ARBORIST REPORT

Pertaining to:

3777, 3791 & 3851 Portage Rd.
Niagara Falls, ON
L2J 2L1

Prepared for:

Arborwood Tree Service Inc.
7838 Twenty Rd. S.
Smithville, ON
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Prepared by:

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Created: March 20, 2024
Last revised: March 20, 2024

Introduction

Urban Arboretum Inc. (the arborist) was retained by Arborwood Tree Service Inc. (the client) to complete an arborist report pertaining to 3777, 3791 & 3815 Portage Road, Niagara Falls (the subject site). The report was requested relative to tree impacts and removals to facilitate a new 12-storey Apartment building and proposed parking lot upgrades (the scope).

The purpose of this report is to:

- Establish species, size and condition of trees as required by the Niagara Region.
- Provide a Tree Protection Plan showing required tree protection measures as detailed in the Niagara Region Tree Preservation Plan Guidelines.

Methodology

1. The subject site was assessed on January 2, 2023 & March 18, 2024 by the arborist.

2. Photos were taken at the time of assessment and the most representative are attached as Appendix I.

3. The methods used to collect data and the information provided below comply with the details and instructions provided in the Niagara Region Tree Protection Plan Guidelines document.

4. Trees within the following categories were assessed and recorded in this Arborist Report:

Ownership Category	Description
1 - Private	Trees with diameters of 10 cm or greater, situated on private property on the subject site.
2 – Neighbor	Trees with diameters of 10 cm or greater, situated on private property within 6 meters of the subject site.
5 – Public	Trees of all diameters situated within City property.
6 – Boundary	Trees located on the property line with an adjoining site where the property line crosses the main stem of the tree prior to the formation of the first scaffold limb.

5. Trunk diameter was measured using a calibrated diameter tape. The measurement was taken at 1.4 meters above ground level, generally referred to as the diameter at breast height (DBH) or diameter at representative height (DRH) as applicable. For trees located on adjacent private property DBH was estimated.

6. Trees were assessed in consideration of overall biological condition and structural condition and assigned a condition rating ranging from good (70-100%) to fair (40-69%) to poor (0-39%) for both categories.

7. Tree protection comments were added by the arborist to a site plan created by Peter J. Lesdow Architect project 21-03 drawing A-1 dated April 19, 2023.

Tree Protection Plan

Pre-Construction

1. The following tree protection measures must be read in conjunction with the Tree Protection Plan (Appendix III). Both documents must be provided to the site supervisor prior to any work commencing on the site.

2. Where indicated on the Tree Protection Plan roots must be exposed and pruned cleanly by a certified arborist according to good arboricultural practices. Tearing roots hinders wound closure and can increase risk of disease and root rot. The air spade must be operated between 90-120 PSI. The trench must be a minimum 61cm (2ft) in depth and 61cm (2ft) in width.

3. Plywood tree protection hoarding (minimum 19mm or ¾") shall be installed in locations as detailed in the Tree Protection Plan. Tree protection barriers must be made of 1.2m (4ft) high plywood hoarding. Within a City road allowance where visibility is a consideration, 1.2m (4ft) high orange plastic web snow fencing on a 38x89mm (2"x 4") frame should be used.

4. Niagara Region requires a tree protection zone for trees with a DBH of 10cm or greater. The tree protection zone is to be 1 meter beyond the dripline of the protected tree or clump of trees.

Construction Phase

5. It is the responsibility of the site supervisor to inspect the condition of the tree protection measures outlined on the tree protection plan and within this report each morning. If disturbance to the barriers is observed, it is to be repaired prior to work commencing on site that day.

6. Tree protection barriers must remain in place and in good condition during demolition, construction and/or site disturbance, including landscaping, and must not be altered, moved, or removed.

7. During construction, if any tree roots are exposed or disturbed outside the tree protection zone (TPZ), care is to be taken to minimize their disturbance. If roots must be removed outside the TPZ, they are to be cleanly pruned. Tearing roots hinders wound closure and can increase risk of disease and root rot.

Post-Construction

8. At the completion of the project the fencing may be dismantled.

9. It is highly recommended that Tree 25 fertilized using a deep root injection method the spring following root pruning activities and that Tree 25 be inspected by a certified arborist once per year for two year following root pruning activities.

Additional Notes

1. For additional information on tree care and management techniques as a tree owner see http://www.treesaregood.com/treeowner/treeownerinformation.aspx for a list of educational brochures provided by the International Society of Arboriculture.

Questions or requests for additional information relative to this report should be directed to the undersigned at 647-884-7716.

Kyle Berwick, N.P.D., R.P.F. in Training
I.S.A. Board Certified Master Arborist # ON-1786B
I.S.A. Tree Risk Assessment Qualified
Certified Butternut Health Assessor #437

Limitations of Assessment

It is the policy of Urban Arboretum Inc. to include this disclaimer to ensure our clients are aware of the technical and professional with respect to the limitations inherent in our work. assessing and retaining trees.

This Report was based on the project scope and details for tree preservation provided for review by to the Arborist. The Arborist assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information provided to the Arborist.

The assessment(s) of the tree(s) presented in this report have been made using accepted and proper arboricultural techniques. This includes an aboveground examination of the tree(s) including but not limited to evidence of structural defects, external indicators of rot or decay, cracking, included bark unions, pests and diseases, foliage and shoot health, natural or unnatural lean, root structures, site conditions, proximity to property and people. Unless otherwise explicitly noted in writing, assessments do not include probing, coring, sounding, climbing assessments, root excavation, pull testing, or any other advanced assessment techniques.

Notwithstanding the recommendations and conclusions in this report, it must be recognized that trees are living organisms and their health, structure and vigor are constantly changing. They can be susceptible to changes in the seasons or weather conditions. Weather events such as windstorms, ice storms and thunderstorms may result in partial or complete tree failure irrespective of assessment results.

All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring, or other invasive procedures, unless otherwise noted in the report. No warranty or guarantee is made, express or implied, that problems or deficiencies will not occur in the future. The consultant shall not be responsible for damages caused by any tree defects and assumes no responsibility for the correction of defects or tree related problems.

The undersigned provides no warranty, either expressed or implied, as to the suitability of the information contained in the report for any purpose. It remains the responsibility of the client to determine applicability to his/her case.

All reports and other correspondence are confidential and are the property of the undersigned and its named clients and their assignees or agents. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal, or alteration of any part of the report invalidates the entire report.

Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be re-assessed periodically. The assessment presented in this report is only valid at the time of inspection. Living with trees means accepting some degree of risk.

Kyle Berwick, N.P.D., R.P.F. in Training
I.S.A. Board Certified Master Arborist # ON-1786B
I.S.A. Tree Risk Assessment Qualified
Certified Butternut Health Assessor #437

Appendix I – Photographs

Photo 1. Trees 1-3, 41 & 42.

Photo 2. Trees 4-9.

Photo 3. Trees 9-14.

Photo 4. Trees 14-16.

Photo 5. Trees 17 & 18.

Photo 6. Tree 19.

Photo 7. Tree 20

Photo 8. Trees 21-23.

Photo 9. Trees 24 & 25.

Photo 10. Trees 26-29.

Photo 11. Trees 30-33.

Photo 12. Trees 34-37.

Photo 13. Trees 38-42.

Appendix II – Tree Inventory

Date: March 20, 2024

Urban Arboretum

Chart Details:

Tree #: Inventoried trees were assigned an identification number
Species: Includes the botanical name and common name of each tree.
DBH: Diameter in cm measured at 1.4 meters from the ground (diameter at breast height). DBH measurements for trees on neighboring properties are estimated.
Crown Radius: Average radius of drip line in meters.
Biological Condition Rating: Overall condition rating from good (70-100%) to fair(40-69%) to poor (0-39%) based on overall health.
Structural Condition Rating: Overall rating from good (70-100%) to fair(40-69%) to poor (0-39%) based on tree Structure.
Condition Comments: Specific observations from the visual assessment that have informed the condition rating.
Minimum TPZ: Minimum required tree protection zone in meters.
Ownership Category: Ownership of tree based on the supplied survey.
Recommended Action & Details: Arborist Recommendations.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
1	*Acer platanoides* (Norway maple)	36	4	Fair	Fair	Decurrent habit; fair shoot extension.	5	Private	**Preserve** - tree protection fence.
2	*Acer platanoides* (Norway maple)	54	4	Fair	Fair	Decurrent habit; fair shoot extension.	5	Private	**Injure** - due to proposed parking lot.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
3	*Acer pseudoplatanus* (sycamore maple)	46	4	Good	Fair	Asymmetrical due to Tree 2; good shoot extension; large canker in main trunk ~25% of circumference.	5	Neighbor	**Remove** - due to proposed parking lot.
4	*Acer negundo* (Manitoba maple)	48	4	Fair	Poor	Significant deadwood up to ~30cm in diameter; fair shoot extension; cohort base with Tree 5.	5	Private	**Remove** - due to proposed parking lot.
5	*Acer platanoides* (Norway maple)	44	5	Fair	Fair	Cohort at base with Tree 4; asymmetrical crown; fair shoot extension.	6	Private	**Remove** - due to proposed parking lot.
6	*Acer platanoides* (Norway maple)	33.5	4	Fair	Fair	Cohort with adjacent trees; fair central leader; fair shoot extension.	5	Private	**Remove** - due to proposed parking lot.
7	*Acer platanoides* (Norway maple)	24.5	3.5	Fair	Fair	Cohort with adjacent trees; fair central leader; fair shoot extension.	4.5	Private	**Remove** - due to proposed parking lot.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
8	*Acer negundo* (Manitoba maple)	57	4	Poor	Poor	Major lean; caught up in adjacent trees; decay at base; exposed surface roots with decay large diameter deadwood.	5	Private	**Remove** - due to proposed parking lot.
9	*Acer platanoides* (Norway maple)	30	3	Fair	Poor	Tree 8 caught up in crown; codominant leader with one leader broken off; good shoot extension; large Eutypella canker in trunk.	4	Private	**Remove** - due to proposed parking lot.
10	*Acer platanoides* (Norway maple)	47	5	Fair	Fair	Asymmetrical due to adjacent trees; Tree 8 caught up in crown; Decurrent habit; fair shoot extension.	6	Private	**Remove** - due to proposed parking lot.
11	*Acer pseudoplatanus* (sycamore maple)	35	2	Poor	Poor	Majority of crown lost in past failure with significant decay in remaining stem; large diameter deadwood up to ~25cm.	3	Private	**Remove** - due to proposed parking lot.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
12	*Acer platanoides* (Norway maple)	39	5	Fair	Fair	Fair central leader; fair shoot extension; cohort with adjacent trees.	6	Private	**Remove** - due to proposed parking lot.
13	*Acer platanoides* (Norway maple)	63	7	Fair	Poor	Bifurcates at ~5m with a fair union; large diameter deadwood; fair shoot extension; moderate storm damage; evidence of internal decay in scaffold limbs; dead central crown.	8	Private	**Remove** - due to proposed parking lot.
14	*Acer platanoides* (Norway maple)	35	5	Fair	Fair	Decurrent habit; fair shoot extension; moderate deadwood.	6	Neighbor	**Preserve**
15	*Juglans nigra* (black walnut)	50	8	Fair	Fair	Decurrent habit; fair shoot extension; minor deadwood.	9	Neighbor	**Injure** - due to proposed parking lot. Tree protection fence with an air spade and root prune is recommended.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
16	*Juglans nigra* (black walnut)	48	7	Fair	Fair	Minor deadwood and past storm damage; utility lines through crown; fair shoot extension.	8	Private	**Remove** - due to proposed parking lot.
17	*Juglans nigra* (black walnut)	30	5	Good	Fair	Decurrent habit; good shoot extension; utility lines through crown.	6	Neighbor	**Injure** - due to proposed parking lot. Tree protection fence with an air spade and root prune is recommended.
18	*Morus alba* (white mulberry)	23	2.5	Fair	Poor	Multi-stem (13, 16 & 11cm DBH); growing in fence; under utility lines; past major heading cuts.	3.5	Boundary	**Remove** - due to proposed parking lot.
19	*Juglans nigra* (black walnut)	18	2.5	Good	Good	Good central leader; good shoot extension.	3.5	Neighbor	**Injure** - due to proposed parking lot.
20	*Chamaecyparis pisifera (Sawara cypress)*	11	1	Good	Good	Good central leader; good new growth.	2	Private	**Injure** - due to proposed concrete walkway.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
21	*Acer platanoides* (Norway maple)	48	4	Fair	Fair	Decurrent habit; stunted new growth.	5	Private	**Remove** - due to proposed parking lot.
22	*Malus sp.* (crabapple)	29.5	3	Fair	Fair	Significant deadwood; fire blight; fair shoot extension.	4	Private	**Remove** - due to proposed parking lot.
23	*Prunus serrulata* (flowering cherry)	49	2.5	Poor	Poor	Exposed surface roots with decay; basal decay and sapwood rot in trunk; major past dieback.	3.5	Private	**Remove** - due to proposed parking lot.
24	*Thuja occidentalis* '*smaragd*' (Emerald cedar)	14	1	Good	Fair	Limbed up 1m; codominant leaders; good new growth.	2	Private	**Remove** - due to proposed 1/2 storey parking structure.
25	*Quercus rubra* (red oak)	120	8	Fair	Fair	Decurrent habit; moderate deadwood; fair shoot extension.	9	Neighbor	**Injure** - due to proposed 1/2 storey parking structure. Significant impacts expected. Air spade and root pruning recommended.

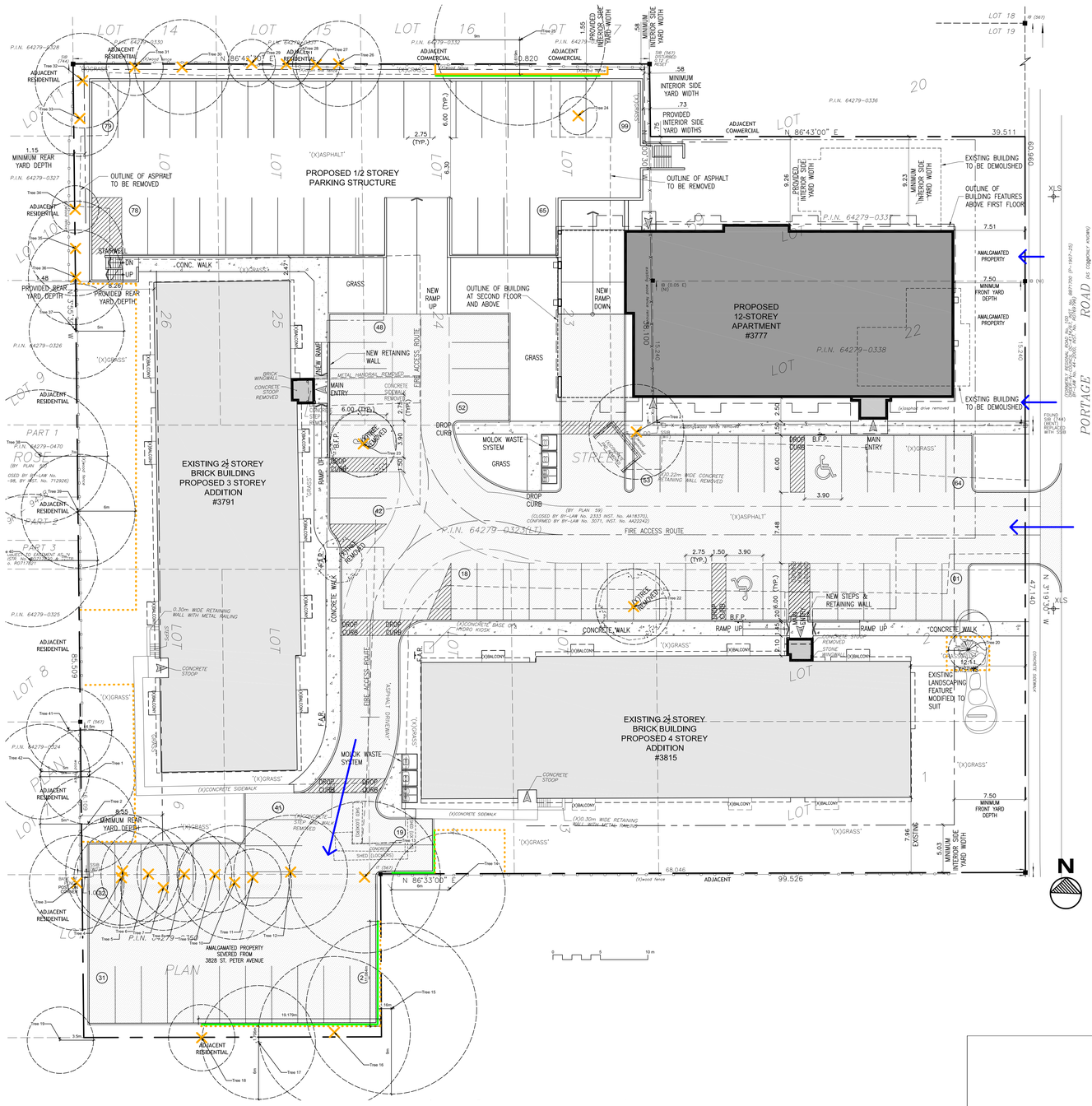
Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
26	*Acer saccharinum* (silver maple)	28	3.5	Good	Poor	Epicormics from stump of past failed tree with rot in existing stump; ~20 & 20cm DBH stems; good new growth.	4.5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.
27	*Thuja occidentalis* (white cedar)	20	1.5	Fair	Fair	Limbed up ~2m; fair new growth.	2.5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.
28	*Thuja occidentalis* (white cedar)	23	1.5	Fair	Fair	Limbed up ~2m; fair new growth.	2.5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.
29	*Morus alba* (white mulberry)	19	1.5	Good	Fair	Multi-stem (~12, 10 & 10cm DBH); good new growth.	2.5	Potential Boundary	**Remove** - due to proposed 1/2 storey parking structure.
30	*Juglans nigra* (black walnut)	40	4	Fair	Poor	Multi-stem (33 * 23cm DBH); one main stem failed in past with large dead stub; fair new growth.	5	Private	**Remove** - due to proposed 1/2 storey parking structure.

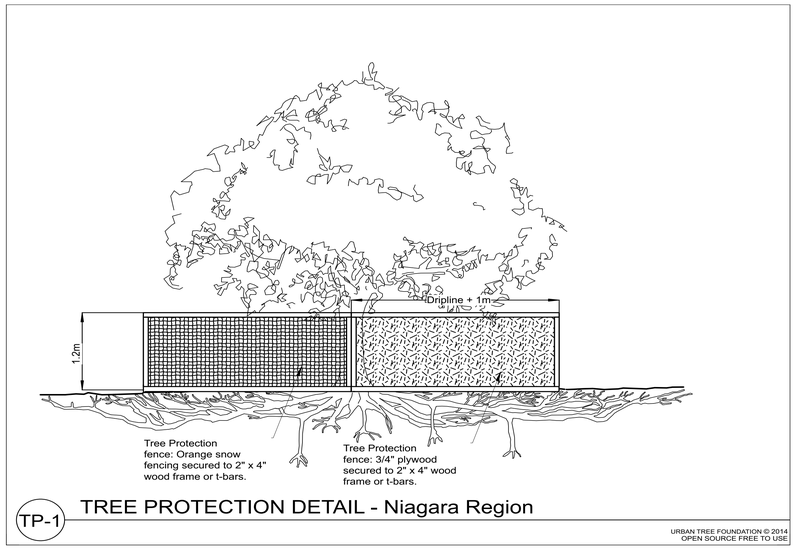
Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
31	*Acer platanoides* (Norway maple)	18	2	Good	Fair	Decurrent habit; good shoot extension.	3	Private	**Remove** - due to proposed 1/2 storey parking structure.
32	*Acer platanoides* (Norway maple)	37	4	Fair	Poor	Multi-stem (26.5, 19 & 18.5cm DBH); Fair shoot extension.	5	Private	**Remove** - due to proposed 1/2 storey parking structure.
33	*Juglans nigra* (black walnut)	24	3	Good	Fair	Two stems from base (17 & 17cm DBH); good shoot extension.	4	Private	**Remove** - due to proposed 1/2 storey parking structure.
34	*Thuja occidentalis* (white cedar)	13.5	1.5	Fair	Fair	Good central leader; dead top.	2.5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.
35	*Morus alba* (white mulberry)	25	4	Fair	Fair	Decurrent habit; asymmetrical crown due to Tree 36; fair shoot extension.	5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
36	*Juglans nigra* (black walnut)	36	4	Fair	Poor	Two stems from base (22 & 28cmm DBH); fair shoot extension.	5	Boundary	**Remove** - due to proposed 1/2 storey parking structure.
37	*Morus alba* (white mulberry)	25	4	Fair	Fair	Multi-stem (~18 & 17cm DBH); fair shoot extension.	5	Potential Boundary	**Preserve** - tree protection fence.
38	*Tilia americana* (basswood)	75	6	Fair	Fair	Decurrent habit; heavy sap sucker feeding; fair shoot extension; minor deadwood.	7	Neighbor	**Preserve** - tree protection fence.
39	*Prunus serotina* (black cherry)	41	5	Fair	Fair	Decurrent habit; moderate deadwood; fair shoot extension.	6	Boundary	**Preserve** - tree protection fence.
40	*Tilia americana* (basswood)	75	6	Fair	Fair	Decurrent habit; heavy sap sucker feeding; fair shoot extension; minor deadwood.	7	Neighbor	**Preserve** - tree protection fence.

Tree #	Species	DBH (cm)	Crown Radius (m)	Biological Condition	Structural Condition	Condition Comments	Min TPZ (m)	Ownership Category	Recommended Action & Details
41	*Acer platanoides* (Norway maple)	17	3.5	Fair	Poor	Leader failed in past; lowest scaffold with poor aspect ratio to main trunk.	4.5	Neighbor	**Preserve** - tree protection fence.
42	*Acer platanoides* (Norway maple)	30	4	Fair	Good	Good central leader; fair new growth.	5	Neighbor	**Preserve** - tree protection fence.

Appendix III – Tree Protection Plan





TP-1 TREE PROTECTION DETAIL - Niagara Region

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Tree Protection Comments:

•Tree protection comments were added by the arborist to a site plan created by Peter J. Lesdow Architect project 21-03 drawing A-1 dated April 19, 2023.

• It is the responsibility of the site supervisor to inspect the condition of the tree protection measures outlined on the tree protection plan each morning. If disturbance to the barriers is observed, it is to be repaired prior to work commencing on site that day.

• Tree protection barriers must remain in place and in good condition during demolition, construction and/or site disturbance, including landscaping, and must not be altered, moved or removed until authorized by Urban Forestry.

• Tree Protection Zones (TPZ) distances must be measured from the outside edge at the base of the tree.

• Where indicated on the Tree Protection Plan roots must be exposed using an air spade and pruned cleanly by a certified arborist according to good arboricultural practices. Tearing roots hinders wound closure and can increase risk of disease and root rot. The air spade must be operated between 90-120 PSI. The trench must be minimum 61cm (2ft) in depth and 61cm (2ft) in width.

• During construction, if any tree roots are exposed or disturbed outside the tree protection zone (TPZ), care is to be taken to minimize their disturbance. If roots must be removed outside the TPZ, they are to be cleanly pruned. Tearing roots hinders wound closure and can increase risk of disease and root rot.

• All landscape and construction work within the Minimum Tree Protection Zones (MTPZs) of affected trees must be competed using hand tools only.

• At the completion of the project, the Forestry Department is to be notified prior to removal of the tree protection fencing on the site. With approval, the fencing may be dismantled.

• The owner is to be aware of the Migratory Birds Convention Act, 1994 that protects birds and their nests. This Act is implemented by Environment Canada, and it is advised that all vegetation be removed between Sept 1 and March 30.

Tree Protection Plan
Appendix III

3777, 3791 & 3815 Portage Rd.
Niagara Falls, ON.

Legend:

- Tree Removal
- Tree Protection Zone
- 4' Tall Plywood Tree Protection Fencing
- Site Access Route
- 4' Tall Snow Fence Tree Protection Fencing
- Air spade location

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Scale:	1 - 200
Drawn By:	Kyle Berwick
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TPP1