Tree Inventory and Preservation Plan Report
2423 Raymore Drive
Burlington, Ontario

prepared for

William and Lorraine Quesnel
5550 Twelve Mile Trail
Burlington, Ontario
L7L 7L3

THIS REPORT IS STILL UNDER REVIEW BY STAFF AND IS NOT CONSIDERED THE FINAL APPROVED DOCUMENT.

THIS DOCUMENT IS PROVIDED FOR INFORMATIONAL PURPOSES TO SUPPORT THE PUBLIC TREE REMOVAL REPORT TO COUNCIL RPF 01-23 FOR TREE #68.

prepared by

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03 March 2021, revised 13 June 2022

KUNTZ FORESTRY CONSULTING INC Project P2673

Introduction

Kuntz Forestry Consulting was retained by William and Lorraine Quesnel to complete a Tree Inventory and Preservation Plan in support of a development application for a property located at 2423 Raymore Drive in Burlington, Ontario. The subject property is located northwest of the Guelph Line and Prospect Street intersection, within a residential area.

The work plan for this tree preservation study included the following:

- Prepare inventory of tree resources with a diameter at breast height (DBH) greater than 10cm on and within six metres of the subject property and trees of all sizes within the City right-of-way;
- Evaluate potential tree saving opportunities based on proposed development plans; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

Methodology

The tree inventory was conducted on 02 March 2021. Trees over 10cm DBH on and within six metres of the subject property and trees of all sizes within the City right-of-way were included in the tree inventory. Trees were located using the topographic survey provided, aerial imagery, and estimations made in the field. Trees included in the inventory were numbered 1 – 74. Refer to Table 1 for the results of the inventory.

Tree resources were assessed utilizing the following parameters:

Tree # - number assigned to tree that corresponds to Figure 1.
Species - common and botanical names provided in the inventory table.
DBH - diameter (centimetres) at breast height, measured at 1.4 metres above the ground.
Condition - condition of tree considering trunk integrity, crown structure, and crown vigour. Condition ratings include poor (P), fair (F) and good (G).
Crown Dieback – percentage of the crown that is dead.
Dripline – diameter (metres) of crown.
Comments - additional relevant detail.

The tree inventory was recently revisited to check diameters partially but more so to check for change in condition including dying trees and fallen trees due to age of previous inventory and recent weather events, and change to the site plan. The results of the evaluation are provided below.

Existing Site Conditions

The study site is currently a vacant residential lot with hedgerow features and clustered trees, perhaps part of a remnant conifer plantation. Tree resources exist in the form of landscape trees and natural regeneration. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The tree inventory documented 73 trees and one hedgerow feature on and within six metres of the subject property. Tree resources were composed of Balsam Fir (*Abies balsamea*),

Norway Maple (*Acer platanoides*), White Birch (*Betula papyrifera*), Japanese Walnut (*Juglans ailantifolia*), White Mulberry (*Morus alba*), Norway Spruce (*Picea abies*), White Spruce (*Picea glauca*), Blue Spruce (*Picea pungens*), Red Pine (*Pinus resinosa*), Cherry Species (*Prunus sp*.), Black Locust (*Robinia pseudoacacia*), Eastern White Cedar (*Thuja occidentalis*), White Elm (*Ulmus americana*), and Siberian Elm (*Ulmus pumila*). Refer to Table 1 for the full tree inventory and Figure 1 for the locations of trees reported in the tree inventory.

Proposed Development

The proposed development includes construction of a two-storey residential dwelling with an associated garage, driveway, patio, porch, and landscaped areas. Refer to Figure 1 for the proposed site plan.

Discussion

The following sections provide a discussion and analysis of tree impacts and tree preservation relative to the proposed development and existing conditions.

Development Impacts/Tree Removal

The removal of Trees 1 – 4, 6 – 26, 28 – 42, 50, 58 – 64, and 68 – 74 will be required to accommodate the proposed development. The above noted trees have trunks that conflict with the proposed house or would be impacted by construction. Trees 6, 21, 23, 29, 50, 61, and 69 – 74 are dead and their removal is required regardless of the site plan.

Trees 1 – 4, 6 – 26, 28 – 42, 58 – 64, and 69 – 74 are greater than 10cm DBH, therefore a permit will be required prior to their removal. Trees 50 and 68 are located within the Road right-of-way and City lands (easement) and permission will be required by the City prior to their removal.

Tree Preservation

Preservation of Trees 5, 27, 43, P44, 45 – 49, 51 – 57, and 65 – 67 will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures must be implemented prior to the proposed work to ensure tree resources designated for retention are not impacted by the proposed development. Refer to Figure 1 for the location of required tree preservation fencing, tree preservation fencing details, and general Tree Protection Plan Notes.

Summary and Recommendations

Kuntz Forestry Consulting was retained by William and Lorraine Quesnel to complete a Tree Inventory and Preservation Plan report in support of a site plan application for a property situated at 2423 Raymore Drive in Burlington, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan. The inventory was recently updated (June, 2022) as the report required an update due to a change in the site plan and the previous inventory was greater than a year old.

The findings of the study indicate a total of 73 trees and one hedgerow feature on and within six metres of the subject property and within the City right-of-way. Fifty-five (55) trees are

required for removal to accommodate the proposed site plan. All other trees may be saved provided appropriate tree protection measures are installed prior to construction as per Figure 1.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for tree protection fencing locations and general Tree Protection Plan Notes.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,
Kuntz Forestry Consulting Inc.

Kimberly Dowell

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Peter Kuntz

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Table 1. Tree Inventory

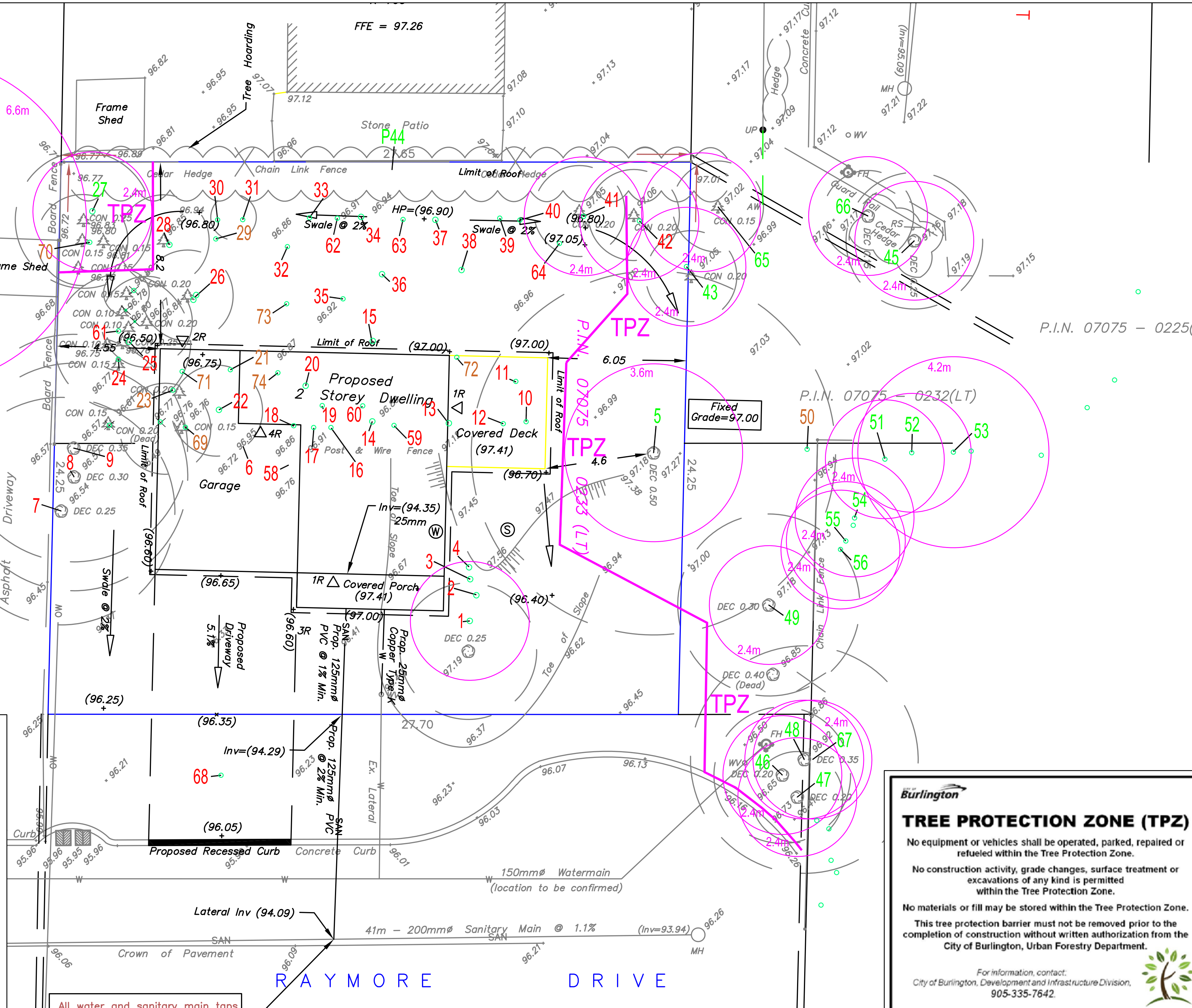
Location: 2423 Raymore Drive, Burlington Date: 02 March 2021, updated June 202 Surveyors: KD

Tree#	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	mTPZ	DL	Comments	Owner	Action
1	White Mulberry	*Morus alba*	~23, 15	P/F	P/F	F		2.4	12	Exposed roots (L), bow (M) to south, pushed down by Tree 2, stem wounds (L), crook (M), union at 1 metre, vertical crack (H) in large stem	Private	Remove
2	White Mulberry	*Morus alba*	41, 37, 30	P/F	P	F/G		4.2	14	Union at base, one stem has lean (H) to south pushing down Tree 1, one stem has lean (M) to northeast, bow (L), stem wounds (M), one stem fused to Tree 3 at base	Private	Remove
3	Norway Maple	*Acer platanoides*	39	F/G	F/G	F/G		2.4	13	Bow (L), asymmetrical crown (M), pruning wounds (L), fused to Tree 2	Private	Remove
4	Norway Maple	*Acer platanoides*	40	F/G	F/G	F/G	10	2.4	8	Co-dominance at 2 metres with included bark (L), growth deficit (L), deadwood (M)	Private	Remove
5	Japanese Walnut	*Juglans ailantifolia*	42, 41	F	F/G	F		3.6	14	Co-dominance at 1.2 metres and 2 metres with included bark (M), lean (M), sweep (L), broken branches (L), epicormic branching (L)	Private	Retain
6	White Elm	*Ulmus americana*	29, 21	D	D	D	100	2.4	7	Union at 0.5 metres with included bark (M), deadwood (L)	Private	Remove (Condition)
7	White Mulberry	*Morus alba*	21, 7	P/F	F	F	40	2.4	5	Bow (M), Tree 8 is growing over, bow (M), pruning wounds (L), asymmetrical crown (H)	Private	Remove
8	White Mulberry	*Morus alba*	25, 11	P/F	F	F	30	2.4	6	Union at 0.5 metres, bow (M) over Tree 7, pruning wounds (L), sweep (L), deadwood (L)	Private	Remove
9	Norway Maple	*Acer platanoides*	38	P/F	G	F		2.4	8	Included fence (M), sweep (L), lean (L), seam (M) from base to 0.5 metres	Private	Remove
10	White Spruce	*Picea glauca*	25	F/G	F/G	F/G		2.4	5	Asymmetrical crown (L), crook (L)	Private	Remove
11	White Spruce	*Picea glauca*	24	F/G	F/G	F/G		2.4	4	Asymmetrical crown (L), sweep (L), crook (L)	Private	Remove
12	White Spruce	*Picea glauca*	18	F/G	F/G	F/G		2.4	3.5	Asymmetrical crown (L), crook (L)	Private	Remove
13	Norway Spruce	*Picea abies*	26	G	G	F/G		2.4	4	Deadwood (L)	Private	Remove
14	Norway Spruce	*Picea abies*	24.5	F/G	F/G	G		2.4	3.5	Asymmetrical crown (L), crook (L)	Private	Remove
15	White Spruce	*Picea glauca*	19	F/G	G	G		2.4	2	Crook (L)	Private	Remove
16	White Spruce	*Picea glauca*	23	F/G	F/G	F/G		2.4	3	Asymmetrical crown (M), deadwood (L)	Private	Remove
17	White Spruce	*Picea glauca*	20	F/G	F/G	F/G		2.4	3	Asymmetrical crown (M), crook (L), deadwood (L)	Private	Remove
18	White Spruce	*Picea glauca*	16	F/G	F/G	F/G		2.4	2.5	Asymmetrical crown (M), crook (L)	Private	Remove
19	White Spruce	*Picea glauca*	16	G	F/G	F/G		2.4	2	Asymmetrical crown (M)	Private	Remove
20	White Spruce	*Picea glauca*	24.5	G	G	G		2.4	4		Private	Remove
21	White Spruce	*Picea glauca*	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)

21	White Spruce	*Picea glauca*	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
22	White Spruce	*Picea glauca*	21.5	F/G	F/G	F/G		2.4	3	Crook (L), deadwood (L)	Private	Remove
23	White Spruce	*Picea glauca*	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
24	Norway Spruce	*Picea abies*	27	F	F	F/G	10	2.4	5	Co-dominance at 5 metres with included bark (L), deadwood (L)	Private	Remove
25	Norway Spruce	*Picea abies*	24	F/G	F/G	F/G		2.4	4	Crook (L)	Private	Remove
26	White Spruce	*Picea glauca*	22	F/G	G	F		2.4	4.5	Sweep (L), fruiting body, epicormic branching (M)	Private	Remove
27	Blue Spruce	*Picea pungens*	23	G	F/G	F/G		2.4	3.5	Asymmetrical crown (L), vine competition (L)	Private	Retain
28	Blue Spruce	*Picea pungens*	20	F/G	F/G	F/G		2.4	2.5	Stem wounds (L) with rot, asymmetrical crown (L)	Private	Remove
29	White Spruce	*Picea glauca*	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
30	Blue Spruce	*Picea pungens*	21.5	G	F/G	F/G		2.4	3	Asymmetrical crown (L), vine competition (M)	Private	Remove
31	Red Pine	*Pinus resinosa*	16	G	F/G	P		2.4	1.5	Small crown	Private	Remove
32	Blue Spruce	*Picea pungens*	21	F	F	F/G		2.4	3.5	Sweep (L), crook (M), co-dominance at 6 metres, vine competition (L)	Private	Remove
33	White Spruce	*Picea glauca*	16	F	F	F	5	2.4	1.5	Asymmetrical crown (M), broken top, top-down dieback, vine competition (L)	Private	Remove
34	Red Pine	*Pinus resinosa*	23	F/G	G	G		2.4	3	Crook (L), vine competition (L)	Private	Remove
35	White Spruce	*Picea glauca*	19.5	F/G	F/G	F/G		2.4	3	Asymmetrical crown (L), crook (L), deadwood (M)	Private	Remove
36	White Spruce	*Picea glauca*	18	F/G	F	F/G		2.4	4	Co-dominance at 6 metres, asymmetrical crown (L), deadwood (L)	Private	Remove
37	White Spruce	*Picea glauca*	20	F/G	F/G	F/G		2.4	3.5	Co-dominance at 7 metres, asymmetrical crown (L)	Private	Remove
38	Balsam Fir	*Abies balsamea*	20	G	G	F/G		2.4	3	Deadwood (L)	Private	Remove
39	Balsam Fir	*Abies balsamea*	27	F/G	F	G		2.4	4.5	Multi-stemmed at 4 metres (5 stems), included bark (M)	Private	Remove
40	Red Pine	*Pinus resinosa*	17.5	G	F	F		2.4	3	Sparse crown (M)	Private	Remove
41	White Spruce	*Picea glauca*	18.5	F/G	G	G		2.4	4.5	Crook (L), deadwood (L)	Private	Remove
42	Red Pine	*Pinus resinosa*	21	G	F/G	F/G		2.4	5	Sparse crown (L), deadwood (L)	Private	Remove
43	Blue Spruce	*Picea pungens*	23	F	G	F/G		2.4	4.5	Sweep (L), lean (L)	Private	Retain
P44	Eastern White Cedar	*Thuja occidentalis*	8-25 Ave.18	F/G	F/G	F/G		2.4	2.5	34 trees in total: 4 trees less than 10cm, 29 trees 10 - 24 cm, 1 tree 25 - 35 cm, 7 trees dead, 2 metres required for protection	Private	Retain
45	White Birch	*Betula papyrifera*	~28	F/G	G	G		2.4	8	Union at 2.5 metres, bow (L)	Private	Retain
46	Siberian Elm	*Ulmus pumila*	23	P	F/G	F		2.4	5	Stem wounds (H) at base, broken branches (L), sweep (L), growth deficits (M) --> Monitor	City	Retain
47	Siberian Elm	*Ulmus pumila*	~16	F	F/G	F/G		2.4	4	Lean (L), crook (L)	City	Retain
48	White Mulberry	*Morus alba*	37	F	F/G	F		2.4	16	Included fence (L), union at 2 metres with included bark (M), sweep (L),seam (L) at base	City	Retain
49	White Mulberry	*Morus alba*	37	P/F	F	F		2.4	6	Crook (H), union at 1.5 metres, poor form (M), co-dominance at 1.75 metres with included bark (H)	City	Retain

50	Siberian Elm	*Ulmus pumila*	-	-	-	-	-	-	-	Failed	City	Remove (Condition)
51	Siberian Elm	*Ulmus pumila*	~32	F	F/G	F	10	2.4	12	Crook (M), poor form (M), broken branches (L), epicormic branches (M), deadwood (L)	Neighbour	Retain
52	Siberian Elm	*Ulmus pumila*	~28	F/G	F	P/F	30	2.4	10	Dead branches (M), union at 6 metres with included bark (M), epicormic branches (H), deadwood (L)	Neighbour	Retain
53	Siberian Elm	*Ulmus pumila*	~45, ~40	F	F/G	P/F	20	4.2	16	Union at base, sweep (L), crook (L), dead branches (L), vine competition (M), included bark (H), epicormic branching (H)	Neighbour	Retain
54	Siberian Elm	*Ulmus pumila*	~20, ~17	F	F/G	F		2.4	10	2 trees growing together, one stem has bow (L) to east, broken branches (L)	Neighbour	Retain
55	White Mulberry	*Morus alba*	~17, ~17, ~13	F/G	F	P/F		2.4	9	Co-dominance at base, broken branches (L), epicormic branching (H)	Neighbour	Retain
56	Cherry Species	*Prunus sp.*	~17	F/G	F	F		2.4	6	Lean (L), crook (L), epicormic branching (L)	Neighbour	Retain
57	Norway Maple	*Acer platanoides*	~65, ~65, ~50	P/F	F	F		6.6	~15	Union at 1.2 metres with included bark (M), seam (L), pruning wounds (L), stem wound (M) from base to 1 metre, cavity (M) on one stem, sparse crown (M)	Neighbour	Retain
58	Black Locust	*Robinia pseudoacacia*	16	G	F	G		2.4	5	Bow (M) south	Private	Remove
59	White Spruce	*Picea glauca*	12.5	F	G	P/F		2.4	2.5	Suppressed	Private	Remove
60	White Spruce	*Picea glauca*	13	F	G	F		2.4	2	Suppressed	Private	Remove
61	White Spruce	*Picea glauca*	12	D	D	D	100	2.4	2	Asymmetrical crown (H), deadwood (M)	Private	Remove (Condition)
62	White Spruce	*Picea glauca*	13	F	F	F		2.4	2.5	Asymmetrical crown (M), suppressed	Private	Remove
63	Norway Spruce	*Picea abies*	13	F/G	F/G	F/G		2.4	2	Sweep (L)	Private	Remove
64	White Spruce	*Picea glauca*	12	F	P	F		2.4	2	Co-dominance at 6 metres, one co-dominant stem with a broken top	Private	Remove
65	White Spruce	*Picea glauca*	15	F/G	F/G	F/G		2.4	2.5	Asymmetrical crown (M)	Neighbour	Retain
66	White Mulberry	*Morus alba*	~14	F/G	F/G	G		2.4	4	Sweep (L)	City	Retain
67	Norway Maple	*Acer platanoides*	~26	F/G	F/G	F/G		2.4	5	Asymmetrical crown (M), Tree 48 growing in crown	Neighbour	Retain
68	Blue Spruce	*Picea pungens*	2	G	G	G		1.2	0.25	Approximately 1.75 metres tall	City	Remove
69	White Spruce	*Picea glauca*	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
70	-	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
71	-	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
72	-	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
73	-	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)
74	-	-	-	-	-	-	-	-	-	Dead	Private	Remove (Condition)

Codes		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown dieback	%
mTPZ	Minimum Tree Protection Zone	(m)
DL	Dripline of tree	Diameter (m)
Owner	Ownership	Private, Neighbour, City
P = poor, F = fair, G = good, ~ = estimate, (VL) = very light, (L) = light, (M) = moderate, (H) = heavy		



LEGEND

Tree Inventory

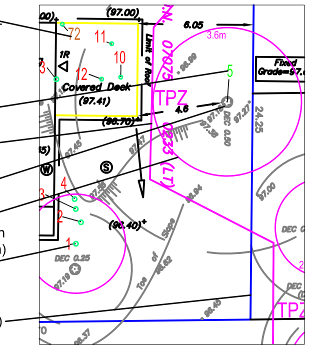
Refer to Table 1 of report dated 03 March 2021, revised 13 June 2022. Trees greater than 10cm DBH on and within six metres of the subject property and trees of all sizes within the road right-of-way were included in the inventory.

Tree Removals

The removal of 55 trees is required to accommodate the proposed development. Trees identified for removal are indicated with RED or ORANGE labels.

Tree Preservation

Preservation of the remaining 19 trees will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Minimum tree preservation zones is indicated in MAGENTA. Refer to Tree Protection Plan Notes for preservation details.



TREE PROTECTION PLAN NOTES

- It is the applicants' responsibility to discuss potential impacts to trees located near or wholly on adjacent properties or on shared boundary lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible through civil action. The applicant would also be required to replace such trees to the satisfaction of Urban Forestry.
- Tree protection barriers shall be installed to standards as detailed in this document and to the satisfaction of Urban Forestry.
- Tree protection barriers must be installed using plywood clad hoarding (minimum 19mm or ¾" thick) or an equivalent approved by Urban Forestry.
- Where required, signs as specified in Section 4, Tree Protection Signage must be attached to all sides of the barrier.
- Prior to the commencement of any site activity such as site alteration, demolition or construction, the tree protection measures specified on this plan must be installed to the satisfaction of Urban Forestry.
- Once all tree/site protection measures have been installed, Urban Forestry staff must be contacted to arrange for an inspection of the site and approval of the tree/site protection requirements. Photographs that clearly show the installed tree/site protection shall be provided for Urban Forestry review.
- Where changes to the location of the approved TPZ or sediment control or where temporary access to the TPZ is proposed, Urban Forestry must be contacted to obtain approval prior to alteration.
- 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.
- No construction activities including grade changes, surface treatments or excavation of any kind are permitted within the area identified on the Tree Protection Plan or Site Plan as a tree protection zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. No movement or storage of vehicles or equipment is permitted within the TPZ. The area(s) identified as a TPZ must be protected and remain undisturbed at all times.
- All additional tree protection or preservation requirements, above and beyond the installation of tree protection barriers, must be undertaken or implemented as detailed in the Urban Forestry approved arborist report and/or the approved tree protection plan and to the satisfaction of Urban Forestry.
- If the minimum tree protection zone (TPZ) must be reduced to facilitate construction access, the tree protection barriers must be maintained at a lesser distance and the exposed portion of TPZ must be protected using a horizontal root protection method approved by Urban Forestry.
- Any roots or branches indicated on this plan which require pruning, as approved by Urban Forestry, must be pruned by an arborist. All pruning of tree roots and branches must be in accordance with good arboricultural practice. Roots that have received approval from Urban Forestry to be pruned must first be exposed using pneumatic (air) excavation, by hand digging or by a using low pressure hydraulic (water) excavation. The water pressure for hydraulic excavation must be low enough that root bark is not damaged or removed. This will allow a proper pruning cut and minimize tearing of the roots. The arborist retained to carry out crown or root pruning must contact Urban Forestry no less than three working days prior to conducting any specified work.
- The applicant/owner shall protect all by-law regulated trees in the area of consideration that have not been approved for removal throughout development works to the satisfaction of Urban Forestry.
- Convictions of offences respecting the regulations in the Street Tree By-law and Private Tree By-law are subject to fines. A person convicted of an offence under these by-laws is liable to a minimum fine of $500 and a maximum fine of $100,000 per tree, and /or a Special Fine of $100,000. The landowner may be ordered by the City to stop the contravening activity or ordered to undertake work to correct the contravention.
- Prior to site disturbance the owner must confirm that no migratory birds are making use of the site for nesting. The owner must ensure that the works are in conformance with the Migratory Bird Convention Act and that no migratory bird nests will be impacted by the proposed work no less than 48 hours prior to conducting any specified work.

No.	Issue/Revisions	Date	By
1	Report Submission	03 Mar. 2021	KD
2	Report Revision - New Site Plan	13 June 2022	PK

Base Data: Cunningham McConnel Ltd. (survey), Crickmore Design (site plan)

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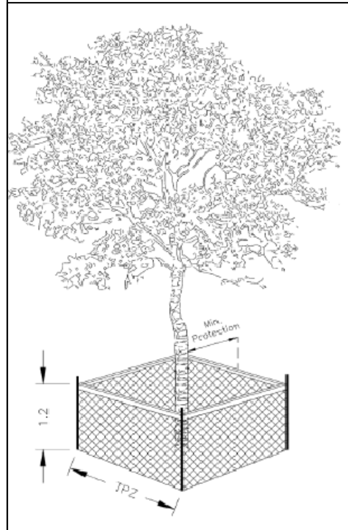
Property
2423 Raymore Drive
Burlington, Ontario

Existing Conditions, Proposed Site Plan
Tree Inventory and Preservation Plan

Project	P2673	Figure
Date	03 March 2021	1
Scale	1:200	

Detail TP-1 – Tree Protection Detail.



Trunk Diameter (DBH) [2]	Minimum Tree Protection Zone (MTPZ) Distances Required [3]	Critical Root Zone (CRZ) Distances Required [3&4]
< 10 cm	1.8 m	1.8 m
11 - 40 cm	2.4 m	4.0 m
41 - 50 cm	3.0 m	5.0 m
51 - 60 cm	3.6 m	6.0 m
61 - 70 cm	4.2 m	7.0 m
71 - 80 cm	4.8 m	8.0 m
81 - 90 cm	5.4 m	9.0 m
91 - 100+ cm	6.0 m	10.0 m

NOTES:

[1] The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the drip line.
[2] Diameter at breast height (DBH) is the measurement of tree trunk taken at 1.4 metres above ground.
[3] Minimum Tree Protection Zone and Critical Root Zone distances are to be measured from the outside edge of the tree base towards the drip line and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work and is subject to Section 6 of this specification.
[4] Where work is being performed beyond the Minimum Tree Protection Zone but within the Critical Root Zone the works are subject to Section 8 of this specification.

TREE PROTECTION BARRIER

1. The required barrier is a 1.2 metre (4 ft) high orange plastic web snow fencing on 2" x 4" frame. Where orange plastic web snow fencing creates a restriction to sightlines, page wire fencing with reflective tape can be used.
2. Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and are to remain in place throughout the entire duration of the project. The barriers shall be maintained erect and in good repair throughout the duration of construction operations with breaks and unsupported sections repaired immediately. Tree protection may be not be removed prior to the completion of construction without written authorization from the City Arborist.
3. All supports and bracing used to safely secure the barrier should be located outside the MTPZ. All supports and bracing should minimize damage to roots.
4. Where some fill or excavated material must be temporarily located near a MTPZ, a wooden barrier with silt fencing must be used to ensure no material enters the MTPZ.
5. No materials or fill may be stored within the MTPZ.
6. Equipment or vehicles shall not be operated, parked, repaired, or refueled within the MTPZ.
7. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the MTPZ without written authorization from the City Arborist.
8. A laminated Minimum Tree Protection Zone sign (See Detail TP-3 – Minimum Tree Protection Zone Sign) must be attached to the side of the Tree Protection where it will be visible by persons entering the site. Minimum size must be 10"x14".

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TREE PROTECTION ZONE (TPZ)

No equipment or vehicles shall be operated, parked, repaired or refueled within the Tree Protection Zone.

No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

No materials or fill may be stored within the Tree Protection Zone.

This tree protection barrier must not be removed prior to the completion of construction without written authorization from the City of Burlington, Urban Forestry Department.

For information, contact:
City of Burlington, Development and Infrastructure Division,
905-335-7642

<u>*SPECIAL MITIGATION MEASURES: Tree 5*</u>

Minor encroachment into the minimum Tree Protection Zone (mTPZ) of Tree 5 will be required to accommodate excavation of the proposed dwelling. If the following protection and mitigation measures are employed before, during and after construction, long-term adverse effects are not anticipated to this tree.

1. Prior to construction, air-spading technology should be used to excavate a trench at the excavation limit of the house within the mTPZ of Tree 5, as shown in Figure 1.
2. The roots of Tree 5 are to be pruned inside the trench by a Certified Arborist in accordance with Good Arboricultural Standards.
3. The trench is to be backfilled in with clean topsoil.
4. Vertical tree preservation fencing should be installed adjacent to the backfilled trench within the mTPZ of Tree 5, as shown in Figure 1.
5. All works should be supervised by a Certified Arborist in accordance with Good Arboricultural Standards.