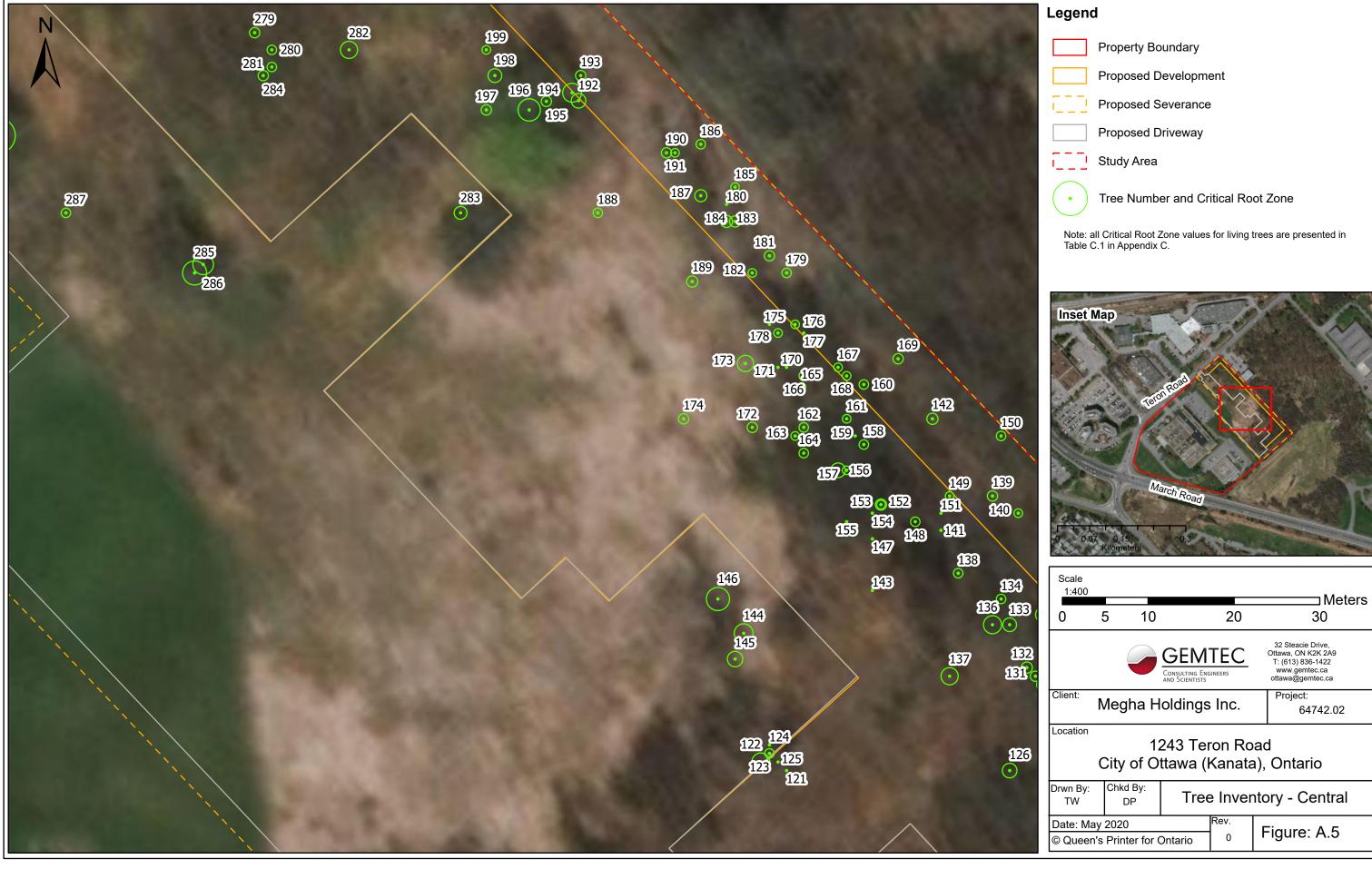


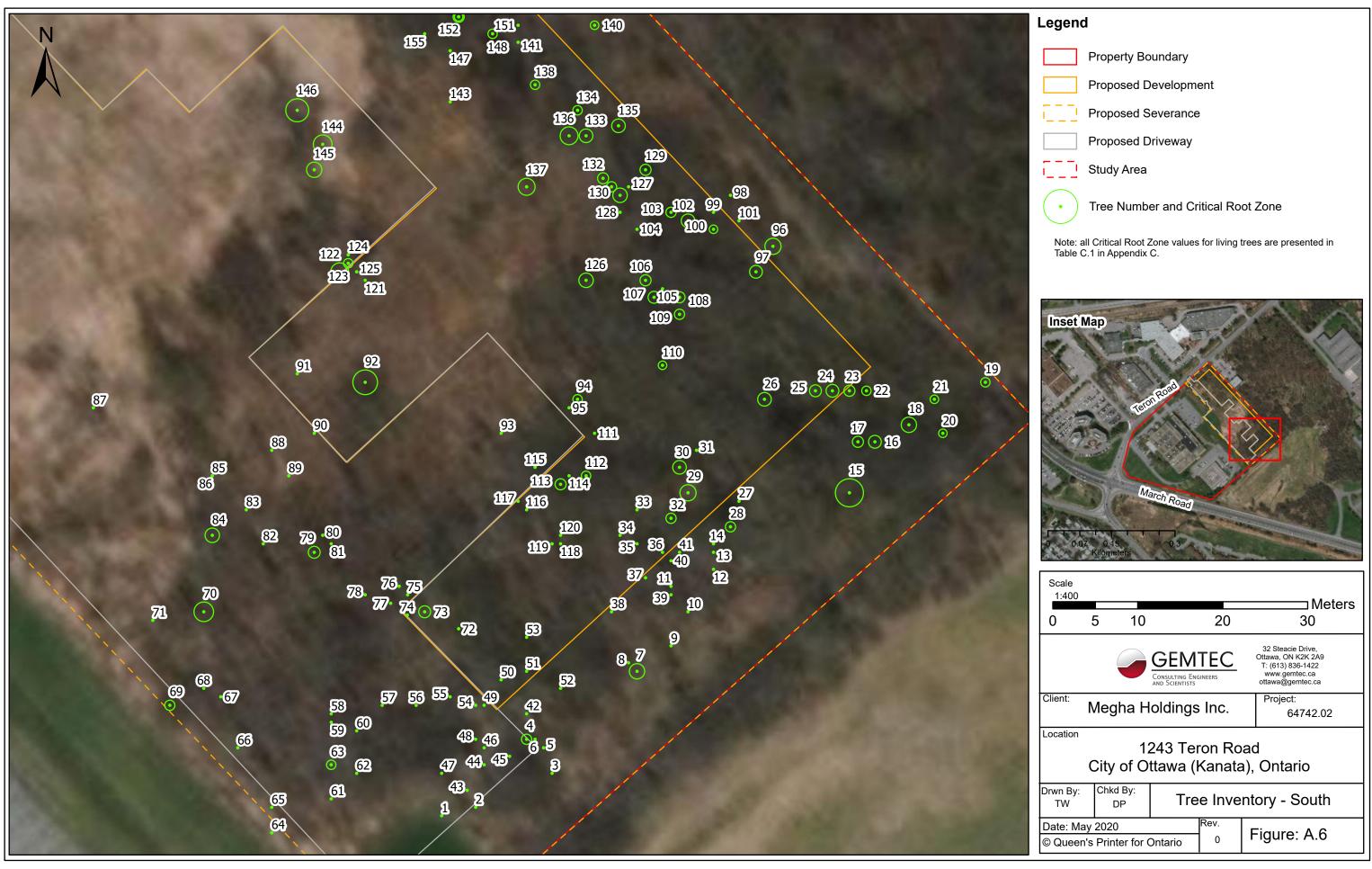


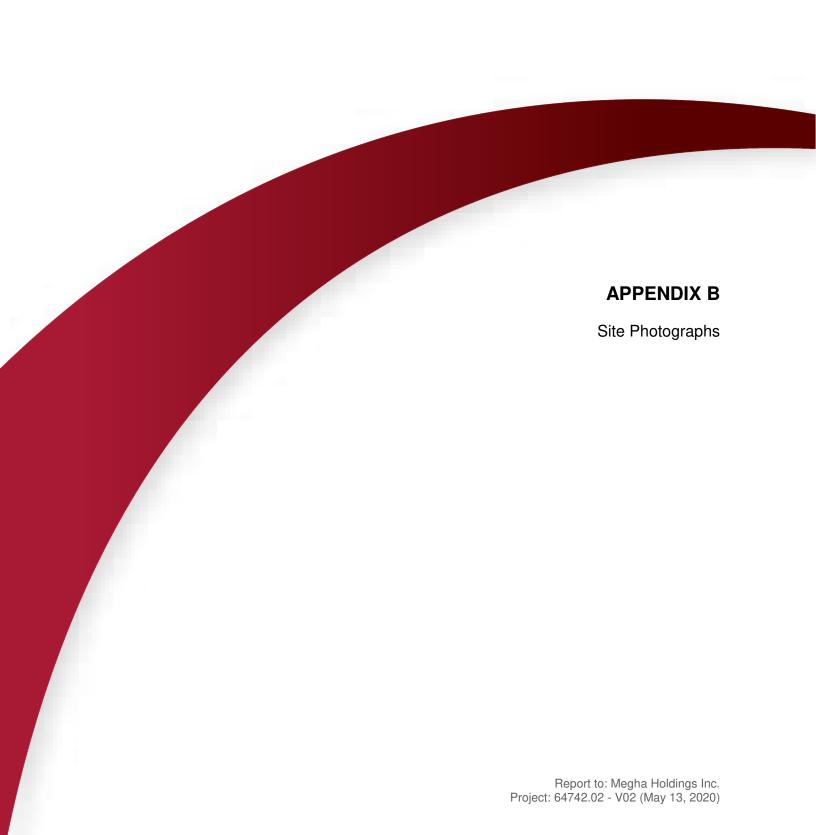














Site Photograph 1 – Cultural Meadow (CUM)



Site Photograph 2 – Cultural Meadow (CUM)



Site Photograph 3 – Cultural Meadow (CUM) with Cultural Woodland (CUW) in Background



Site Photograph 4 – Cultural Meadow (CUM) with Sumac Cultural Thicket (CUT1-1) and Cultural Woodland (CUW) in Background



Project

Tree Conservation Report Proposed Commercial Development 1243 Teron Road Ottawa (Kanata), Ontario APPENDIX B

File No.

64742.02

Site Photographs



Site Photograph 5 – Cultural Woodland (CUW) with Dead Ash Trees



Site Photograph 6 – Cultural Woodland (CUW)



Site Photograph 7 – Cultural Woodland (CUW)



Site Photograph 8 – Sumac Cultural Thicket (CUT1-1)



Project

Tree Conservation Report
Proposed Commercial Development
1243 Teron Road
Ottawa (Kanata), Ontario

APPENDIX B

File No.

64742.02

Site Photographs

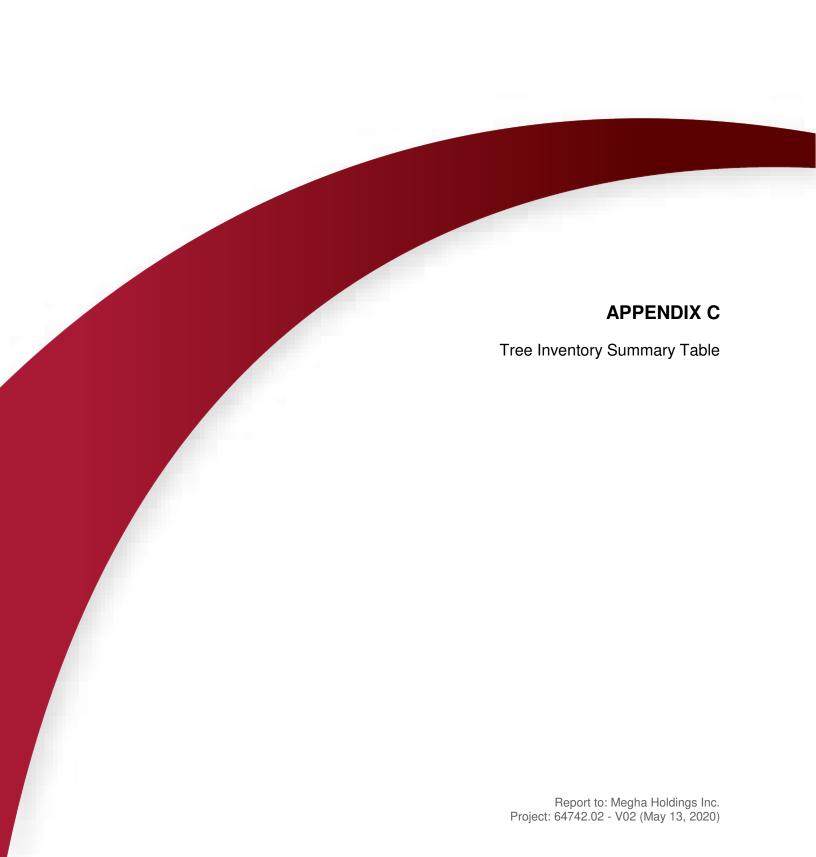


Table C.1
Summary of Tree Inventory Results

Summary of Tree Inventory Results								
Tree Number	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Signficant Tree (> 50 cm)	Wildlife Tree
1	Ash sp.	Fraxinus sp.	18		Dead	Conflict	N	N
2	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N
3	Ash sp.	Fraxinus sp.	17.5		Dead	Conflict	N	N
	Common	·						
4	Buckthorn	Rhamnus cathartica	12	120	Healthy	Conflict	N	N
5	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N
	· ·	τταλιπαο ορ.			Multi-stem (2),			
6	Ash sp.	Fraxinus sp.	20 & 15		dead	Conflict	N	N
7	American Elm	Ulmus americana	18	180	Healthy	Conflict	N	N
8	Ash sp.		12		Dead	Conflict	N	N
		Fraxinus sp.						
9	Ash sp.	Fraxinus sp.	18		Dead	Conflict	N	N
10	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
11	Ash sp.	Fraxinus sp.	12 & 10		Multi-stem (2),	Conflict	N	N
	·	,			dead			
12	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
13	Ash sp.	Fraxinus sp.	18		Dead	Conflict	N	N
14	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	Ν
15	Manitoba Maple	Acer negundo	33, 25 & 22		Multi-stem (3), dead	Conflict	N	N
16	Common Buckthorn	Rhamnus cathartica	15 & 10	150	Multi-stem (2), healthy	Conflict	N	N
. —	Common	D/	40 44 = ::	100	Multi-stem (3),	~		
17	Buckthorn Common	Rhamnus cathartica	13, 11 & 11	130	healthy	Conflict	N	N
18	Buckthorn	Rhamnus cathartica	18	180	Healthy	Conflict	N	N
19	Staghorn Sumac	Rhus typhina	11	110	Healthy	Conflict	N	N
20	Common	Rhamnus cathartica	10	100	Healthy	Conflict	N	N
21	Buckthorn Common	Rhamnus cathartica	10 & 10	100	Multi-stem (2),	Conflict	N	N
22	Buckthorn Common	Rhamnus cathartica	11	110	healthy Healthy	Conflict	N	N
	Buckthorn				Multi-stem (2),	Conflict		
23	Hawthorn Common	Crataegus sp.	13 & 10	130	healthy		N	N
24	Buckthorn Common	Rhamnus cathartica	15 14, 13, 12 &	150	Healthy Multi-stem (4),	Conflict	N	N
25	Buckthorn	Rhamnus cathartica	10	140	healthy	Conflict	N	N
26	White Ash	Fraxinus americana	16	160	Poor, dying	Conflict	N	N
27	Ash sp.	Fraxinu sp.	20		Dead	Conflict	N	N
28	Common Buckthorn	Rhamnus cathartica	12, 10	120	Multi-stem (2), healthy	Conflict	N	N
29	American Elm	Ulmus americana	19	190	Healthy	Conflict	N	N
					•			
30	American Elm	Ulmus americana	16	160	Healthy	Conflict	N	N
31	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
32	American Elm	Ulmus americana	12	120	Healthy	Conflict	N	N
33	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
34	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
35	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	Ν
36	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N
37	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N
38	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
39	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
40	Ash sp.	Fraxinus sp.	22 & 13		Multi-stem (2), dead	Conflict	N	N
41	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
42	Ash sp.	Fraxinus sp.	20 & 13		Multi-stem (2), dead	Conflict	N	N
40	Ach on	Fravinus as	20		Dead	Conflict	NI	NI
43	Ash sp.	Fraxinus sp.	30			Conflict	N	N
44	Ash sp.	Fraxinus sp.	27		Dead	Conflict	N	N
45	Ash sp.	Fraxinus sp.	17		Dead	Conflict	N	N
46	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N
47	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N
48	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N
49	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N
50	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	Ν
51	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	Ν
52	Ash sp.	Fraxinus sp.	18		Dead	Conflict	N	N
53	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
54	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
55	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N
56	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
57	Ash sp.	Fraxinus sp. Fraxinus sp.	16		Dead	Conflict	N	N
58	·	•	21		Dead	Conflict	N N	N
36	Ash sp.	Fraxinus sp.	۷1		Deau	Commict	IN	IN



Table C.1
Summary of Tree Inventory Results

Summary of Tree Inventory Results								
Tree Number	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Signficant Tree (> 50 cm)	Wildlife Tree
59	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
60	Ash sp.	Fraxinus sp.	26		Dead	Conflict	N	N
61	Ash sp.	Fraxinus sp.	17		Dead	Conflict	N	N
62	Ash sp.	Fraxinus sp.	17		Dead	Conflict	N	Ν
63	American Elm	Ulmus americana	11	110	Poor, dying	Conflict	N	Ν
64	Ash sp.	Fraxinus sp.	17	170	Dead	Conflict	N	Ν
65	Ash sp.	Fraxinus sp.	21		Dead	Conflict	N	Ν
66	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
67	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N
68	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
69	Hawthorn	Crataegus sp.	12, 10 & 10	120	Multi-stem (7), healthy	Conflict	N	N
70	American Elm	Ulmus americana	23	230	Healthy	Conflict	N	N
71	Ash sp.	Fraxinus sp.	22		Dead	Conflict	N	Ν
72	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N
73	American Elm	Ulmus americana	14	140	Poor, dying	Conflict	N	Ν
74	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
75	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	Ν
76	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N
77	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
78	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
79	Green Ash	Fraxinus pennsylvanica	14	140	Healthy	Conflict	N	N
80	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
81	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
82	Ash sp.	Fraxinus sp.	18		Dead	Conflict	N	N
83	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N
84	American Elm	Ulmus americana	17	170	Healthy	Conflict	N	N
85	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
86	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
87	Ash sp.	Fraxinus sp.	22 & 22		Multi-stem (2), dead	Conflict	N	N
88	Ach en	Fravinus en	22		Dead	Conflict	N	N
89	Ash sp. Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
90	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N
91	Ash sp.	Fraxinus sp. Fraxinus sp.	21		Dead	Conflict	N	N
92	American Elm	Ulmus americana	29	290	Healthy	Conflict	N	N
93	Ash sp.	Fraxinus sp.	20	290	Dead	Conflict	N	N
94	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N
95	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N
96	American Elm	Ulmus americana	19	190	Poor, dying	Conflict	N	N
97	American Elm	Ulmus americana	15	150	Poor, dying	Conflict	N	N
98	Ash sp.	Fraxinus sp.	11 & 10		Multi-stem (2),	Conflict	N	N
00	•	•			dead			
99	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
100	American Elm	Ulmus americana	10		Dead	Conflict	N	N
101	Ash sp.	Fraxinus sp. Fraxinus	11	160	Dead	Conflict	N	N
102 103	Green Ash American Elm	pennsylvanica Ulmus americana	16 12 & 11	160 120	Healthy Healthy	Conflict Conflict	N N	N N
104	Ash sp.	Fraxinus sp.	12 (11		Dead	Conflict	N	N
105	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
106	American Elm	Ulmus americana	13	130	Healthy	Conflict	N	N
107	White Ash	Fraxinus americana	14	140	Healthy	Conflict	N	N
107	American Elm	Ulmus americana	13	130	Healthy	Conflict	N	N
109	American Elm	Ulmus americana	12	120	Healthy	Conflict	N	N
110	American Elm	Ulmus americana	10	100	Healthy	Conflict	N	N
111	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N
112	American Elm	Ulmus americana	11	110	Healthy	Conflict	N	N
113	American Elm	Ulmus americana	13	130	Poor, dying	Conflict	N	N
114	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N
115	Ash sp.	Fraxinus sp. Fraxinus sp.	11		Dead	Conflict	N	N
116	Ash sp.	Fraxinus sp.	13		Dead	Conflict	N	N
117	Ash sp.	Fraxinus sp. Fraxinus sp.	14		Dead	Conflict	N	N
117	Ash sp.	Fraxinus sp. Fraxinus sp.	11		Dead	Conflict	N	N
119	Ash sp.	Fraxinus sp. Fraxinus sp.	10		Dead	Conflict	N	N
120	Ash sp.	Fraxinus sp. Fraxinus sp.	11		Dead	Conflict	N	N
121	Ash sp.	Fraxinus sp. Fraxinus sp.	11		Dead	Conflict	N	N
121	Asn sp. American Elm	Ulmus americana	21	210	Healthy	Conflict		
122	American Elm American Elm	Ulmus americana Ulmus americana	11	110	•	Conflict	N N	N N
123	American Eim Ash sp.		11		Healthy Dead	Conflict	N N	N
124	Asn sp. Ash sp.	Fraxinus sp. Fraxinus sp.	13		Dead	Conflict	N N	N
	•	•		 170				
126	American Elm	Ulmus americana	17	170	Healthy	Conflict	N	N



Table C.1
Summary of Tree Inventory Results

	Summary of Tree inventory nesults								
Tree Number	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Signficant Tree (> 50 cm)	Wildlife Tree	
127	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N	
128	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N	
129	American Elm	Ulmus americana	13	130	Healthy	Conflict	N	N	
130	American Elm	Ulmus americana	17	170	Poor, dying	Conflict	N	N	
131	American Elm	Ulmus americana	12	120	Healthy	Conflict	N	N	
132	American Elm	Ulmus americana	13	130	Healthy	Conflict	N	N	
133	American Elm	Ulmus americana	16	160	Healthy	Conflict	N	N	
134	American Elm	Ulmus americana	11	110	Healthy	Conflict	N	N	
135	American Elm	Ulmus americana	16	160	Healthy	Conflict	N	N	
136	American Elm	Ulmus americana	21	210	Healthy	Conflict	N	N	
137	American Elm	Ulmus americana	20	200	•	Conflict	N	N	
					Healthy				
138	American Elm	Ulmus americana	11	110	Healthy	Conflict Conflict	N	N	
139 140	American Elm Green Ash	Ulmus americana Fraxinus	12 10	120 100	Healthy Healthy	Conflict	N N	N N	
		pennsylvanica –			Ť				
141	Ash sp.	Fraxinus sp.	21		Dead	Conflict	N	N	
142	American Elm	Ulmus americana	13	130	Healthy	Conflict	N	N	
143	Ash sp.	Fraxinus sp.	20	200	Dead	Conflict	N	N	
144	American Elm	Ulmus americana	22	220	Healthy	Conflict	N	N	
145	American Elm	Ulmus americana	18	180	Healthy	Conflict	N	N	
146	American Elm	Ulmus americana	27	270	Healthy	Conflict	N	N	
147	Ash sp.	Fraxinus sp.	13	130	Healthy	Conflict	N	Ν	
148	American Elm	Ulmus americana	11	110	Healthy	Conflict	N	N	
149	American Elm	Ulmus americana	10	100	Healthy	Conflict	N	N	
150	Staghorn Sumac	Rhus typhina	11 & 10	110	Multi-stem (2), healthy	Conflict	N	N	
151	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N	
152	American Elm	Ulmus americana	10	100	Poor, dying	Conflict	N	N	
153	American Elm	Ulmus americana	13	130	Poor, dying	Conflict	N	N	
154	Ash sp.	Fraxinus sp.	15		Dead	Conflict	N	N	
155	Ash sp.	Fraxinus sp.	12		Dead	Conflict	N	N	
156	American Elm	Ulmus americana	17	170	Healthy	Conflict	N	N	
157	American Elm	Ulmus americana	10	100	Healthy	Conflict	N	N	
157	American Elm	Ulmus americana	11	110	Healthy	Conflict	N	N	
			18		Dead	Conflict	N	N	
159 160	Ash sp. Green Ash	Fraxinus sp. Fraxinus	11	110	Poor, canopy	Conflict	N	N	
161	Green Ash	pennsylvanica Fraxinus	10	100	dead Poor, canopy	Conflict	N	N	
162	Green Ash	pennsylvanica Fraxinus	11	110	dead Poor, canopy	Conflict	N	N	
		pennsylvanica Fraxinus			dead Multi-stem (2),				
163	Green Ash	pennsylvanica Fraxinus	10	100	poor, dying Multi-stem (2),	Conflict	N	N	
164	Green Ash	pennsylvanica	11 & 11	110	poor, dying	Conflict	N	N	
165	American Elm	Ulmus americana	10	100	Healthy	Conflict	N	N	
166	White Ash	Fraxinus americana	11	110	Poor, canopy dead	Conflict	N	N	
167	Green Ash	Fraxinus pennsylvanica	10	100	Poor, canopy dead	Conflict	N	N	
168	Bur Oak	Quercus macrocarpa	10	100	Multi-stem (3), healthy	Conflict	N	N	
169	Staghorn Sumac	Rhus typhina	12	120	Healthy	Conflict	N	N	
170	Ash sp.	Fraxinus sp.	16		Dead	Conflict	N	N	
171	Ash sp.	Fraxinus sp.	14		Dead	Conflict	N	N	
172	American Elm	Ulmus americana	12 & 11	120	Multi-stem (2), healthy	Conflict	N	N	
173	Green Ash	Fraxinus pennsylvanica	19	190	Poor, canopy dead	Conflict	N	N	
174	Willow sp.	Salix sp.	12	120	Poor, some dead limbs	Conflict	N	N	
175	Ash sp.	Fraxinus sp.	10		Dead	Conflict	N	N	
176	American Elm	Ulmus americana	10	100	Multi-stem (2), healthy	Conflict	N	N	
177	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N	
178	Bur Oak	Quercus macrocarpa	10	100	Multi-stem (2), healthy	Conflict	N	N	
179	Ash sp.	Fraxinus sp.	11		Dead	Conflict	N	N	
180	Unknown		11		Dead	Conflict	N	N	
181	American Elm	Ulmus americana	12	120	Healthy	Conflict	N	N	
182	American Elm	Ulmus americana	10	100	Poor, canopy dead	Conflict	N	N	



Table C.1
Summary of Tree Inventory Results

Tree Imber	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Signficant Tree (> 50 cm)	Wildlife Tree
183	American Elm	Ulmus americana	14	140	Multi-stem (2), healthy	Conflict	N	N
184	Bur Oak	Quercus macrocarpa	13 & 10	130	Multi-stem (2), healthy	Conflict	N	Ν
185	Basswood	Tilia americana	10	100	Healthy	Conflict	N	N
186	American Elm	Ulmus americana	11	110	Healthy	Conflict	N	N
187	American Elm	Ulmus americana	14	140	Healthy	Conflict	N	N
188	Willow sp.	Salix sp.	11	110	Healthy Multi-stem (6),	Conflict	N	N
189	Basswood	Tilia americana	13, 11 & 11	130	healthy	Conflict	N	N
190	Bur Oak	Quercus macrocarpa	12	120	Healthy	Conflict	N	Ν
191	Basswood	Tilia americana	10	100	Multi-stem (7), healthy	Conflict	N	Ν
192	Trembling Aspen	Populus tremuloides	17	170	Healthy	Conflict	N	N
193	Trembling Aspen	Populus tremuloides	12	120	Poor, canopy	Conflict	N	N
		•			dead			
194 195	Trembling Aspen Manitoba Maple	Populus tremuloides Acer negundo	22 12	220 120	Healthy Healthy	Conflict Conflict	N N	N N
100	Maritoba Mapic	Acer riegando	26, 25, 24,	120	·	Oominict	111	1 1
196	White Willow	Salix alba	22, 21, 18, 18 & 17	260	Multi-stem (8), healthy	Conflict	N	N
197	Staghorn Sumac	Rhus typhina	12	120	Healthy	Conflict	N	N
198	Staghorn Sumac	Rhus typhina	16	160	Healthy Multi-stem	Conflict	N	N
199	Malus sp.	Malus sp.	10	100	(10), healthy	Conflict	N	N
200	Staghorn Sumac	Rhus typhina	10	100	Healthy	Conflict	N	Ν
201	White Willow	Salix alba	27, 23 & 18	270	Multi-stem (3),	Conflict	Ν	Ν
202	White Willow	Salix alba	26	260	healthy Healthy	Conflict	N	N
203	Manitoba Maple	Acer negundo	27	270	Healthy	Conflict	N	N
204	White Willow	Salix alba	29, 27, 23, 19, 16, 16 &	290	Multi-stem (7), healthy	Conflict	N	N
205	Manitoba Maple	Acer negundo	12 26	260	Healthy	Conflict	N	N
	·	_			Multi-stem (2),			
206	White Willow	Salix alba	15 & 14	150	healthy	Conflict	N	N
207 208	White Willow White Willow	Salix alba Salix alba	34 17	340 170	Healthy Healthy	Conflict Conflict	N N	N N
					Multi-stem (2),			
209	Manitoba Maple	Acer negundo	25 & 18	250	healthy	Conflict	N	N
210	Manitoba Maple	Acer negundo	23 & 20	230	Multi-stem (2), healthy	Conflict	N	N
211	Manitoba Maple	Acer negundo	24, 21, 19 & 18	240	Multi-stem (5), healthy	Conflict	N	N
212	Manitoba Maple	Acer negundo	20, 16 & 12	200	Multi-stem (3), healthy	Conflict	N	N
213	Manitoba Maple	Acer negundo	17	170	Healthy	Conflict	N	N
214	White Willow	Salix alba	27	270	Healthy	Conflict	N	Ν
215	Manitoba Maple	Acer negundo	21 & 20	210	Multi-stem (2), healthy,	Conflict	N	N
					leaning Multi-stem,			
216	Manitoba Maple	Acer negundo	27, 24 & 14	2710	with one stem fallen over (4),	Conflict	N	N
					healthy Multi-stem (2),			
217	Manitoba Maple	Acer negundo	14 & 10	140	healthy	Conflict	N	Ν
218	White Willow	Salix alba	25 & 22	250	Multi-stem (2), healthy	Conflict	N	N
219	White Willow	Salix alba	35 & 28	350	Multi-stem (2), healthy	Conflict	N	N
220	Manitoba Maple	Acer negundo	24 & 21	240	Multi-stem (2), healthy	Conflict	N	N
221	Manitoba Maple	Acer negundo	17, 15 & 12	170	Multi-stem (4), healthy	Conflict	N	N
222	Manitoba Maple	Acer negundo	22 & 21	220	Multi-stem (2), healthy	Conflict	N	Ν
223	Trembling Aspen	Populus tremuloides	21	210	Healthy	Conflict	N	N
224	Manitoba Maple	Acer negundo	26	260	Healthy	Conflict	N	Ν
225	Manitoba Maple	Acer negundo	12	120	Healthy	Conflict	N	N
226 227	Manitoba Maple Manitoba Maple	Acer negundo Acer negundo	11 26	110 260	Healthy Healthy	Conflict Conflict	N N	N N
 1	·	_			Multi-stem (2),	Conflict	N	N
228	Manitoba Maple	Acer negundo	18 & 14	180				



Table C.1
Summary of Tree Inventory Results

Summary of Tree inventory nesults								
Tree lumber	Common Name	Scientific Name	Diameter (cm DBH)	Critical Root Zone (cm)	Condition	Retainable or Conflict	Signficant Tree (> 50 cm)	Wildlife Tree
230	Manitoba Maple	Acer negundo	25	250	Healthy	Conflict	N	N
231	Manitoba Maple	Acer negundo	16, 12 & 10	160	Multi-stem (5), healthy	Conflict	N	N
232	Manitoba Maple	Acer negundo	23, 20 & 16	230	Multi-stem (3), healthy	Conflict	N	N
233	Manitoba Maple	Acer negundo	22	220	Healthy	Conflict	N	N
234	Trembling Aspen	Populus tremuloides	22	220	Healthy	Conflict	N	Ν
235	Trembling Aspen	Populus tremuloides	20	200	Healthy	Conflict	N	N
236	Trembling Aspen	Populus tremuloides	19 & 19	190	Multi-stem (2), healthy	Conflict	N	N
237	Staghorn Sumac	Rhus typhina	10	100	Healthy	Conflict	N	N
238	White Willow	Salix alba	30, 24 & 16	300	Multi-stem (5), healthy	Conflict	N	N
239	White Willow	Salix alba	32, 31, 30, 28, 27 & 18	320	Multi-stem (6), healthy	Conflict	N	N
240	White Willow	Salix alba	17	170	Healthy	Conflict	N	N
241					•			
	Trembling Aspen	Populus tremuloides	26	260	Healthy	Conflict	N	N
242	White Willow	Salix alba	37	370	Healthy	Conflict	N	N
243	Trembling Aspen	Populus tremuloides	16	160	Healthy	Conflict	N	N
244	American Elm	Ulmus americana	18	180	Healthy	Conflict	N	N
245	Large-tooth Aspen	Populus grandidentata	12	120	Healthy	Conflict	N	N
246	Large-tooth Aspen	Populus grandidentata	12	120	Healthy	Conflict	N	N
247	Large-tooth Aspen	Populus grandidentata	12	120	Healthy	Conflict	N	N
248	Staghorn Sumac	Rhus typhina	14	140	Healthy	Conflict	N	N
249	Manitoba Maple	Acer negundo	23	230	Healthy	Conflict	N	N
250	Prunus sp.	Prunus sp.	12 & 10	120	Multi-stem (8),	Conflict	N	N
251	Staghorn Sumao	Dhuc typhina	11	110	healthy	Conflict	N	NI
251	Staghorn Sumac	Rhus typhina		110	Healthy	Connict	N	N
252	White Willow	Salix alba	26, 24, 20 & 16	260	Multi-stem (4), healthy	Conflict	N	N
253	White Willow	Salix alba	44, 38, 23 & 20	440	Multi-stem (4), Poor, dead and broken limbs	Conflict	N	N
254	Manitoba Maple	Acer negundo	16 & 12	160	Multi-stem (2), healthy	Conflict	N	N
255	Manitoba Maple	Acer negundo	20 & 19	200	Multi-stem (2), healthy	Conflict	N	N
256	Trembling Aspen	Populus tremuloides	25	250	Healthy	Conflict	N	Ν
257	Trembling Aspen	Populus tremuloides	21	210	Healthy	Conflict	N	N
258	Trembling Aspen	Populus tremuloides	16	160	Healthy	Conflict	N	N
259	Trembling Aspen	Populus tremuloides	18	180	Healthy	Conflict	N	N
260	Trembling Aspen	Populus tremuloides	17	170	Healthy	Conflict	N	N
		•			•	Conflict		
261	Trembling Aspen	Populus tremuloides	24	240	Healthy		N	N
262	Staghorn Sumac	Rhus typhina	19	190	Healthy	Conflict	N	N
263	Green Ash	Fraxinus pennsylvanica	12 & 11	120	Multi-stem (2), healthy	Conflict	N	N
264	Green Ash	Fraxinus pennsylvanica	11	110	Poor, canopy dead	Conflict	N	N
265	Ash sp.	Fraxinus sp.	12 & 11	120	Multi-stem (2), dead	Conflict	N	N
266	Ash sp.	Fraxinus sp.	15	150	Dead	Conflict	N	N
267	White Willow	Salix alba	17, 16 & 14	170	Multi-stem (2), healthy	Conflict	N	N
268	Manitoba Maple	Acer negundo	27	270	Healthy	Conflict	N	N
269	Trembling Aspen	Populus tremuloides	21	210	Healthy	Conflict	N	N
270271	Trembling Aspen	Populus tremuloides Populus tremuloides	18 14 & 11	180 140	Healthy Mutli-stem (2),	Conflict Conflict	N N	N N
272	Trembling Aspen Trembling Aspen	Populus tremuloides Populus tremuloides	22	220	healthy Healthy	Conflict	N N	N
273	Trembling Aspen	Populus tremuloides	15	150	Healthy	Conflict	N	N
		•			•			
	Trembling Aspen	Populus tremuloides	11	110	Healthy	Conflict	N	N
274		Populus tremuloides	10	100	Healthy Poor, dead	Conflict	N	N
274 275	Trembling Aspen Staghorn Sumac	·	11	110		Conflict	N	N
274275276	Staghorn Sumac	Rhus typhina			limbs Poor, dead			
274275276277	Staghorn Sumac Staghorn Sumac	Rhus typhina Rhus typhina	14	140	limbs Poor, dead limbs	Conflict	N	N
274275276	Staghorn Sumac	Rhus typhina			limbs Poor, dead			



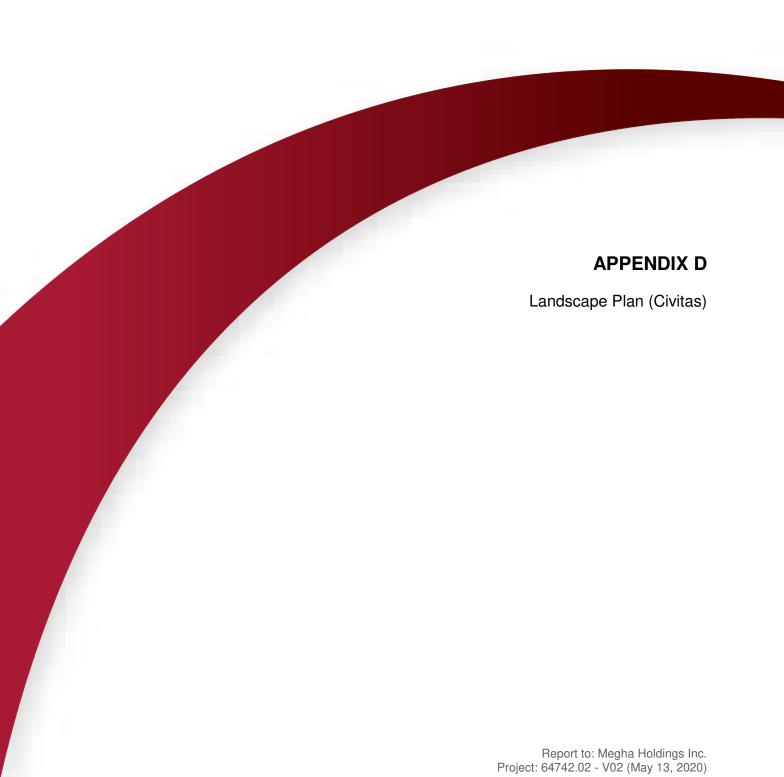
Table C.1
Summary of Tree Inventory Results

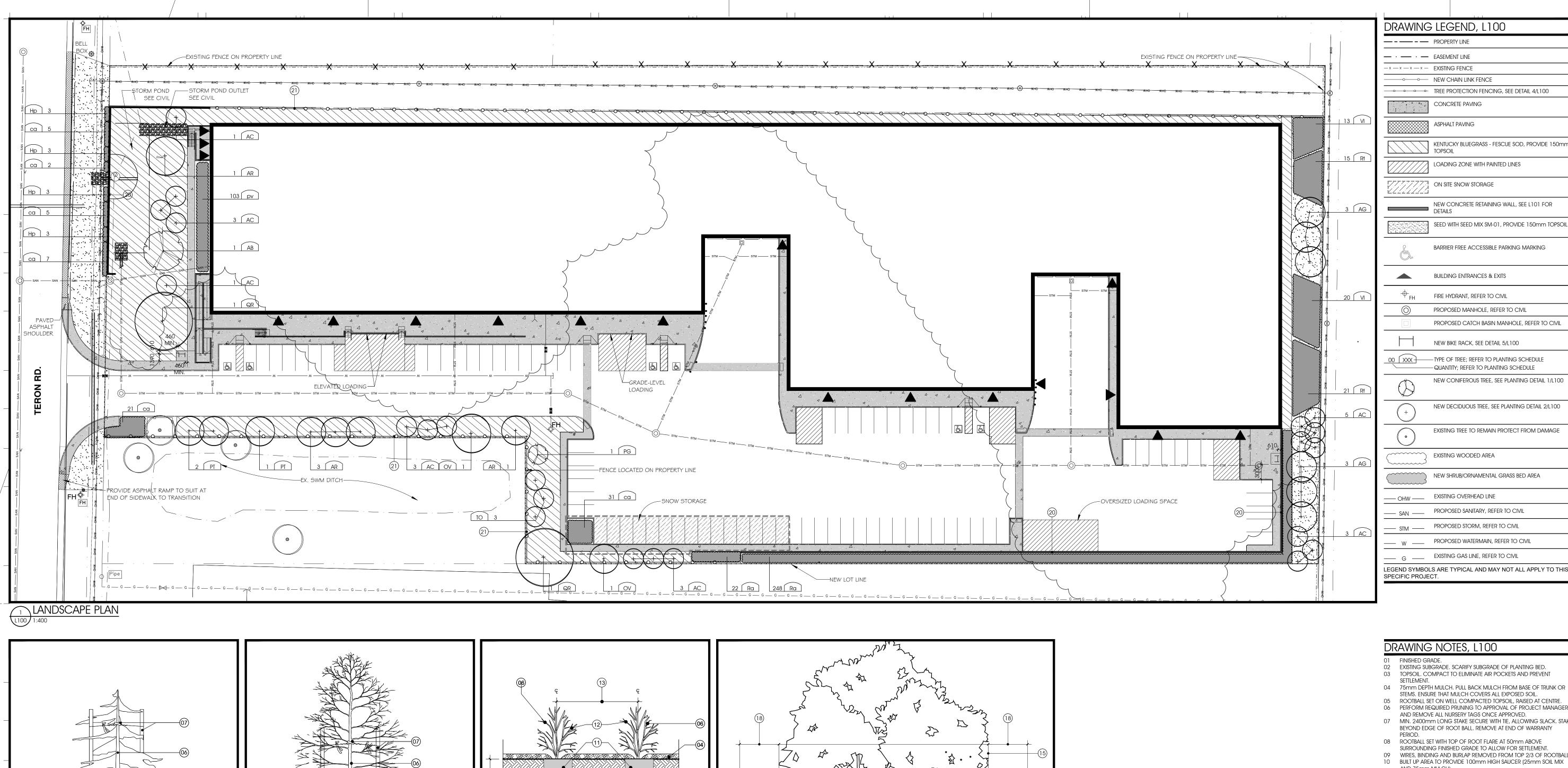
Tree	Common Name	Scientific Name	Diameter	Critical Root	Condition	Retainable	Signficant Tree	
Number			(cm DBH)	Zone (cm)		or Conflict	(> 50 cm)	Tree
280	Staghorn Sumac	Rhus typhina	11	110	Poor, dead limbs	Conflict	N	N
281	Staghorn Sumac	Rhus typhina	11	110	Healthy	Conflict	N	Ν
282	Staghorn Sumac	Rhus typhina	20	200	Healthy	Conflict	N	Ν
283	Malus sp.	Malus sp.	15, 14 & 12	150	Multi-stem (14), poor	Conflict	N	N
284	Staghorn Sumac	Rhus typhina	12	120	Healthy	Conflict	N	Ν
285	Manitoba Maple	Acer negundo	28, 24 & 13	280	Multi-stem (3), healthy	Conflict	N	N
286	Manitoba Maple	Acer negundo	24 & 19	240	Multi-stem (2), healthy	Conflict	N	N
287	Staghorn Sumac	Rhus typhina	11	110	Healthy	Conflict	N	Ν
288	Manitoba Maple	Acer negundo	42	420	Multi-stem, healthy	Conflict	N	N
289	Manitoba Maple	Acer negundo	24	240	Healthy	Conflict	N	Ν
290	Manitoba Maple	Acer negundo	24 & 21	240	Multi-stem (2), healthy	Conflict	N	N
291	Manitoba Maple	Acer negundo	21	210	Healthy	Conflict	N	Ν
292	Manitoba Maple	Acer negundo	22	220	Healthy	Conflict	N	Ν
293	Manitoba Maple	Acer negundo	14	140	Healthy	Conflict	N	N
294	Manitoba Maple	Acer negundo	26 & 17	260	Multi-stem (2), healthy	Conflict	N	N
295	Manitoba Maple	Acer negundo	25, 24 & 19	250	Multi-stem (3), healthy	Retainable	N	N
296	Manitoba Maple	Acer negundo	42	420	Healthy	Retainable*	N	N
297	Red oak	Quercus rubra	14	140	Healthy	Retainable*	N	N
298	Manitoba Maple	Acer negundo	20, 17 & 15	200	Multi-stem (3), healthy	Conflict	N	N
299	American Elm	Ulmus americana	45		Multi-stem (2), dead	Conflict	N	N

Notes:



^{*}Following offiical surveying of the property trees numbered 296 and 297 are not located on-site.





TREE PROTECTION DETAIL

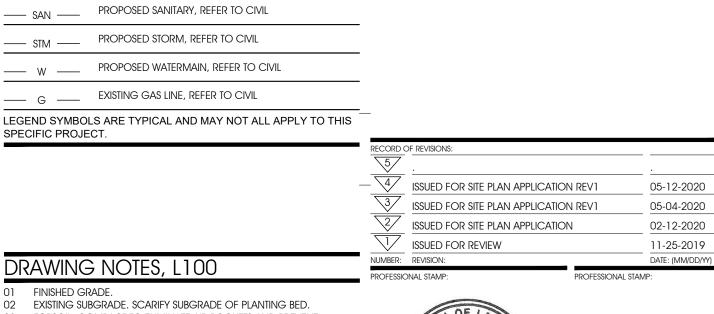
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3 SHRUB/ORNAMENTAL GRASS PLANTING BED

Weight Weight

1 + 1

Carbon Stainless



EXISTING SUBGRADE. SCARIFY SUBGRADE OF PLANTING BED.

03 TOPSOIL. COMPACT TO ELIMINATE AIR POCKETS AND PREVENT

04 75mm DEPTH MULCH. PULL BACK MULCH FROM BASE OF TRUNK OR STEMS. ENSURE THAT MULCH COVERS ALL EXPOSED SOIL. 05 ROOTBALL SET ON WELL COMPACTED TOPSOIL, RAISED AT CENTRE. 06 PERFORM REQUIRED PRUNING TO APPROVAL OF PROJECT MANAGER,

AND REMOVE ALL NURSERY TAGS ONCE APPROVED. 07 MIN. 2400mm LONG STAKE SECURE WITH TIE, ALLOWING SLACK. STAKE— BEYOND EDGE OF ROOT BALL. REMOVE AT END OF WARRANTY

08 ROOTBALL SET WITH TOP OF ROOT FLARE AT 50mm ABOVE SURROUNDING FINISHED GRADE TO ALLOW FOR SETTLEMENT.

WIRES, BINDING AND BURLAP REMOVED FROM TOP 2/3 OF ROOTBALL. BUILT UP AREA TO PROVIDE 100mm HIGH SAUCER (25mm SOIL MIX AND 75mm MULCH). REMOVE POTS COMPLETELY FROM POTTED STOCK.

FOR PLANT SPECIES, REFER TO PLANT SCHEDULE. FOR PLANT SPACING, REFER TO PLANT SCHEDULE. 14 THIN AND CLEAN CROWN TO APPROVAL BY DEPARTMENTAL REPRESENTATIVE.

DRIP LINE OF EXISTING TREE. 35x35mm T-BAR STAKES AT 1500mm O/C MAX. 1200mm HIGH HEAVY DUTY ORANGE PLASTIC MESH FENCE SECURED

WASTE AND EXCESS SOIL. NO DIGGING, TRENCHING OR OTHER SOIL DISTURBANCE ALLOWED WITHIN THE FENCED AREA. 18 ERECT TREE PROTECTION FENCE AWAY FROM TREE TRUNK AT A DISTANCE OF 10cm PER EVERY cm OF DIAMETER OF TREE TRUNK AT BREAST HEIGHT. MIN. 1000mm FROM DRIPLINE OF TREE. ACCEPTABLE TO REDUCE EXTENT OF TREE PROTECTION FENCE WHEN TREE IS IN

WITH TWIST TIES. FENCED AREA TO BE CLEAR OF BUILDING MATERIALS,

CLOSE PROXIMITY TO PROPOSED STRUCTURES. OBTAIN APPROVAL FROM DEPARTMENTAL REPRESENTATIVE. 19 PROTECT ROOT SYSTEMS UNDER THE TREE DRIPLINE FROM DAMAGE, COMPACTION AND CONTAMINATION RESULTING FROM

COMMON NAME

SERVICEBERRY

AMUR MAPLE

IRONWOOD

RED OAK

BALSAM FIR

WHITE SPRUCE

KARPICK MAPLE

TREMBLING ASPEN

COMMON NAME

EASTERN WHITE CEDAR

LITTLE QUICK FIRE HYDRANGEA

HEAVY METAL SWITCH GRASS

COMMON NAME

ALPINE CURRANT

STAGHORN SUMAC

COMMON NAME

NANNYRERRY

CONSTRUCTION 20 NEW CONCRETE RETAINING WALL AND GUARD, SEE L101 FOR DETAILS.

21 NEW CHAIN LINK FENCE PER STANDARD CITY OF OTTAWA DETAIL F9.

SPACING SIZE

SPACING SIZE

100cm 60cm

100cm

50mm CAL. WB.

50mm CAL. WB.

50mm CAL. WB.

50mm CAL. B&B.

50mm CAL. B&B.

250cm HT. WB.

125cm HT. B&B.

60cm

200cm 60cm POT

100cm 60cm POT 75cm 1 gal POT

CONDITION

CONDITION

CONDITION

POT



MEGHA HOLDINGS INC.

1558 BIHOM DRIVE

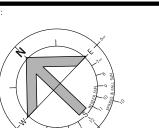
OTTAWA, ONTARIO, K1G 4R7

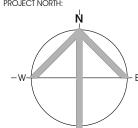
6 LOCATION PLAN



CIVITAS ARCHITECTURE INC. 14 CHAMBERLAIN AVENUE, SUITE 101 CANADA K1S 1V9

T: 613.742.7482 WWW.CIVITAS-INC.CA





_PROPOSED WAREHOUSE

1243 TERON ROAD OTTAWA, ONTARIO

LANDSCAPE PLAN

05-12-2020 — ISSUED FOR:

SITE PLAN 05-12-2020 1908

SYMBOL SEED MIXTURE SM-01

PLANTING SCHEDULE

BOTANICAL NAME

ACER GINNALA

AMELANCHIER CANADENSIS

ACER RUBRUM 'KARPICK'

OSTRYA VIRGINIANA

QUERCUS RUBRA

BOTANICAL NAME

ABIES BALSAMEA

PICEA GLAUCA

THUJA OCCIDENTALIS

BOTANICAL NAME

RIBES ALPINUM

RHUS TYPHINA

VIBURNUM LENTAGO

BOTANICAL NAME

PANICUM VIRGATUM 'HEAVY METAL

HYDRANGEA PANICULATA 'LITTLE QUICK FIRE'

CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

POPULUS TREMULOIDES

SYMBOL

CONIFEROUS TREES

DECIDUOUS SHRUBS

SYMBOL QUANTITY

270

.3.3

QUANTITY

ORNAMENTAL GRASSES

QUANTITY

SEED: CERTIFIED CANADA NO.1 GRADE, IN ACCORDANCE

MIXTURE COMPOSITION: 10% Red Clover (Medium Type). 15% Quebec Perennial Ryegrass. 25% Tall Fescue. 25% Creeping Red Fescue. 15% Richmond Timothy.

2 kg / 100 m₂.

WITH GOVERNMENT OF CANADA "SEEDS ACT" AND "SEED REGULATIONS".

10% Kentucky Bluegrass. SEEDING RATES FOR MECHANICAL SEEDING:

W4508 BIKE RACK

34" DEPTH

5 BIKE RACK CUT SHEET

CONIFEROUS TREE PLANTING

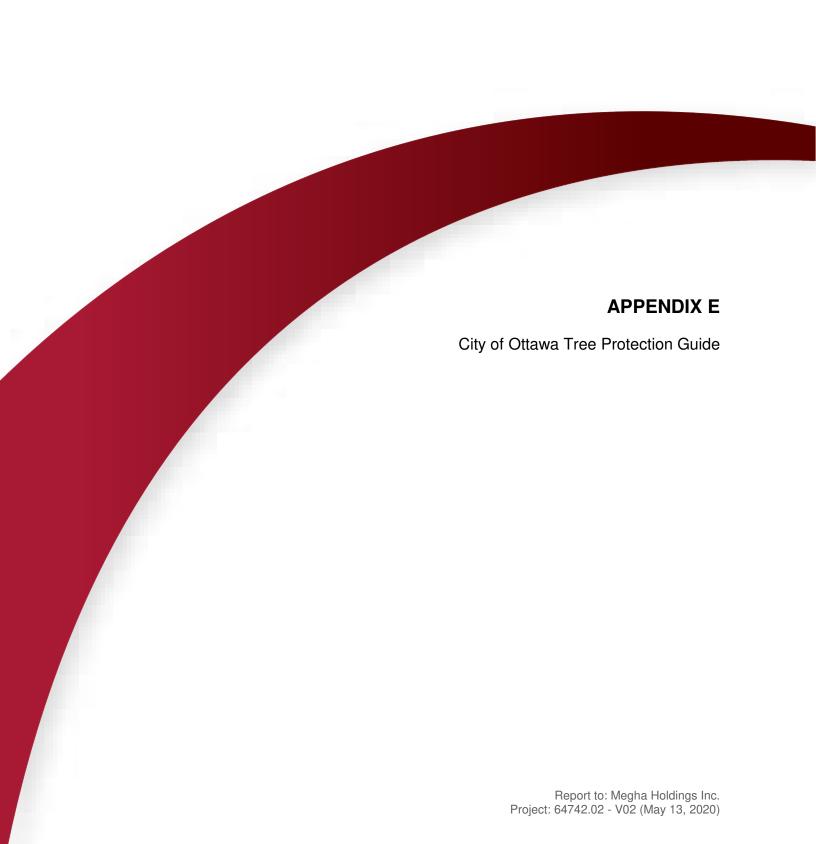
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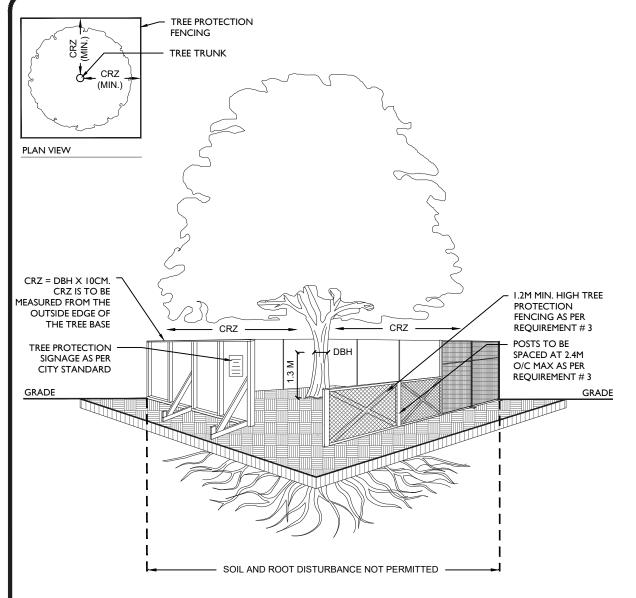
Width

nchor to Ancho

DECIDUOUS TREE PLANTING
1:30

#18115





TREE PROTECTION REQUIREMENTS:

- PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
- 2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
 - DO NOT PLACE ANY MATERIAL OR EQUIPMENT INCLUDING OUTHOUSES;
 - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
 - DO NOT RAISE OR LOWER THE EXISTING GRADE;
 - TUNNEL OR BORE WHEN DIGGING;
 - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE:
 - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
 - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
- 3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"X4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
- 4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE DISCLOSURE REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
- 5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

BY-LAWS

ALL CITY-OWNED TREES ARE PROTECTED UNDER THE MUNICIPAL TREES AND NATURAL AREAS PROTECTION BY-LAW (2006-279). WITHIN THE URBAN AREA, PRIVATELY-OWNED TREES GREATER THAN 50CM DIAMETER ON LOTS 1HA IN SIZE OR LESS, AND TREES GREATER THAN 10CM DIAMETER ON LOTS >1HA, ARE PROTECTED UNDER THE URBAN TREE CONSERVATION BY-LAW (2009-200).

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE. UPON REQUEST



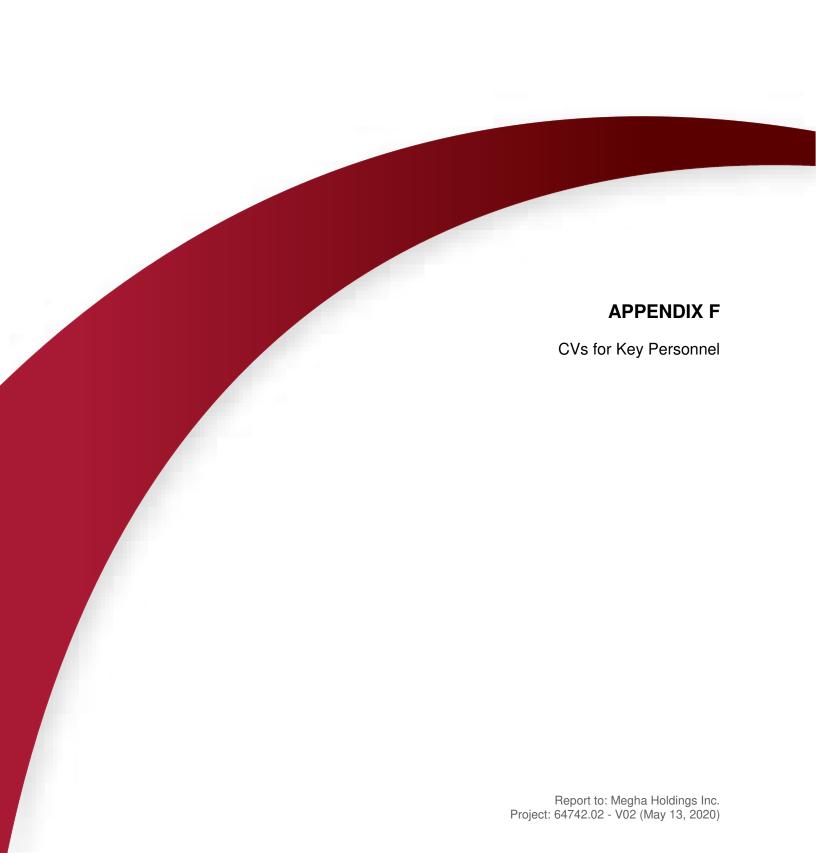
TREE PROTECTION SPECIFICATION

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

SCALE:	NTS

DATE: MAY 2019

DRAWING NO.: 1 of 1





Drew Paulusse, B.Sc.

Senior Biologist / Manager of Environmental Services

Mr. Paulusse has over 12 years of experience in the environmental consulting industry, providing private industry and municipal and federal government clients with cost effective solutions to manage environmental constraints associated with land development proposals and infrastructure projects. Mr. Paulusse's expertise, as it relates to land development proposals and infrastructure projects is field assessment and regulatory permitting associated with species at risk, fish habitat and wetlands.

Education

- B.Sc., Biology, Trent University, 2007
- Environmental Technician, Fleming College, 2004

Professional Experience

2018-date	GEMTEC Consulting Engineers and Scientists Limited Manager of Environmental Services	l Ottawa, Ontario
2011-2018	Geofirma Engineering Limited Senior Biologist	Ottawa, Ontario
2007-2011	INTERA Engineering Limited Biologist	Ottawa, Ontario
2007	Canadian Wildlife Service, Environment Canada Wetland Conservation Officer	Burlington, Ontario
2005	Centre for Inland Waters, Environment Canada Junior Marine Technologist	Burlington, Ontario

Professional Affiliations and Technical Training

- Canadian Society of Environmental Biologists
- Ontario Association for Impact Assessment
- MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings. Ministry of Transportation. 2018
- Ontario Wetland Evaluation System Certification Course. Ministry of Natural Resources and Forestry. 2017
- Headwater Drainage Feature Assessment Training Course. Rideau Valley Conservation Authority. 2017





- Ecological Land Classification System Certification Course. Ministry of Natural Resources and Forestry. 2015
- Ontario Benthic Biomonitoring Network Certification Course. Ministry of Environment, Conservation and Parks. 2011

Project Highlights

- DFO Self-Assessment and Preparation of Tender Special Provisions, Osceola Culvert Replacement, County of Renfrew, Ontario (2019): Project manager and technical lead responsible for the evaluation of the significance of fish habitat and species at risk, and completion of a DFO self-assessment. Work included aquatic habitat assessments, pathway of effects evaluation, culvert design recommendations and reporting.
- Biological Inventory, Ontario Power Generation Incorporated, Bath, Ontario (2018):
 Project manager and technical lead responsible for conducting a three-season inventory of avian and amphibian species at the Lennox Provincially Significant Wetland. Work included conducting presence and abundance surveys following the Canadian Wildlife Service marsh monitoring protocol and Bird Studies Canada breeding bird surveys, statistical analysis of species data trends and reporting.
- Wetland Management Plan, Ontario Power Generation Incorporated, Bath, Ontario (2018): Project manager and technical lead responsible for the development of an adaptive wetland management plan for the Lennox Provincially Significant Wetland. Work included a synthesis of historical data, statistical analysis of data trends, vegetation assessment, air photo interpretation, development of short-term and long-term management objectives and development of a standardized monitoring program.
- Environmental Compliance Monitoring, Petrie Island Causeway Rehabilitation Project,
 Ottawa, Ontario (2018): Project manager and technical lead responsible for monitoring
 constructor compliance with various Department of Fisheries and Oceans, Ministry of Natural
 Resources and Conservation Authority permit conditions during the Petrie Island Causeway
 Rehabilitation Project within the Ottawa River. Work included species at risk surveys, fish
 salvage, exclusion fence inspection, monitoring of sediment and erosion control measures,
 turbidity monitoring, regulatory agency consultation and weekly reporting.
- Wetland Delineation and Wetland Function Assessment, National Capital Commission,
 Ottawa, Ontario (2018): Project manager and technical lead responsible for the delineation
 of wetland pockets within the LeBreton Flats Redevelopment Area and the assessment of
 wetland function for the purpose of evaluating compensation requirements. Work was
 completed following both the federal and provincial wetland evaluation frameworks.





- Environmental Impact Statement, Code Drive Development, Smiths Falls, Ontario (2018): Project manager and technical lead responsible for the completion of an Environmental Impact Statement in support of a severance application for the creation of eight residential lots within a significant woodland and adjacent to a large local wetland. Work included targeted surveys for species at risk, breeding amphibians and marsh birds, impact assessment, development of lot-specific mitigation measures and agency consultations.
- Tree Conservation Report, Royal LePage Team Realty, Ottawa, Ontario (2018): Mr. Paulusse completed an inventory of all trees located on an urban commercial lot for the purpose of identify significant retainable trees and trees in conflict with the proposed site redevelopment. Work included, site inventory, tree removal permit preparation and reporting.
- Environmental Compliance Monitoring, Airport Parkway Culvert Rehabilitation Project,
 Ottawa, Ontario (2018): Project manager and technical lead responsible for monitoring
 constructor compliance with Ministry of Natural Resources and Conservation Authority permit
 conditions. Work included species at risk surveys, exclusion fence inspection, monitoring of
 sediment and erosion control measures and weekly reporting.
- Tier I and II Natural Environment Report, Crain's Construction, Ottawa, Ontario (2018):
 Project manager and technical lead responsible for completing an inventory of site flora and fauna, completion of species at risk surveys, regulatory agency consultation, impact assessment and reporting.
- Species at Risk Assessment, National Capital Commission, Gatineau, Quebec (2018):

 Project manager responsible for the completion of avian species at risk surveys to determine the presence or absence of chimney swift and barn swallows at a contaminated site. Work was undertaken to support an Ecological Risk Assessment.
- Fish Habitat Assessment, Various Culvert Replacements, Ottawa, Ontario (2018):

 Project manager and technical lead responsible for the evaluation of the significance of fish habitat at three culvert crossings in rural Ottawa. Work included aquatic habitat assessments, pathway of effects evaluation, culvert design recommendations and reporting.
- Environment Effects Evaluation Assessment, Britannia Wall Rehabilitation Project,
 Ottawa, Ontario (2018): Project manager and technical lead responsible for completing a
 comprehensive tree inventory, wetland boundary delineation, significant wildlife habitat
 assessment and evaluation of effects associated with the rehabilitation of the Britannia Wall,
 a 600-metre-long community flood protection structure.
- Environmental Compliance Monitoring, Petrie Island Beach Head Rehabilitation Project, Ottawa, Ontario (2018): Project manager and technical lead responsible for monitoring constructor compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island





Beach Head Rehabilitation Project within the Ottawa River. Work included species at risk surveys, exclusion fence inspection, monitoring of sediment and erosion control measures, and reporting.

- Provincially Significant Wetland Boundary Evaluation and Mitigation Plan, Town and County Chrysler, Smiths Falls, Ontario (2018): Project manager and technical lead responsible for revising the wetland boundary associated with a provincially significant wetland and development of a mitigation plan to enable the redevelopment of an adjacent commercial lot. Work included wetland vegetation delineation, regulatory technical document submissions, agency consultations, mitigation measure development and reporting.
- Environmental Impact Statement and Headwater Drainage Feature Assessment, Swank
 Construction Limited, Morrisburg, Ontario (2017-2018): Project manager and technical
 lead responsible for the completion of an Environmental Impact Statement with Headwater
 Drainage Feature Assessment for a 100-lot residential subdivision. Work included ecological
 land classification, breeding bird surveys, impact assessment and a three season assessment
 of hydrological conditions and their contributions to downstream fish habitat.
- Natural Heritage Inventory and Environmental Impact Assessment, Combermere Lodge
 Limited, Barry's Bay, Ontario (2017-2018): Project manager and technical lead responsible
 for the completion of a Natural Heritage Inventory and Environmental Impact Assessment
 completed in support of a 54-lot condominium development located in an environmentally
 sensitive area. Work included wetland boundary delineation, identification of significant
 wildlife habitat, application of the significant wildlife habitat mitigation support tool, completion
 of a two-year survey of site flora and fauna, impact assessment and town hall presentations.
- Lake Capacity Assessment, Combermere Lodge Limited, Barry's Bay, Ontario (2017-2018): Project manager and technical lead responsible for the predictive assessment of septic effluent impacts relating to the operation of a 54-lot condominium development on three adjacent waterbodies. Work included limnological investigations over two seasons, application of the provincial lakeshore capacity model, hydrogeological investigations, mass flux analysis, mitigation measure development and reporting.
- Detailed Quantitative Ecological Risk Assessment, National Capital Commission, Gatineau, Quebec (2016 to 2018): Project manager and technical lead for the completion of a Detailed Quantitative Ecological Risk Assessment completed for a former landfill property located adjacent to the Ottawa River. Work included aquatic habitat assessment, benthic community characterization, species at risk surveys, terrestrial wildlife surveys and analysis of site-specific aquatic toxicity data.
- Environmental Compliance Monitoring, Carp Snow Dump, Ottawa, Ontario (2017):
 Project manager and technical lead responsible for monitoring constructor compliance with a Ministry of Natural Resources overall benefit permit for blanding's turtle associated with the





construction of the Carp Snow Dump. Work included weekly exclusion fence inspection and weekly reporting to the contract administrator.

- Fish Habitat Assessment, Little Bark Bay Properties, Barry's Bay, Ontario (2017):

 Project manager and technical lead responsible for the identification and evaluation of significance of fish habitat within and adjacent to a proposed plan of subdivision. Work included aquatic habitat assessments, pathway of effects evaluation, application of the Department of Fisheries and Oceans self-assessment process and reporting.
- Species at Risk and Migratory Bird Screening Assessment, City of Ottawa, New Edinburg Park Redevelopment Project, Ottawa, Ontario (2017): Project manager and technical lead responsible for the completion of a species at risk and migratory bird screening assessment to assist in bid tender package preparation for the re-development of New Edinburg Park. Work included a general habitat assessment, a probability of occurrence assessment, follow-up pre-construction surveys and reporting.
- Fish Habitat Assessment, Highway 417 Culvert Replacement Project, Ottawa, Ontario (2017): Project manager and technical lead responsible for the evaluation of the significance of fish habitat at two culvert crossings Ottawa. Work included aquatic habitat assessments, pathway of effects evaluation, application of the Department of Fisheries and Oceans self-assessment process and reporting.
- Fish Habitat and Headwater Drainage Feature Assessment, Private Landowner, Ottawa, Ontario (2017): Project manager and technical lead responsible for the completion of a two-season hydrological assessment of on-site water courses and assessment of fish habitat.
 Work completed in support of a permit required to develop an unopened road allowance.
- Environmental Impact Statement and Wetland Boundary Assessment, Town and Country RV, Perth, Ontario (2016-2017): Project manager and technical lead responsible for delineation of a provincially significant wetland and impact assessment associated with the expansion of an existing commercial enterprise. Work included ecological land classification, identification of significant wildlife habitat, species at risk surveys, wetland vegetation assessment, impact assessment and development of site-specific mitigation measures.
- Environmental Impact Statement, Blueberry Creek Veterinary Clinic, Perth, Ontario (2016): Project manager and technical lead responsible for delineation of a provincially significant wetland and impact assessment associated with the development of a commercial lot. Work included ecological land classification, identification of significant wildlife habitat, species at risk surveys, wetland vegetation assessment, impact assessment and development of site-specific mitigation measures.





Taylor Warrington, B.Sc.

Biologist

Ms. Warrington has 4 years of experience in the environmental consulting industry, providing private industry and municipal and federal government clients with cost effective solutions to manage environmental constraints associated with land development proposals and infrastructure projects.

Education

- B.Sc., Life Sciences, McMaster University, 2015
- Graduate Certificate, Ecosystem Restoration, Niagara College, 2016

Professional Experience

2020-date	GEMTEC Consulting Engineers and Scientists Limit <i>Biologist</i>	ed Ottawa, Ontario
2019-2020	GEMTEC Consulting Engineers and Scientists Limit <i>Junior Biologist</i>	ed Ottawa, Ontario
2017-2019	Geofirma Engineering Limited Junior Biologist/Scientist	Ottawa, Ontario
2016	Dillon Consulting Junior Field Biologist	Little Current, Ontario
2014	McMaster University Laboratory-Research Assistant; URBAN Project Coordin	Hamilton, Ontario

Professional Affiliations and Technical Training

- Ottawa Conservation Partners Workshop: How to Prepare and Environmental Impact Statement. 2020.
- Class 2 Backpack Electrofishing Crew Leader Certification Course. June, 2019.
- Ontario Reptile and Amphibian Survey Course. Blazing Star Environmental, Natural Resource Solutions Inc., and Ontario Nature. 2018
- Ontario Benthic Biomonitoring Network Certification Course. Ministry of Environment, Conservation and Parks, 2016

Project Highlights

 Tier I and II Natural Environment Report, Crain's Construction, Lanark County, Ontario. Biologist responsible for completing on-going surveys in support of a proposed





quarry application. Surveys include winter mammal and ungulate use surveys, bat maternity roost surveys, ecological land classification, breeding bird surveys, turtle basking surveys, amphibian breeding surveys and targeted species at risk surveys for American ginseng and eastern whip-poor-will.

- Botanical Surveys, Ontario Power Generation Incorporated, Hydroelectric Generating
 Stations throughout Central and Eastern Ontario. Biologist responsible for completing
 on-going botanical surveys at 12 hydroelectric generating stations to update existing
 records. Botanical surveys will include a combination of field survey protocols including
 random meander, transects and quadrant sampling methods to identify vascular plant
 species present at each site.
- Foresters Falls Dam Removal, Renfrew County, Ontario. Biologist responsible for conducting a species at risk screening assessment to identify the presence of species at risk within the project area and evaluate the potential impacts on SAR and their habitat if the dam is removed. On-going surveys including targeted turtle basking surveys, and terrestrial wildlife and vegetation surveys.
- Environmental Impact Statement, Subdivision Development, Lanark County, Ontario.
 Biologist responsible for the completion of an Environmental Impact Statement for a
 proposed 25-lot subdivision application. Work included ecological land classification
 surveys, targeted surveys for species at risk, breeding amphibians and birds, basking turtle
 surveys, bat maternity roost surveys, headwater drainage feature assessment, butternut
 health assessment, impact assessment, development of lot-specific mitigation measures
 and agency consultation.
- Wetland Evaluation and Significant Wildlife Habitat Surveys, Ontario Power Generation Incorporated, Bath, Ontario (2019). Biologist responsible for conducting a wetland evaluation and significant wildlife habitat surveys at the Lennox Provincially Significant Wetland. Work included conducting turtle basking surveys, reptile hibernacula surveys, targeting species at risk surveys for Least Bittern and a wetland evaluation following the MNRF's Ontario Wetland Evaluation System.
- Environmental Impact Statement, Proposed Subdivision Development, Hawksbury, Ontario (2019). Biologist responsible for the completion of an Environmental Impact Statement in support of a proposed 272-lot subdivision application. Work included ecological land classification surveys, targeted surveys for breeding birds, bat maternity roost surveys, headwater drainage feature assessment, impact assessment and development of lotspecific mitigation measures.
- Surface Water Impact Assessment, Green Lake Development, Barry's Bay, Ontario (2019): Biologist responsible for the completion of a surface water impact assessment supporting two residential lot severances. Work included a review of existing data on Green





Lake, application of the provincial lakeshore capacity model, mitigation measure development and reporting.

- Biological Inventory, Ontario Power Generation Incorporated, Bath, Ontario (2018):
 Field Biologist responsible for conducting a three-season inventory of avian and amphibian
 species at the Lennox Provincially Significant Wetland. Work included conducting presence
 and abundance surveys following the Canadian Wildlife Service marsh monitoring protocol
 and Bird Studies Canada breeding bird surveys, statistical analysis of species data trends
 and reporting.
- Environmental Compliance Monitoring, Petrie Island Causeway Rehabilitation Project,
 Ottawa, Ontario (2018): Field biologist responsible for monitoring constructor compliance
 with various Department of Fisheries and Oceans, Ministry of Natural Resources and
 Conservation Authority permit conditions during the Petrie Island Causeway Rehabilitation
 Project within the Ottawa River. Work included species at risk surveys, fish salvage,
 exclusion fence inspection, monitoring of sediment and erosion control measures, turbidity
 monitoring, regulatory agency consultation and weekly reporting.
- Environmental Impact Statement, Code Drive Development, Smiths Falls, Ontario (2018): Field Biologist responsible for the completion of an Environmental Impact Statement in support of a severance application for the creation of eight residential lots within a significant woodland and adjacent to a large local wetland. Work included targeted surveys for species at risk, breeding amphibians and marsh birds, impact assessment, development of lot-specific mitigation measures and agency consultations.
- Tier I and II Natural Environment Report, Crain's Construction, Ottawa, Ontario (2018):
 Field biologist responsible for completing an inventory of site flora and fauna, completion of
 species at risk surveys, bat exit surveys, regulatory agency consultation, impact assessment
 and reporting.
- Species at Risk Assessment, National Capital Commission, Gatineau, Quebec (2018):
 Field biologist responsible for the completion of avian species at risk surveys to determine
 the presence or absence of chimney swift and barn swallows at a contaminated site. Work
 was undertaken to support an Ecological Risk Assessment.
- Environment Effects Evaluation Assessment, Britannia Wall Rehabilitation Project,
 Ottawa, Ontario (2018): Field Biologist responsible for completing a comprehensive tree
 inventory, wetland boundary delineation, significant wildlife habitat assessment and
 evaluation of effects associated with the rehabilitation of the Britannia Wall, a 600-metrelong community flood protection structure.
- Environmental Compliance Monitoring, Petrie Island Beach Head Rehabilitation Project, Ottawa, Ontario (2018): Field biologist responsible for monitoring constructor





compliance with various Department of Fisheries and Oceans, Ministry of Natural Resources and Conservation Authority permit conditions during the Petrie Island Beach Head Rehabilitation Project within the Ottawa River. Work included species at risk surveys, exclusion fence inspection, monitoring of sediment and erosion control measures, and reporting.

- Natural Heritage Inventory and Environmental Impact Assessment, Combermere Lodge Limited, Barry's Bay, Ontario (2017-2018): Field biologist responsible for the completion of a Natural Heritage Inventory and Environmental Impact Assessment completed in support of a 54-lot condominium development located in an environmentally sensitive area. Work included wetland boundary delineation, identification of significant wildlife habitat, application of the significant wildlife habitat mitigation support tool, completion of a two-year survey of site flora and fauna, and impact assessments.
- Species at Risk and Migratory Bird Screening Assessment, City of Ottawa, New Edinburg Park Redevelopment Project, Ottawa, Ontario (2017): Field biologist responsible for the completion of a species at risk and migratory bird screening assessment to assist in bid tender package preparation for the re-development of New Edinburg Park. Work included a general habitat assessment, a probability of occurrence assessment, follow-up pre-construction surveys and reporting.
- Post-Construction Windfarm Monitoring for Wildlife Impacts, Little Current, Ontario (2016): Field biologist responsible for the completion of post-construction monitoring of a windfarm for avian and mammalian fatalities. Work included fatality surveys, vegetation surveys, and wildlife scavenger surveys.
- Long-term Changes in Ecosystem Health, Frenchman's Bay, Pickering, Ontario (2015): Field biologist responsible for evaluating the long-term changes in ecosystem health of Frenchman's Bay. Work included: data review, analysis of data trends, watershed and land-use mapping, digitization of wetland vegetation cover and analysis of changes over time, reporting and symposium presentation.





civil

geotechnical

environmental

field services

materials testing

civil

géotechnique

environnementale

surveillance de chantier

service de laboratoire des matériaux

