Arborist Report

Project No. 23-096

Tree Inventory and Preservation Plan – Arborist Report
759 Maple Avenue
Burlington, Ontario

Prepared for:

Structured Creations
590 Woodland Ave,
Burlington, Ontario L7R 2S5

Prepared by:

Seferian Design Group
761 Brant Street, Suite 202
Burlington, Ontario L7R 2H7

Report Date: February 12, 2024
Revised Date: August 26, 2024

Re: Arborist Report and Tree Inventory and Preservation Plan, 759 Maple Ave, Project No. 23-096

1.0 INTRODUCTION

Seferian Design Group (SDG) has completed a Tree Inventory and Preservation Plan for the proposed development at 759 Maple Avenue, Burlington. The subject property resides on the east side of Maple Avenue, with Hammond Street intersecting to the south, and Thorpe Road intersecting to the north. Currently, there is one dwelling on the project site, in poor condition due to structural fire in the past. The proposed project would demolish the current building and build four-unit, three storey townhomes with an asphalt driveway and new landscaping.

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

- Prepare inventory of the tree resources greater than 20cm DBH on and within 6m of the subject property and trees of all sizes on municipal property.
- Evaluate potential tree saving opportunities based on the proposed work plan plans; and,
- Document the findings in a Tree Inventory and Preservation Plan Report (Arborist Report).

The results of the evaluation are provided below.

2.0 METHODOLOGY

The tree inventory was conducted on January 12, 2024. Trees greater than 20cm DBH, within 6m of the disturbance limit and trees of any size on municipal property were included in the tree inventory. Trees were located using the survey provided, aerial imagery, and a GPS unit. Individual trees were identified using the numbers 1-14. Tree locations are shown on Figure 1. See Table 1 for the results of the tree inventory. See Appendix A for photographs of trees.

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 (Table 1).
DBH – diameter (centimeters) at breast height, measured at 1.37 m above the ground.
Tree Health – condition of tree health, including injuries, dieback, evidence of disease, insects and/or decay. Condition ratings include Poor, Fair and Good.
Tree Structure – condition of tree's structure, including trunk and branching conditions. Condition ratings include Poor, Fair, and Good.
TPZ – Minimum Tree Protection Zone (meters), based on DBH of the tree.
Comments – additional relevant information.

Where trees occurred with multiple stems, they were inventoried by measuring the DBH of each stem and taking the square root (√) of the sum of all stems squared (e.g. DBH = $\sqrt{a^2 + b^2 + c^2}$). One multiple-stemmed tree was included in the inventory.

Multiple-stemmed trees were assessed utilizing the same parameters as single stemmed trees.

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3.0 EXISTING SITE CONDITIONS

The subject property is currently comprised of a single-family residential dwelling in poor condition (structural fire). The rest of the site is vacant, with three (3) Norway Maple Trees located at the back of the site. Tree resources exist in the form of landscape trees and self-seeded volunteers. Refer to Figure 1 for the existing site conditions.

4.0 INDIVIDUAL TREE RESOURCES

The inventory documented 14 trees on and within 6 meters of the subject property. Refer to Table 1 for the full tree inventory and Figure 1 for the location of trees reported in the tree inventory. See Appendix A for the photographs of the trees.

Tree resources were comprised of: *Acer platanoides 'Crimson King', Picea abies, Picea glauca, Ostrya virginiana, Thuja occidentalis, Tilia americana,* and *Pinus strobus.*

Note: the tree inventory and assessment were completed during the dormant season of deciduous trees. Species/cultivar identification may not be accurate of deciduous trees.

City of Burlington Street Tree notes an Ivory Silk Lilac (*Syringa reticulata 'Ivory Silk')* within the ROW, in front of the subject property. Upon tree inventory field work, this tree no longer existed.

Tree #1 is located on City property and City of Burlington By-law 68-2013 applies to work near City-owned trees. All other trees are located on private property and City of Burlington By-law 40-2022 applies to work near these trees.

5.0 PROPOSED DEVELOPMENT

The proposed development includes: four-unit, three storey townhomes built along the southern edge of the property, a new asphalt driveway along the northern edge of the property, visitor parking and resident parking (carports), new privacy fencing along the north and south sides of the property, and new landscape plantings.

6.0 DISCUSSION

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

6.1 Development Impacts/Tree Removal

The removal of 3 individual trees is required to accommodate the proposed design. Removal permits will be required for these trees as per City of Burlington By-law 40-2022. These trees either directly conflict with proposed structures (i.e. paving) or significant encroachment into their minimum tree protection zones would be required to accommodate proposed excavating and/or grading such that they would not be expected to tolerate the injury. Tree #3 is in poor condition and the additional stress of construction may further decline of the tree. Tree removals include Trees #2, 3, and 4; all *Acer platanoides 'Crimson King'.*

All trees scheduled for removal will be replaced, see Section 6.3 and Table 1 for further explanation. See Landscape Drawings for locations of replacement trees.

6.2 Tree Preservation

The preservation of remaining trees, including Trees 1, 5-14 will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Dedicated tree preservation fencing has been

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prescribed for these trees at the specified Tree Protection Zone (TPZ, in metres) where possible. Where the TPZ of any one tree cannot be fully respected, special mitigation measures have been prescribed and described below.

6.2.1 Special Mitigation measures

Encroachment into the Tree Protection Zone (TPZ) will be required for neighbouring trees 1,7-10, and 14 to accommodate the proposed grade changes, and installation of site features. Injury permits may be required as per City of Burlington By-law 40-2022. Any excavation to occur adjacent to these trees should be supervised by a Certified Arborist and an exploratory air spade conducted. Contractor to use caution when excavating in encroachment zones. Any roots exposed in the excavation/air spading process should be pruned by a Certified Arborist in accordance with Good Arboriculture Standards.

Refer to Figure 1 for the general Tree Protection Plan Notes and the tree preservation fence details.

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, general Tree Protection Plan Notes, and tree preservation fence details.

6.3 Tree Replacement

The City of Burlington requires compensation (replacement plantings) for healthy by-law protected tree removals. The ratio of required replacement plantings per tree removal is below:

DBH of Trees to be Removed	Tree Replacement Ratio
20 to 35 cm	2:1
36 to 74 cm	3:1
75cm or more	4:1

A total of 9 replacement trees are required to compensate for tree removals. Refer to Table 1 for the replacement plantings for each tree removal.

7.0 SUMMARY AND RECOMMENDATIONS

A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 14 individual trees on and within 6m of the disturbance area. The removal of 3 trees will be required to accommodate the proposed design. Preservation of the remaining trees will be possible with the implementation of the preservation measures prescribed herein.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for the location of required tree preservation fencing, general Tree Protection Plan Notes, and the tree preservation fencing detail.

- 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

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on Figure 1 as a Tree Protection Zone (TPZ) at any time during or after construction.

- Special mitigation measures have been prescribed for select trees, as outlined in the Tree Preservation section of this report.

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

- Site visits, pre, during and post construction is recommended by either an ISA Certified Arborist or Registered Professional Forester (RPF) 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.

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Limitation of Assessment

Only the trees identified in this report were included in the inventory. The assessment of the trees presented in this report have been made using acceptable 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 nearby 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 landscape 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 vigour 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 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.

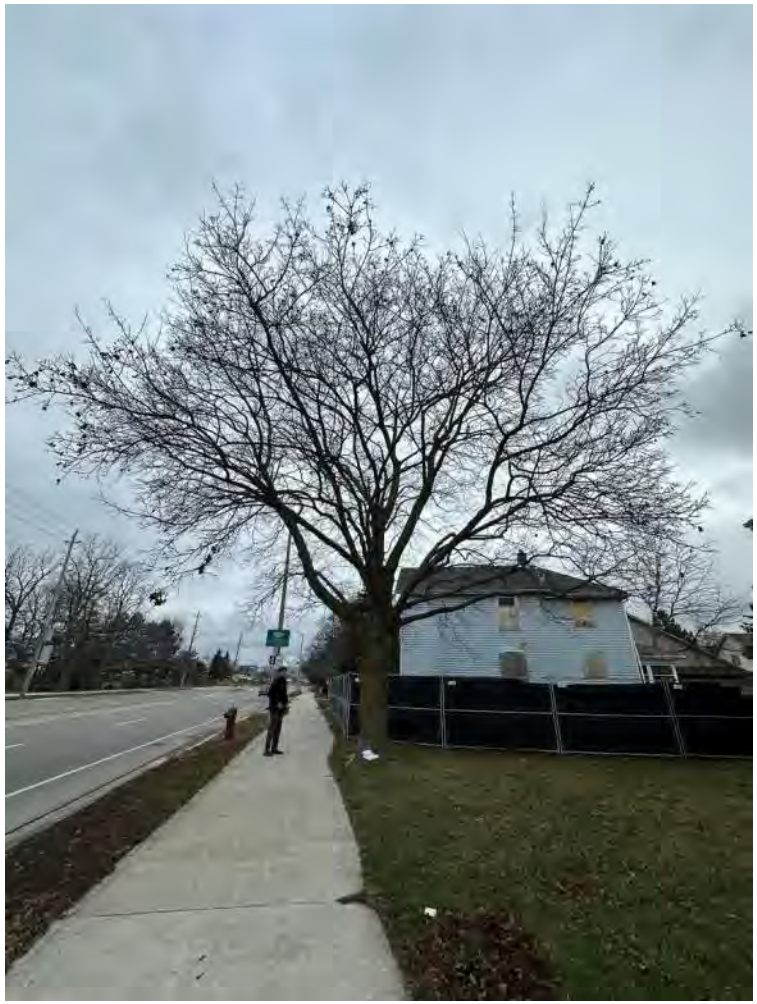
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Table 1. TREE INVENTORY

Location:	759 Maple Ave		Date:	12-Jan-24			Surveyors: AN, MG				
Tree #	**Common Name**	**Scientific Name**	**DBH (cm)**	**Tree Health**	**Tree Structure**	**TPZ (m)**	**Comments**	**Action**	**Owner**	**Reason for Removal**	**Compensation**
1	Crimson King Norway Maple	*Acer platanoides 'Crimson King'*	67	Good	Good	4.2	Root prune following city specs	Protect	City		
2	Crimson King Norway Maple	*Acer platanoides 'Crimson King'*	48	Good	Good	3		Remove	Subject Property	Within proposed project	3
3	Crimson King Norway Maple	*Acer platanoides 'Crimson King'*	38.1	Fair	Poor	2.4	Weak attachment point at fork	Remove	Subject Property	Within proposed project	3
4	Crimson King Norway Maple	*Acer platanoides 'Crimson King'*	44.4	Good	Fair	3	Bulge/deformity in trunk from previous pruning injury	Remove	Subject Property	Within proposed project	3
5	Norway Spruce	*Picea abies*	33	Good	Good	2.4		Protect	Neighbour		
6	White Spruce	*Picea glauca*	27.4	Good	Good	2.4		Protect	Neighbour		
7	Ironwood	*Ostrya virginiana*	38.2	Good	Fair	2.4	Evidence of coppicing/watersprouts, included bark. Root prune following city specs	Protect	Neighbour		
8	Norway Spruce	*Picea abies*	38.8	Good	Good	2.4	Root prune following city specs	Protect	Neighbour		
9	Norway Spruce	*Picea abies*	47.5	Good	Good	3	Root prune following city specs	Protect	Neighbour		
10	Eastern White Cedar	*Thuja occidentalis*	43.3	Good	Good	3	Multiple stems: √(14.5^2, 20^2, 10^2, 11.5^2, 22^2, 13^2, 12^2, 8^2, 10^2, 7.8^2) = 43.3 DBH. Root prune following city specs.	Protect	Neighbour		
11	Norway Spruce	*Picea abies*	48.4	Good	Good	3		Protect	Neighbour		
12	Basswood	*Tilia americana*	38	Good	Good	2.4	Slight bend in stem	Protect	Neighbour		
13	White Pine	*Pinus strobus*	36.5	Good	Good	2.4		Protect	Neighbour		
14	Basswood	*Tilia americana*	42	Good	Good	3	Split in bark going up trunk. Root prune following city specs	Protect	Neighbour		

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APPENDIX A. PHOTOGRAPHS OF TREES



Tree #1 – Note: absence of Ivory Silk Lilac tree in front of subject property (City-Owned).

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Tree #2

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Tree #3

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Tree #4

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Tree #5

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Tree #6

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Tree #7

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Tree #8

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Tree #9

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Tree #10

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Tree #11

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Tree #12

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Tree #13

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Tree #14 – in background to left.

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