Tree Inventory and Preservation Plan Report
1354 Bronte Road
Oakville, Ontario

prepared for

Eaglewood Communities
2140 King Street East
Hamilton, ON
L8K 1W6

prepared by

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8 November 2021, Revised 1 May 2023

KUNTZ FORESTRY CONSULTING INC Project P2782

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1.0 Introduction

Kuntz Forestry Consulting Inc. was retained by Eaglewood Communities to complete a Tree Inventory and Preservation Plan in support of a proposed development application for the property located at 1354 Bronte Road in the Town of Oakville. The property is located on the west side of Bronte Road, south of Upper Middle Road, within a rural residential area.

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

- Prepare an inventory of tree resources over 10cm DBH occurring on and within six metres of the subject property, and trees of all sizes within the road 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.

The results of the evaluation are provided below.

2.0 Methodology

2.1 Tree Inventory and Preservation Plan

Field assessments for the tree inventory were conducted on 13 May 2021. Trees measuring over 10cm DBH on and within six metres of the subject property and trees of all sizes within the road right-of-way were identified in the tree inventory. Trees were located using the topographic survey provided and estimates made in the field. Trees on the subject property were tagged with the numbers 912-923, while trees on neighbouring properties or within the Town right-of-way are identified with the numbers N1 – N11 and H12 (for a hedgerow).

Tree resources included in the inventory were visually assessed for condition 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).
Drip Line – Crown radius (metres); and
Comments - additional relevant detail.

2.2 Tree Valuation

A tree valuation was calculated for the trees within the road right-of-way based on the information obtained by the tree inventory. The value was calculated using the Reproduction Cost Method – Trunk Formula Technique as described in the Guide for Plant Appraisal, 10th Edition (CTLA, 2019). The Ontario Supplement (2003) provides regionally relevant data pertaining to basic costs for trees.

Trunk Formula Technique

This method is used for trees that are larger than what is commonly available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of

nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement (2003). For Ontario, the unit tree cost has been set at $6.51/cm^2$ within the Supplement and this value has been used for the calculation. For trees that were small enough in size to be replaced with nursery stock, the price of the nursery stock was obtained through wholesale price quotes from multiple nurseries throughout southern Ontario.

The Basic Tree Cost is calculated by multiplying the unit tree cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).

The appraised value of trees is therefore calculated using the following equation:

Basic Tree Cost = Appraised Tree Trunk Area X Unit Tree Cost

Appraised Value = Basic Tree Cost X Condition Rating X Functional Limitation Rating X External Limitation Rating

Functional Limitation Ratings and External Limitation Ratings are calculated according to the methods outlined in the guide. Condition ratings were calculated based on the assessed condition of the trees on the site and in accordance with the guide.

Only live trees were included in the tree valuation. For trees in hedgerows or with multiple stems, the average DBH was used to calculate the appraisal value. For trees with appraisal values less than $744.00 (Town of Oakville's minimum value per tree), their values were set to $744.00.

3.0 Existing Site Conditions

The subject property is currently occupied by a house with a circular driveway, detached garage, and amenity areas. Tree resources exist in the form of landscape trees and natural volunteers. Refer to Figure 1 for the existing site conditions.

4.0 Individual Tree Resources

The tree inventory documented 23 trees and one hedgerow on and within six metres of the subject property and within the road right-of-way. Tree resources are comprised of White Spruce (*Picea glauca*), Silver Maple (*Acer saccharinum*), Shademaster Honey Locust (*Gleditsia triacanthos* 'inermis'), Eastern White Cedar (*Thuja occidentalis*), Cherry species (*Prunus sp.*), Pear species (*Pyrus sp.*), and Black Walnut (*Juglans nigra*).

Refer to Table 1 for the detailed tree inventory and Figure 1 for the location of trees reported in the tree inventory.

5.0 Proposed Works

The proposed development includes the demolition of the existing structures and the construction of a new four-storey building with above and below-ground parking. Access to the property will be from Saw Whett Road, which will be constructed on the south side of the property. Refer to Figure 1 for the existing conditions and proposed site plan.

6.0 Discussion

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

6.1 Development Impacts/Tree Removals

The removal of the majority of trees on site (Trees 912-922, N1-N8, and H12) will be required to accommodate the proposed development. Trees 912 and 913 are hazardous, and Tree 922 would also be recommended for removal due to its condition.

Trees 921, 922, N4-N8 are located partially or fully on neighbouring properties; permission from these property owners is required prior to their removal. Trees N1-N3 are located within the existing Bronte Road right-of-way.

Refer to Figure 1 for the location of the proposed tree removals.

6.2 Tree Preservation

Preservation of Trees 923, N9, N10, and N11 will be possible through the use of designated tree preservation measures, as indicated on Figure 1. Designated tree protection fencing will not be required to protect Tree N9 during construction, as its minimum tree protection zone and dripline are entirely offsite. Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes.

6.3 Tree Valuation

The minimum value of $744 was applied for Trees N1-N3, as their value per the CTLA's Guide to Plant Appraisal, 10th edition (see section 2.2), produced a value lower than that. As such, the total value of Trees N1-N3 is $2,232.

7.0 Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Eaglewood Communities to complete a Tree Inventory and Preservation Plan in support of a development application for the property located at 1354 Bronte Road in Oakville. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 23 trees and one hedgerow feature on and within six metres of the subject property and within the right-of-way. Twenty trees and one hedgerow are required to be removed to accommodate the site plan and/or due to their condition. One private tree and three neighbouring trees can be preserved.

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.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

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8.0 References

Council of Tree & Landscape Appraisers, 2019. Guide for Plant Appraisal, 10th Edition.

Ontario Supplement to the Guide for Plant Appraisal – 8th Edition, 2003. ISA Ontario. International Society of Arboriculture, Champaign, Illinois. 26 pp. Updated 2003.

Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (i.e. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: 1354 Bronte Road, Oakville

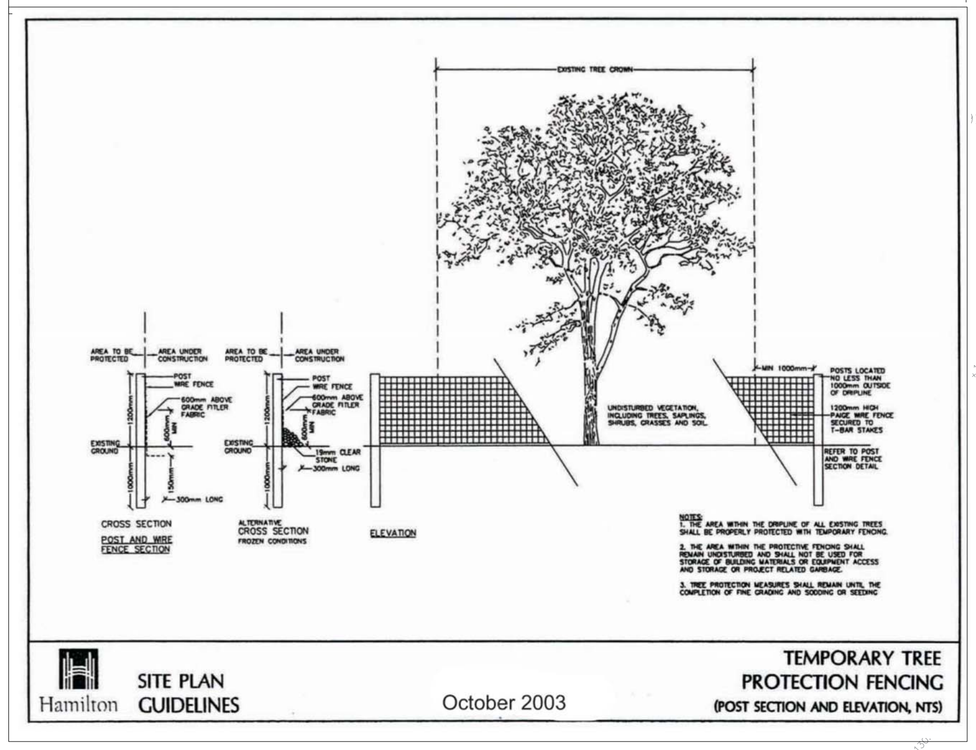
Date: 13 May 2021 Surveyors: KD

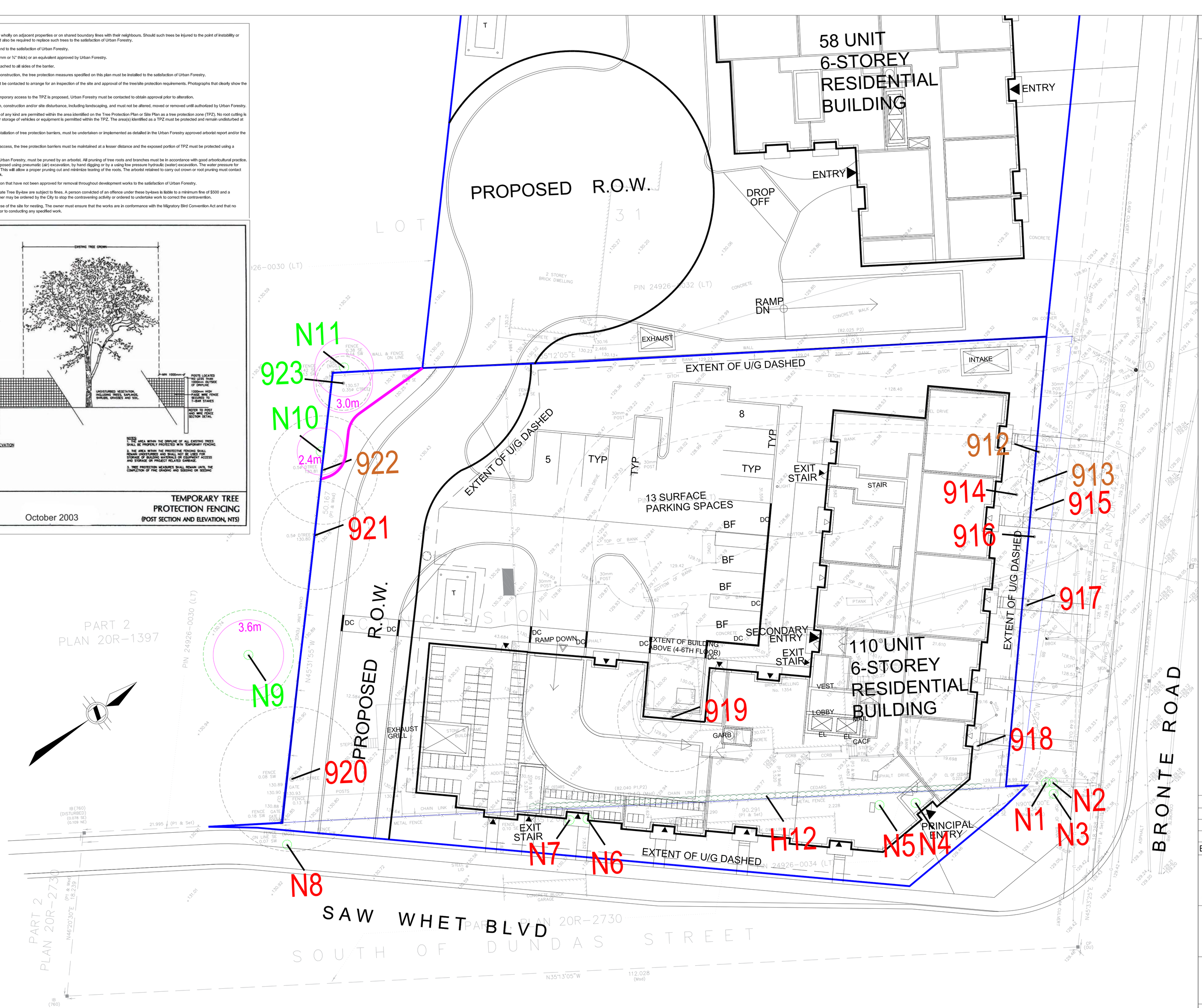
Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	mTPZ	A. mTPZ	Oakville Tree No.	Comments	Ownership	Action
912	White Spruce	*Picea glauca*	29	P-F	F-G	F	20	2	2.4			Sparse crown (L), asymmetrical crown (L), little substrate holding root system into ground --> High risk	Private	Remove (Condition)
913	White Spruce	*Picea glauca*	27	P	G	F-G	10	2	2.4			Little substrate holding root system into ground --> Hazard	Private	Remove (Condition)
914	White Spruce	*Picea glauca*	28	F-G	G	F-G	10	3	2.4			Deadwood (L), pruning wounds (L), asymmetrical crown (L)	Private	Remove
915	White Spruce	*Picea glauca*	34	G	G	G	15	2.5	3.0			Deadwood (L)	Private	Remove
916	White Spruce	*Picea glauca*	27	F-G	F-G	P-F	30	2	2.4			Deadwood (M), suppressed, asymmetrical crown (M), crook (L), pruning wounds (H)	Private	Remove
917	White Spruce	*Picea glauca*	35	G	G	G		3	3.0				Private	Remove
918	Silver Maple	*Acer saccharinum*	90	F-G	F-G	F-G	10	6	5.4			Pruning wounds (H), deadwood (L), epicormic branching (L), broken branches (L)	Private	Remove
919	Norway Maple	*Acer platanoides*	47	F-G	F-G	G		4	3.0			Co-dominant stems at 1.25 metres, included bark (M), pruning wounds (M)	Private	Remove
920	Honey Locust (shademaster)	*Gleditsia triacanthos inermis*	56	P-F	F	F		4.5	3.6			Bark peeling (H) from base to 3 metres (some response growth), epicormic branching (H), pruning wounds (M), asymmetrical crown (M)	Private	Remove
921	Silver Maple	*Acer saccharinum*	51	F	F-G	P-F	20	5	3.6			Pruning wounds (M), co-dominant stems at 3 metres, top-down dieback, deadwood (M), epicormic branching (M)	Shared	Remove
922	Silver Maple	*Acer saccharinum*	~55	F	F-G	P	50	4	3.6			Deadwood (H), epicormic branching (H), co-dominant stems at 2.5 metres, included bark (M)	Shared	Remove (Condition)
923	White Spruce	*Picea glauca*	31	F	F-G	P-F	30	2.5	3.0			Pruning wounds (H), sparse crown (M)	Private	Retain
N1	Eastern White Cedar	*Thuja occidentalis*	~2	G	G	F-G		0.25	1.8			Crooks (H)	Town	Remove
N2	Eastern White Cedar	*Thuja occidentalis*	~1	G	G	F-G		0.25	1.8				Town	Remove
N3	Cherry species	*Prunus sp.*	~9, ~6, ~4	F	F	P	90	0.5	1.8			Trunk covered in metal sheets, epicormic branching (H), deadwood (H)	Town	Remove
N4	Cherry species	*Prunus sp.*	~15	F	F-G	P	85	1	2.4			Co-dominant stems at 1.25 metres, stem wounds (M), deadwood (H)	Neighbour	Remove
N5	Cherry species	*Prunus sp.*	~20	F	F	P-F	50	1.5	2.4			Trunk covered in metal sheets, co-dominant stems at 1.25 metres	Neighbour	Remove
N6	Cherry species	*Prunus sp.*	~35	F-G	F-G	F-G	25	2.5	3.0			Multi-stem at 1.75 metres, deadwood (M)	Neighbour	Remove
N7	Cherry species	*Prunus sp.*	~10	F	F-G	P	75	1	2.4			Deadwood (H)	Neighbour	Remove
N8	Pear species	*Pyrus sp.*	~12	P-F	P-F	P	50	1	2.4			Lost leader, epicormic branching (H)	Neighbour	Remove
N9	Black Walnut	*Juglans nigra*	~60	G	G	F		5	3.6	5.3		Epicormic branching (H), deadwood (L)	Neighbour	Retain
N10	Black Walnut	*Juglans nigra*	~15, ~8	G	F-G	G		1.5	2.4			Union at base	Neighbour	Retain
N11	Black Walnut	*Juglans nigra*	~32	G	G	F		4	3.0			Epicormic branching (M), vine competition (L)	Neighbour	Retain
H12	Eastern White Cedar	*Thuja occidentalis*	1 - 20	G	G	G		0.25	2.4			~52 trees, ~35 trees (less than 10cm DBH), ~15 trees (10 - 15 cm DBH), ~2 trees (15 - 20 cm DBH)	Private	Remove

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 Die Back	*(%)*
DL	Dripline	*(m)*
mTPZ	minimum Tree Protection Zone	*TPZ (m) based on Town of Oakville's Tree Protection During Construction (Prcedure EN-TRE-001-001) from base of tree*
A. mTPZ	Actual minimum Tree Protection Zone	*Actual TPZ (m) achievable during construction from base of tree*
~ = estimate; (L) = light; (M) = moderate; (H) = heavy		

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.





LEGEND

Tree Inventory

Refer to Table 1 of the report revised 1 May 2023. Trees greater than 10cm DBH on and within six metres of the proposed development and trees of all sizes within the road right-of-way were included in the inventory.

Tree Removals

17 trees require removal to accommodate the proposed development, as indicated with RED labels.

3 trees are recommended for removal due to poor condition, as indicated with ORANGE labels.

Tree Preservation

Preservation of 4 trees will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Tree protection measures must be implemented prior to construction. Minimum tree preservation zones and required tree preservation fencing is indicated in MAGENTA. Refer to Tree Protection Plan Notes for preservation details.

Tree Label (GREEN), preservation recommended	X
Tree Label (RED), removal recommended	X
Tree Label (ORANGE), removal recommended due to condition	X
Minimum Tree Protection Zone (MAGENTA Circle, with radius, as measured from edge of tree)	xm
Tree Location Estimated by KFCI	
Dripline	
Property Boundary	
Tree Protection Fencing (Thick MAGENTA)	

No.	Issue/Revisions	Date	By
1	Report Submission	8 Nov. '21	CB
2	Report Revisions	1 May '23	KB

Base Data: KNYMH Architecture Solutions

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Tree Inventory and Preservation Plan

Project	P2782	Figure	1
Date	01 May 2023		
Scale	1:200		