



**Tree Assessment and
Conservation
1+19 Sir John A MacDonald
Parkway, Ottawa, Ontario**

Type of Document:

Final Submission

Client:

National Capital Commission
40 Elgin Street
Ottawa, ON K1P 1C7

Project Number:

OTT-00245595-A0

Reviewed By: ,Sally Wang, O.A.L.A., C.S.L.A., ISA Cert. Arborist

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Date Submitted:

April, 2019

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Table of Contents

1.	Background	1
2.	Introduction	1
3.	Development Proposal	2
4.	Method of Evaluation	2
4.1	Assessment:	3
4.2	Condition:	3
5.	Vegetation Summary	3
5.1	Trees within Subject Property	3
5.2	Trees within City's Properties	3
6.	Plant Valuation Process	4
6.1	Study Criteria	4
6.2	Removal & Preservation Recommendations	4
6.2.1	Trees Recommended for Removal	4
6.2.2	Trees Recommended for Preservation	4
7.	Assumptions & Limitations	5
8.	Closure	5

List of Figures

Figure 1: Site Location Map

Drawing TPP 01 & TPP 02

Be attached with this report

1. Background

EXP Services has been retained by the National Capital Commission to assess the condition of the existing vegetation present on site, and to prepare a tree conservation report based a development concept plan for the re-zoning of the subject lands by the City of Ottawa.

The NCC is looking to complete a rezoning request for a 3.7 hectare site located north of Burnside Avenue between Forward Avenue and Slidell Street and bounded to the north by the Sir John A MacDonald Parkway (SJAMP) and Burnside Avenue to the south. The site is currently zoned as 'Open Space and Leisure', and the National Capital Commission (NCC) would like to rezone as Residential First Density (R1).

For the purposes of the rezoning request, the land has been divided into 6 parcels (see draft concept plan P1), with a pathway along the northern edge of the site and two pathway connections through the site. Parkland has been provided at the eastern edge of the site.



Figure 1 – Site Location Map

2. Introduction

The current site plan has indicated each parcel is to be developed with entry driveway, an office building and associated parking lot. The site is current vacant with mature trees on the site, the site is flat in general.

This Report performs the following:

- Evaluates the trees within the subject site that may be impacted during site construction,
- Evaluates the trees on adjacent lands that may be impacted during site construction,
- Determines which trees are to be removed and tree protection measure.

A tree inventory was conducted on May 12th, 2018 on the site.

3. Development Proposal

The proposed development concept of six parcels which will be rezoned and developed as residential (R1) land-uses. The NCC has prepared a concept plan showing six parcels, the size of the buildings are as follows:

Parcel	GFA (m2)
Parcel 1	2,430
Parcel 2	2,139
Parcel 3	2,123
Parcel 4	2,360
Parcel 5	2,090
Parcel 6	2,147
Total	13,289

The concept includes a new pathway long the SJAMP, and two connections to adjacent local streets through the site. Included in the development concept includes 1,596 m2 of parkland. The Concept Plan shows potential access to the local roadway network, parking, and entrances.

As the project moves forward, each parcel will need to follow a site plan approval process which may include the preparation of separate Tree Conservation and Compensation plans.

4. Method of Evaluation

The subject property is governed by The Private Tree Protection By-law No. 2009-200 of the City of Ottawa.

Each tree location and associated identification number was denoted on *Drawing TPP* for ease of reference. The trees were measured for DBH (Diameter at Breast Height) 1.4m above grade and for approximate height in meters.

The trees were assessed in accordance with the International Society of Arboriculture Methodology, by visual inspection from ground locations only. The tree was not climbed, nor was invasive assessment techniques (trunk boring) employed. The tree inventory and observations are summarized in Drawing TPP01 and TPP 02.

4.1 Assessment:

Vegetation is assessed based on a visual inspection of the trunk and branch condition, structure, foliage condition, and evidence of abiotic (environmental, mechanical and physical damage) and biotic (insects and disease) stressors.

4.2 Condition:

Tree health and condition is evaluated as poor, fair or good:

- Poor - Considerable dieback, contorted growth, diseased, or extensive physical damage, root damage, decay, cavities, and presence of secondary agents (harmful insects) that aid in the decline of the tree. The plant may have reached its normal life expectancy.
- Fair - some dieback, signs, and symptoms of stress both by non-living and living agents, aesthetic value is compromised; however, the tree continues to show healthy growth.
- Good - healthy, vigorous growth, strong branch attachment, and taper, no signs or symptoms of stress.

5. Vegetation Summary

5.1 Trees within Subject Property

Trees on the site are a mix of various deciduous and coniferous species. Manitoba maple (*Acer negundo*) trees dominate in the middle of the site, the trees are in clusters, most of the trees in poor condition, such as broken branches, leaning trunks, several big trunks fell on the ground due to the recent storm happened a few days prior the site visit. Ash (*Fraxinus sp.*), Elm (*Ulmus sp.*), Willow (*Salix sp.*) were found, the conditions are not good, similar to Manitoba maple.

Other species include Silver Maple (*Acer saccharinum*), Sugar Maple (*Acer platanoides*), Red Oak (*Quercus rubra*), Hackberry (*Celtis occidentalis*), Austrian Pine (*Pinus nigra*), White Pine (*Pinus strobus*), Scott Pine (*Pinus sylvestris*), Blue Spruce (*Picea pungens*), Larch (*Larix sp.*), these trees are in fairly good conditions, scattered or in grouping in the east and north perimeter of the site.

5.2 Trees within City's Properties

City's properties are the Right of Way (ROW) and the City's parkland/ open space. Trees in these land include are on the open space to the east, the ROW to the north and smaller trees along the sidewalks of Burnside Ave. Austrian pine, Scott Pine, Sugar Maple, Pin Oak and White Spruce are the major species. Majority of the trees are mature and in good conditions

6. Plant Valuation Process

6.1 Study Criteria

The composition of individual trees and tree grouping were analyzed utilizing the following categories;

- Common and Botanical Classification
- General Health
- Size
- Species Potential for Preservation in an Urban Situation
- Site Potential to Support Vegetation given proposed grading and drainage changes.

Taking all the above factors into consideration a recommendation for preservation or removal was given.

6.2 Removal & Preservation Recommendations

Trees will not thrive if major disruptions occur in their micro-environment. Changes in grade, drainage and wind pattern can all contribute to their decline and eventual death. This can result in very costly removal fees once construction is completed around the trees. Therefore, extreme care must be taken with any trees scheduled for preservation. To remove trees prior to construction is cost-effective, but where possible every effort should be made to preserve trees. The decision to preserve trees must be coupled with sound arboriculture methods to ensure the long-term health and survival of preserved trees.

6.2.1 Trees Recommended for Removal

As indicated on the Tree Inventory & Protection Plan (Drawing TPP 01), majority of the trees will need to be removed due to the site construction of proposed buildings, parking lots and driveways. A coupe of trees will be removed due to poor conditions such as tree C9, C15. and C 43 to 48. All the Manitoba maple trees will be removed for both site construction and poor conditions.

6.2.2 Trees Recommended for Preservation

For trees which trunks are beyond 6m to the construction limits, in fair or good condition, these trees should be protected with tree hoardings, the trees hoardings will be installed prior to the start of construction and will remain on site during all stage of construction. As indicated on the Tree Inventory & Protection Plan (Drawing TPP 01), trees to be protected are mostly in the east and north of the property. Trees in the City's ROW and open space are all to remain five trees which are in the proposed sidewalk (tree C38 - C40) and in poor condition (C9, C15).

As an arboricultural standards practice, the minimal tree protection zone (TPZ) radius is based on drip lines or the diameter of the tree trunk (TPZ \approx 6 x DBH). Tree hoardings installed should refer to the locations on Drawing TPP 01 and detail on Drawing TPP 02.

7. Assumptions & Limitations

This assessment and evaluation is limited to the assignment and purpose as stated within the Introduction.

The assessment has been conducted using a visual examination of only the above-ground parts of trees. Unless specifically noted trees were not cored, probed, sounded or climbed. Parts of the trees below ground, unless specifically noted, were not inspected nor exposed by excavation for assessment.

Trees are living organisms that respond individually to outside influences such as climate, biotic changes, and abiotic changes. As such, this assessment is limited to the observations made at the time of inspection.

8. Closure

The review of existing vegetation confirmed there are no trees considered to be species at risk (SAR). However, a few significant trees were identified. The current development plan impacts a number of trees, and some significant species.

A compensation tree plan will be developed using the development concept plan. The proposed planting plan will use local native, low maintenance species common to the Ottawa area.

We trust that this demonstrates that the impact of the current development scenario on existing vegetation can be mitigated. Future site plans should be developed to minimise impacts on significant species and limit the cost of compensation planting.



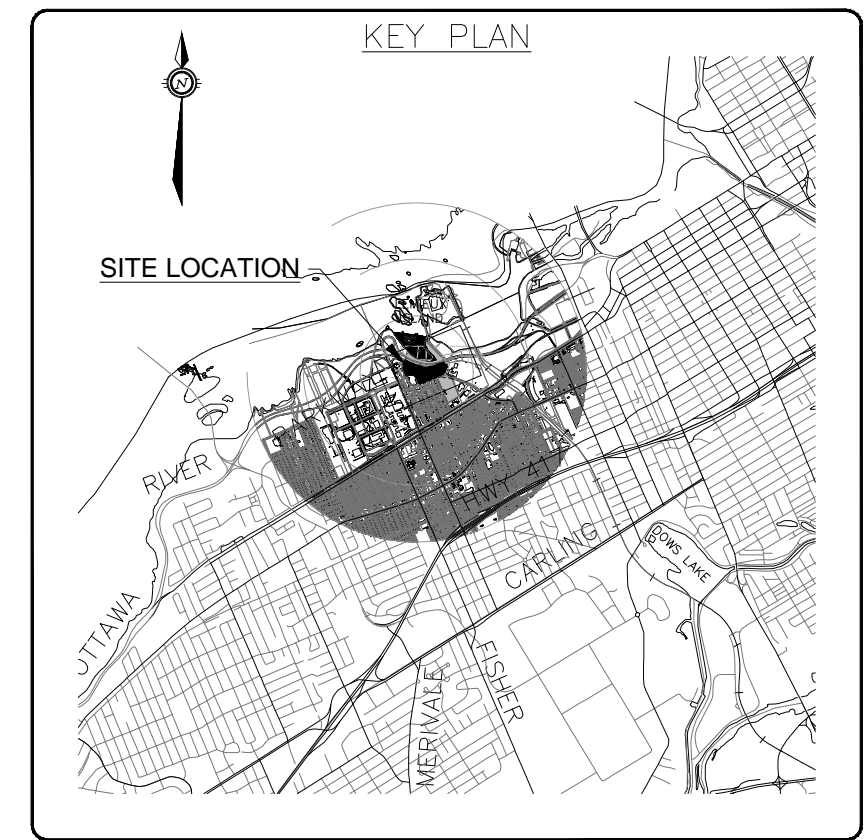
Sally Wang, OALA, CSLA
Senior Landscape Architect
ISA Certified Infrastructure Services d
Arborist ON-1600A



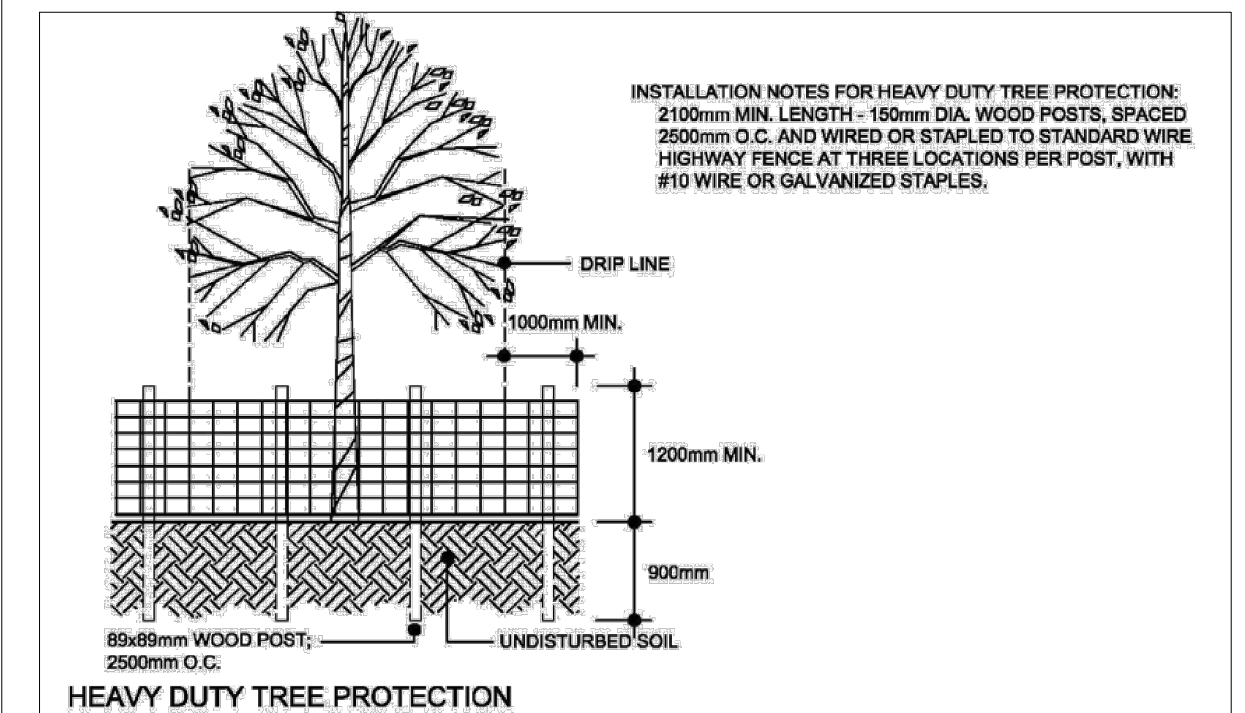
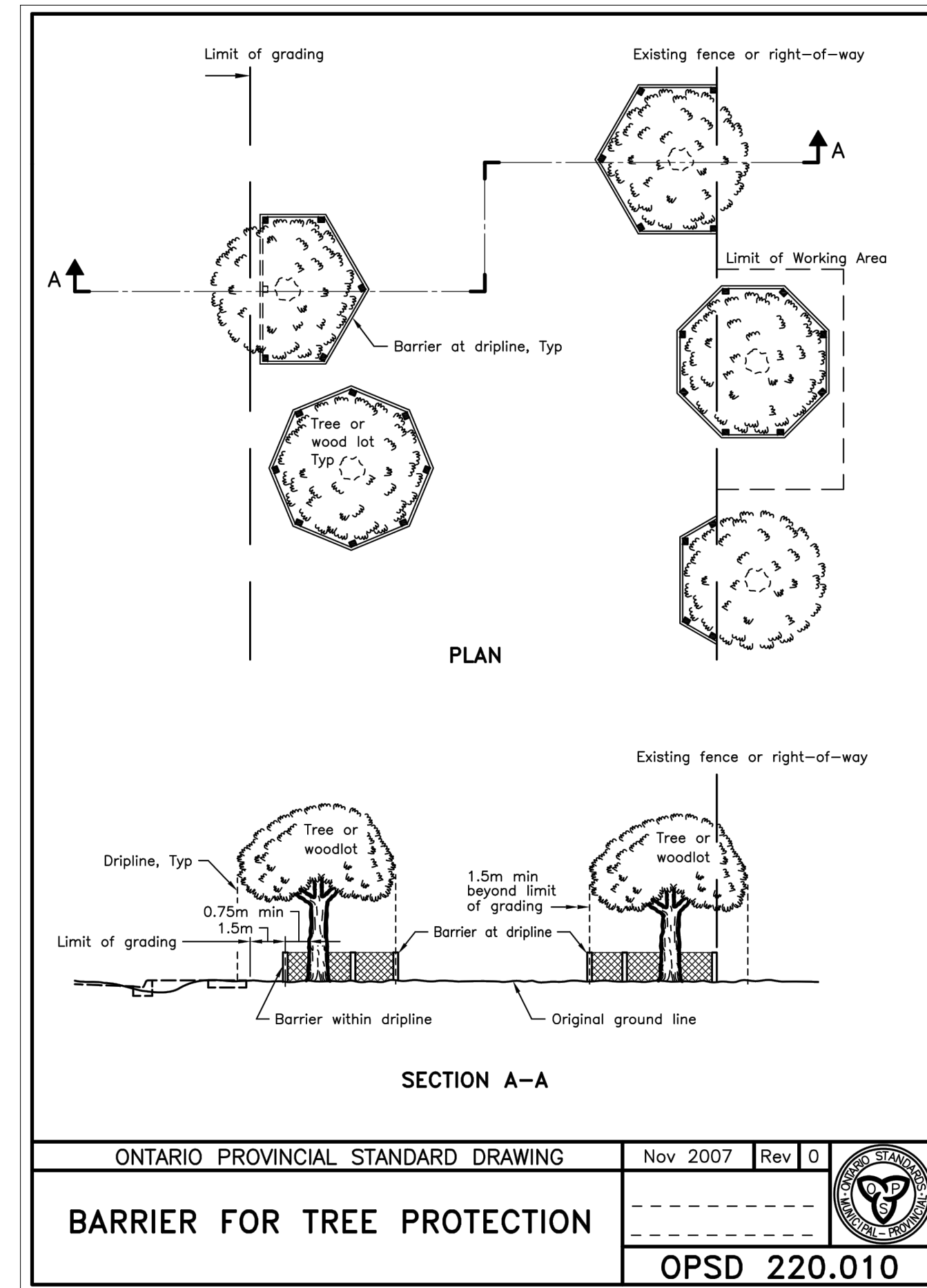
Philippe Desmarais, P.Eng.
Senior Project Manager
Infrastructure Services

TREE INVENTORY CHART

Project: Burnside OPA & ZBLA, Ottawa, ON.		Date of Field Work: May 12th, 2018					
Tree ID #	Botanical Name	Common Name	Quantity	DBH(cm)	Health Condition	Action	Reasons for removal
Trees within Subject Property							
1	<i>Acer negundo</i>	Manitoba Maple	1	19	Fair	Remain	
2	<i>Pinus nigra</i>	Austrian Pine	1	25	Fair	Remove	Site Construction
3	<i>Pinus nigra</i>	Austrian Pine	1	26	Fair	Remove	Site Construction
4	<i>Pinus nigra</i>	Austrian Pine	1	34	Fair	Remove	Site Construction
5	<i>Acer negundo</i>	Manitoba Maple	1	31, 31, 25	Fair	Remove	Site Construction
6	<i>Acer negundo</i>	Manitoba Maple	1	40, 36	Fair	Remove	Site Construction
7	<i>Sorbus americana</i>	Mountain Ash	1	13, 14, 16	Fair	Remain	
8	<i>Acer negundo</i>	Manitoba Maple	1	28, 32	Fair	Remain	
9	<i>Acer saccharum</i>	Sugar Maple	1	52	Fair	Remove	Site Construction
10	<i>Acer saccharum</i>	Sugar Maple	1	41	Fair	Remove	Site Construction
11	<i>Acer saccharum</i>	Sugar Maple	1	38	Fair	Remove	Site Construction
12	<i>Acer saccharum</i>	Sugar Maple	1	40	Fair	Remove	Site Construction
13	<i>Tilia sp.</i>	Linden	1	29	Fair	Remain	
14	<i>Tilia sp.</i>	Linden	1	20-35 (5 Stems)	Fair	Remain	
15	<i>Acer negundo</i>	Manitoba Maple	1	24-45 (4 Stems)	Fair	Remove	Site Construction
16	<i>Acer negundo</i>	Manitoba Maple	1	28, 27	Fair	Remove	Site Construction
17	<i>Quercus palustris</i>	Pin Oak	1	42, 38	Fair	Remove	Site Construction
18	<i>Thuja occidentalis</i>	White Cedar	1	14-26 (5 Stems)	Fair	Remain	
19	<i>Thuja occidentalis</i>	White Cedar	1	18-32 (6 Stems)	Fair	Remain	
20	<i>Prunus sp.</i>	Cherry	1	21	Fair	Remove	Site Construction
21	<i>Acer negundo</i>	Manitoba Maple	1	41	Fair	Remove	Site Construction
22	<i>Acer negundo</i>	Manitoba Maple	1	18	Fair	Remove	Site Construction
23	<i>Acer negundo</i>	Manitoba Maple	1	21	Fair	Remove	Site Construction
24	<i>Acer negundo</i>	Manitoba Maple	1	32	Poor	Remove	Poor Condition
25	<i>Acer negundo</i>	Manitoba Maple	1	26	Poor	Remove	Poor Condition
26	<i>Acer negundo</i>	Manitoba Maple	1	14-38 (7 Stems)	Poor	Remove	Poor Condition / Site Construction
27	<i>Acer negundo</i>	Manitoba Maple	1	38, 34	Fair	Remove	Site Construction
28	<i>Malus sylvestris</i>	Crab apple	1	14-17 (4 Stems)	Fair	Remove	Site Construction
29	<i>Acer negundo</i>	Manitoba Maple	1	18, 18	Poor	Remove	Site Construction
30	<i>Acer negundo</i>	Manitoba Maple	1	32	Fair	Remove	Site Construction
31	<i>Acer saccharum</i>	Sugar Maple	1	49	Fair	Remove	Site Construction
32	<i>Larix sp.</i>	Larch	1	46	Fair	Remove	Site Construction
33	<i>Quercus rubra</i>	Red Oak	1	75	Fair	Remove	Site Construction
34	<i>Pinus strobus</i>	White Pine	1	40	Good	Remain	
35	<i>Pinus strobus</i>	White Pine	1	36	Good	Remain	
36	<i>Pinus strobus</i>	White Pine	1	47	Good	Remain	
37	<i>Quercus rubra</i>	Red Oak	1	41	Fair	Remain	
38	<i>Pinus strobus</i>	White Pine	1	46	Fair	Remain	
39	<i>Pinus strobus</i>	White Pine	1	38	Fair	Remove	Site Construction
40	<i>Pinus strobus</i>	White Pine	1	37	Fair	Remove	Site Construction
41	<i>Salix sp.</i>	Willow	1	85	Poor	Remove	Poor Condition / Site Construction
42	<i>Salix sp.</i>	Willow	1	85	Poor	Remove	Poor Condition / Site Construction
43	<i>Acer negundo</i>	Manitoba Maple	1	28, 24	Fair	Remove	Site Construction
44	<i>Acer negundo</i>	Manitoba Maple	1	21, 14	Fair	Remove	Site Construction
45	<i>Ulmus sp.</i>	Elm	1	28	Fair	Remove	Site Construction
46	<i>Acer negundo</i>	Manitoba Maple	1	28, 21	Poor	Remove	Poor Condition / Site Construction
47	<i>Acer negundo</i>	Manitoba Maple	1	33, 15	Poor	Remove	Poor Condition / Site Construction
48	<i>Ulmus sp.</i>	Elm	1	26, 19	Fair	Remove	Site Construction
49	<i>Fraxinus sp.</i>	Ash	1	37	Dead	Remove	
50	<i>Acer negundo</i>	Manitoba Maple	1	30, 17	Poor	Remove	Poor Condition / Site Construction
51	<i>Pinus nigra</i>	Austrian Pine	1	18	Fair	Remove	Site Construction
52	<i>Celtis occidentalis</i>	Hackberry	1	11	Fair	Remove	Site Construction
53	<i>Picea pungens</i>	Blue Spruce	1	13	Fair	Remove	Site Construction
54	<i>Acer saccharinum</i>	Silver Maple	1	12	Fair	Remove	Site Construction
55	<i>Acer platanoides</i>	Sugar Maple	1	48	Fair	Remove	Site Construction
56	<i>Acer platanoides</i>	Sugar Maple	1	51	Fair	Remove	Site Construction
57	<i>Acer platanoides</i>	Sugar Maple	1	30	Fair	Remove	Site Construction
58	<i>Acer platanoides</i>	Sugar Maple	1	12-25 (5 Stems)	Poor	Remove	Poor Condition / Site Construction
59	<i>Acer platanoides</i>	Sugar Maple	1	28	Fair	Remove	Site Construction
60	<i>Acer platanoides</i>	Sugar Maple	1	47	Fair	Remain	
61	<i>Acer platanoides</i>	Sugar Maple	1	45	Fair	Remain	
62	<i>Acer platanoides</i>	Sugar Maple	1	48	Fair	Remain	
63	<i>Quercus rubra</i>	Red Oak	1	39	Fair	Remain	
64	<i>Quercus rubra</i>	Red Oak	1	43	Fair	Remain	
67	<i>Acer saccharinum</i>	Silver Maple	1	95	Fair	Remain	
75	<i>Acer platanoides</i>	Sugar Maple	1	39	Fair	Remain	
C5	<i>Acer negundo</i>	Manitoba Maple	1	30, 25, 21	Fair	Remove	Site Construction
C6	<i>Pinus nigra</i>	Austrian Pine	1	27	Fair	Remove	Site Construction
C7	<i>Pinus nigra</i>	Austrian Pine	1	26	Fair	Remove	Site Construction
C8	<i>Pinus nigra</i>	Austrian Pine	1	25	Fair	Remove	Site Construction
C11	<i>Pinus nigra</i>	Austrian Pine	1	28	Fair	Remain	
C13	<i>Quercus palustris</i>	Pin Oak	1	26, 23	Fair	Remain	
C14	<i>Acer saccharum</i>	Sugar Maple	1	22, 28	Fair	Remain	
C32	<i>Acer rubrum</i>	Red Maple	1	10	Fair	Remain	
C33	<i>Acer rubrum</i>	Red Maple	1	12	Fair	Remain	
C34	<i>Acer rubrum</i>	Red Maple	1	12	Fair	Remain	
C35	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	8	Good	Remain	
C36	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	8	Good	Remain	
C37	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	8	Good	Remain	
Tree Groupings within Subject Property							
G1	<i>Acer negundo</i>	Manitoba Maple	25 ±	15-35	Fair-Poor	Remove	Site Construction
G2	<i>Acer negundo</i>	Manitoba Maple	35 ±	14-28	Fair-Poor	Remove	Site Construction
G3	<i>Acer negundo</i>	Manitoba Maple	10	14-33	Fair-Poor	Remove	Site Construction
G4	<i>Acer negundo</i>	Manitoba Maple	25	15-36	Fair	Remove	Site Construction
G5	<i>Pinus nigra</i>	Austrian Pine	4	22-45	Fair	Remain	
G6	<i>Pinus nigra</i>	Austrian Pine	7	22-45	Fair	Remove	Site Construction
G7	<i>Acer negundo</i>	Manitoba Maple	9	15-28	Fair	Remove	Site Construction
G8	<i>Acer negundo</i>	Manitoba Maple	25 ±	12-28	Fair	Remove	Site Construction
G9	<i>Pinus strobus</i>	White Pine	7	9-28	Fair-Poor	1 Trees Remain, 6 Trees Remove	Site Construction
G10	<i>Pinus sylvestris</i>	Scott Pine	10	20-40	Fair-Poor	Remain	



Trees within City Road allowance							
65	<i>Pinus sylvestris</i>	Scott Pine	1	39	Fair	Remain	
66	<i>Pinus sylvestris</i>	Scott Pine	1	39	Fair	Remain	
68	<i>Picea pungens</i>	Blue Spruce	1	14	Fair	Remain	
69	<i>Pinus sylvestris</i>	Scott Pine	1	29	Fair	Remain	
70	<i>Pinus sylvestris</i>	Scott Pine	1	31	Fair	Remain	
71	<i>Pinus sylvestris</i>	Scott Pine	1	28	Fair	Remain	
72	<i>Pinus sylvestris</i>	Scott Pine	1	39	Fair	Remain	
73	<i>Acer saccharinum</i>	Silver Maple	1	105	Fair	Remain	
C1	<i>Picea glauca</i>	White Spruce	1	24	Fair	Remain	
C2	<i>Picea glauca</i>	White Spruce	1	31	Fair	Remain	
C3	<i>Pinus nigra</i>	Austrian Pine	1	34	Fair	Remain	
C4	<i>Pinus nigra</i>	Austrian Pine	1	45	Fair	Remain	
C9	<i>Acer negundo</i>	Manitoba Maple	1	115	Poor	Remove	Poor Condition
C10	<i>Pinus nigra</i>	Austrian Pine	1	25	Fair	Remain	
C12	<i>Acer negundo</i>	Manitoba Maple	1	12-25 (9 Stems)	Fair	Remain	
C15	<i>Quercus palustris</i>	Pin Oak	1	32	Poor	Remove	Poor Condition
C16	<i>Acer saccharum</i>	Sugar Maple	1	22, 22, 32	Fair	Remain	
C17	<i>Acer saccharum</i>	Sugar Maple	1	28	Fair	Remain	
C18	<i>Acer saccharum</i>	Sugar Maple	1	26	Fair	Remain	
C19	<i>Acer platanoides</i>	Norway Maple	1	35	Fair	Remain	
C20	<i>Acer platanoides</i>	Norway Maple	1	35	Fair	Remain	
C21	<i>Acer platanoides</i>	Norway Maple	1	48	Fair	Remain	
C22	<i>Acer platanoides</i>	Norway Maple	1	47	Fair	Remain	
C23	<i>Acer platanoides</i>	Norway Maple	1	42	Fair	Remain	
C24	<i>Pinus sylvestris</i>	Scott Pine	1	39	Fair	Remain	
C25	<i>Pinus sylvestris</i>	Scott Pine	1	27	Fair	Remain	
C26	<i>Pinus nigra</i>	Austrian Pine	1	38	Fair	Remain	
C27	<i>Pinus nigra</i>	Austrian Pine	1	34	Fair	Remain	
C28	<i>Celtis occidentalis</i>	Hackberry	1	13	Fair	Remain	
C29	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	9	Fair	Remain	
C30	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	8	Fair	Remain	
C31	<i>Syringa reticulata 'Ivory Silk'</i>	Ivory Silk Tree	1	6	Fair	Remain	
C38	<i>Acer platanoides</i>	Norway Maple	1	19	Fair	Remove	Site Construction
C39	<i>Acer platanoides</i>	Norway Maple	1	36	Good	Remove	Site Construction
C40	<i>Acer negundo</i>	Manitoba Maple	1	45	Poor	Remove	Poor Condition / Site Construction
C41	<i>Quercus bicolor</i>	Swamp White Oak	1	5	Fair	Remain	
C42	<i>Quercus bicolor</i>	Swamp White Oak	1	4	Fair	Remain	
C43	<i>Quercus bicolor</i>	Swamp White Oak	1	5	Fair	Remain	
C44	<i>Acer rubrum</i>	Red Maple	1	5	Fair	Remain	
C45	<i>Acer rubrum</i>	Red Maple	1	6	Fair	Remain	
C46	<i>Quercus bicolor</i>	Swamp White Oak	1	4	Fair	Remove	Site Construction
Tree Groupings within City Road allowance							
CG1	<i>Populus sp.</i>	Cottonwood	10	14-26	Fair	Remain	



1 TREE PROTECTION DETAILS
SCALE NTS

REV	REVISION DESCRIPTION	DATE	BY	APPD
C	PROPERTY LINE UPDATE	17/01/19	TS	SW
B	SITE PLAN UPDATE	29/11/18	TS	SW
A	DRAFT PLAN REVIEW	22/05/18	TS	SW

SCALE: 1:750
DESIGNED BY: [Signature]
REVIEWED BY: [Signature]

CLIENT: NATIONAL CAPITAL COMMISSION (NCC) OTTAWA, ONTARIO

PROJECT: BURNSIDE OPA & ZBLA FORWARD AVENUE TO SLIDELL STREET OTTAWA, ONTARIO

exp Services Inc. 416-688-1899 | 416-632-7330 | 2500 Queen Street East, Unit 100, Ottawa, ON K1B 8H6, Canada

PROJECT MANAGER: [Name]

DATE: 05/2018

DRAWING No: TPP-02

CAUTION: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NOT FOR CONSTRUCTION

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