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CONSULTING AND GIS ANALYSIS
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Tree Inventory and Preservation Plan Report

Subject Property:

367 Springbank Drive
London, ON

Prepared For:

Kanwal Dentistry Professional Corporation
1097 Melsetter Way
London, ON N6G 0S4

Prepared By:

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

16 January 2024

Jackson Arboriculture Inc. Project No. P449

1.0 Introduction

Jackson Arboriculture Inc. was retained by Kanwal Dentistry Professional Corporation to complete a Tree Inventory and Preservation Plan report for a property situated at 367 Springbank Drive in the City of London, Ontario, hereby referred to as the subject property. It is understood that a development application will be filed with the City for an addition to the existing dwelling on site.

The following study has been completed in accordance with the City's Design Specifications and Requirements Manual and the London Plan Policies.

2.0 Methodology

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

2.1 Tree Inventory

A site visit was conducted on the 22nd of November 2023 to complete the tree inventory. All trees 10 cm in diameter and larger situated on subject property, on neighbouring property within 6 m and within the road allowance 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 corresponding to the tree inventory (Table 1) and the Tree Preservation Plan Sheet 1.
- **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 good, fair or poor. The condition ratings are based on the signs, symptoms and defects exhibited by each tree, considering the surroundings in which it is growing.
- **Dripline**: The distance from the trunk to the tips of the live branches.
- **mTPZ**: Minimum tree preservation zone distance, as measured from the base of the tree in meters.
- **Location**: The property where the tree is situated, based on the topographic survey and gps locations taken on site.
- **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 results of the impact assessment.

The trees included in the inventory are identified with numbers 1-19. Trees were located using the topographic survey provided and a tablet computer with a GPS chip.

2.2 Impact Assessment

A tree preservation analysis was completed on each tree in the inventory 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 and branches conflict with machinery during construction.

The minimum tree preservation zone (mTPZ) distances, outlined in the City's Design Specifications and Requirements Manual, were applied during the tree preservation analysis to determine the impacts to trees included in the tree inventory. The mTPZ distance is based on the diameter of the tree trunk and provides a minimum distance at which development can safely occur without adversely affecting the tree health. Where encroachment within an mTPZ is required to accommodate the proposed development tree removal may be required. Refer to Table 2 for the mTPZ distance based on the corresponding trunk diameter.

Table 2. Minimum tree preservation zone (mTPZ) distances.

DBH (cm)	Min. Protect Distance (m)
	Radius
< 10	1.2
10 – 29	1.8
30 – 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

3.0 Existing Conditions

The subject property is currently occupied by a residential dwelling, detached garage, asphalt parking and amenity areas. The property is bound by residential development to the north, east and west, and Springbank Drive to the south.

4.0 Tree Inventory Results

The results of the tree inventory indicate that a total of 19 trees reside on subject property and on neighbouring property within 6 m. The trees included in the inventory appear to be comprised of naturally occurring trees and landscape plantings.

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

5.0 Proposed Development

The proposed development is comprised of an addition to the rear of the existing dwelling, including an expansion of the asphalt parking area. The existing dwelling on site will be converted into a dental office.

6.0 Discussion

The following sections discuss the tree removal requirements, tree preservation opportunities, tree preservation recommendations and tree compensation requirements.

6.1 Tree Removal

The removal of Trees 1-11 will be required to accommodate the proposed development.

All of the trees identified for removal reside on subject property.

6.2 Tree Preservation

The preservation of Trees 12-19 will be possible with the use of appropriate tree protection measures. Tree protection measures must be implemented prior to the commencement of construction (earthworks).

Encroachment within the dripline of Tree 19 will be required to accommodate the proposed asphalt parking and curb. The majority of the area of encroachment is occupied by the detached garage on concrete slab. It is anticipated no tree roots will reside below the existing garage, and as such, the area of encroachment is limited to the area between the garage and property boundary. The limit of encroachment (tree protection fence location) must be excavated by air spade to gently expose any tree roots that conflict with development. If any tree roots are exposed they must be pruned by a Certified Arborist in accordance with good arboricultural practice to ensure that the root system is not damaged by the proposed development.

Tree protection fence must be installed at the mTPZ distance unless noted otherwise in this report and on Sheet 1. Tree protection fence must be installed prior to the commencement of construction to ensure that the trees identified for preservation are not impacted by the proposed development.

Refer to Table 1 for the mTPZ distances. Refer to Sheet 1 for the prescribed tree protection fence locations, additional tree protection plan notes and the tree protection fence detail.

6.3 Tree Preservation Recommendations

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

- Tree protection fence must be installed at the locations outlined on Sheet 1 prior to the commencement of construction, unless noted otherwise in this report and on Sheet 1.
- 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 1 as a tree preservation zone (TPZ) is allowed at anytime during construction unless noted otherwise in this report and on Sheet 1.
- The roots of Tree 19 must be exposed and pruned as outlined above.
- 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 the 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.

6.4 Tree Compensation

Compensation for the proposed removal of tree canopy will be required in the form of tree plantings. As outlined in the London Plan Policy, 1 compensation tree is required for each 10 cm of trunk diameter that is proposed for removal. The total diameter of the trees identified for removal equates to 193 cm. As such, a total of 19 compensation trees will be required. If all 19 compensation trees can not be planted on site, a cash in lieu payment to the City may be required.

7.0 Summary

Jackson Arboriculture Inc. was retained by Kanwal Dentistry Professional Corporation to complete a Tree Inventory and Preservation Plan report for a property situated at 367 Springbank Drive in the City of London, Ontario. 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 19 trees situated on subject property and on neighbouring property within 6 m. The results of the impact assessment indicate that the removal of 11 trees 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.

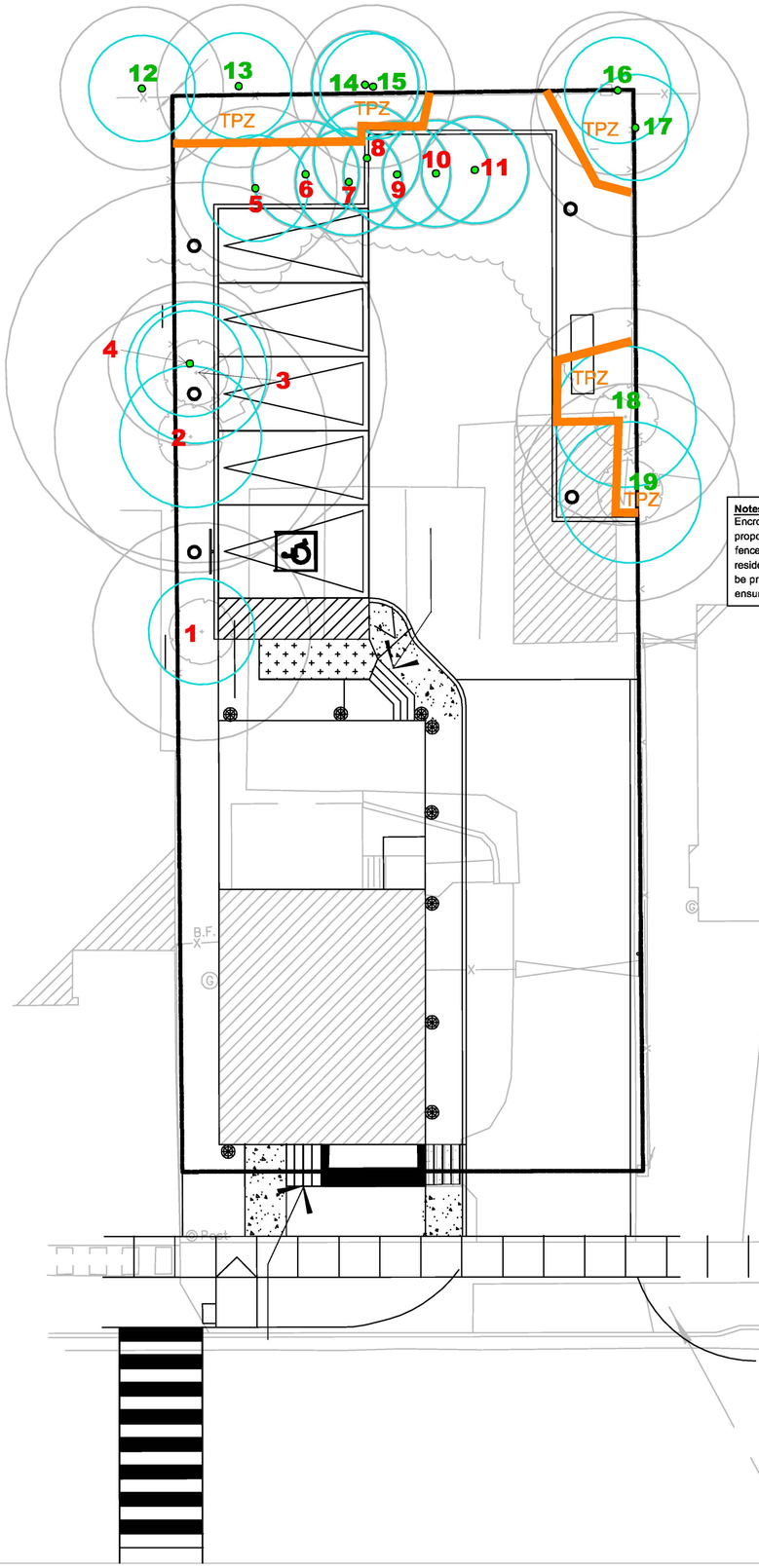
Table 1. Tree Inventory

Location: 367 Springbank Dr, London Date: 22 Nov. 2023 Surveyors: JJJ

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	Location	Comments	Action
1	Sweet Cherry	*Prunus avium*	18	G	G	G	4	1.8	Subject Property		Remove
2	Norway Maple	*Acer platanoides*	32	G	G	G	5	2.4	Subject Property	Union at 2 m, light seam	Remove
3	Sweet Cherry	*Prunus avium*	31	G	G	G	7	2.4	Subject Property	Lean east	Remove
4	Norway Maple	*Acer platanoides*	11, 10	FG	G	G	3	1.8	Subject Property	Union at ground	Remove
5	Willow species	*Salix spp.*	13	F	G	G	3	1.8	Subject Property	Crook, growing out of rotting stump	Remove
6	Blue Spruce	*Picea pungens*	13	G	FG	FG	2	1.8	Subject Property	Asymmetrical crown - competition from neighbouring tree	Remove
7	Blue Spruce	*Picea pungens*	13	G	F	F	2	1.8	Subject Property	Asymmetrical crown - competition from neighbouring tree, 20% crown dieback	Remove
8	Blue Spruce	*Picea pungens*	12	G	P	P	2	1.8	Subject Property	asymmetrical crown - competition from neighbouring tree, 60% crown dieback	Remove
9	Blue Spruce	*Picea pungens*	13	G	F	F	2	1.8	Subject Property	Asymmetrical crown - competition from neighbouring tree	Remove
10	Blue Spruce	*Picea pungens*	18	G	FG	FG	2	1.8	Subject Property	Asymmetrical crown - competition from neighbouring tree, light lean southeast	Remove
11	Blue Spruce	*Picea pungens*	19	G	F	F	2	1.8	Subject Property	Asymmetrical crown - competition from neighbouring tree, light lean/sweep southeast	Remove
12	Norway Maple	*Acer platanoides*	~20	G	G	G	3	1.8	Neighbouring		Preserve
13	Norway Maple	*Acer platanoides*	~17	G	G	G	3	1.8	Neighbouring		Preserve
14	Norway Maple	*Acer platanoides*	~12	G	G	G	2	1.8	Neighbouring	Grapevine competition	Preserve
15	Norway Maple	*Acer platanoides*	~13	G	G	G	3	1.8	Neighbouring	Grapevine competition	Preserve
16	Manitoba Maple	*Acer negundo*	24	G	G	G	3	1.8	Boundary		Preserve
17	Manitoba Maple	*Acer negundo*	28	G	G	G	4	1.8	Boundary	Crown bowed southeast	Preserve
18	Norway Maple	*Acer platanoides*	30	G	G	G	4	2.4	Subject Property	Included metal fence post	Preserve
19	Norway Maple	*Acer platanoides*	37	G	G	G	4	2.4	Subject Property		Preserve

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)
Con.	Overall Condition	(G, F, P)
DL	Dripline	(m)
mTPZ	Minimum Tree Preservation Zone	(m)
G	Good	

F	Fair
P	Poor



Notes:
Encroachment within the dripline of Tree 19 will be required to accommodate the proposed asphalt parking and curb. The limit of encroachment (tree protection fence location) must be excavated by air spade to gently expose any tree roots that reside beyond the tree protection fence. If any tree roots are exposed they must be pruned by a Certified Arborist in accordance with good arboricultural practice to ensure that the root system is not damaged by the proposed development.

TREE PROTECTION PLAN NOTES
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. It is the applicants' responsibility to discuss potential tree injury of trees on shared property lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible for removal and such issues would be dealt with in civil court or through negotiation.
TREE PROTECTION ZONE: No construction activity including grade changes, surface treatments or excavations of any kind is 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. Grade changes are not permitted within established TPZ. The area(s) identified as a TPZ must remain undisturbed at all times.
TREE PROTECTION BARRIERS:
Tree protection barriers must be installed around trees to be protected using paige wire fence supported on metal T-bars. All supports and bracing to safely secure the barrier should be outside the TPZ. All such supports and bracing should minimize damage to roots outside the TPZ.
General Note:
Prior to the commencement of any site activity the tree protection barriers specified on this plan must be installed. Established tree protection zones must not be used as construction access, storage or staging areas. The tree protection barriers must remain in effective condition until all site activities including landscaping are complete. Permission from the City/Town must be provided prior to the removal of tree protection fence.
ARBORICULTURAL WORK:
Any roots or branches which extend beyond the TPZ indicated on this plan which require pruning, must be pruned by a Certified Arborist. All pruning of tree roots and branches must be in accordance with good arboricultural standards. Roots located outside the TPZ that have received approval from the City/Town to be pruned must first be exposed by hand digging or by using an air spade. This will allow a proper pruning cut and minimize tearing of the roots.

NOTES:

1.THIS DETAIL DOES NOT REPRESENT ANY PARTICULAR TREE SPECIES

2. NO CONSTRUCTION ACTIVITY. GRADE CHANGE, SURFACE TREATMENT, COMPACTION, EXCAVATION OR STOCKPILING OF ANY KIND IS PERMITTED WITHIN THE PROTECTED AREA.

TREE PROTECTION FENCE DETAIL

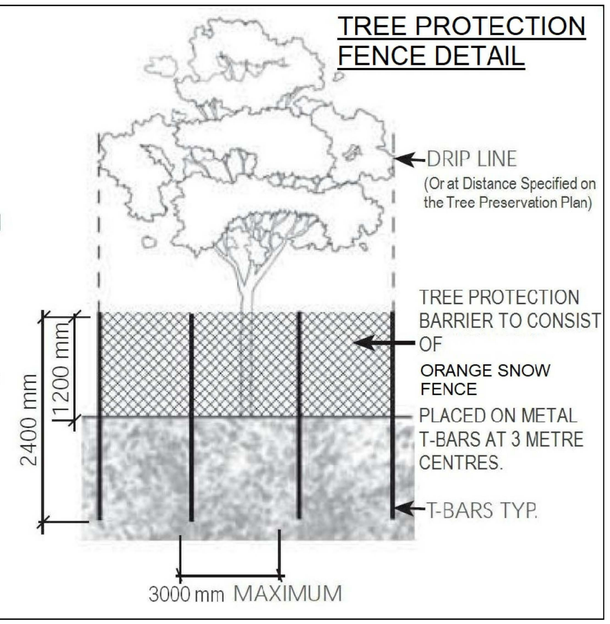


Table 1. Tree Inventory

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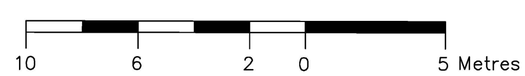

LEGEND

- Surveyed Tree Location
- GPS Tree Location
- 3 — Tree Number Identified for Preservation (GREEN)
- 6 — Tree Number Identified for Removal (RED)
- TPZ — Tree Preservation Zone Symbol
- Minimum Tree Preservation Zone (mTPZ)
- Tree Protection Fence Location
- Property Boundary

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

- Tree protection fence must be installed at the mTPZ distance prior to the commencement of construction, unless noted otherwise on this drawing.
- 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 this drawing as a tree preservation zone (TPZ) is allowed at anytime during construction, unless noted otherwise on this drawing.
- The roots of Tree 19 must be exposed and pruned as outlined in the note on this drawing.
- 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 the 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.

No.	Description	Date	By
1	Report Submission	16 Jan. 2024	JJ

Data Source: Archibald, Gray & McKay Ltd., 77 Inches Design Studio

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London, ON

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Tree Inventory and Preservation Plan

JACKSON ARBORICULTURE INC.
118 Pleasant Ridge Road
Brantford ON N3R 0B8
905-512-6503
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Project #	P449	Figure # 1
Date	16 January 2024	
Scale	1:150 (@18x24)	