Tree Inventory and Preservation Plan Report 200 South Service Road & 201 Radley Road Mississauga, Ontario

prepared for

#### Glen Schnarr & Associates Inc. 700-10 Kingsbridge Garden Circle Mississauga, ON L5R 3K6

prepared by



146 Lakeshore Road West PO Box 1267 Lakeshore W PO Oakville ON L6K 0B3 t: 289.837.1871 f: 866.693.6390 e: consult@kuntzforestry.ca

12 October 2017, revised 18 December 2017

KUNTZ FORESTRY CONSULTING INC Project P1645

# Introduction

Kuntz Forestry Consulting Inc. was retained by Glen Schnarr & Associates Inc. to complete a Tree Inventory and Preservation Plan for the proposed development located at 200 South Service Road and 201 Radley Road in Mississauga. The subject property is located southeast of South Service Road and Crestview Avenue.

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

- Prepare inventory of the tree resources greater than 15 cm diameter on and within six metres of the proposed subject property, and all trees within the City road allowance;
- Evaluate potential tree saving opportunities based on proposed work; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

### Methodology

Tree resources were assessed utilizing the following parameters:

Tree # - number assigned to tree that corresponds to Figure 1.
Species - common and scientific names provided in the inventory table.
DBH - diameter (centimetres) at breast height, measured at 1.4 m 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).
Comments - additional relevant detail.

Trees measuring over 15cm DBH on the subject property, within six metres of the subject property and trees of all sizes within the City road allowance were included in the tree inventory. Trees were located using topographic survey. Trees not included in the topographic survey were located using aerial photo interpretation and estimations made in the field.

Trees situated in clusters were inventoried as Tree Polygons. These polygons were labelled with a prefix of 'P'. Trees were numbered 1 to 27. Refer Table 1 for the results of the inventory.

The results of the evaluation are provided below.

### Existing Site Conditions

The subject property is currently comprised of two 1-storey detached residential dwellings with lawn. Tree resources exist in the form of natural regenerated trees and landscape trees. The majority of the trees found were Siberian Elm (*Ulmus pumila*) in declining condition.

### Tree Resources

The tree inventory was conducted on 12 October 2017. The inventory documented 25 individual trees and two tree polygons on and within six metres of the subject property, and within the City road allowance. Refer to Table 1 for the full tree inventory and Figure 1 for the location of trees reported in the tree inventory.

Tree resources included in the inventory are comprised of Siberian Elm (*Ulmus pumila*), White Spruce (*Picea glauca*), Black Walnut (*Juglans nigra*), Serviceberry species (*Amelanchier* sp.), Green Ash (*Fraxinus pennsylvanica*), Russian Olive (*Elaeagnus angustifolia*), Red Maple (*Acer rubrum*), and White Ash (*Fraxinus americana*).

# **Proposed Development**

The proposed development includes the demolition of the existing dwellings and the construction of five detached residential buildings. Refer to Figure 1 for the existing conditions and proposed site plan.

# Discussion

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

### Development Impacts

The dripline of trees was used in the preservation planning process to determine if trees require removal. Where development is proposed within the driplines of trees, there is a potential to damage trees and some tree removal could be required depending on the species and condition of trees and the level of encroachment required.

#### Tree Removal

The removal of 14 trees and two tree polygons, will be required to accommodate the proposed development. There is opportunity to transplant the Serviceberry tree located within Tree polygon P12 to a different location on the subject property. In additional, the removal of 3 dead, dying and hazardous trees has been proposed, including Trees 3, 14 and 19. A permit is required for the removal of 3 or more trees over 15cm in diameter per calendar year. Tree 13 and tree polygon P11 and 12 are located within the City road allowance and will require permission from the City prior to removal. Tree 19 is a dead, hazardous Ash tree located on neighbouring property. The neighbouring property owner should be notified and permission from the neighbouring property owner will be required prior to removal. Refer to Table 1 for the tree inventory and Figure 1 for the locations of the proposed tree removals and of the dead, dying and hazard trees.

#### Tree Preservation

Preservation of the remaining 8 trees will be possible with appropriate tree protection measures. Tree preservation hoarding must be erected prior to the commencement of construction to ensure trees identified for preservation are not impacted by development.

Any existing driveway is located within the driplines of Trees 1 and 2. The removal of the existing asphalt within the driplines of these trees should be removed carefully by hand. The area must then be amended with healthy topsoil and stabilized (seeded or sodded). The tree protection hoarding must then be extended to the full dripline of these trees for the remainder of the proposed development.

A portion of the tree protection hoarding for Trees 1, 2, 16 and 17 are located within the City road allowance. Tree protection hoarding on the subject property should consist of solid plywood hoarding and tree protection hoarding within the City road allowance should consist of plastic safety fencing. A portion of the mTPZs for Trees 1 and 2 are located within a proposed road widening. Preservation planning for these trees should be reassessed prior to the proposed road widening; however, these trees will be retained based on the proposed development.

Refer to Table 1 for the tree inventory table, Figure 1 for tree protection hoarding locations, further tree preservation plan notes and the Tree Protection Fence Detail.

## Summary and Recommendations

Kuntz Forestry Consulting Inc.was retained by Glen Schnarr & Associates Inc. to complete a Tree Inventory and Preservation Plan for the proposed development located at 200 South Service Road and 201 Radley Road in Mississauga. The subject property is located southeast of South Service Road and Crestview Avenue.

The findings of the study indicate a total of 25 trees individual trees and two tree polygons on and within six metres of the proposed development and within the City road allowance. The removal of 14 trees and 2 tree polygons will be required to accommodate the proposed works. The removal of 3 additional trees is recommended due to their dead, dying or hazardous condition. All remaining trees may be preserved assuming the tree protection measures stated in this report are implemented.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional tree preservation notes and the Tree Preservation Fence Detail.

- Tree protection barriers and fencing should be erected at locations prescribed on Figure 1.
- Tree protection measures will have to be implemented prior to demolition and construction to ensure the trees identified for preservation are not impacted by the development.
- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at anytime during or after construction.
- Branches and roots that extend past 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 are 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 mitigation measures are implemented.

Respectfully Submitted,

# Kuntz Forestry Consulting Inc.

Amy Choi

Amy Choi, B.Sc.(Env.), M.Sc.F. Associate Forest Ecologist ISA Certified Arborist #ON-1609A Butternut Health Assessor #024

<u>11 October 2017</u> Surveyors: <u>AC</u>

# Table 1. Tree Inventory

Location:

200 South Service Road, Mississauga

Tree #	Common Name	Scientific Name	DBH	ті	CS	CV	CDB	DL	Comments	Action
1	Siberian Elm		40.5	F	F	F	000		Enjcormic branches(M) pruning wounds(M) bowed(M)	Retain
	Siberian Elm	Ulmus pumila	40.5					4	Druning wounde(M) enjagrining wounds(M), bowed(M)	Detain
2	Sibenan Eim	Oimus pumila	40	Г	Г	Г		5		Retain
3	Siberian Elm	Ulmus pumila	74	PF	F	F		11	Epicormic branches(M), dead branches(L), broken branches(M), co-dominant at 1.75m with included bark(H) and wetwood, potential hazard	Remove
4	White Spruce	Picea glauca	~32	FG	FG	F		5	Lean(L), heavy seed crop, pruning wounds(L), chlorotic(L)	Retain
5	Black Walnut	Juglans nigra	~28	FG	FG	FG		8	Vertical scaffold limbs with included bark(M)	Retain
6	Siberian Elm	Ulmus pumila	65.5	PF	F	F		5	Dead and broken branches(M), epicormic branches(L), pruning wounds(H), stem wound(VH) with rot	Remove
7	Siberian Elm	Ulmus pumila	44.5	F	F	F		3	Dead and broken branches(L), epicormic branches(M), pruning wound(M) with rot	Remove
8	Siberian Elm	Ulmus pumila	40	F	F	F		3	Dead and broken branches(L), epicormic branches(L)	Remove
9	Siberian Elm	Ulmus pumila	48	FG	F	F		4	Bowed(M), epicormic branches(M)	Remove
10	Siberian Elm	Ulmus pumila	37.5	FG	F	F		4	Dead branches(L), epicormic branches(M), pruning wounds(L) lean(L)	Remove
P11	Siberian Elm	Ulmus pumila	~2-10, avg. 6	F	F	F		3	~15 stems, union at base, two clumps	Remove
	Siberian Elm	Ulmus pumila	~2-10, avg. 6	F	F	F		3	2 clumps, multi-stem, union at base	Remove
	Siberian Elm	Ulmus pumila	~5-12, avg. 8	F	F	F		4	2 clumps, multi-stem, union at base	Remove
<b>D</b> 40	Siberian Elm	Ulmus pumila	~2-8, avg. 4	F	F	F		2	2 clumps, multi-stem, union at base	Remove
P12	Serviceberry species	Amelanchier sp.	6	FG	F	F		1	Crack(L), epicormic branches(L)	Transplant
	Siberian Elm	Ulmus pumila	2,2	F	F	F		1.5		Remove
	Green Ash	Fraxinus pennsylvanica	3	FG	FG	F		1.5		Remove
13	Russian Olive	Elaeagnus angustifolia	27	F	F	F		3.5	Lean(M), pruning wounds(M), epicormic branches(M), coppice growth(M)	Remove
14	Green Ash	Fraxinus pennsylvanica	14,19,14	PF	PF	PF	15	3	Flower galls, sloughing bark, epicormic branches(M), EAB(M), union at base with included bark(L)	Remove
15	Red Maple	Acer rubrum	56.5	F	F	FG		10	Pruning wounds(L), vertical scaffold limbs with included bark(M)	Remove

Date:

16	White Ash	Fraxinus americana	20,26	F	F	FG	4	Marked/treated for EAB, pruning wounds(L), union at base with included bark(M), epicormic branches(L)	Retain
17	White Ash	Fraxinus americana	24,22.5,23	F	FG	FG	5	Marked/treated for EAB, pruning wounds(L), union at base with included bark(M), epicormic branches(L)	Retain
18	Sugar Maple	Acer saccharum	~52	FG	F	FG	8.8	Pruning wounds(L), vertical scaffold limbs with included bark(L)	Retain
19	White Ash	Fraxinus americana	~25		DEAD	)	-	Co-dominant at 4m with included bark, hazard	Remove
20	Siberian Elm	Ulmus pumila	31.5	F	F	F	2	Lean(L), epicormic branches(L), co-dominant at 6m with included bark(L), dead branches(L)	Retain
21	Siberian Elm	Ulmus pumila	30.5,31	PF	F	F	5	Union at 1.2m, pruning wounds(M), epicormic branches(L),fused stems with included bark(H)	Remove
22	Siberian Elm	Ulmus pumila	75	PF	F	F	7	Epicormic branches(M), co-dominant at 1.7m with included bark(H) and wetwood, pruning wounds(L)	Remove
23	Siberian Elm	Ulmus pumila	45	F	F	F	4	Asymmetrical crown(L), dead branches(L), epicormic branches(M), vertical scaffold limbs with included bark(L)	Remove
24	Siberian Elm	Ulmus pumila	23	F	F	F	2.5	Seam(L), pruning wounds(L), epicormic branches(M)	Remove
25	Siberian Elm	Ulmus pumila	44	F	F	F	5	Pruning wounds(L), epicormic branches(M), wetwood	Remove
26	Siberian Elm	Ulmus pumila	65	F	F	F	6	Pruning wounds(M) with wetwood, co-dominant at 3m with included bark(L), epicormic branches(H)	Remove
27	Elm species	Ulmus sp.	38.5	F	FG	FG	4	Pruning wounds(L), epicormic branches(M)	Remove
END									

	Codes			
DBH	Diameter at Breast Height	(cm)		
ті	Trunk Integrity	(G, F, P)		
CS	Crown Structure	(G, F, P)		
CV	Crown Vigor	(G, F, P)		
CDB	Crown dieback	%		
DL	Dripline	(m)		
P = p li	oor, $F = fair$ , $G = good$ , $\sim = estiright, (L) = light, (M) = moderate,$	nate, (VL) = very (H) = heavy		



#### LEGEND



Refer to Table 1 of report dated 12 October 2017 revised 18 December 2017 for complete tree inventory information. All trees greater than 15 cm DBH on and within six metres of the subject property, and trees of all sizes within the City road allowance were included in the inventory. Trees were located by topographic survey or aerial photo interpretation and estimations in the field.

#### Tree Removals

The removal of 17 trees and 2 tree polygons will be required to accommodate the proposed works or due to condition. Required tree removals are indicated with RED labels. Dead, dying and hazardous trees are indicated with ORANGE labels.

#### **Tree Preservation**

Preservation of all remaining tree resources will be possible with appropriate tree protection measures. Trees identified for preservation are indicated with GREEN labels. Required Tree Preservation Fencing is indicated in MAGENTA and approximate dripline of trees is shown with dashed GREEN circles. Refer to Tree Protection Plan Notes for eservation details



pecifications for the Protection and Preservation of Existin Vegetation Standard Note

All existing trees which are to remain shall be fully protected with hoarding erected beyond the drip line of the tree canopy to the Totaling effected beyond and building bepartment prior to the issuance satisfaction of the Planning and Building Department prior to the issuance of the building permit. Groups of trees and other existing vegetation are to be protected with hoarding around the entire area. Areas within the protective fencing shall remain undisturbed and shall not be used for the storage of building materials and equipment.

The Planning and Building Department will be responsible for inspection of trees on private property, while the Community Services Department is responsible for the inspection of hoarding for public trees. Hoarding must remain in place until an inspection by the Landscape Architectural Technologist, Development and Design Division, and an appropriate removal time has been agreed upon.

No rigging cables shall be wrapped around or installed in the trees and surplus soil, equipment, debris or materials shall not be placed over the root systems of the trees within the protection fencing. No contaminants will be dumped or flushed where feeder roots of trees exist.

The developer or agents shall take every precaution necessary to preven damage to the vegetation to be retained.

Where limbs or portions of trees are removed to accommodate construction, they will be removed in accordance with accepted arboricultural practice.

Where root systems of protected trees adjacent to construction are exposed or damaged they shall be neatly trimmed and the area backfilled with appropriate material to prevent desiccation.

No open trenching shall occur through tree preservation zones (TPZ). Only directional boring can be used for service installation in these areas.

Where necessary, vegetation will be given an overall pruning to restore the balance between roots and top growth, or to restore its appearance.

Trees that have died or have been damaged beyond repair shall be removed and replaced at the owners' expense with trees of a size and species approved by the Planning and Building Department.

If grades around trees to be protected are to change, the owner shall be required to take precautions such as dry welling, retaining walls, and root feeding to the satisfaction of the Planning and Building Department.

No.	Issue/Revisions	Date	B
1	Report Submission	12 Oct 17	AC
2	Report Revision	18 Dec 17	AC
			$\vdash$
Base Data:	Tom A. Senkus Ontario Land Surveyor (topo), Maram Cervini Arch	itect (site plan)	
	FORESTRY CONSULTING Inc.	Lakeshore Road West 267 Lakeshore W PO Oakville ON L6K 0B3 .1871 f: 866.693.6390 isult@kuntzforestry.ca : www.kuntzforestry.ca	
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Property 200 Mississ	South Service Road & 201 Rad sauga, Ontario	lley Road	
Exist Tree	ing Conditions, Proposed Site Plan Inventory & Preservation Plan		
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Date	12 October 2017	1	

OARDING 2" X 4" TOP AND BOTTOM RAI 8cm CLEARANCE -EXISTING GRADE Ĭ **ONSTRUCTION** UNDISTURBED SUBGRADE DRIP LINE Õ H'X 3' TOP & BOTTOM RAIL DESIGN ৵ -UNDISTURBED SUBGRADE DEVELOPMENT SCALE: N.T.S. DATE: JUNE, 2014 codd/onolects/M4038 PB Construction Hoarding.CP/Vector/ D&D.ContructHd.don

