Application # D07-12-22-0155

2510 St. Laurent Blvd - Tree **Conservation Report**

Claridge Homes



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1. Introduction

IBI Group was retained to complete a tree inventory and prepare a Tree Conservation Report for development located at 2510 St. Laurent Boulevard (Subject Property). The proposed development consists of a residential area with medium-density dwellings and an urban park. Tree removals are required to facilitate the construction of the approved residential development within the 5.7-hectare property.

The purpose of this report is to identify those trees that will be impacted by the proposed development and construction activities within the Subject Property, identify opportunities for tree retention, and establish a mitigative framework for removals that allow for the implementation of impact avoidance measures, to minimize risk to surrounding natural heritage features.

The following was considered during the production of the Tree Conservation Report:

The characteristics of trees growing on site including species composition, size, figure, and other health considerations; The social and ecological functions of the trees identified; The sensitivity of these trees to disturbances (including changes to grade and drainage, sun and wind exposure, and proximity to physical construction activities).

This report aims to identify each individual tree of significance on the property as outlined by The City of Ottawa's Tree Protection By-law.

2. Site Observation and Methodology

The Subject Property is a decommissioned commercial lot with no existing structures present within the 5.7 ha. Large ornamental plant species such as: Norway Spruce (*Picea albies*), Blue Spruce (*Picea pungens*) and Honey Locust (*Gleditsia triacanthos*); mid-succession species such as Large Tooth Aspen (*Populus grandidentata*), Trembling Aspen (*Populus tremuloides*), and Green Ash (*Fraxinus pensynvanica*); and various invasive species such as European Buckthorn (*Rhamnus cathartica*) and Amur Honeysuckle (*Lonicera maackii*) dominate the landscape within the Subject Property.

Trees were assessed and inventoried on June 24th and June 27th of 2022 by a qualified terrestrial ecologist. Weather conditions were sunny, with a temperature of 27°C and 22°C respectively.

All trees greater than 10 cm Diameter at Breast Height (DBH) were measured using a calibrated diameter tape at 1.4 m above ground as per the City of Ottawa's Tree Protection By-law (No. 2020-340).

Tree inventory data included the following metrics: tree species, general health conditions, DBH, UTM coordinates, and other notable characteristics identified by the surveyor (i.e. number of stems, cavities, etc...).

October 3, 2023

3. Survey Results

The vegetation on this vacant commercial property (**Figure 1**) can be described as a disturbed urban tree stand composed of several non-native and invasive tree species of various sizes and stages of development. The trees within the tree stand may provide cover and nesting habitat services for birds and other wildlife. However, none of the inventoried trees possessed cavities that would be suitable for any significant wildlife habitat.

Invasive species such as European Buckthorn and Dog Strangling Vine (*Cynanchum rossicum*) were prevalent within the Subject Property. These invasive species are present within the understory of taller conifers and canopy trees, fence lines, and open hedge rows. The presence of Emerald Ash Borer (EAB) was evident within some of the dead tree snags. The presence of these invasive species within the urban tree canopy can have a significant impact on the ecological integrity of the existing landscape. Over time, invasive could outcompete and displace native vegetation by impacting the existing species diversity and as has likely occurred within the Subject Property.

Four major structures existed on the Subject property until they were demolished around 2007. Currently, all that remains of the existing structures are the abandoned parking lots that once serviced the units. Additionally, the urban woodlot serves no social value as it is fenced off from the public.

3.1. Tree Inventory Results

237 trees with a DBH greater than 10cm were located within the Subject Property during field visits. A total of 22 different tree species were found in varying stages of maturity with an average of 23cm DBH. Larger trees within the lot are predominately ornamental spruces, pines, and honey locust species. Some larger native trees such as Red Oaks and Sugar Maples are present throughout the Subject Property, however presence is limited. Smaller diameter trees throughout the Subject Property are predominantly Poplar species, Manitoba Maple, Russian Olive, and Green Ash trees.

The following table (**Table 1**) provides a summary of the grouped tree inventory results with a full tree inventory in **Appendix B**.

None of the trees identified within the inventoried footprint are considered to be at risk or regionally rare.

Table 1: Summary of grouped tree inventories for 2510 St Laurent Blvd

COMMON NAME	BOTANICAL NAME	AVERAGE DBH	AVERAGE HEALTH	TOTAL TREES INVENTORIED
Amur Honeysuckle	Lonicera maackii	13	Good	4
Amur Maple	Acer ginnala	12	Good	8
Austrian Pine	Pinus nigra	38	Fair	25
Balsam Poplar	Populus balsamifera	10	Good	1
Basswood	Tilia americana	31	Excellent	1
Blue Spruce	Picea pungens	30	Good	49
Canada Plum	Prunus nigra	15	Good	1
Crabapple Tree	Malus spp.	12	Fair	2
Siberian Elm	Ulmus pumila	12	Good	2
Green Ash	Fraxinus pennsylvanica	15	Fair	13
Honey Locust	Gleditsia triacanthos	29	Good	4
Large Tooth Aspen	Populus grandidentata	13	Very Good	27
Little Leaf Linden	Tilia cordata	32	Very Good	2
Manitoba Maple	Acer negundo	14	Good	21
Norway Spruce	Picea abies	37	Very Good	8
Peach Leaf Willow	Salix amygdaloides	12	Very Good	4
Red Oak	Quercus rubra	39	Good	3
Russian Olive Tree	Elaeagnus angustifolia	16	Good	11
Sugar Maple	Acer saccharum	39	Very Good	6
Trembling Aspen	Populus tremuloides	12	Very Good	14
Unknown	N/A	21	Dead	22
White Ash	Fraxinus americana	15	Very Good	1
White Poplar	Populus alba	19	Very Good	8
	-		Total	237

3.2. Limitations of Assessment

The inventory and assessment provided in this report has been completed using techniques of visual observation of above-ground parts of each tree. This tree assessment is therefore valid at the time of inspection, and no guarantee can be made about the continued health of the trees deemed to be in good condition.

In addition, due to tree canopy cover, there can be variability associated with the accuracy of the GPS utilized during the inventory. As such, the inventoried tree locations are approximate.

4. Criteria for Removal

Tree removals within the property have been determined by cross referencing recorded tree locations with the proposed site plan. The site plan which has been guided by the City of Ottawa's Zoning By-law that identifies that the Subject Property zoned as General Mixed Use and allows for the development of residential units (ie. apartment, stacked, or townhouse dwellings).

The Critical Root Zone (CRZ) of 143 trees located within the Subject Property are in direct conflict with the proposed site plan (**Figure 2**) and will require removal. Physical impacts on the CRZ by construction activities rapidly deteriorates the overall health, quality, and ecological service of the tree.

The tree inventory identified a number of invasive and non-native species on site. The removal of invasive tree species will help protect adjacent natural heritage features, and local biodiversity. Landscape plans for the proposed development should favour native species that hold greater ecological and social value to local communities.

To protect trees in properties adjacent to the Subject Property orange snow fence should be installed to serve as tree protection fencing along the perimeter of the construction footprint (**Figures 3.1-3.4**). Additionally, to ensure that no harm is caused to breeding birds, tree removal and vegetation clearing should be avoided during the migratory bird season (April 15 – August 15) as specified by The City of Ottawa's Environmental Impact Study Guidelines.

5. Criteria for Retention

Trees have been considered for retention in instances where they do not conflict with the development footprint, or where there is limited anticipated impact to the CRZ of high-quality trees. Characteristics such as species type, location in development area, overall tree quality, and relative age, aided in determining a tree's potential for retention.

A total of 93 trees have been identified as being considered for retention (Appendix B).

- 74 of the retainable trees are located within the proposed park area. Removals within this area should be determined at the detailed design stage for the park. Where possible, the design should prioritize the retention of healthy trees, such as the following tree numbers: 91, 92, 94, 95, 96, 99, 101, 102, and 108.
- 19 trees within and adjacent to the project footprint have been identified as retainable.

Efforts will be taken to maintain the health and well being of each retainable tree. Tree protection fencing must be installed around the critical root zone of all retained trees and recommended areas of tree protection interest as based on the guidance of the City of Ottawa's Tree Protection Specification under the City of Ottawa's Tree Protection By-law.

6. Mitigation Measures

The success of this mitigation plan is largely dependent upon the execution of clearing and construction activities to minimize impacts while meeting the planned objectives. The following mitigation and monitoring requirements are intended to manage the potential risk on the local ecology and ensure this compensation plan is executed to the standards expected by the City of Ottawa and the local community.

Grading plans should ensure that the CRZ of the trees identified for retention do not incur any damage. Activities that have the potential to incur damage to the CRZ include, but are not limited to, the requirement to excavate soils from the CRZ, changing the grade within the CRZ of the trees, or stockpiling equipment or construction materials within the CRZ of the trees.

The following tree protection and mitigation measures are recommended:

- Removals in Park Blocks shall be determined at the detailed design stage. The retention
 of healthy trees shall be prioritized where possible, and Tree Protection Fencing shall be
 installed in a manner that protects the CRZ of retainable trees.
- The limit of all grading shall be clearly staked in the field in advance of tree clearing to facilitate the flagging/marking of trees that need to be removed.
- Tree Protection Fencing shall be installed as per the mapping in Figures 3.1-3.4 of the TCR to protect the CRZ of the trees to be retained.
 - → 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, as per the City of Ottawa Tree Protection Specification (Appendix C).
 - → Tree protection fencing shall be monitored weekly to ensure that it is in working order. Should deficiencies be identified, the contractor must ensure to fix the fence within 48 hours of notice.
 - → Do not place any material or equipment within the CRZ of any trees to be preserved.
 - → There shall be no access to the area beyond the limit of construction. All construction access shall be limited to the development side of the tree protection fence.
 - → Do not attach any signs, notices, or posters to any tree.
 - → Do not raise or lower the existing grade within the CRZ of trees without approval.
 - → Do not tunnel or bore when digging within the CRZ of a tree without approval.
 - → A qualified professional shall inspect the fencing prior to commencement of construction activities to confirm the tree protection measures are adequate.
- A qualified professional shall mark all trees (dead and alive) that need to be removed, relative to the staked grading limits and referring the tree inventory.
- An updated removals tally shall be provided to the City Forester for review to ensure general compliance with the permit.

- If tree clearing is required during the breeding bird season (April 5th to August 28th), a qualified biologist shall undertake a search for active nests and nesting behaviors within and adjacent to the clearing limits within 2 days before clearing activities begin. If nesting activity is identified, an appropriate area around the nest (as determined by the qualified biologist) shall be protected until the young have left the nest or the nest is abandoned.
- Should roots be encountered during construction, they are to be clean cut using proper arboricultural practices in order to minimize root damage and impact to tree health.
- To minimize the risks to adjacent natural heritage features and wildlife during construction, the following best management procedures and mitigation measures should be followed prior to and during construction:
 - → Prior to the start of tree clearing, a qualified biologist should conduct site visit(s) with the contractor to review exactly which trees need to be removed and to identify those trees that that can be 'topped' to provided wildlife habitat.
 - → A qualified professional should be on-site for vegetation clearing to ensure only those trees selected for removal are being removed.

7. Tree Conservation Summary

To accommodate the proposed residential development, it is expected that tree removals will be required for the construction of medium-density residential development and its associated infrastructure. Trees considered for removal were determined based off the site plan, and the overall impact to a tree's critical root zone. Ecological impacts associated with the removal of identified trees will be permanent but limited due to the presence of invasive and non-native/cultivated trees within the Subject Property. Urban tree cover quality is likely to improve with the installation of newly planted native tree species. The proposed works would result in the removal of 145 trees over an area of 5.7 hectares. The tree selection for the Subject Property and the proposed park should incorporate native trees to enhance the ecological integrity. Native plantings will extend The City of Ottawa's existing wildlife corridors within the south end by connection existing nearby green spaces such as Sharel Park, Fairlea Park, and Orlando Park.

Tree removals are to be guided by a trained professional where a site visit is required to mark all trees to be removed to ensure that no additional trees are harmed or killed during the works. The Tree Conservation Plan is to be reviewed by the City of Ottawa to ensure that the plan adequately mitigates the anticipated impacts of tree removals.

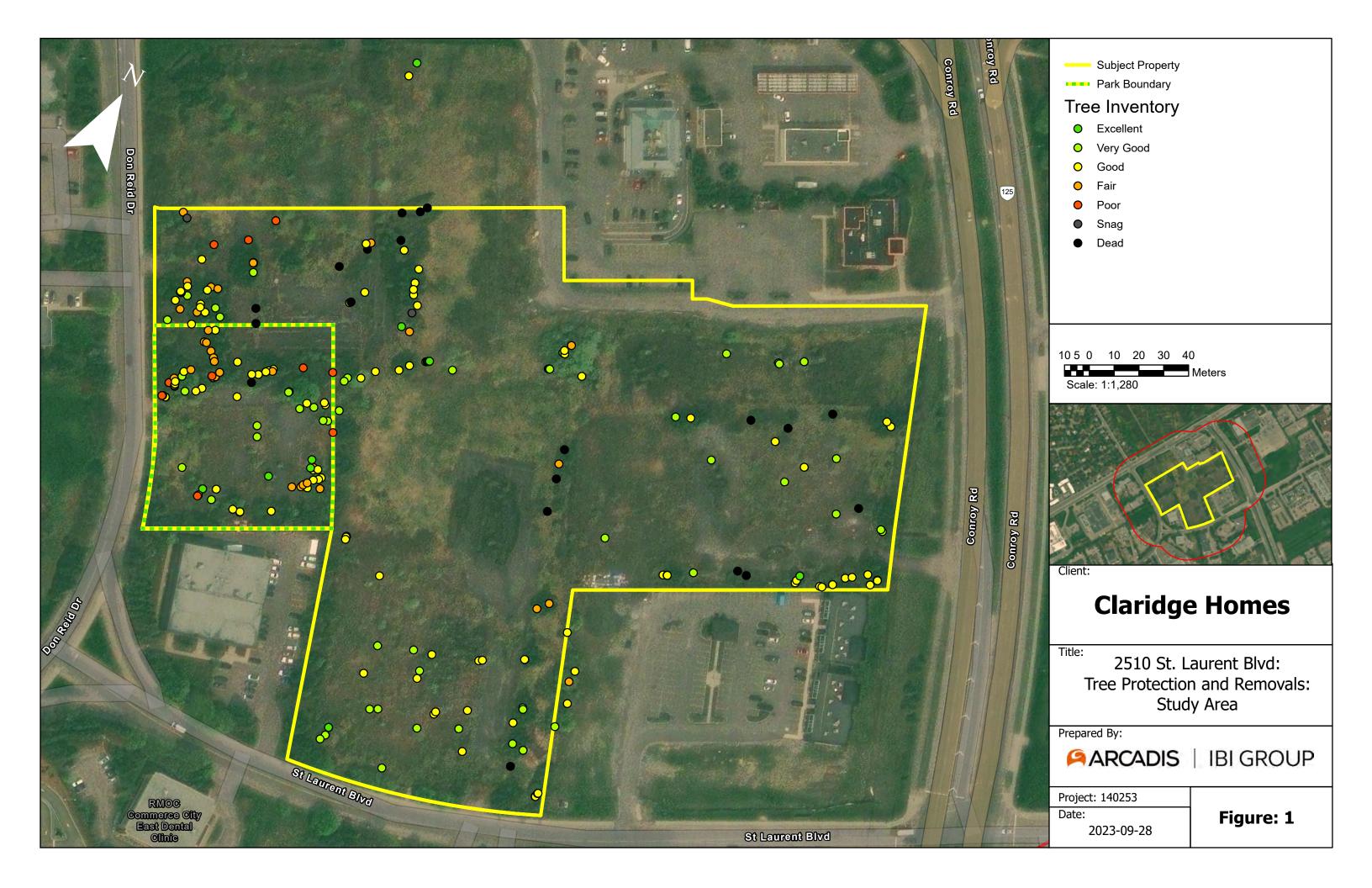
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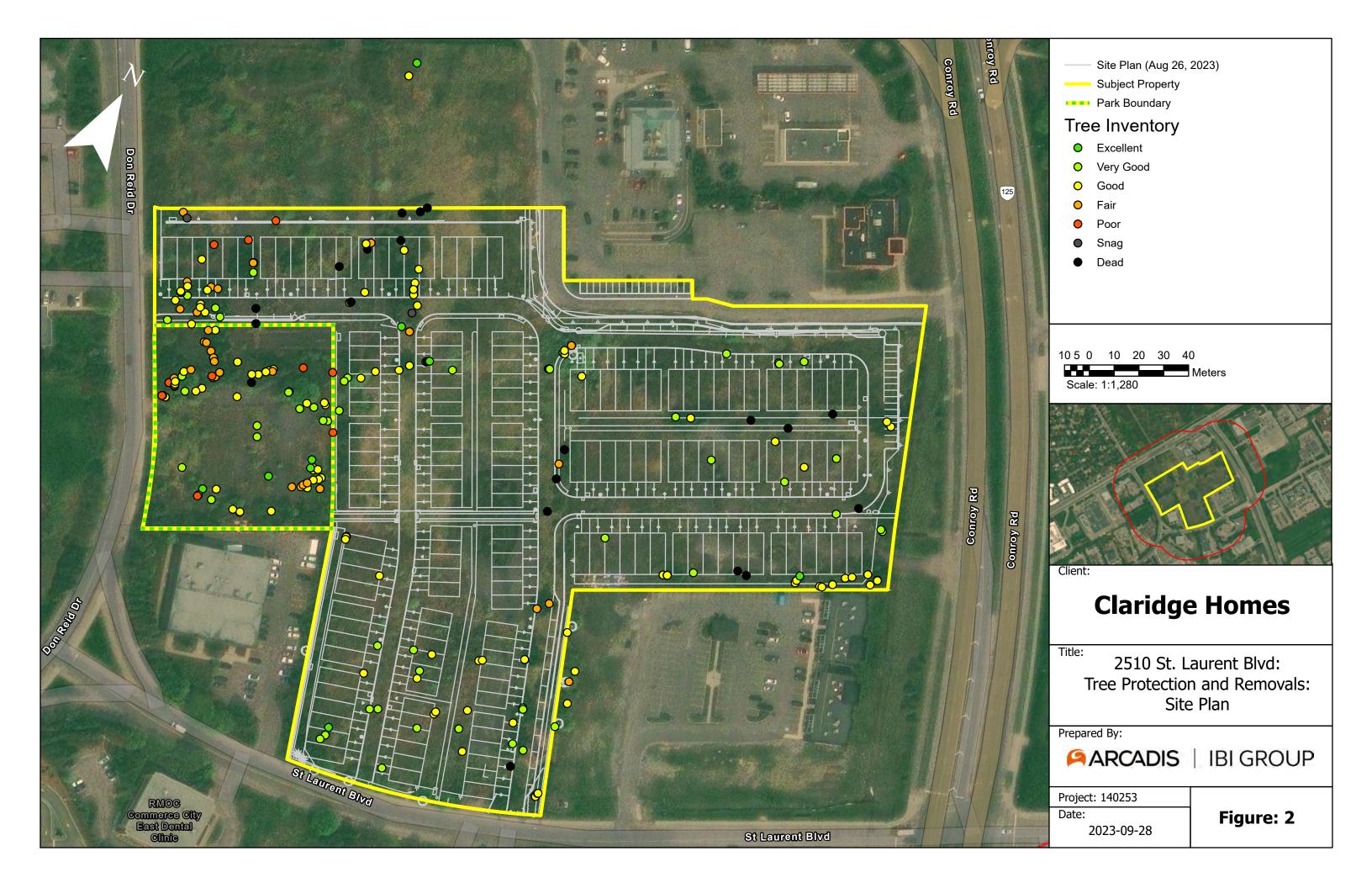
Brittany Semmler, HB.Sc. *Ecologist, Natural Systems*

Alex Zeller, M.Sc. Associate – Manager, Natural Systems

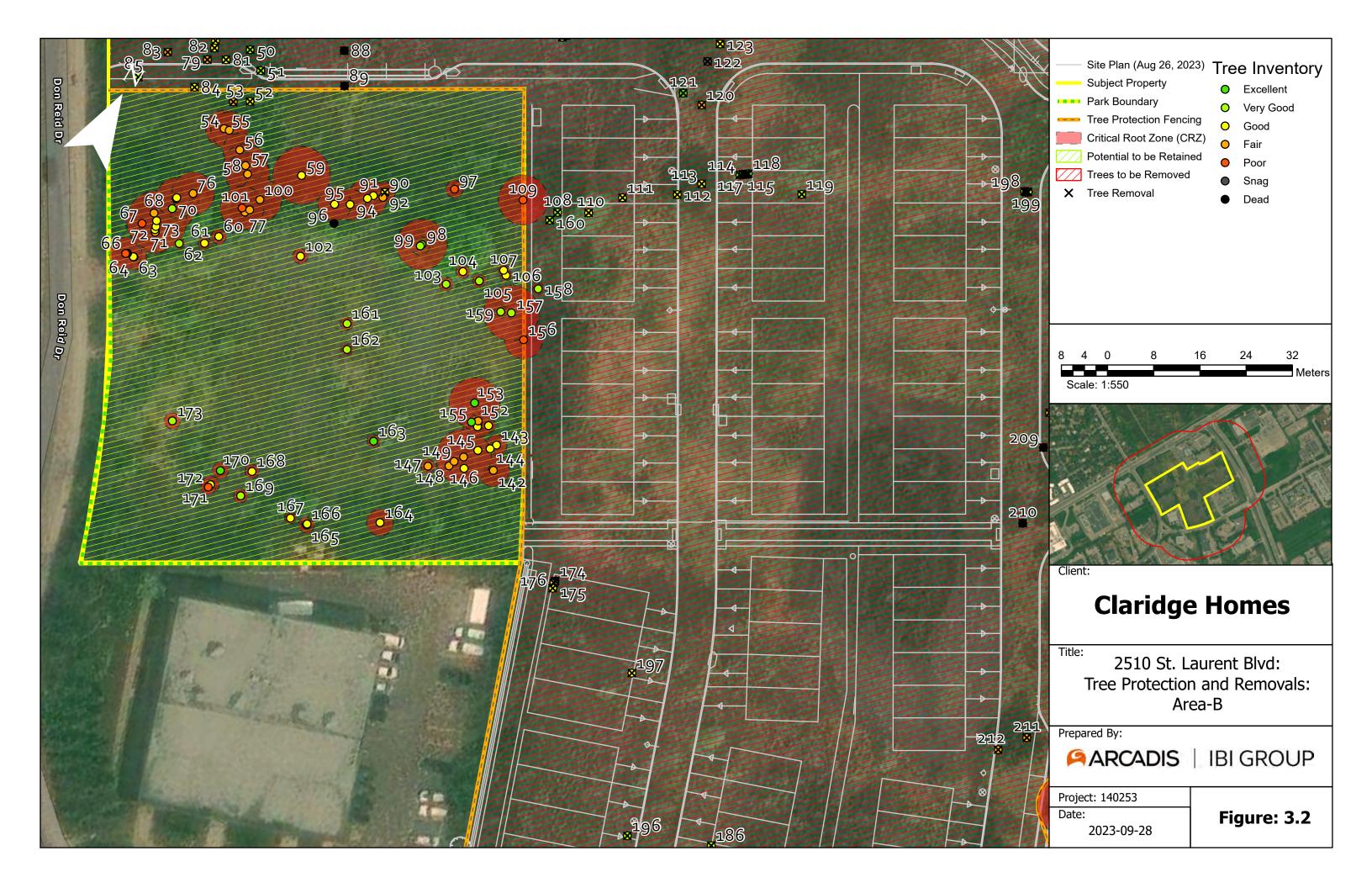
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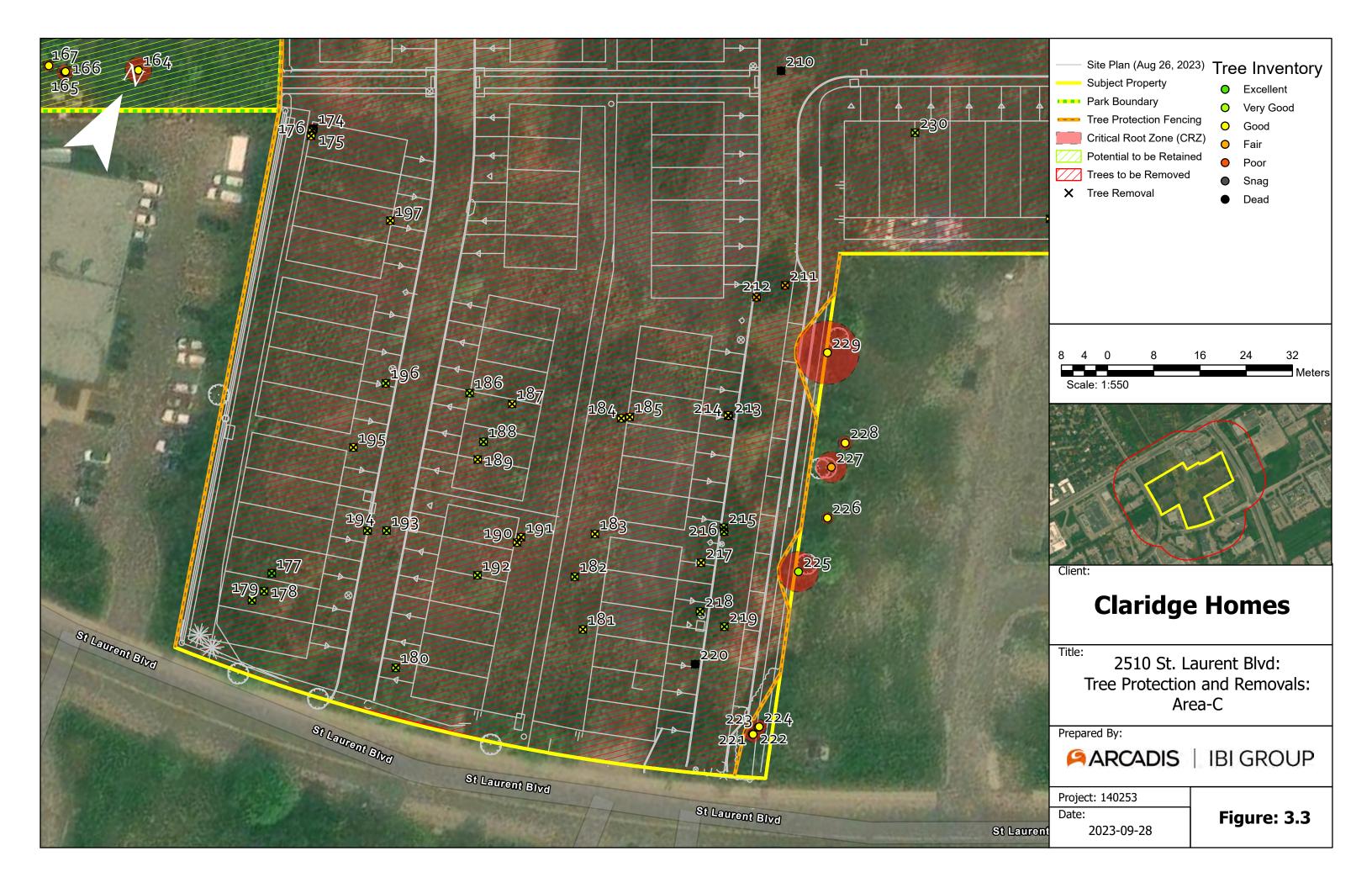
Appendix A – Site Maps

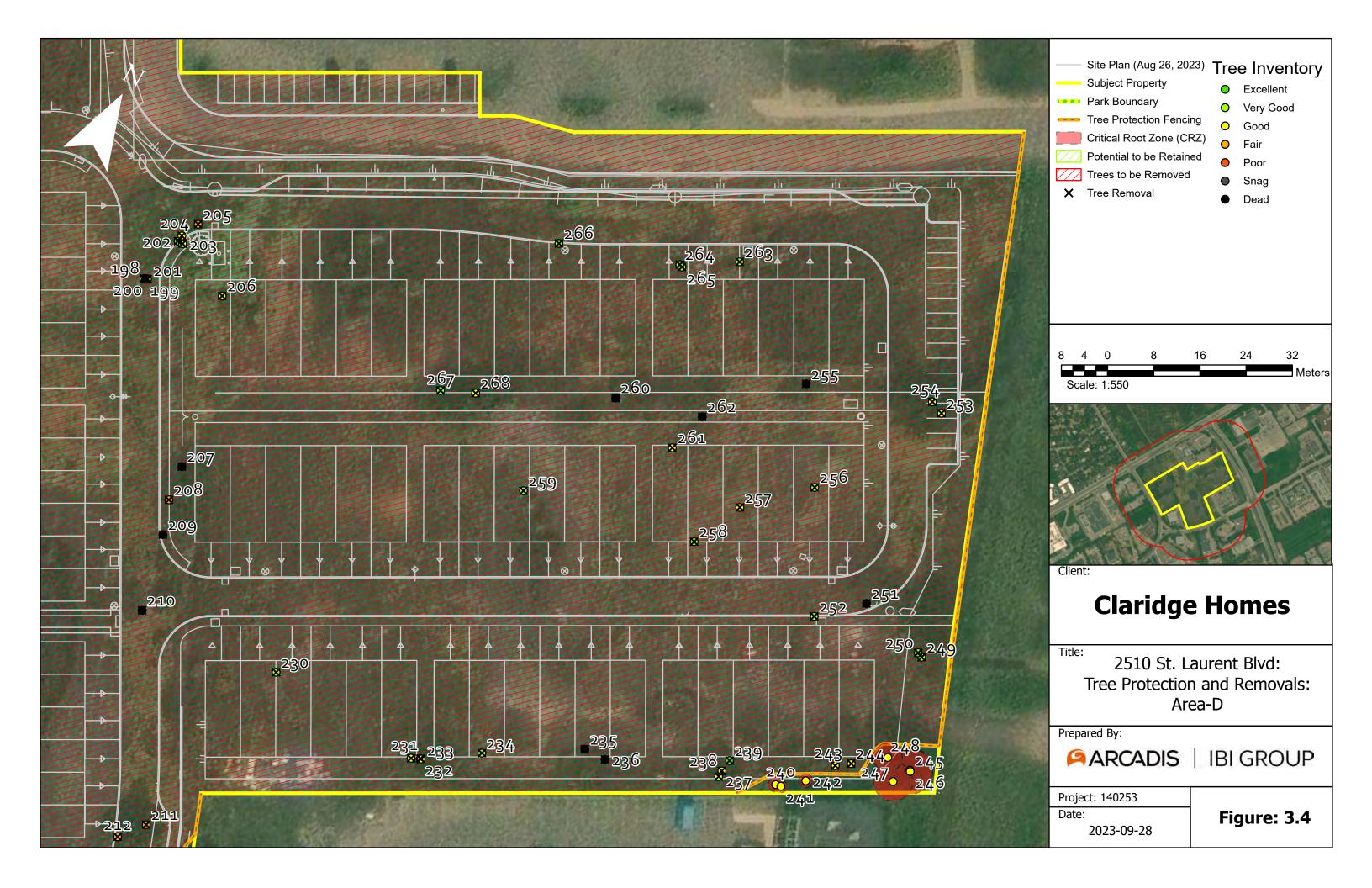












Appendix B – Complete Tree Inventory

Table 2 Complete tree inventory list, including condition, recommended action, and action rational for all trees.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
1	33	No	Good	Red Oak	Quercus rubra	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fence should be installed at the limit of grading to ensure that trees are retained within the additional lands owned by the applicant.
2	10	No	Excellent	Manitoba Maple	Acer negundo	Retain	In adjacent lands owned by applicant.
30	34	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
31	26	No	Snag	Blue Spruce	Picea pungens	Remove	Required for construction activities
34	11	No	Poor	Manitoba Maple	Acer negundo	Remove	Required for construction activities
35	40	No	Poor	Austrian Pine	Pinus nigra	Remove	Required for construction activities
36	39	No	Very Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
37	38	No	Very Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
38	37	No	Fair	Austrian Pine	Pinus nigra	Remove	Required for construction activities
39	48	No	Very Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
40	16	Yes	Fair	Honey Locust	Gleditsia triacanthos	Remove	Required for construction activities
41	37	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
42	34	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
43	21	Yes	Dead	Green Ash	Fraxinus pennsylvanica	Remove	Required for construction activities
44	35	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
45	30	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
46	23	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
47	13	No	Fair	Crabapple Tree	Malus spp.	Remove	Required for construction activities
48	20	No	Good	Manitoba Maple	Acer negundo	Remove	Required for construction activities
49	11	Yes	Good	Manitoba Maple	Acer negundo	Remove	Required for construction activities

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
50	18	Yes	Poor	Green Ash	Fraxinus pennsylvanica	Remove	Required for construction activities
51	29	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
52	44	No	Very Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
53	25	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
54	28	No	Fair	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
55	32	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
56	32	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
57	29	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
58	38	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
59	38	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
60	50	No	Good	Red Oak	Quercus rubra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
61	13	No	Good	Large Tooth Aspen	Populus grandidentata	Potential to be Retained	In park block, removal to be determined at detailed design stage.
62	11	No	Good	Large Tooth Aspen	Populus grandidentata	Potential to be Retained	In park block, removal to be determined at detailed design stage.
63	10	No	Very Good	Peach Leaf Willow	Salix amygdaloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
64	10	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
65	23	Yes	Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
66	20	No	Dead	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
67	28	No	Poor	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
68	28	No	Poor	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
69	24	No	Fair	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
70	17	No	Dead	Unknown	Unknown	Potential to be Retained	In park block, removal to be determined at detailed design stage.
71	39	No	Very Good	Sugar Maple	Acer saccharum	Potential to be Retained	In park block, removal to be determined at detailed design stage.
72	28	No	Fair	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
73	41	No	Good	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
74	11	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
75	52	No	Good	Honey Locust	Gleditsia triacanthos	Potential to be Retained	In park block, removal to be determined at detailed design stage.
76	35	No	Good	Honey Locust	Gleditsia triacanthos	Potential to be Retained	In park block, removal to be determined at detailed design stage.
77	37	No	Fair	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
78	26	No	Fair	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
79	29	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
80	29	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
81	37	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
82	29	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
83	15	Yes	Good	Honey Locust	Gleditsia triacanthos	Remove	Required for construction activities
84	28	No	Fair	Austrian Pine	Pinus nigra	Remove	Required for construction activities

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
85	38	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
86	34	No	Very Good	Honey Locust	Gleditsia triacanthos	Remove	Required for construction activities
87	32	No	Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
88	36	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
89	23	No	Dead	Unknown	Unknown	Remove	Required for construction activities
90	20	No	Dead	Unknown	Unknown	Remove	Required for construction activities
91	18	No	Good	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
92	17	No	Good	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
93	11	No	Fair	Crabapple Tree	Malus spp.	Potential to be Retained	In park block, removal to be determined at detailed design stage.
94	34	No	Good	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
95	27	No	Good	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
96	29	No	Good	Blue Spruce	Picea pungens	Potential to be Retained	In park block, removal to be determined at detailed design stage.
97	20	No	Dead	Unknown	Unknown	Potential to be Retained	In park block, removal to be determined at detailed design stage.
98	15	Yes	Poor	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
99	44	No	Excellent	Sugar Maple	Acer saccharum	Potential to be Retained	Updated Site Plan places this tree within the proposed park block. As there is no detailed design available for the proposed park, the tree can be retained. Tree removal details for the park will occur at the detailed design stage, and trees identified by the City should be considered for incorporation in the design.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
100	16	Yes	Very Good	Peach Leaf Willow	Salix amygdaloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
101	38	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
102	38	No	Poor	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
103	13	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
104	12	No	Very Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
105	12	No	Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
106	11	No	Very Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
107	10	No	Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
108	36	No	Very Good	White Poplar	Populus alba	Remove	In park block, removal to be determined at detailed design stage.
109	43	No	Poor	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
110	33	No	Good	Red Oak	Quercus rubra	Remove	Updated Site Plan places this tree within the footprint of a home and is not suitable for retention. Tree is to be removed.
111	37	No	Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
112	35	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
113	12	No	Good	Green Ash	Fraxinus pennsylvanica	Remove	Required for construction activities
114	14	Yes	Excellent	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
115	15	Yes	Excellent	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
116	12	Yes	Excellent	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
117	11	No	Excellent	Peach Leaf Willow	Salix amygdaloides	Remove	Required for construction activities
118	15	No	Excellent	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
119	21	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
120	15	Yes	Fair	Green Ash	Fraxinus pennsylvanica	Remove	Required for construction activities
121	15	No	Excellent	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
122	25	No	Snag	Unknown	Unknown	Remove	Required for construction activities
123	21	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
124	19	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
125	28	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
126	40	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
127	24	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
128	39	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
129	36	No	Dead	Blue Spruce	Picea pungens	Remove	Required for construction activities
130	35	No	Dead	Austrian Pine	Pinus nigra	Remove	Required for construction activities
131	37	No	Dead	Blue Spruce	Picea pungens	Remove	Required for construction activities
132	25	No	Dead	Green Ash	Fraxinus pennsylvanica	Remove	Required for construction activities
135	29	No	Dead	Unknown	Unknown	Remove	Required for construction activities
136	12	Yes	Fair	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities
137	13	Yes	Good	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities
138	15	No	Dead	Unknown	Unknown	Remove	Required for construction activities
139	11	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
140	15	Yes	Dead	Unknown	Unknown	Remove	Required for construction activities
141	18	Yes	Good	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
142	28	Yes	Fair	Russian Olive Tree	Elaeagnus angustifolia	Potential to be Retained	In park block, removal to be determined at detailed design stage.
143	18	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
144	11	No	Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
145	17	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
146	10	No	Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
147	12	No	Fair	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
148	22	Yes	Fair	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
149	15	Yes	Fair	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
150	48	No	Fair	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
151	18	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
152	28	Yes	Fair	Russian Olive Tree	Elaeagnus angustifolia	Potential to be Retained	In park block, removal to be determined at detailed design stage.
153	44	No	Excellent	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.
154	12	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
155	13	Yes	Excellent	Large Tooth Aspen	Populus grandidentata	Potential to be Retained	In park block, removal to be determined at detailed design stage.
156	33	Yes	Poor	Russian Olive Tree	Elaeagnus angustifolia	Potential to be Retained	In park block, removal to be determined at detailed design stage.
157	48	No	Very Good	Austrian Pine	Pinus nigra	Potential to be Retained	In park block, removal to be determined at detailed design stage.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
158	10	Yes	Very Good	Russian Olive Tree	Elaeagnus angustifolia	Potential to be Retained	In park block, removal to be determined at detailed design stage.
159	11	No	Very Good	Green Ash	Fraxinus pennsylvanica	Potential to be Retained	In park block, removal to be determined at detailed design stage.
160	11	No	Very Good	Manitoba Maple	Acer negundo	Remove	
161	11	No	Very Good	Russian Olive Tree	Elaeagnus angustifolia	Potential to be Retained	In park block, removal to be determined at detailed design stage.
162	10	No	Very Good	Large Tooth Aspen	Populus grandidentata	Potential to be Retained	In park block, removal to be determined at detailed design stage.
163	11	No	Excellent	Trembling Aspen	Populus tremuloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
164	23	No	Good	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
165	14	No	Very Good	Trembling Aspen	Populus tremuloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
166	10	No	Good	Balsam Poplar	Populus balsamifera	Potential to be Retained	In park block, removal to be determined at detailed design stage.
167	10	No	Good	Trembling Aspen	Populus tremuloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
168	12	No	Good	Trembling Aspen	Populus tremuloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.
169	12	No	Very Good	Large Tooth Aspen	Populus grandidentata	Potential to be Retained	In park block, removal to be determined at detailed design stage.
170	14	Yes	Excellent	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
171	15	Yes	Good	White Ash	Fraxinus americana	Potential to be Retained	In park block, removal to be determined at detailed design stage.
172	13	No	Poor	Manitoba Maple	Acer negundo	Potential to be Retained	In park block, removal to be determined at detailed design stage.
173	14	Yes	Very Good	Trembling Aspen	Populus tremuloides	Potential to be Retained	In park block, removal to be determined at detailed design stage.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
174	15	No	Dead	Unknown	Unknown	Remove	Required for construction activities
175	15	No	Good	Canada Plum	Prunus nigra	Remove	Required for construction activities
176	10	No	Good	Manitoba Maple	Acer negundo	Remove	Required for construction activities
177	10	No	Excellent	Manitoba Maple	Acer negundo	Remove	Required for construction activities
178	13	Yes	Very Good	Manitoba Maple	Acer negundo	Remove	Required for construction activities
179	10	No	Very Good	Manitoba Maple	Acer negundo	Remove	Required for construction activities
180	33	No	Very Good	Sugar Maple	Acer saccharum	Remove	Required for construction activities
181	12	Yes	Good	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities
182	2	Yes	Very Good	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities
183	10	No	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
184	10	No	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
185	11	Yes	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
186	12	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
187	10	No	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
188	11	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
189	11	Yes	Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
190	10	Yes	Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
191	10	Yes	Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
192	14	Yes	Very Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
193	14	No	Very Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
194	10	No	Very Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
195	13	No	Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
196	10	Yes	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities

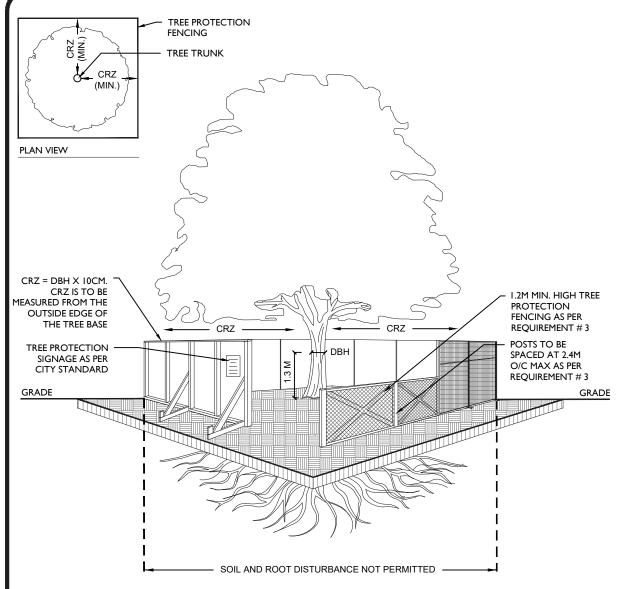
TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
197	13	No	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
198	10	No	Good	White Poplar	Populus alba	Remove	Required for construction activities
199	14	No	Very Good	White Poplar	Populus alba	Remove	Required for construction activities
200	11	No	Good	White Poplar	Populus alba	Remove	Required for construction activities
201	10	No	Very Good	White Poplar	Populus alba	Remove	Required for construction activities
202	49	No	Excellent	White Poplar	Populus alba	Remove	Required for construction activities
203	13	Yes	Good	White Poplar	Populus alba	Remove	Required for construction activities
204	14	No	Good	White Poplar	Populus alba	Remove	Required for construction activities
205	12	Yes	Fair	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
206	11	No	Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
207	16	No	Dead	Unknown	Unknown	Remove	Required for construction activities
208	24	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
209	19	No	Dead	Unknown	Unknown	Remove	Required for construction activities
210	22	No	Dead	Unknown	Unknown	Remove	Required for construction activities
211	24	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
212	37	No	Fair	Blue Spruce	Picea pungens	Remove	Required for construction activities
213	29	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
214	31	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
215	29	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
216	29	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
217	41	No	Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
218	34	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities
219	29	No	Very Good	Blue Spruce	Picea pungens	Remove	Required for construction activities

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
220	25	No	Dead	Unknown	Unknown	Remove	Required for construction activities
221	14	Yes	Good	Amur Honeysuckle	Lonicera maackii	Retain	Updated Site plan identifies this section of trees as retainable. Tree protection fencing will be required to protect the CRZ.
222	14	Yes	Good	Amur Honeysuckle	Lonicera maackii	Retain	Updated Site plan identifies this section of trees as retainable. Tree protection fencing will be required to protect the CRZ.
223	14	Yes	Good	Amur Honeysuckle	Lonicera maackii	Retain	Updated Site plan identifies this section of trees as retainable. Tree protection fencing will be required to protect the CRZ.
224	13	Yes	Good	Amur Honeysuckle	Lonicera maackii	Retain	Updated Site plan identifies this section of trees as retainable. Tree protection fencing will be required to protect the CRZ.
225	35	No	Very Good	Sugar Maple	Acer saccharum	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ as it borders the property line.
226	10	No	Good	Elm spp.	Ulmus pumila	Retain	Outside property limit. Tree to be retained, CRZ of tree to be protected.
227	27	No	Fair	Sugar Maple	Acer saccharum	Retain	Native Species, outside property limit. Tree to be retained, CRZ of tree to be protected.
228	12	No	Good	Elm spp.	Ulmus pumila	Retain	Outside property limit. Tree to be retained, CRZ of tree to be protected.
229	55	No	Good	Sugar Maple	Acer saccharum	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ as it borders the property line.
230	10	No	Very Good	Trembling Aspen	Populus tremuloides	Remove	Required for construction activities
231	37	No	Good	Blue Spruce	Picea pungens	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a road right-of-way.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
232	13	Yes	Good	Amur Maple	Acer ginnala	Remove	Required for construction activities
233	14	Yes	Good	Amur Maple	Acer ginnala	Remove	Required for construction activities
234	35	No	Very Good	Little Leaf Linden	Tilia cordata	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a road right-of-way.
235	18	No	Dead	Unknown	Unknown	Remove	Required for construction activities
236	21	No	Dead	Unknown	Unknown	Remove	Required for construction activities
237	31	No	Good	Blue Spruce	Picea pungens	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a road right-of-way.
238	11	Yes	Good	Amur Maple	Acer ginnala	Remove	Required for construction activities
239	31	No	Excellent	Basswood	Tilia americana	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a road right-of-way.
240	13	Yes	Good	Amur Maple	Acer ginnala	Retain	CRZ not impacted by development. Tree to be retained, CRZ of tree to be protected.
241	11	Yes	Good	Amur Maple	Acer ginnala	Retain	CRZ not impacted by development. Tree to be retained, CRZ of tree to be protected.
242	12	Yes	Good	Amur Maple	Acer ginnala	Retain	CRZ not impacted by development. Tree to be retained, CRZ of tree to be protected.
243	12	Yes	Good	Amur Maple	Acer ginnala	Remove	Required for construction activities
244	10	Yes	Good	Amur Maple	Acer ginnala	Remove	Required for construction activities
245	39	No	Very Good	Norway Spruce	Picea abies	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ.
246	39	No	Good	Norway Spruce	Picea abies	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ.
247	34	No	Good	Norway Spruce	Picea abies	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ.

TREE ID	DBH (CM)	MULTI STEM TREE	GENERAL CONDITION	COMMON NAME	BOTANICAL NAME	RECOMENDED ACTION	ACTION RATIONALLE
248	25	Yes	Good	Norway Spruce	Picea abies	Retain	Updated Site Plan shows that this tree can be retained. Tree protection fencing will be required to protect the CRZ.
249	35	No	Very Good	Norway Spruce	Picea abies	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a parking lot.
250	39	No	Very Good	Norway Spruce	Picea abies	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a parking lot.
251	34	No	Dead	Unknown	Unknown	Remove	Required for construction activities
252	38	No	Very Good	Norway Spruce	Picea abies	Remove	Required for construction activities
253	45	No	Good	Norway Spruce	Picea abies	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a parking lot.
254	29	No	Good	Blue Spruce	Picea pungens	Remove	Updated Site Plan shows that this tree cannot be retained as it is within a parking lot.
255	24	No	Dead	Unknown	Unknown	Remove	Required for construction activities
256	12	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
257	12	No	Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
258	10	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
259	28	No	Very Good	Little Leaf Linden	Tilia cordata	Remove	Required for construction activities
260	22	No	Dead	Unknown	Unknown	Remove	Required for construction activities
261	13	Yes	Good	Russian Olive Tree	Elaeagnus angustifolia	Remove	Required for construction activities
262	15	No	Dead	Unknown	Unknown	Remove	Required for construction activities
263	13	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
264	11	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
265	21	No	Very Good	Large Tooth Aspen	Populus grandidentata	Remove	Required for construction activities
266	12	Yes	Very Good	Peach Leaf Willow	Salix amygdaloides	Remove	Required for construction activities
267	30	No	Very Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities
268	32	No	Good	Austrian Pine	Pinus nigra	Remove	Required for construction activities

Appendix C - City of Ottawa Tree Protection Specification



TREE PROTECTION REQUIREMENTS:

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

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

ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST



TREE PROTECTION SPECIFICATION

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

SCALE: NTS

DATE: MARCH 2021

DRAWING NO.: 1 of 1