



Prepared for:

Michael Miao

287 King St. Niagara on the Lake, ON L0S 1J0

Arborist Report

Pre-Construction Assessment

Prepared For:

Michael Miao

Site Address:

287 King St. Niagara on the Lake
Ontario
L0S 1J0

July 8, 2021

Prepared By:

Nick Lawson

ISA Certified Arborist (ON-2361A)

Phone: (905) 870-9726 || Email: nicholas.lawson@davey.com

©2021 Davey Resource Group. All rights reserved. This document must be used in conjunction with the tree inventory lists, and Tree Preservation Plans with arborist comments (these plans are to be printed on correct size to ensure scalability). This document must be used in whole and with all pages.

Prepared by:

Davey Resource Group

Nicholas Lawson

500-611 Tradewind Dr., Ancaster, ON

(905)-870-9726

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Arborist Report

Summary

This letter is regarding potential severance of an existing lot located at 287 King St. in Niagara on the Lake. The intent of this report is to provide the homeowner with the documentation necessary so that the municipality of Niagara on the Lake, Ontario may issue the required forestry clearance and permitting.

Assignment

The client requested the Davey Resource Group (DRG) to assess and report on all trees throughout both properties. The intent of the report is to provide an inventory of trees throughout both lots in consideration of tree protection during future developments. Before gaining approval to sever the lot, the client was advised by the municipality that an Arborist Report and Tree Preservation Plan would need to be produced by an ISA Certified Arborist. At issue are any trees, tree branches or critical root zones that may be impacted by construction during future site development. A site visit was performed by ISA Certified Arborist Nicholas Lawson (ON-2361A) on July 2, 2021.

Limitations of Assignment

It must be understood that DRG is the assessor of the trees regarding a tree condition assessment as it relates to the most current industry standards. The inspection of this site pertained strictly to trees with a Diameter at Breast Height (DBH) >10cm located on the property or within 3m of the property boundary. Access to neighbouring properties was limited or not possible for certain trees however, the Arborist has made assumptions on DBH based on experience and erring on the side of added protection. The original Site Plan for this project, provided to the Arborist, does not disclose the exact locations of the trees included in this report. Therefore, assumptions of tree locations have been made using available measuring tools and best practices. The client should incorporate the information and recommendations provided in this report into their construction and installation procedures on an ongoing basis.



Observations & Methods

- Site visit occurred on July 2, 2021 at 11:00 am by ISA Certified Arborist Nicholas Lawson (ON-2361 A).
- Weather was 25°C and sunny with intermittent showers.
- All photographs taken are copies of their originals. Some may have been cropped to fit page dimensions.
- Measurements were taken with a metric measuring tape and metric DBH tape.
- The subject trees of concern are located in the front and rear yard of the client's property and a neighbouring property on the North side.
 - The home is considered East facing for the purposes of this report.
- There are **7** city owned trees, located on the boulevards surrounding the home, included in this report.
- All trees range in condition from GOOD to POOR using the designated methodology assigned by the International Society of Arboriculture.
- There are several small trees and shrubs scattered throughout the client's property however, none of which are applicable under the size restrictions set forth by tree protection bylaws pertaining to Niagara on the Lake.
- The recommendations pertaining to TPZ (Tree Protection Zone) or CRZ (Critical Root Zone) radial distances are recommendations by the Arborist based on industry standards. These recommendations are outlined in **Appendix 2** of this document. TPZ details for all trees pertaining to this site can be found in the Tree Protection Action Key (TPAK)
- Aluminum tree tag have been affixed to trees throughout the property.
 - Tree tag numbers pertain the inventoried trees and have been displayed in the TPAK.
 - Trees on neighboring properties were not tagged
- The existing lot has been divided into two sections for the purposes of the severance.
 - Lot #1: Where the original home is located on the East side of the property
 - Lot #2: Proposed severance into a secondary building lot on the West side of the property.
 - Proposed lot lines are displayed within the attached Tree Protection Plan
- At the time of inspection, there were no visible signs that any construction has commenced prior to the site visit.
 - Lot marking stakes were placed delineating the proposed severance.

63 trees were assessed on site:

- Private Trees at 278 King St.: **52**
- Private trees located on neighboring properties: **3**
- Shared private trees between the client and neighbor: **1**
- Town of Niagara on the Lake trees: **7**

Trees located throughout and surrounding Lot #1: **53**

- Trees #11-63 (Tag #145-194)

Trees located throughout and surrounding Lot #2: **10**

- Trees #1-10 (Tag #134-144)

Scope of Work

A lot severance has been proposed by the current homeowner of 287 King St. to create a second building lot on the existing property. The purpose of this report is to inventory the existing trees and make recommendations for future development in consideration of preservation of the urban canopy. It is likely that tree removal and injury will occur during site development. The homeowner should consider impact on all trees and make decisions in respect for existing tree preservation bylaws in the town of Niagara on the lake. Due to the nature of the proposed project, trees on both lots will be affected by the severance. The existing lot (Lot #1) will likely require tree removal to develop a new driveway access off Gage St. although the exact location of this has not been specified. Trees throughout Lot #2 may require removal or injury once severance is approved, a site plan developed, and construction allowed to proceed.

In the development stages of Lot #2 several considerations should be made in consideration of tree protection. Excavation for a new foundation or installation of utility lines, site access and location of overhead branches should all be taken into consideration when developing a building plan. A Certified Arborist should be consulted during development of the building plan to ensure that the impact to trees is minimized. Further, any necessary tree removal or pruning should be completed by a Certified Arborist prior to commencement of construction. This will ensure ease of operations during tree removal, promote work site safety and aid in the preservation of trees throughout the properties.

A “Tree Preservation Plan” (**Appendix 3**) attached to this document. This will provide an approximate location of existing trees as well as recommendations for tree preservation. Although, it should be noted that the TPP is only a guideline for site development and a more robust and complete preservation plan should be developed once the parameters of construction have been solidified.

Vetting of this report, in consideration of permit approval should be sought by professionals representing the forestry division of the Town of Niagara on the Lake.

Tree Protection Action Key (TPAK)

MS – Where multi stemmed trees exist, the three largest stems have been measured and added together to obtain DBH

H – Where hedge rows exist the largest stem had been measured and displayed representing the DBH of the tree

Tree Map Number	Tree Tag #	Species	Botanical	DBH (cm) @ 1.4 m	Tree Ownership	Minimum Tree Protection Distance (m)	Health	Structure	Overall Condition	Tree Height (m)	Crown Width (m)	Deadwood (%)	Action	Details
1	134	Flowering Cherry	<i>Prunus serrulata</i>	17	P	1.8	G	G	G	5	5	0	Protect	
2	136	Black Walnut	<i>Juglans nigra</i>	75	P	4.8	G	G	G	18	15	5	Protect	
3	137	Siberian Elm	<i>Ulmus pumila</i>	41	P	3.0	G	G	G	15	10	20	Protect	
4	138	White Mulberry	<i>Morus alba</i>	18	P	1.8	G	F	G	9	8	10	Protect	
5	139	Common Buckthorn	<i>Rhamnus cathartica</i>	13	P	1.8	F	F	F	7	7	20	Protect	
6	140	Norway Spruce	<i>Picea abies</i>	73	P	4.8	G	G	G	18	10	10	Protect	
7	141	Basswood	<i>Tilia americana</i>	10	P	1.8	G	P	P	4	5	0	Protect	
8	142	Basswood	<i>Tilia americana</i>	10	P	1.8	G	P	P	4	5	0	Protect	
9	143	Norway Maple	<i>Acer platanoides</i>	24	P	1.8	G	G	G	9	9	20	Protect	
10	144	Norway Maple	<i>Acer platanoides</i>	33	C	2.4	F	F	F	8	9	30	Protect	
11	145	Norway Spruce	<i>Picea abies</i>	40	P	2.4	G	G	G	16	9	20	Protect	
12	146	Norway Spruce	<i>Picea abies</i>	19	P	1.8	G	F	G	10	5	20	Protect	
13	147	Norway Spruce	<i>Picea abies</i>	25	P	1.8	G	G	G	12	6	20	Protect	
14	148	Norway Spruce	<i>Picea abies</i>	34	P	2.4	G	G	G	16	9	10	Protect	
15	149	Norway Spruce	<i>Picea abies</i>	35	P	2.4	G	G	G	14	7	10	Protect	
16	150	Norway Spruce	<i>Picea abies</i>	28	P	1.8	G	G	G	14	7	10	Protect	

17	151	Norway Spruce	<i>Picea abies</i>	35	P	2.4	G	G	G	14	8	10	Protect	
18	152	Norway Maple	<i>Acer platanoides</i>	21	P	1.8	G	G	G	10	9	20	Protect	
19	153	Pussy Willow	<i>Salix discolor</i>	29	P	1.8	G	F	F	7	7	20	Protect	MS
20	154	Pussy Willow	<i>Salix discolor</i>	24	P	1.8	G	G	G	8	7	20	Protect	
21	155	Norway Maple	<i>Acer platanoides</i>	14	P	1.8	G	G	G	9	6	5	Protect	
22	156	Basswood	<i>Tilia americana</i>	29	P	1.8	G	G	G	8	8	5	Protect	MS
23	157	Eastern Hemlock	<i>Tsuga canadensis</i>	10	P	1.8	G	G	G	6	3	5	Protect	
24	158	Colorado Blue Spruce	<i>Picea pungens</i>	10	P	1.8	G	G	G	6	4	0	Protect	
25	159	Eastern Hemlock	<i>Tsuga canadensis</i>	12	P	1.8	G	G	G	7	3	0	Protect	
26	160	Eastern Hemlock	<i>Tsuga canadensis</i>	16	P	1.8	G	G	G	7	4	0	Protect	MS
27	161	White Elm	<i>Ulmus americana</i>	55	P	3.6	G	G	G	12	12	10	Protect	
28	162	Pussy Willow	<i>Salix discolor</i>	24	P	1.8	G	G	G	7	8	0	Protect	MS
29	163	Ivory Silk Lilac	<i>Syringa vulgaris</i>	21	P	1.8	G	F	F	4	2	30	Protect	MS
30	164	Pussy Willow	<i>Salix discolor</i>	38	P	2.4	P	P	P	9	5	70	Protect	MS
31	165	Norway Spruce	<i>Picea abies</i>	66	P	4.2	G	G	G	18	10	10	Protect	
32	166	Norway Spruce	<i>Picea abies</i>	60	P	3.6	G	P	F	10	11	10	Protect	
33	167	Ivory Silk Lilac	<i>Syringa vulgaris</i>	20	P	1.8	G	F	G	6	6	20	Protect	MS
34	168	Norway Spruce	<i>Picea abies</i>	10	P	1.8	F	F	F	4	3	30	Protect	
35	169	Norway Maple	<i>Acer platanoides</i>	25	P	1.8	G	G	G	14	10	5	Protect	
36	170	Norway Maple	<i>Acer platanoides</i>	31	P	2.4	G	G	G	14	12	5	Protect	
37	171	Norway Maple	<i>Acer platanoides</i>	21	P	1.8	G	F	F	10	8	10	Protect	
38	172	Norway Maple	<i>Acer platanoides</i>	18	S	1.8	G	F	F	10	8	10	Protect	
39		Norway Spruce	<i>Picea abies</i>	40	N	2.4	G	G	G	12	9	40	Protect	
40		Norway Spruce	<i>Picea abies</i>	40	N	2.4	G	G	G	12	9	40	Protect	
41	173	Norway Maple	<i>Acer platanoides</i>	24	P	1.8	G	G	G	9	8	5	Protect	
42	174	Black Walnut	<i>Juglans nigra</i>	35	P	2.4	G	G	G	17	10	5	Protect	
43	175	Norway Maple	<i>Acer platanoides</i>	15	P	1.8	F	F	F	9	7	10	Protect	
44	176	Norway Maple	<i>Acer platanoides</i>	12	P	1.8	F	F	F	7	6	5	Protect	
45		Norway Spruce	<i>Picea abies</i>	40	P	2.4	G	G	G	15	8	10	Protect	
46	177	Black Walnut	<i>Juglans nigra</i>	31	P	2.4	F	F	F	9	10	20	Protect	MS

Prepared by:

Davey Resource Group
Nicholas Lawson

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47	178	Norway Maple	<i>Acer platanoides</i>	26	P	1.8	G	G	G	10	10	10	Protect	
48	179	Eastern White Cedar	<i>Thuja occidentalis</i>	43	P	3.0	G	G	G	9	7	20	Protect	MS
49	180	Norway Maple	<i>Acer platanoides</i>	18	P	1.8	G	G	G	12	8	10	Protect	
50	181	Norway Maple	<i>Acer platanoides</i>	25	P	1.8	G	G	G	12	8	10	Protect	
51	182	Eastern White Cedar	<i>Thuja occidentalis</i>	43	P	3.0	G	G	G	8	8	20	Protect	MS
52	183	Eastern Hemlock	<i>Tsuga canadensis</i>	10	P	1.8	F	F	F	7	2	40	Protect	
53	184	Littleleaf Linden	<i>Tilia cordata</i>	26	P	1.8	G	G	G	12	10	5	Protect	
54	185	Japanese Maple	<i>Acer palmatum</i>	10	P	1.8	G	G	G	5	4	0	Protect	
55	186	Magnolia species	<i>Magnolia species</i>	10	P	1.8	G	G	G	5	4	0	Protect	
56	187	Magnolia species	<i>Magnolia species</i>	12	P	1.8	G	G	G	4	4	0	Protect	MS
57	188	Ornamental Fir	<i>Abies sp.</i>	11	P	1.8	G	G	G	6	2.5	0	Protect	
58	189	Eastern White Cedar	<i>Thuja occidentalis</i>	10	C	1.8	G	G	G	5	3	20	Protect	H
59	190	Norway Maple	<i>Acer platanoides</i>	38	C	2.4	G	F	G	9	9	10	Protect	
60	191	Eastern White Cedar	<i>Thuja occidentalis</i>	10	C	1.8	G	G	G	4	2	10	Protect	
61	192	Eastern White Cedar	<i>Thuja occidentalis</i>	15	C	1.8	G	G	G	4	3	10	Protect	MS
62	193	Norway Maple	<i>Acer platanoides</i>	58	C	3.6	G	G	G	13	14	5	Protect	
63	194	Red Oak	<i>Quercus rubra</i>	32	C	2.4	G	G	G	12	9	0	Protect	

Conclusion

After a site inspection it has been determined that several trees throughout the property should be considered when developing a plan to sever the existing lot for construction purposes. A Certified Arborist should be consulted throughout the site development process to ensure that tree preservation is taken into account when developing the new construction plan. The Arborist will ensure that considerations are made toward the protection of root systems and scaffolding branches while also giving recommendations on how to minimize tree injury by utilizing specialized building materials or mitigating injury to trees if working in the TPZ. A replanting plan should also be part of the proposed site development.

Guidelines for forest preservation on the Town of Niagara on the Lake that define the TPZ radial distances for all protected trees are outlined in **Appendix 2** of this document. Accompanying this document is a Tree Protection Plan which will provide an approximate location of the existing trees.



Recommendations

- We recommend that this report be submitted to the municipality as required to do so in consideration of lot severance.
- We recommend that the client follow and abide by all tree preservation regulations regarding site development in the town of Niagara on the Lake.
 - All necessary forestry permitting should be sought after and obtained from the town of Niagara on the Lake prior to commencement of construction of the newly severed lots.
- We recommend that an Arborist Report and Tree Protection Plan be developed by a Certified Arborist prior to commencement of construction.
- We recommend that the construction and building plan be developed in consideration of protecting the urban canopy wherever possible.
 - A Certified Arborist should assist to develop the site plan and make considerations toward trees preservation.
 - All recommendations contained within the Arborist Report associated with new construction should be followed to ensure impact to trees from construction is minimized.
 - All necessary tree pruning, and removal should be completed by a Certified Arborist prior to commencement of construction on the site.
- We recommend that replanting guidelines be followed as mandated by the town of Niagara on the Lake.
 - Any replanting requirements that cannot be accommodated onsite should be rectified as Cash-in-Lieu payments made to the town of Niagara on the Lake.

Arborist Qualifications

Nicholas Lawson is an ISA Certified Arborist (ISA ON-2361A) for the Davey Resource Group (DRG). His formal education includes a being a graduate of the Arboricultural program at Humber College in Toronto ON. Mr. Lawson has over seven years of varied work experience in the forestry, arboriculture, landscape construction, and ecological assessment fields. Mr. Lawson has worked for the Davey Tree Expert Company of Canada throughout his career.



Appendix 1 – Photographs



Figure 1 – Approximate property boundary at 287 King St. in Niagara on the Lake. This area is considered applicable to this document.



Figure 2, Trees #1-2



Figure 3, Tree #3-5:



Figure 4, Trees #7-9



Figure 5, Tree #10:

Fig. 1-5 have displayed all trees located within Lot #2



Figure 6, Trees #11-18 # & #58-59



Figure 7, Trees 19-22 & #60-62



Figure 8, Trees #23-27



Figure 9, Trees #28-29 & #63:



Figure 10, Trees #30-40



Figure 11, Trees #41-46



Figure 12, Trees #47-53

Photographs of Trees 54-57 are not displayed here

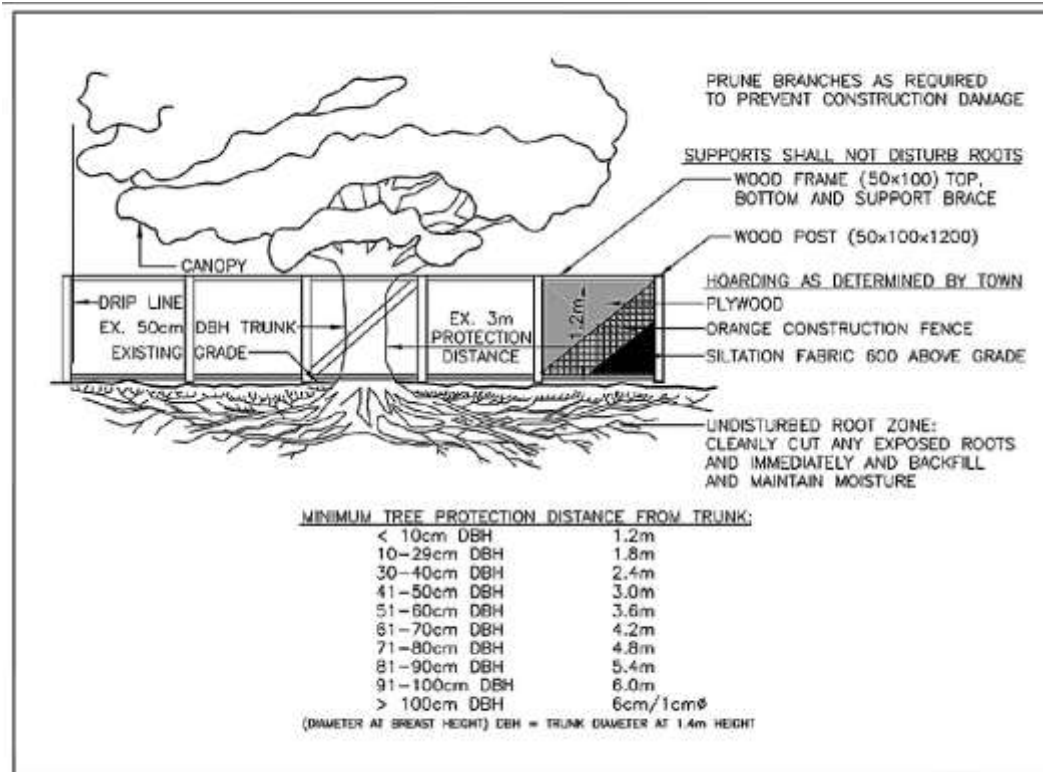


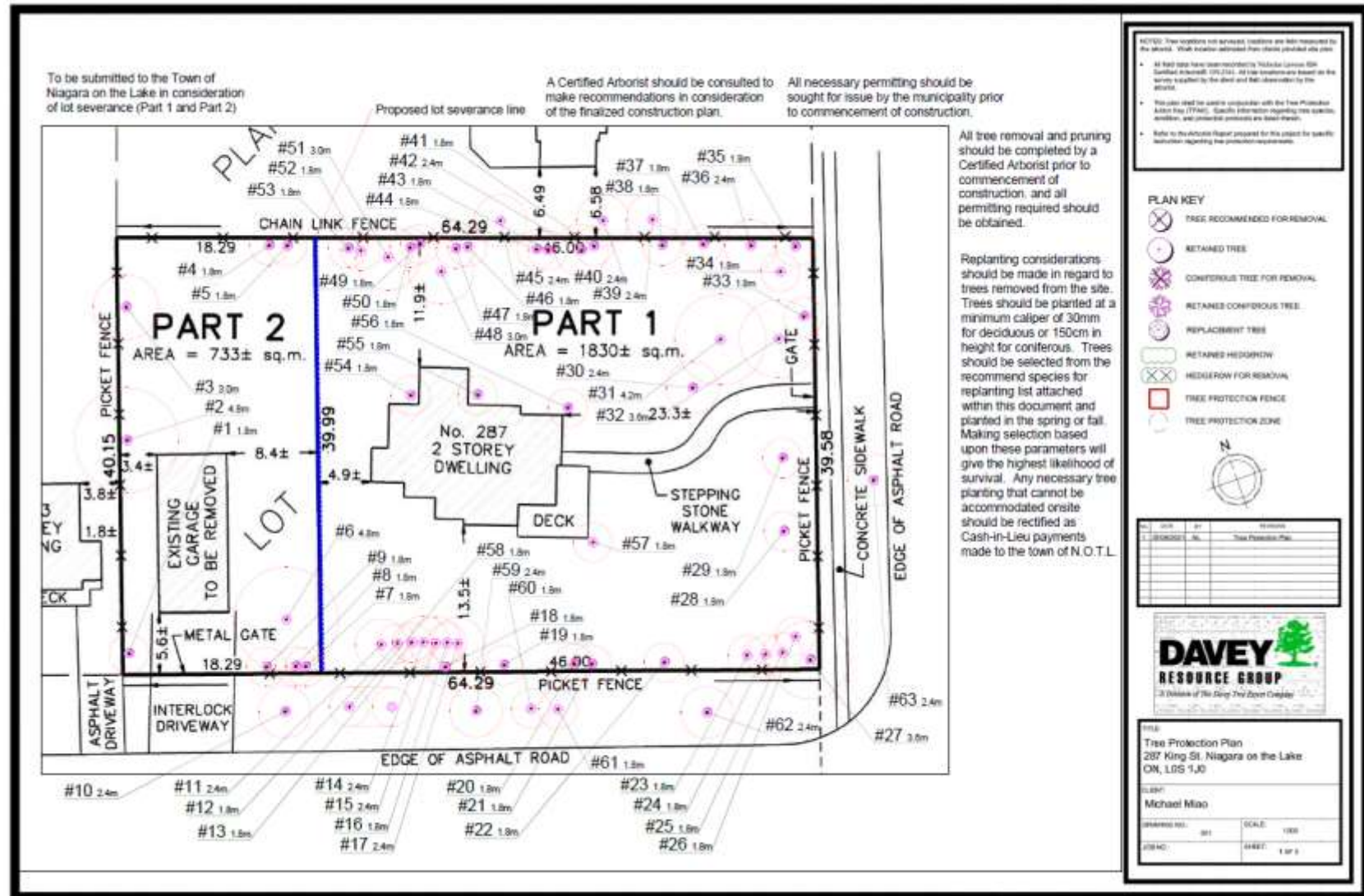
Figure 1 – Ref. Fencing Diagram and Tree Protection Barrier set back distances.

List of Preferred Trees for Replanting

Alternate-Leaf Dogwood	Largetooth Aspen
American Beech	Northern Hackberry
American Chestnut	Pawpaw
American Elm	Peachleaf Willow
Balsam Poplar	Pin Cherry
Basswood	Pin Oak
Bitternut Hickory	Red Maple
Black Cherry	Red Mulberry
Black Oak	Red Oak
Black Walnut	Sassafras
Black Willow	Serviceberries
Blue-Beech	Shagbark Hickory
Bur Oak	Silver Maple
Butternut	Sugar Maple
Cherry Birch	Swamp White Oak
Chokecherry	Sycamore
Eastern Hemlock	Tamarack
Eastern Redcedar	Trembling Aspen
Eastern White Cedar	Tulip Tree
Eastern White Pine	White Birch
Hawthorn	White Oak
Ironwood	Yellow Birch

Figure 2 – Replacement trees as recommended by By-law 5139-19 for Niagara on the Lake.

Prepared for:
Michael Miao
287 King St. Niagara on the Lake, ON L0S 1J0
Appendix 3 – Tree Protection Plan
For preview purposes only



This Conditions of Assessment Agreement is made pursuant to and as a provision of Davey Resource Group, a division of The Davey Tree Expert Co. of Canada, Limited ("Davey"), providing tree assessment services as agreed to between the parties, the terms and substance of which are incorporated in and made a part of this Agreement (collectively the "Services").

Trees are living organisms that are subject to stress and conditions and which inherently impose some degree or level of risk. Unless a tree is removed, the risk cannot be eliminated entirely. Tree conditions may also change over time even if there is no external evidence or manifestation. In that Davey provides the Services at a point in time utilizing applicable standard industry practices, any conclusions and recommendations provided are relevant only to the facts and conditions at the time the Services are performed. Given that Davey cannot predict or otherwise determine subsequent developments, Davey will not be liable for any such developments, acts, or conditions that occur including, but not limited to, decay, deterioration, or damage from any cause, insect infestation, acts of god or nature or otherwise.

Unless otherwise stated in writing, assessments are performed visually from the ground on the above-ground portions of the tree(s). However, the outward appearance of trees may conceal defects. **Therefore, to the extent permitted by law, Davey does not make and expressly disclaims any warranties or representations of any kind, express or implied, with respect to completeness or accuracy of the information contained in the reports or findings resulting from the Services beyond that expressly contracted for by Davey in writing, including, but not limited to, performing diagnosis or identifying hazards or conditions not within the scope of the Services or not readily discoverable using the methods applied pursuant to applicable standard industry practices.** Further, Davey's liability for any claim, damage or loss caused by or related to the Services shall be limited to the work expressly contracted for.

In performing the Services, Davey may have reviewed publicly available or other third- party records or conducted interviews, and has assumed the genuineness of such documents and statements. Davey disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any information obtained from any third- party or publicly available source.

Except as agreed to between the parties prior to the Services being performed, the reports and recommendations resulting from the Services may not be used by any other party or for any other purpose. The undersigned also agrees, to the extent permitted by law, to protect, indemnify, defend and hold Davey harmless from and against any and all claims, demands, actions, rights and causes of action of every kind and nature, including actions for contribution or indemnity, that may hereafter at any time be asserted against Davey or another party, including, but not limited to, bodily injury or death or property damage arising in any manner from or in any way related to any disclaimers or limitations in this Agreement.

By accepting or using the Services, the customer will be deemed to have agreed to the terms of this Agreement, even if it is not signed.

Acknowledged by:

Name of Customer: _____

Authorized Signature: _____

Date: _____

Prepared by:

Davey Resource Group

Nicholas Lawson

500-611 Tradewind Dr., Ancaster, ON

(905)-870-9726

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To be submitted to the Town of Niagara on the Lake in consideration of lot severance (Part 1 and Part 2)

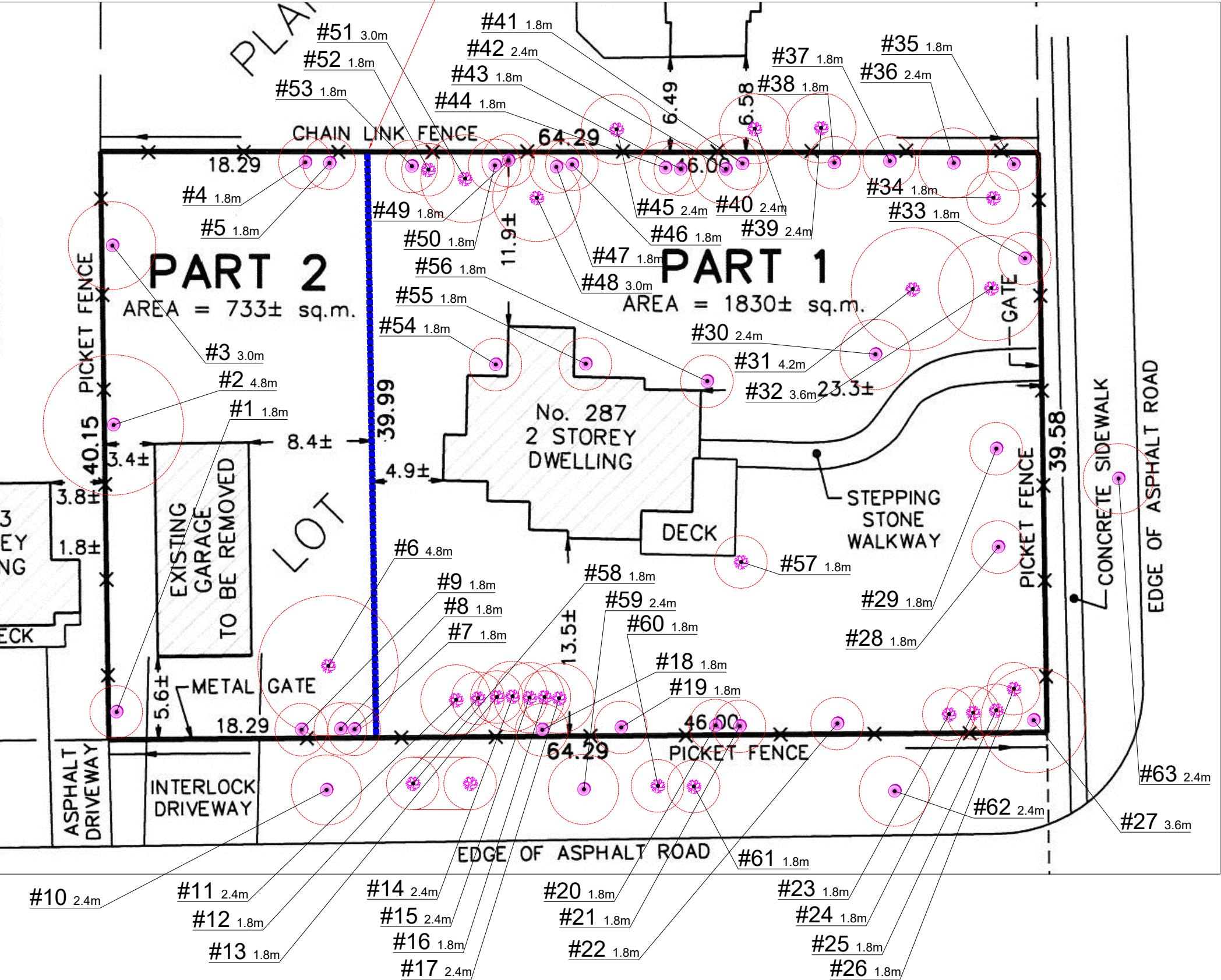
A Certified Arborist should be consulted to make recommendations in consideration of the finalized construction plan.

All necessary permitting should be sought for issue by the municipality prior to commencement of construction.

All tree removal and pruning should be completed by a Certified Arborist prior to commencement of construction, and all permitting required should be obtained.

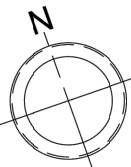
Replanting considerations should be made in regard to trees removed from the site. Trees should be planted at a minimum caliper of 30mm for deciduous or 150cm in height for coniferous. Trees should be selected from the recommend species for replanting list attached within this document and planted in the spring or fall. Making selection based upon these parameters will give the highest likelihood of survival. Any necessary tree planting that cannot be accommodated onsite should be rectified as Cash-in-Lieu payments made to the town of N.O.T.L.

- NOTES: Tree locations not surveyed, locations are field measured by the arborist. Work location estimated from clients provided site plan.
- All field data have been recorded by Nicholas Lawson ISA Certified Arborist® ON-2361. All tree locations are based on the survey supplied by the client and field observation by the arborist.
 - This plan shall be used in conjunction with the Tree Protection Action Key (TPAK). Specific information regarding tree species, condition, and protection protocols are listed therein.
 - Refer to the Arborist Report prepared for this project for specific instruction regarding tree protection requirements.



PLAN KEY

- TREE RECOMMENDED FOR REMOVAL
- RETAINED TREE
- CONIFEROUS TREE FOR REMOVAL
- RETAINED CONIFEROUS TREE
- REPLACEMENT TREE
- RETAINED HEDGEROW
- HEDGEROW FOR REMOVAL
- TREE PROTECTION FENCE
- TREE PROTECTION ZONE



No.	DATE	BY	REVISIONS
1	07/08/2021	NL	Tree Protection Plan



TITLE:
Tree Protection Plan
287 King St. Niagara on the Lake
ON, L0S 1J0

CLIENT:
Michael Miao










DRAWING NO.: 001
JOB NO.:
SCALE: 1:300
SHEET: 1 OF 3

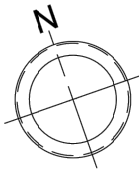
Tree Map Number	Tree Tag #	Species	Botanical	DBH (cm) @ 1.4 m	Tree Ownership	Minimum Tree Protection Distance (m)	Health	Structure	Overall Condition	Tree Height (m)	Crown Width (m)	Deadwood (%)	Action	Notes and Observations
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3	137	Siberian Elm	<i>Ulmus pumila</i>	41	P	3.0	G	G	G	15	10	20	Protect	
4	138	White Mulberry	<i>Morus alba</i>	18	P	1.8	G	F	G	9	8	10	Protect	
5	139	Common Buckthorn	<i>Rhamnus cathartica</i>	13	P	1.8	F	F	F	7	7	20	Protect	
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10	144	Norway Maple	<i>Acer platanoides</i>	33	C	2.4	F	F	F	8	9	30	Protect	
11	145	Norway Spruce	<i>Picea abies</i>	40	P	2.4	G	G	G	16	9	20	Protect	
12	146	Norway Spruce	<i>Picea abies</i>	19	P	1.8	G	F	G	10	5	20	Protect	
13	147	Norway Spruce	<i>Picea abies</i>	25	P	1.8	G	G	G	12	6	20	Protect	
14	148	Norway Spruce	<i>Picea abies</i>	34	P	2.4	G	G	G	16	9	10	Protect	
15	149	Norway Spruce	<i>Picea abies</i>	35	P	2.4	G	G	G	14	7	10	Protect	
16	150	Norway Spruce	<i>Picea abies</i>	28	P	1.8	G	G	G	14	7	10	Protect	
17	151	Norway Spruce	<i>Picea abies</i>	35	P	2.4	G	G	G	14	8	10	Protect	
18	152	Norway Maple	<i>Acer platanoides</i>	21	P	1.8	G	G	G	10	9	20	Protect	
19	153	Pussy Willow	<i>Salix discolor</i>	29	P	1.8	G	F	F	7	7	20	Protect	MS
20	154	Pussy Willow	<i>Salix discolor</i>	24	P	1.8	G	G	G	8	7	20	Protect	
21	155	Norway Maple	<i>Acer platanoides</i>	14	P	1.8	G	G	G	9	6	5	Protect	
22	156	Basswood	<i>Tilia americana</i>	29	P	1.8	G	G	G	8	8	5	Protect	MS
23	157	Eastern Hemlock	<i>Tsuga canadensis</i>	10	P	1.8	G	G	G	6	3	5	Protect	
24	158	Colorado Blue Spruce	<i>Picea pungens</i>	10	P	1.8	G	G	G	6	4	0	Protect	
25	159	Eastern Hemlock	<i>Tsuga canadensis</i>	12	P	1.8	G	G	G	7	3	0	Protect	
26	160	Eastern Hemlock	<i>Tsuga canadensis</i>	16	P	1.8	G	G	G	7	4	0	Protect	MS
27	161	White Elm	<i>Ulmus americana</i>	55	P	3.6	G	G	G	12	12	10	Protect	
28	162	Pussy Willow	<i>Salix discolor</i>	24	P	1.8	G	G	G	7	8	0	Protect	MS
29	163	Ivory Silk Lilac	<i>Syringa vulgaris</i>	21	P	1.8	G	F	F	4	2	30	Protect	MS
30	164	Pussy Willow	<i>Salix discolor</i>	38	P	2.4	P	P	P	9	5	70	Protect	MS
31	165	Norway Spruce	<i>Picea abies</i>	66	P	4.2	G	G	G	18	10	10	Protect	
32	166	Norway Spruce	<i>Picea abies</i>	60	P	3.6	G	P	F	10	11	10	Protect	
33	167	Ivory Silk Lilac	<i>Syringa vulgaris</i>	20	P	1.8	G	F	G	6	6	20	Protect	MS
34	168	Norway Spruce	<i>Picea abies</i>	10	P	1.8	F	F	F	4	3	30	Protect	
35	169	Norway Maple	<i>Acer platanoides</i>	25	P	1.8	G	G	G	14	10	5	Protect	
36	170	Norway Maple	<i>Acer platanoides</i>	31	P	2.4	G	G	G	14	12	5	Protect	
37	171	Norway Maple	<i>Acer platanoides</i>	21	P	1.8	G	F	F	10	8	10	Protect	
38	172	Norway Maple	<i>Acer platanoides</i>	18	S	1.8	G	F	F	10	8	10	Protect	
39		Norway Spruce	<i>Picea abies</i>	40	N	2.4	G	G	G	12	9	40	Protect	
40		Norway Spruce	<i>Picea abies</i>	40	N	2.4	G	G	G	12	9	40	Protect	
41	173	Norway Maple	<i>Acer platanoides</i>	24	P	1.8	G	G	G	9	8	5	Protect	
42	174	Black Walnut	<i>Juglans nigra</i>	35	P	2.4	G	G	G	17	10	5	Protect	
43	175	Norway Maple	<i>Acer platanoides</i>	15	P	1.8	F	F	F	9	7	10	Protect	
44	176	Norway Maple	<i>Acer platanoides</i>	12	P	1.8	F	F	F	7	6	5	Protect	
45		Norway Spruce	<i>Picea abies</i>	40	P	2.4	G	G	G	15	8	10	Protect	
46	177	Black Walnut	<i>Juglans nigra</i>	31	P	2.4	F	F	F	9	10	20	Protect	MS
47	178	Norway Maple	<i>Acer platanoides</i>	26	P	1.8	G	G	G	10	10	10	Protect	
48	179	Eastern White Cedar	<i>Thuja occidentalis</i>	43	P	3.0	G	G	G	9	7	20	Protect	MS
49	180	Norway Maple	<i>Acer platanoides</i>	18	P	1.8	G	G	G	12	8	10	Protect	
50	181	Norway Maple	<i>Acer platanoides</i>	25	P	1.8	G	G	G	12	8	10	Protect	
51	182	Eastern White Cedar	<i>Thuja occidentalis</i>	43	P	3.0	G	G	G	8	8	20	Protect	MS
52	183	Eastern Hemlock	<i>Tsuga canadensis</i>	10	P	1.8	F	F	F	7	2	40	Protect	
53	184	Littleleaf Linden	<i>Tilia cordata</i>	26	P	1.8	G	G	G	12	10	5	Protect	
54	185	Japanese Maple	<i>Acer palmatum</i>	10	P	1.8	G	G	G	5	4	0	Protect	
55	186	Magnolia species	<i>Magnolia species</i>	10	P	1.8	G	G	G	5	4	0	Protect	
56	187	Magnolia species	<i>Magnolia species</i>	12	P	1.8	G	G	G	4	4	0	Protect	MS
57	188	Ornimental Fir	<i>Abies sp.</i>	11	P	1.8	G	G	G	6	2.5	0	Protect	
58	189	Eastern White Cedar	<i>Thuja occidentalis</i>	10	C	1.8	G	G	G	5	3	20	Protect	H
59	190	Norway Maple	<i>Acer platanoides</i>	38	C	2.4	G	F	G	9	9	10	Protect	
60	191	Eastern White Cedar	<i>Thuja occidentalis</i>	10	C	1.8	G	G	G	4	2	10	Protect	
61	192	Eastern White Cedar	<i>Thuja occidentalis</i>	15	C	1.8	G	G	G	4	3	10	Protect	MS
62	193	Norway Maple	<i>Acer platanoides</i>	58	C	3.6	G	G	G	13	14	5	Protect	
63	194	Red Oak	<i>Quercus rubra</i>	32	C	2.4	G	G	G	12	9	0	Protect	

NOTES: Tree locations not surveyed, locations are field measured by the arborist. Work location estimated from clients provided site plan.

- All field data have been recorded by Nicholas Lawson ISA Certified Arborist® ON-2361. All tree locations are based on the survey supplied by the client and field observation by the arborist.
- This plan shall be used in conjunction with the Tree Protection Action Key (TPAK). Specific information regarding tree species, condition, and protection protocols are listed therein.
- Refer to the Arborist Report prepared for this project for specific instruction regarding tree protection requirements.

PLAN KEY

-  TREE RECOMMENDED FOR REMOVAL
-  RETAINED TREE
-  CONIFEROUS TREE FOR REMOVAL
-  RETAINED CONIFEROUS TREE
-  REPLACEMENT TREE
-  RETAINED HEDGEROW
-  HEDGEROW FOR REMOVAL
-  TREE PROTECTION FENCE
-  TREE PROTECTION ZONE



No.	DATE	BY	REVISIONS
1	07/08/2021	NL	Tree Protection Plan



TITLE:

Tree Protection Plan
287 King St. Niagara on the Lake
ON, L0S 1J0

CLIENT:

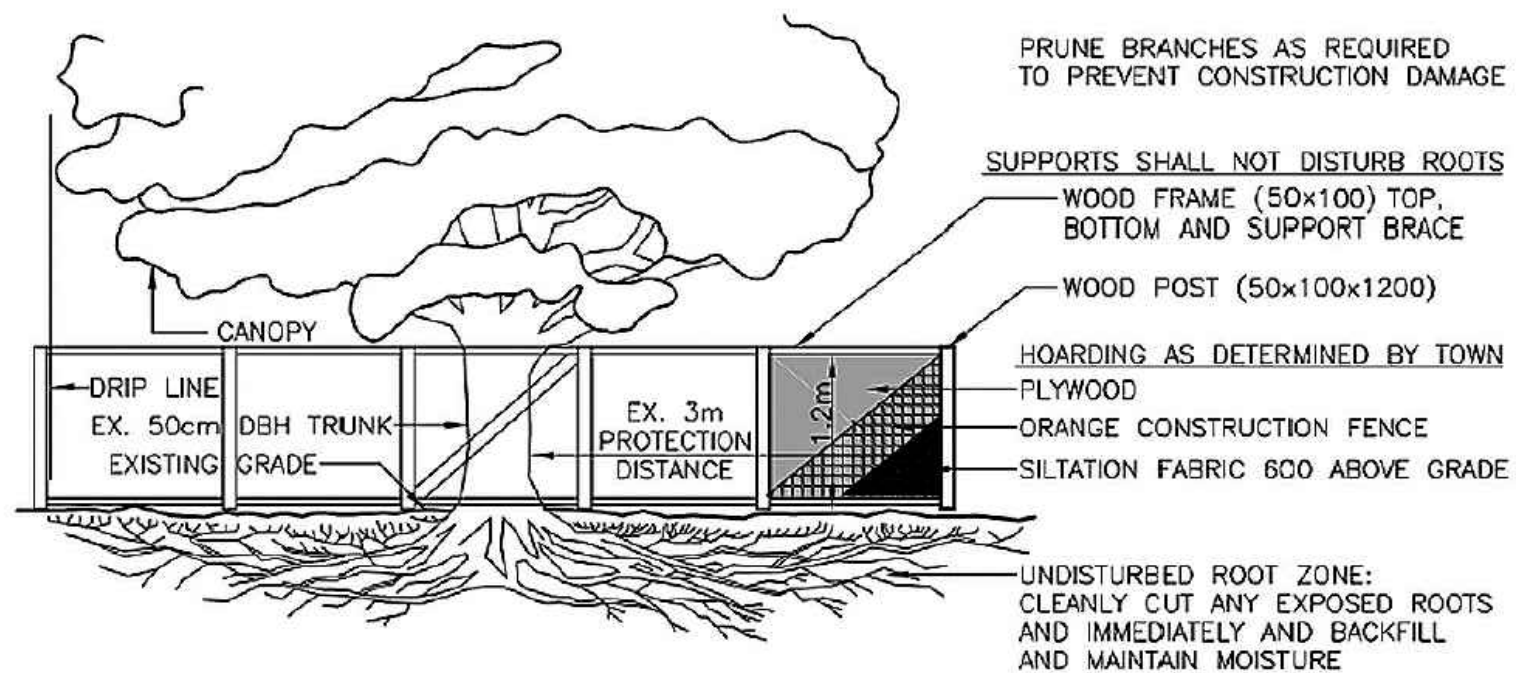
Michael Miao

DRAWING NO.: 001

SCALE: 1:300

JOB NO.:

SHEET: 2 OF 3



MINIMUM TREE PROTECTION DISTANCE FROM TRUNK:

< 10cm DBH	1.2m
10-29cm DBH	1.8m
30-40cm DBH	2.4m
41-50cm DBH	3.0m
51-60cm DBH	3.6m
61-70cm DBH	4.2m
71-80cm DBH	4.8m
81-90cm DBH	5.4m
91-100cm DBH	6.0m
> 100cm DBH	6cm/1cmØ

(DIAMETER AT BREAST HEIGHT) DBH = TRUNK DIAMETER AT 1.4m HEIGHT

SCHEDULE "B"
Fees

- | | |
|---|--|
| 1. Application Fee for Owners who are individuals | \$50 per tree for the first tree and \$25 per tree for subsequent trees under the same permit. |
| 2. Application Fee for Owners who are corporations | \$250 per tree. |
| 3. Use of Inspector for Owners who are individuals | No fee. |
| 4. Use of Inspector for Owners who are corporations | \$250 per visit. |
| 5. Cash in lieu for replacement planting by Owners who are Individuals | \$250 per tree. |
| 6. Cash in lieu for replacement Planting by Owners who are Corporations | \$500 per tree. |

SCHEDULE "C"
Replacement and Replanting

Tree Replacement as the Condition
of a Tree Removal Permit

Diameter at Breast Height (DBH) in centimetres	Number of Replacement Trees
12.5-24	2
25-34	3
35-44	4
45-54	5
55-64	6
65-74	7
75-84	8
85-94	9
95-104	10
105-114	11
>115	12

List of Preferred Trees for Replanting

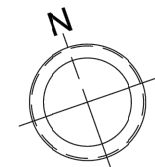
Alternate-Leaf Dogwood	Largetooth Aspen
American Beech	Northern Hackberry
American Chestnut	Pawpaw
American Elm	Peachleaf Willow
Balsam Poplar	Pin Cherry
Basswood	Pin Oak
Bitternut Hickory	Red Maple
Black Cherry	Red Mulberry
Black Oak	Red Oak
Black Walnut	Sassafras
Black Willow	Serviceberries
Blue-Beech	Shagbark Hickory
Bur Oak	Silver Maple
Butternut	Sugar Maple
Cherry Birch	Swamp White Oak
Chokecherry	Sycamore
Eastern Hemlock	Tamarack
Eastern Redcedar	Trembling Aspen
Eastern White Cedar	Tulip Tree
Eastern White Pine	White Birch
Hawthorn	White Oak
Ironwood	Yellow Birch

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PLAN KEY

- TREE RECOMMENDED FOR REMOVAL
- RETAINED TREE
- CONIFEROUS TREE FOR REMOVAL
- RETAINED CONIFEROUS TREE
- REPLACEMENT TREE
- RETAINED HEDGEROW
- HEDGEROW FOR REMOVAL
- TREE PROTECTION FENCE
- TREE PROTECTION ZONE



No.	DATE	BY	REVISIONS
1	07/08/2021	NL	Tree Protection Plan



TITLE:

Tree Protection Plan
287 King St. Niagara on the Lake
ON, L0S 1J0

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