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Tree Inventory and Preservation Plan Report

Subject Property:

1029-1033 Waterdown Road
Burlington, ON

Prepared For:

Adesso Design Inc.
218 Locke St. S., 2nd Floor
Hamilton ON L8P 4B4

Prepared By:

Jackson Arboriculture Inc.
118 Pleasant Ridge Rd.
Brantford ON N3R 0B8

16 November 2021

Jackson Arboriculture Inc. Project No. 252

1.0 Introduction

Jackson Arboriculture Inc. was retained by Adesso Design Inc. to complete a Tree Inventory and Preservation Plan report for a property situated at 1029-1033 in the City of Burlington, hereby referred to as the subject property. It is understood that a development application will be filed with the City for the redevelopment of the property.

The following study has been completed in accordance with the City of Burlington's Specifications Index for Tree Protection and Preservation (SPEC NO. SS12A) and the Site Plan Application Guidelines.

2.0 Methodology

At the onset of the project the arborilogical scope of work was coordinated with the client and the consulting team. Prior to conducting a site visit, the topographic survey of the subject property and current aerial photography were overlaid utilizing geographic information software, for use on site during the completion of the tree inventory. The tree locations, the topographic survey and the site plan were overlaid and a tree preservation analysis was completed to determine the impacts to each tree included in the inventory.

2.1 Tree Inventory

A site visit was conducted on the 30th of September 2021 to complete the tree inventory. All trees 10 cm in diameter and larger situated on subject property, on neighbouring property within 5 m and within the road allowances were included in the tree inventory. A visual assessment was completed on each tree included in the inventory and the following information is provided in the tree inventory table (Table 1):

- **Tree #**: A number assigned to each tree correlating to the tree inventory and the Tree Preservation Plan Sheet L-1, as prepared by Adesso Design Inc.
- **Species**: Common and scientific (Latin) species names.
- **DBH**: The trunk diameter at breast height, measured in centimeters at 1.4 m from the ground.
- **Condition**: The health of the tree considering the trunk integrity, the crown structure and the crown vigour; each rated as poor, fair or good. The condition ratings are based on the signs, symptoms and defects exhibited by each tree, considering the conditions in which it is growing.
- **Dripline**: The distance from the stem to the tips of the live branches.
- **mTPZ**: Minimum Tree Preservation Zone, i.e. the distance in meters from the base of the tree trunk at which tree protection fence is to be installed.
- **Crown Class**: The position of the tree crown within the surrounding canopy, classified as dominant, codominant, intermediate or supressed.
- **Ownership**: The owner/property where each tree resides.
- **Comments**: Any additional notes relevant to the tree's health or growing conditions.
- **Recommendation**: The recommended removal or preservation of each tree based on the impact assessment.

The trees included in the inventory are identified with numbers 1-68 and were located using the topographic survey prepared by Ashenhurst Nouwens & Associates Inc.

2.2 Impact Analysis

A tree preservation analysis was completed on each tree individually considering the impacts from the proposed development and many other factors including, but not limited to, tree condition, species, DBH and the existing site conditions. The impacts from the proposed development will occur where tree roots conflict with construction machinery during demolition, foundation excavation, grading and servicing.

During the tree preservation analysis the minimum Tree Protection Zone (mTPZ) distance, as outlined in the City's Specifications Index for Tree Protection and Preservation, was utilized to determine the potential impacts to each tree included in the inventory. Where encroachment is required within the mTPZ, tree removal may be required.

The mTPZ distance is the minimum distance at which development can safely occur without appreciably damaging a tree's root system. The mTPZ distance is based on the diameter of the tree and measured in meters from the base of the stem. Refer to Table 2 for the mTPZ distances based on trunk diameter.

Table 2. Minimum tree protection zone distances.

DBH (cm)	Min. Tree Preservation Zone Distance (m)*
	Radius
< 10	1.8
10 – 40	2.4
41 – 50	3.0
51 – 60	3.6
61 – 70	4.2
71 – 80	4.8
81 – 90	5.4
91 – 100	6.0
101 – 110	6.6

*As measured from the outside of the tree trunk.

3.0 Existing Conditions

The subject property is currently occupied by two detached residential dwellings and amenity areas. The property is bound by residential development to the north, commercial development to the east and south, and Waterdown Road to the west.

4.0 tree Inventory Results

The results of the tree inventory indicate that a total of 68 trees reside on subject property, within the road allowances and on neighbouring property within 5 m of the property boundaries. The trees included in the inventory appear to be comprised of landscape plantings and naturally occurring trees.

The trees included in the inventory are comprised of the following species:

- Black Locust (*Robinia pseudoacacia*),
- Tree-of-heaven (*Ailanthus altissima*),
- White Elm (*Ulmus americana*),
- Manitoba Maple (*Acer negundo*),
- White Mulberry (*Morus alba*),
- Sweet Cherry (*Prunus avium*),
- Apricot species (*Prunus sp.*),
- Norway Male (*Acer platanoides*),
- Siberian Elm (*Ulmus pumila*),
- Black Walnut (*Juglans nigra*) and
- Eastern White Cedar (*Thuja occidentalis*).

No rare, threatened or endangered tree species were documented in the tree inventory. Refer to Table 1 for the complete tree inventory and Sheet L-1 for the tree locations.

5.0 Proposed Development

The proposed development includes the demolition of the existing dwellings on site and constructing a 29 storey mixed use residential/commercial structure with below ground parking.

6.0 Discussion

The following sections outline the recommended tree removal and tree preservation opportunities based on the results of the impact analysis, and recommendations for the trees identified for preservation.

6.1 Tree Removal

The removal of Trees 2-7, 9-14, 20, 28-58 and 61-68 will be required to accommodate the proposed development.

Trees 2-7, 9-12, 20, 28-53 and 55-58 appear to reside partially or fully on neighbouring property. Permission from the respective property owner will be required prior to the removal of trees residing partially or fully on neighbouring property.

Trees 46-48 appear to reside within road allowances. Permission from the appropriate City or Regional department will be required prior to their removal.

6.2 Tree Preservation

The preservation of Trees 1, 8, 15-19, 21-27, 59 and 60 will be possible with the use of appropriate tree protection measures. Tree protection measures must be implemented prior to the commencement of demolition to ensure that the trees identified for preservation are not damaged by the proposed development activities.

Tree protection fence must be installed at the mTPZ distances outlined in the tree inventory (Table 1). Refer to Sheets L-1 for the prescribed tree protection fence locations and the tree protection fence detail.

6.3 Tree Protection Recommendations

The following recommendations are made in attempts to reduce the impacts to trees identified for preservation:

- Tree protection fence must be installed at locations outlined on Sheet L-1 prior to the commencement of demolition.
- Tree protection fence must be installed at the mTPZ distance as outlined in Table 1.
- A Laminated Minimum Tree Preservation Zone sign must be attached to the most visible side of the tree protection fence with a minimum size of 10”x14”.
- Once tree protection fence has been installed it must not be moved, relocated or altered in any way (unless repairing fallen fence etc.) for the duration of the construction period.
- No intrusion into an area identified on Sheet L-1 as a tree preservation zone (TPZ) is allowed at anytime during construction.
- No storage of machinery, construction debris, materials, waste or any other items is allowed within a TPZ.
- Any tree branches (and roots) that conflict with proposed development must be pruned by a Certified Arborist in accordance with good arboricultural practice.
- Tree protection fencing should be inspected by a Certified Arborist prior to and during construction to ensure that the fencing remains intact and in good repair throughout the stages of development.

7.0 Summary

Jackson Arboriculture Inc. was retained by Adesso Design Inc. to complete a Tree Inventory and Preservation Plan report for a property situated at 1029-1033 in the City of Burlington. A tree inventory was conducted and an impact assessment was completed in the context of the proposed development plan.

The tree inventory documented a total of 68 situated on subject property, in the road allowance and on neighbouring property within 5 m of the property boundaries. The results of the impact assessment indicate that removal of 52 trees included in the tree inventory will be required to accommodate the proposed development.

Respectfully submitted,
Jackson Arboriculture Inc.

Jeremy Jackson

Jeremy Jackson, H.B.Sc.,
ISA Certified Arborist #ON-1089A
GIS Analyst

Limitations of Assessment

It is our policy to attach the following limitations of assessment to ensure that the client, municipalities and agencies are fully aware of what is technically and professionally realistic when visually assessing and retaining trees.

The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above ground parts of each 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 and direction of any lean, the general condition of the trees and the surrounding site, and the proximity of property and people.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour constantly change. They are not immune to changes in site conditions, or seasonal variations in the weather conditions, including severe storms with high-speed winds.

While reasonable efforts have been made to ensure that the trees recommended for retention are healthy no guarantees are offered, or implied, that these trees, or any parts of them, will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree of group of trees or their component parts in al circumstances. Inevitably a standing tree will always pose some risk. Most trees have the potential for failure under adverse weather conditions, and the risk can only be eliminated if the tree is removed.

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

Table 1. Tree Inventory

Location: 1029-1033 Waterdown Rd. Burlington Date: 30 Sep. 2021 Surveyors: JJJ

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	CC	Ownership	Comments	Recom.
1	Black Locust	*Robinia pseudoacacia*	13, 12	FG	G	G	3	2.4	CD	Neighbouring	Union at 0.4 m	Preserve
2	Tree-of-heaven	*Ailanthus altissima*	12, 14	FG	G	G	4	2.4	CD	Boundary	Union at ground	Remove
3	White Elm	*Ulmus americana*	10, 11, 12	FG	FG	G	3	2.4	CD	Boundary	Union at ground, bowed, grapevine competition	Remove
4	White Mulberry	*Morus alba*	14, 10, 8, 9	FG	FG	G	3	2.4	CD	Boundary	Union at ground	Remove
5	White Mulberry	*Morus alba*	~20	G	G	G	4	2.4	CD	Neighbouring		Remove
6	Manitoba Maple	*Acer negundo*	~10, 10, 10	FG	G	G	3	1.8	CD	Neighbouring	Union at ground	Remove
7	White Mulberry	*Morus alba*	~11, 10	F	G	G	3	2.4	CD	Neighbouring	Union at ground, crook	Remove
8	Sweet Cherry	*Prunus avium*	~25	G	G	G	3	2.4	CD	Neighbouring		Preserve
9	White Mulberry	*Morus alba*	~14	FG	G	G	3	2.4	CD	Neighbouring	Union at 1.5 m	Remove
10	Manitoba Maple	*Acer negundo*	10, 7, 8	F	FG	G	4	1.8	CD	Neighbouring	Union at ground, bow/lean south	Remove
11	White Mulberry	*Morus alba*	13	FG	FG	G	4	2.4	CD	Neighbouring	Bowed west	Remove
12	White Mulberry	*Morus alba*	8, 11, 12	F	F	G	4	2.4	CD	Neighbouring	Cluster of stems	Remove
13	Apricot	*Prunus armeniaca*	36	PF	PF	PF	4	2.4	D	Subject Property	Pruning wounds with heart rot, 40% crown dieback	Remove
14	Norway Maple	*Acer platanoides*	~15	G	G	G	4	2.4	I	Subject Property		Remove
15	Siberian Elm	*Ulmus pumila*	~55	G	FG	FG	5	3.6	CD	Neighbouring	10% crown dieback, bowed west	Preserve
16	Siberian Elm	*Ulmus pumila*	~25	G	FG	FG	5	2.4	CD	Neighbouring	10% crown dieback	Preserve
17	Siberian Elm	*Ulmus pumila*	~35	G	FG	FG	5	2.4	CD	Neighbouring	10% crown dieback, bowed, pruning wounds	Preserve
18	Siberian Elm	*Ulmus pumila*	~41	F	FG	FG	4	3.0	CD	Neighbouring	Union at 3.5m, 10% crown dieback, bowed, pruning wound	Preserve
19	Norway Maple	*Acer platanoides*	~20	FG	G	G	4	2.4	CD	Neighbouring	Light crook	Preserve
20	Siberian Elm	*Ulmus pumila*	~20	F	F	FG	5	2.4	I	Neighbouring	Bowed south	Remove
21	Norway Maple	*Acer platanoides*	~15	G	G	G	3	2.4	I	Neighbouring		Preserve
22	Siberian Elm	*Ulmus pumila*	~35	F	G	G	4	2.4	CD	Neighbouring	Union at 1.5 m	Preserve
23	Norway Maple	*Acer platanoides*	~15	G	G	G	3	2.4	I	Neighbouring		Preserve
24	Siberian Elm	*Ulmus pumila*	~35	FG	G	G	4	2.4	CD	Neighbouring	Union at base of crown	Preserve
25	Norway Maple	*Acer platanoides*	~12, 14	FG	G	G	3	2.4	I	Neighbouring	Union at ground	Preserve
26	Siberian Elm	*Ulmus pumila*	~35, 25	F	FG	FG	4	2.4	CD	Neighbouring	Union at 1.2 m, pruning wound, bowed southeast, heavy stem wound from failed limb	Preserve

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	CC	Ownership	Comments	Recom.
27	Norway Maple	*Acer platanoides*	~18	G	G	G	4	2.4	I	Neighbouring		Preserve
28	Siberian Elm	*Ulmus pumila*	~20	G	PF	PF	4	2.4	CD	Neighbouring	Union at base of crown, 40% crown dieback, bowed south	Remove
29	Siberian Elm	*Ulmus pumila*	~30	FG	P	P	5	2.4	I	Neighbouring	Bowed west, 50% crown dieback	Remove
30	Siberian Elm	*Ulmus pumila*	~18	FG	F	F	3	2.4	CD	Neighbouring	Bowed east, 20% crown dieback	Remove
31	Norway Maple	*Acer platanoides*	~10	G	G	G	3	2.4	I	Neighbouring		Remove
32	Siberian Elm	*Ulmus pumila*	~15	PF	P	P	1	2.4	I	Neighbouring	Top of crown missing, fruiting body in crown	Remove
33	Siberian Elm	*Ulmus pumila*	~15	F	F	FG	3	2.4	I	Neighbouring	Union at 1.8 m	Remove
34	Siberian Elm	*Ulmus pumila*	~55	F	F	F	9	3.6	CD	Neighbouring	Union at 2 m, bowed south, 10% crown dieback	Remove
35	Black Walnut	*Juglans nigra*	~30	G	G	G	4	2.4	CD	Neighbouring		Remove
36	Siberian Elm	*Ulmus pumila*	~35	FG	F	F	4	2.4	CD	Neighbouring	20% crown dieback	Remove
37	Siberian Elm	*Ulmus pumila*	~41	F	F	FG	9	3.0	CD	Neighbouring	Union at base of crown, stem wounds	Remove
38	Siberian Elm	*Ulmus pumila*	~15, 15	P	P	P	3	2.4	I	Neighbouring	Union at ground, peeling bark, failed stem	Remove
39	White Mulberry	*Morus alba*	50, 52	F	FG	G	9	3.6	CD	Neighbouring	Union at ground with included bark, union at 2 m	Remove
40	White Mulberry	*Morus alba*	68	FG	FG	FG	7	4.2	CD	Subject Property	Union at base of crown, bacterial wetwood	Remove
41	Norway Maple	*Acer platanoides*	26	G	G	G	4	2.4	CD	Subject Property		Remove
42	Norway Maple	*Acer platanoides*	35, 28	FG	G	G	5	2.4	CD	Subject Property	Union at 0.5 m	Remove
43	Manitoba Maple	*Acer negundo*	~15, 20	F	F	FG	4	2.4	I	Subject Property	Pruning wounds, lean north, epicormic branching	Remove
44	Eastern White Cedar	*Thuja occidentalis*	~12, 15	FG	FG	FG	2	2.4	CD	Subject Property	Union at ground, pruning wound	Remove
45	Siberian Elm	*Ulmus pumila*	~13	G	G	G	3	2.4	CD	Subject Property	Grapevine competition	Remove
46	Amur Maple	*Acer ginnala*	6	G	G	G	1.5	1.8	D	ROW		Remove
47	Amur Maple	*Acer ginnala*	6	G	G	G	1.5	1.8	D	ROW		Remove
48	Amur Maple	*Acer ginnala*	5	G	G	G	1.5	1.8	D	ROW		Remove
49	Apple species	*Malus sp.*	18, 18, 17, 8, 9	FG	FG	G	4	2.4	D	Subject Property	Union at ground	Remove
50	Siberian Elm	*Ulmus pumila*	~30	F	PF	F	4	2.4	I	Neighbouring	Top of crown failed	Remove
51	Siberian Elm	*Ulmus pumila*	~35	FG	FG	FG	10	2.4	CD	Neighbouring	Union at base of crown, bowed west	Remove
52	Siberian Elm	*Ulmus pumila*	~20	F	F	FG	3	2.4	CD	Neighbouring	Heavy stem wound with heart rot	Remove
53	Siberian Elm	*Ulmus pumila*	~55	FG	FG	FG	10	3.6	CD	Neighbouring	Bacterial wetwood, bowed west	Remove

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	CC	Ownership	Comments	Recom.
54	Siberian Elm	*Ulmus pumila*	~18	F	F	F	6	2.4	I	Subject Property	Heavy bow west, 10% crown dieback	Remove
55	Siberian Elm	*Ulmus pumila*	~25	F	F	F	3	2.4	I	Neighbouring	Union at base of crown, 20% crown dieback	Remove
56	Siberian Elm	*Ulmus pumila*	~41	F	F	FG	5	3.0	CD	Neighbouring	Union at base of crown, pruning wounds, bowed east	Remove
57	Siberian Elm	*Ulmus pumila*	~25, 30	F	FG	G	4	2.4	CD	Neighbouring	Union at 0.5 m	Remove
58	Siberian Elm	*Ulmus pumila*	~40, 55	F	FG	FG	10	3.6	CD	Neighbouring	Union at 1.2 m, bowed west	Remove
59	Siberian Elm	*Ulmus pumila*	~15	F	P	P	4	2.4	I	Neighbouring	Top of crown failed, 50% crown dieback	Preserve
60	Siberian Elm	*Ulmus pumila*	~12	F	PF	PF	2	2.4	I	Neighbouring	Top of crown failed	Preserve
61	Eastern White Cedar	*Thuja occidentalis*	23	G	G	G	3	2.4	CD	Subject Property		Remove
62	Eastern White Cedar	*Thuja occidentalis*	19, 12	FG	FG	G	3	2.4	CD	Subject Property	Union at ground	Remove
63	Eastern White Cedar	*Thuja occidentalis*	12	G	FG	FG	1	2.4	CD	Subject Property	Sparse crown	Remove
64	Eastern White Cedar	*Thuja occidentalis*	16, 22	FG	FG	G	3	2.4	CD	Subject Property	Union at ground	Remove
65	Eastern White Cedar	*Thuja occidentalis*	23, 11	FG	G	G	3	2.4	CD	Subject Property	Union at ground	Remove
66	Norway Maple	*Acer platanoides*	27	G	G	G	4	2.4	CD	Subject Property		Remove
67	White Mulberry	*Morus alba*	18	F	FG	G	3	2.4	CD	Subject Property	Bacterial wetwood at natural branch wound, bowed south	Remove
68	Norway Maple	*Acer platanoides*	24	G	G	G	4	2.4	CD	Subject Property		Remove

Legend

DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
DL	Dripline	(m)
mTPZ	Minimum Tree Preservation Zone	(m)
CC	Crown Class	(D, CD, I, S)
Recom.	Recommendations	(Preserve/Remove)
D	Dominant	
CD	Co-dominant	
I	Intermediate	
S	Suppressed	
G	Good	
F	Fair	
P	Poor	
~	Approximate	