

TOWN OF INNISFIL

# 25<sup>TH</sup> SIDE ROAD – RECONSTRUCTION & ACTIVE TRANSPORTATION ARBORIST REPORT

SEPTEMBER 09, 2022





# 25TH SIDE ROAD – RECONSTRUCTION & ACTIVE TRANSPORTATION ARBORIST REPORT

TOWN OF INNISFIL

PROJECT NO.: 211-06027-00  
DATE: SEPTEMBER 09, 2022

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Nicole Bitter	Peter McNamara	Peter McNamara		

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September 9, 2022

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Date

APPROVED<sup>1</sup> BY *(must be reviewed for technical accuracy prior to approval)*



September 9, 2022

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- A** TREE PRESERVATION TABLES
- B** SITE PHOTOS

# 1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Town of Innisfil to implement the preliminary design and phasing plan for the reconstruction and active transportation facilities along 25<sup>th</sup> Side Road between Innisfil Beach Road and Bay Point Road.

WSP Landscape Architecture has completed a vegetation inventory within the right of way (ROW) of 25<sup>th</sup> Side Road, including trees on adjacent private properties with a dripline that overhangs the ROW which may be impacted by the proposed works. The purpose of the inventory was to assess vegetation for health and location and potential impacts related to the proposed design. Tree Preservation Plans have been prepared in association with this report.

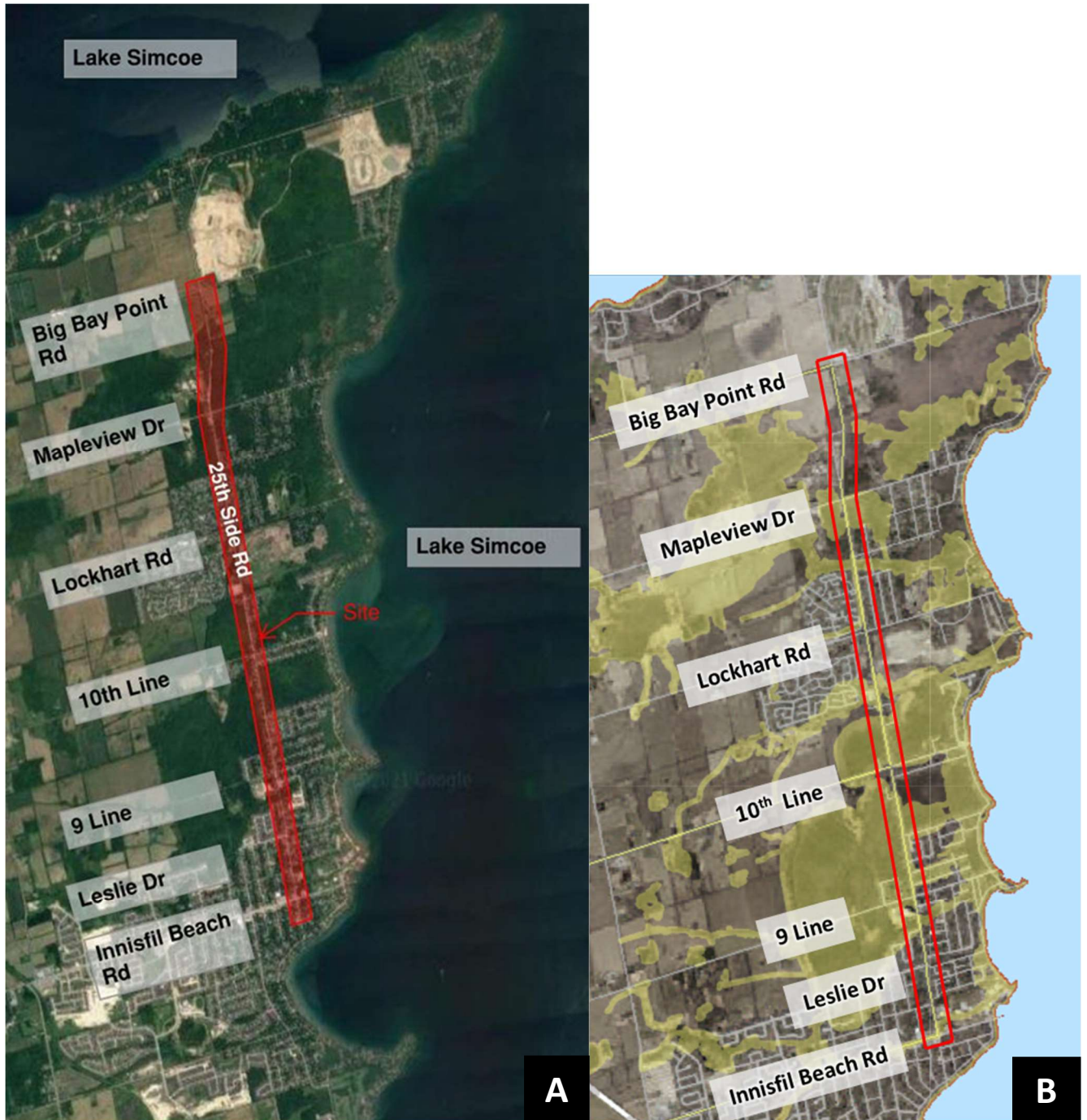
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## 1.1 STUDY LIMITS

- The study limit for this site consists of 25<sup>th</sup> Side Road in Innisfil – Innisfil Beach Road to Big Bay Point Rd (nearly 7 km);
- Refer to Figure 1, which illustrates the study area.



Figure 1: Study Area



A) Study area highlighted in red. Imagery from Google Earth.

B) Study area outlined in red. LSRCA Regulated Areas in yellow hatch. Taken from LSRCA's Regulation Maps tool.

*\*Last accessed February 2022*

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## 1.2 REPORT FRAMEWORK

This report details the results of the tree inventory; provides an overview of the relevant policy and legislation in relation to the proposed works; and makes recommendations for tree protection, tree injury, mitigative measures and removals based on the proposed works.

- The study area limits are located within the limits of 25<sup>th</sup> Side Road in Innisfil. The Town of Innisfil does not have a tree by-law and defers to the County of Simcoe Forest Conservation By-law No. 6894.
- The tree inventory included:
  - Individual trees >10cm DBH within the study area;
  - Trees with a canopy that continuously overlapped (e.g. forest edges) were assessed as a grouping;
  - Trees on privately owned land with a dripline that overhangs the ROW limit.

This report is to be read in conjunction with:

- Appendix A: Tree Preservation Tables;
- Appendix B: Site Photos;
- Tree Preservation Plans (TP-1 to TP-5).

## 2 EXISTING CONDITIONS

Vegetation was observed within the study area limits. This area consisted of the ROW along 25<sup>th</sup> Side Road and adjacent single dwelling residential lots, farmland, and wooded areas.

Vegetation is a mixture of native and non-native deciduous and coniferous trees.

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### 2.1 BUILT FORM AND NATURALIZED AREAS

- No buildings were present within the ROW;
  - Several single dwelling residential properties lined 25<sup>th</sup> Side Road;
  - A commercial plaza and mid-rise residential building were located at the south end of the study area, at the intersection of 25<sup>th</sup> Side Road and Innisfil Beach Road;
  - A Town of Innisfil building and gas station were located along the east side of 25<sup>th</sup> Side Road, in the central-southern portion of the study area;
  - Farmland was present along 25<sup>th</sup> Side Road in the northern portion of the study area;
  - Several naturalized areas were present along 25<sup>th</sup> Side Road, throughout the study area.
- 

### 2.2 VEGETATION

Vegetation consisted of naturally occurring clusters and woodlot, as well as planted trees within the ROW and / or on private property.

Vegetation composition and tree size are detailed below by location.

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#### 2.2.1 SUBJECT SITE AND ADJACENT PROPERTIES

- Trees within the study area were primarily located on public property; however, they were often located on private front lawns lining 25<sup>th</sup> Side Road.
- Trees within the study area include:
  - Mixture of native and non-native trees;
  - Mixture of deciduous and coniferous trees;
  - Inventoried trees ranged from 10 to 109 cm DBH with the average of 29 cm effective DBH.
- The northern portion of the study area was mainly occupied by farmland and naturalized or wooded areas, with some planted trees along the hedgerows of the farmland. Species composition in the northern portion of the study area includes:
  - **Abundant:** Ash species (*Fraxinus sp.*), either in poor condition or dead, Poplar species (*Populus sp.*), Eastern White Pine (*Pinus strobus*), and Black Locust (*Robinia pseudoacacia*);
  - **Frequent:** Sugar Maple (*Acer saccharum*) and Eastern White Cedar (*Thuja occidentalis*);
  - **Occasional:** American Basswood (*Tilia americana*), Manitoba Maple (*Acer negundo*), American Elm (*Ulmus americana*), Paper Birch (*Betula papyrifera*), and Northern Red Oak (*Quercus rubra*).

- The central and southern portions of the study area were mainly occupied by residential and commercial lots consisting of planted trees, with occasional stretches of naturalized and wooded areas. Species composition in the central and southern portions of the study area include:
  - Abundant: Ash species, either in poor condition or dead, Eastern White Cedar, Eastern White Pine, American Basswood, Scots Pine (*Pinus Sylvestris*), Blue Spruce (*Picea pungens*), White Spruce (*Picea glauca*), Trembling Aspen (*Populus tremuloides*), and Norway Maple (*Acer platanoides*);
  - Frequent: Sugar Maple, Paper Birch, Poplar species, American Elm, Norway Spruce (*Picea abies*), Balsam Fir (*Abies balsamea*), Black Pine (*Pinus nigra*), and Silver Maple (*Acer saccharinum*);
  - Occasional: Manitoba Maple, Red Maple (*Acer rubrum*), Weeping Mulberry (*Morus alba* ‘Pendula’), Cherry species (*Prunus sp.*), Pear species (*Pyrus sp.*), Apple species (*Malus sp.*), American Larch (*Larix laricina*), American Beech (*Fagus grandifolia*), Ivory-silk Lilac (*Syringa reticulata*), Emerald Green Cedar (*Thuja occidentalis* ‘Smaragd’), Black Walnut (*Juglans nigra*), Siberian Elm (*Ulmus pumila*), and Horse Chestnut (*Aesculus hippocastanum*).

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## 2.3 CONDITION

Tree health ranges between good and poor; the majority observed to be in good condition overall. Several of the trees in poor condition were Ash trees, likely affect by Emerald Ash Borer (*Agrilus planipennis*). Signs of decline and defects were observed on some trees including:

- Lean;
- Weakly formed unions;
- Dead branches and stems;
- Loose bark;
- Co-dominant stems;
- Exposed roots;
- Dieback up to 75%;
- Overall lack of vigour;
- Fruiting bodies;
- Compartmentalization;
- Vertical cracks;
- Suckering at base.

# 3 POLICY CONTEXT

This section summarizes the various municipal, regional, provincial and federal planning policies and regulations related to the tree inventory and applicability to the project. Thus, they provide the policy context for this Arborist Report.

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## 3.1 TREE BY-LAW

- The Town of Innisfil does not have a tree by-law and defers to the County of Simcoe Forest Conservation By-law No. 6894.
- The County of Simcoe Forest Conservation By-law regulates clearing of forests, commercial harvesting, and properties no smaller than one hectare (2.47 acres). This By-law regulates the injury or destruction of any tree within woodlands or sensitive natural areas without an applicable permit.
- The By-law does not apply to work undertaken or authorized by a municipality.

### Applicability to Project

- This study area is more than one hectare; however, the individual properties on which trees occurred were generally less than one hectare.
  - Some of the wooded areas within the study area are greater than one hectare in size.
  - The work being conducted within the study area is authorized by the municipality; as such, this By-law does not apply.
- 

## 3.2 CANADA FOOD AND INSPECTION AGENCY

Canada Food and Inspection Agency (CFIA) Directive D-03-08: Phytosanitary Requirements to Prevent the Introduction into and Spread within Canada of the Emerald Ash Borer (EAB), *Agrilus planipennis* (Fairmaire), applies to Ash (*Fraxinus* sp.) species observed on properties that are located within the EAB Regulated Areas of Canada, prepared by the CFIA and dated June 2019. This area covers all south and central Ontario and western Quebec. Ash trees that require removal are subject to this directive.

### Applicability to Project

- The CFIA restricts the movement of all Ash material including wood, bark, chips or bark chips from being transported outside of the Regulated Area. A Movement Certificate is required by the CFIA for any Ash material leaving the Regulated Area.
- Ash are permitted to be chipped on site and / or removed or cut down and removed from site. Chipped Ash material that is to remain on site must be ground or chipped to a size of less than 2.5cm in any two dimensions. All Ash material chipped or whole that is to be removed from site must be disposed of within the Regulated Areas of Canada.
- Refer to the CFIA website for a current map of the ‘*Emerald Ash Borer Regulated Areas of Canada*’.
- Thirty-one (31) Ash trees, in good to poor condition or dead, were observed within the study area. Trees range in size from 10 to 109cm DBH. Evidence of EAB was observed for several trees.

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## 3.3 LAKE SIMCOE AND REGION CONSERVATION AUTHORITY GUIDELINES

The Lake Simcoe and Region Conservation Authority (LSRCA), as mandated under O. Reg. 179/06 LSRCA Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses, regulates and may prohibit work that may take place within a regulated area (“an area that represents the greatest physical extent of the combined hazards, plus a prescribed allowance, as set out in the Conservation Authorities Act”). This includes valley and stream corridors, wetlands and associated areas of interference and the Lake Simcoe waterfront.

### Applicability to Project

- Several portions of the study area fall within LSRCA regulated areas. Refer to Figure 1B.

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## 3.4 ENDANGERED SPECIES ACT, 2007

Species designated as Threatened or Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO), otherwise known as Species at Risk in Ontario (SARO), and their habitats (i.e., areas essential for breeding, rearing, feeding, hibernation and migration) are automatically afforded legal protection under the Endangered Species Act, 2007 (ESA) (Government of Ontario 2007). The ESA (Subsection 9 (1)) states that:

- “No person shall,
  - a) kill, harm, harass, capture or take a living member of a species that is listed on the SARO List as an extirpated, endangered or threatened species;
  - b) possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade;
    - (i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
    - (ii) any part of a living or dead member of a species referred to in subclause (i);
    - (iii) anything derived from a living or dead member of a species referred to in subclause (i); or,
  - c) sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii)”.
- Clause 10(1) (a) of the ESA states that:
- “No person shall damage or destroy the habitat of a species that is listed on the SARO list as an endangered or threatened species”.

### Applicability to Project

- No woody species at risk were observed within the study area.

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## 3.5 MIGRATORY BIRDS CONVENTION ACT, 1994

The Migratory Birds Convention Act, MBCA (1994) and Migratory Birds Regulations, MBR (2014) protect most species of migratory birds anywhere they are found in Canada, including surrounding ocean waters, regardless of ownership. General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters / areas frequented by them.

- The MBR includes an additional prohibition against incidental take, defined by Environmental Canada as:

*“The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs.”*

- Environment Canada implements policies and guidelines to protect migratory birds, their eggs and their nests. There is guidance on the Environment Canada website to minimize the risk of incidental take effects on migratory birds, achieve compliance with the law and maintain sustainable populations of migratory birds.
- Compliance with the MBCA and MBR is best achieved through a due diligence approach, which identifies potential risk, based on a site-specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website.

#### Applicability to Project

- The MBCA and its regulations are applicable to the project. Migratory bird species subject to the MBCA may be present within the study area and may use various habitats within the study area (e.g. trees, grass and other herbaceous material, buildings). Recommended measures to reduce the possibility of contravention to the MBCA and its regulations are provided in Section 7.6.
- Tree removals are to be coordinated outside of the Migratory Bird Nesting Season (**April 1 to August 31**) and the active period for bats (e.g. up to the end of September). Overall clearing of trees would be permitted between **October 1 to March 31**.



# 4 DEFINITIONS

The following are the definitions of the assessment categories utilized in our tree assessment:

**Table 4.1 – Definitions**

ACRONYM / DEFINITION	DESCRIPTION
Tree Number	This number refers to the number on the on the tree tag or alpha-numeric, alphabetical or tree grouping label listed in Appendix A: Tree Inventory Tables and labelled on the Tree Preservation Plans (e.g. P29, 1216, A or TG-1).
Tree Grouping	A tree grouping is more than one (1) tree located within proximity of other trees with no separation between the canopies.
DBH	“Diameter at breast height” and refers to the diameter of the stem of a tree measured outside the bark at a point 1.37 metres (4.5 feet) above the highest point on the tree where the ground meets the stump.
Tree Protection Zone (TPZ)	This is the area around a tree that is to be protected through tree protection measures e.g. hoarding. No construction activities are to be undertaken within this zone.
Suppressed	Refers to trees that have their crowns completely overtopped by adjacent trees and received limited to very limited sunlight.
Co-dominant Stem	Stems equal in size and relative importance that make up the overall crown of the tree.
Union	Junction point where two or more stems meet. A ‘U’ shaped junction indicates a well-formed union. A ‘V’ shaped junction indicates a weakly formed union, whereas stems grow and increase in girth, weak bark called ‘included bark’ forms within the junction and stems start to push apart causing vertical cracks and loss of structure.
Compartmentalization	This is a naturally occurring process by which chemical and physical barriers are synthesized to prevent the spread of decay and disease in trees.
Irregular Tree Form	Refers to branches and stems that have formed irregularly often resulting in contorted growth, weak attachments, weakly formed unions and codominant stems. The irregular growth of scaffold (lateral) branches typically leads to damage to other scaffold branches.
Imminently Hazardous Tree	Refers to a destabilized or structurally compromised tree that is in imminent danger of causing damage or injury to life or property.
Injure and Injury	Described as failure to protect a tree’s health in any manner. This includes but is not limited to: wounding the trunk, canopy, or roots; breaking branches; compacting soil within a tree’s TPZ; or not following mitigation measures outlined in this report.
Root Zone	Refers to the subterranean area around the tree measured from the trunk to up to 2-3m beyond the dripline.
Critical Root Zone	The minimum area of the root system necessary to maintain vitality or stability of the tree. Typically, this area extends to the drip line of the tree. The severing of one root can cause approximately 5-20% loss of the root system. A reduction of this area by greater than 30% can pose stability concerns for the tree.
Public Tree	Any tree which has 50 percent or more of their main stem situated on a public park or a Town street.



**Table 4.2 – Tree Assessment Criteria**

DEFINITION	DESCRIPTION
Trunk Integrity (T.I.)	This is an assessment of the trunk for any defects or weaknesses. It is measured on a scale of poor, fair, good.
Canopy Structure (C.S.)	This is an assessment of the scaffold branches, unions and the canopy of the tree. This is measured on a scale of poor, fair, good.
Canopy Vigour (C.V.)	This is an assessment of the health of the tree and assesses the amount of deadwood and live growth in the crown as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is measured on a scale of poor, fair, good.
Good	Tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Fair	Tree displays 15%-40% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Poor	Tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI, CS, CV).

# 5 FIELD SURVEYS

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## 5.1 TREE INVENTORY METHODOLOGY

The field observations were conducted on October 18, 19, 20, 26, and 29, 2021 within the study limits.

- Tree information recorded included species, DBH, dripline radius, location and general health condition;
  - Tree locations were identified using a combination of aerial photography and a topographic survey;
  - Representative photographs were taken, which are on file at WSP;
  - Refer to Appendix B for a photographic inventory.
- 

### 5.1.1 TREE ASSESSMENT & IDENTIFICATION CRITERIA

Individual trees with a DBH greater than 10 cm within the study area limits were tagged as below:

- Individual trees within the ROW were tagged with pre-numbered metal tree tags where possible; however, trees within front lawns, even where they were considered to be within the ROW, were not tagged and were instead assigned alpha-numeric identifiers, e.g. A1.
  - Trees within the study area with a dripline that continuously overlapped adjacent trees were assessed as groupings e.g. TG1.
- 

## 5.2 TREE INVENTORY RESULTS

A total of **599 trees** were assessed for this report:

- 371 individual trees:
  - Tree numbers from A1 to A324;
  - Tree numbers from 501 to 539;
  - Tree numbers from 201 to 208.
- 228 trees in 21 tree groupings:
  - TG-1 to TG-21.

Refer to Section 2.2 for a detailed description of trees and location and Appendix A for details on the inventory of each tree.

The majority of trees were inferred to be within the Town property limits; however, it was difficult to discern the location of non-surveyed trees as many of these trees were located on residential lawns whereby it was difficult to determine the property limit. Some trees located on private property were captured within this inventory as their canopies overlapped the proposed work area. Refer to the following table for a breakdown of trees by location.

**Table 5.1 – Tree Location**

Property Type	Tree Numbers	Subtotal
Town	201, 202, 203, 204, 205, 206, 207, 208, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 529, 530, 531, 532, 533, 534, 535, A100, A101, A102, A103, A104, A11, A122, A123, A126, A13, A133, A134, A135, A14, A143, A144, A145, A146, A147, A149, A150, A153, A154, A155, A156, A157, A158, A159, A16, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200, A201, A202, A203, A204, A205, A206, A207, A208, A209, A210, A223, A224, A225, A227, A228, A229, A230, A231, A232, A233, A234, A235, A236, A243, A244, A245, A246, A247, A248, A249, A25, A250, A251, A252, A253, A26, A262, A267, A27, A272, A275, A276, A277, A278, A279, A28, A280, A282, A283, A284, A289, A29, A290, A291, A292, A294, A295, A296, A297, A298, A299, A30, A300, A306, A307, A308, A309, A31, A310, A311, A312, A313, A314, A316, A317, A318, A32, A320, A321, A35, A37, A41, A42, A43, A44, A48, A50, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A64, A68, A69, A70, A71, A77, A78, A79, A80, A81, A82, A83, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A98, A99, TG10 (18 trees), TG11 (45 trees), TG12 (6 trees), TG15 (5 trees), TG16 (7 trees), TG17 (4 trees), TG18 (4 trees), TG19 (5 trees), TG20 (9 trees), TG21 (16 trees), TG3 (10 trees), TG4 (3 trees), TG5 (5 trees), TG6 (10 trees), TG7 (10 trees), TG8 (3 trees), TG9 (6 trees)	395
Private	511, 512, 513, 514, 515, 516, 527, 528, 536, 537, 538, 539, A1, A10, A105, A106, A107, A108, A109, A110, A111, A112, A113, A114, A115, A116, A117, A118, A119, A12, A120, A121, A124, A125, A127, A128, A129, A130, A131, A132, A136, A137, A138, A139, A140, A141, A142, A148, A15, A151, A152, A17, A18, A19, A2, A20, A21, A211, A212, A213, A214, A215, A216, A217, A218, A219, A22, A220, A221, A222, A226, A23, A237, A238, A239, A24, A240, A241, A242, A254, A255, A256, A257, A258, A259, A260, A261, A263, A264, A265, A266, A268, A269, A270, A271, A273, A274, A281, A285, A286, A287, A288, A293, A3, A301, A302, A303, A304, A305, A315, A319, A322, A323, A324, A33, A34, A36, A38, A39, A4, A40, A45, A46, A47, A49, A5, A51, A6, A63, A65, A66, A67, A7, A72, A73, A74, A75, A76, A8, A84, A9, A97, TG1 (10 trees), TG13 (23 trees), TG14 (8 trees), TG2 (7 trees), and TG4 (14 trees)	204
<b>Totals</b>		<b>599</b>

# 6 DISCUSSION

This section is a discussion of the retention potential, preservation and / or impacts to trees within the limits of the proposed site development. Proposed works, vegetation recommendations, impacts and preservation are detailed in the following sections.

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## 6.1 PROPOSED WORKS

Proposed works are shown on the Tree Preservation Plans. The anticipated proposed works related to the reconstruction and active transportation development include:

- Proposed asphalt roadway;
  - Proposed 1.5 – 2m concrete sidewalks;
  - Proposed 1.5 – 2m cycle lane;
  - Proposed 3m multi use path;
  - Proposed 1.5 – 2m and 4m mixed cross ride;
  - Proposed bioswale and planting strips;
  - Proposed 2.4m parking lane;
  - Proposed 0.5m asphalt buffer / maintenance strips;
  - Proposed mountable curb;
  - Proposed 2.5m crosswalk;
  - Proposed 5.05 boulevard;
  - Proposed roundabout;
  - Proposed hydro poles;
  - Utility pole / fire hydrant relocation.
- 

## 6.2 TREE RECOMMENDATIONS / ASSUMPTIONS

The design, infrastructure installation and grading works have been proposed as part of preliminary design drawings prepared by WSP Canada Inc. The site plan elements have been illustrated on the Tree Preservation Plans.

The following recommendations / assumptions apply to trees that are to be removed, preserved, or retained.

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### 6.2.1 TREE REMOVAL

- Tree removal is recommended when the amount of impact is likely to cause a significant and irreversible decline in health of the tree;
- Tree removal is based on the degree of excavation / disturbance within the TPZ and considers tree species, size, condition and the number of critical roots that would be impacted that are vital to sustaining the trees overall health and stability;
- This designation may also be applied to trees that are dead; in poor condition or trees that could pose future safety concerns; and trees dying because of a disease or insect infestation.

## 6.2.2 TREE PRESERVATION

- Preservation of trees is considered where an encroachment, excavation or disturbance into the TPZ is expected to be minor or nil and that tree health and stability will not be adversely impacted;
- The implementation of mitigation measures will reduce potential impacts to the tree therefore allowing the tree to be preserved e.g. air-spade excavation and / or horizontal root protection.

## 6.2.3 TREE RETENTION

- Proposed works will occur beyond the TPZ and the dripline with no impacts to the tree. Trees can be retained and do not require tree protection hoarding.

## 6.3 TREE REMOVALS

Where the impact to the root zone and branch removal will be significant and is likely to cause an irreversible decline in health of the tree from the removal or damage of structural and critical roots, tree removal is recommended.

- Impacts to trees will occur where trees are located within the limits of the proposed transportation infrastructure including:
  - Sidewalks, cycle lane, multi use path, bioswale / planting strips, and asphalt buffer / maintenance strips.
- A total of **349 trees** are recommended for removal;
- The following table provides details on the location of trees to be removed.

**Table 6.1 – Tree Removal Table**

Property Type	Tree Numbers	Subtotal
Town	201, 205, 206, 501, 502, 510, 517, 520, 521, 522, 523, 524, 525, 526, 529, A100, A102, A103, A122, A123, A126, A13, A133, A134, A135, A14, A143, A144, A145, A146, A147, A150, A156, A157, A158, A159, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A202, A203, A204, A205, A206, A207, A208, A209, A210, A223, A224, A225, A236, A243, A244, A245, A246, A247, A248, A249, A250, A251, A252, A253, A276, A277, A278, A279, A28, A280, A289, A29, A290, A291, A292, A294, A295, A296, A297, A298, A299, A300, A306, A307, A308, A309, A310, A311, A312, A313, A314, A316, A35, A41, A42, A43, A44, A48, A50, A59, A60, A61, A62, A69, A70, A71, A77, A78, A79, A80, A81, A82, A83, A86, A87, A88, A89, A90, A93, A95, TG10 (18 trees), TG11 (45 trees), TG12 (6 trees), TG15 (5 trees), TG16 (7 trees), TG18 (4 trees), TG19 (5 trees), TG20 (9 trees), TG21 (16 trees), TG3 (10 trees), TG4 (3 trees), TG7 (10 trees), and TG8 (3 trees)	297
Private	511, 512, 513, 514, 515, 516, 536, 537, A10, A111, A12, A124, A136, A141, A142, A213, A214, A222, A237, A281, A3, A301, A33, A34, A36, A4, A84, A9, TG1 (10 trees), and TG4 (14 trees)	52
<b>Totals</b>		<b>349</b>

### 6.3.1 ROOT PRUNING

- Excavation for the proposed roadwork infrastructure will require root pruning, specifically trees within proposed sidewalks, cycle lanes, bioswale /planting strips, asphalt buffer/ maintenance strips, and multi-use paths. In these locations the work will encroach into the dripline and root zone of trees and have the potential to damage roots and/or branches through excavation and mobilization of equipment.
- At total of **120 trees** will require pruning due to construction activities;
- To mitigate the potential damage to trees, the following recommendations are proposed:
  - As roots are exposed during excavation, prune at the limit of excavation;
  - Where possible, excavate in the same direction as the roots to minimize breakage;
  - Roots are to be pruned neatly and cleanly with proper / approved tools (i.e. by-pass secateurs, chain saw, hand saw);
  - Pruning to be undertaken by a certified arborist or under the supervision of one;
  - Backfill immediately after excavation;
  - Should excavation occur in the summer months (June to September), periodically water trees to minimize shock and potential for decline.
  - Refer to Section 7.3 for Root Pruning Practices.
- Refer to Table 6.2 which identifies the quantities and tree numbers per location and Table 6.3 which includes details for each tree. Refer to Sections 7 for mitigative measures.

**Table 6.2 – Root Pruning Table**

LOCATION	TREE NUMBERS	SUBTOTAL
Town	A235, A267, A272, A54, 202, 504, 530, 531, A101, A104, A149, A16, A282, A283, A284, A30, A317, A318, A320, A321, A52, A55, A56, A57, A64, A85, A91, A92, A96, A98, A99, A27, and A26	33
Private	A105, A112, A115, A117, A119, A120, A121, A130, A131, A132, A148, A151, A152, A240, A254, A256, A258, A293, A39, A7, A72, A73, A8, A97, 527, 528, 538, 539, A1, A109, A110, A113, A114, A116, A118, A125, A129, A2, A21, A211, A212, A216, A217, A219, A22, A220, A221, A226, A23, A238, A241, A242, A257, A259, A260, A264, A265, A266, A268, A269, A270, A271, A273, A285, A286, A287, A288, A302, A303, A304, A305, A315, A319, A46, A5, A51, A6, A74, A75, A76, and TG2 (7 trees)	87
<b>Total</b>		<b>120</b>

**Table 6.3 – Root Pruning and Mitigation Table**

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
202	Eastern White Cedar	MS 25, 16, 14, 10	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	During excavation any roots exposed are to be pruned at the limit of disturbance using air-spade / hydro-vacuum excavation and accepted pruning techniques (see

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
					Sections 7.2, 7.3, and 7.4). This measure will enable pruned root ends to sprout new roots once construction has been completed and site has been restored and ensure that structural stability and health will remain unchanged. Refer to Section 7.
504	Sugar Maple	27	1.8	Excavation for the proposed multi-use path will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
527	Manitoba Maple	MS: 37, 17	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
528	Manitoba Maple	33	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
530	Scots Pine	19	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
531	Eastern White Cedar	21	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
538	Apple sp.	21	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
539	Apple sp.	MS: 15, 15, 9, 9, 7, 10, 10	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A1	Sugar Maple	95	6	Excavation for the proposed multi-use path, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A2	American Basswood	MS: 95, 105	6.3	Excavation for the proposed multi-use path, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A5	Eastern White Pine	47	3	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A6	Eastern White Pine	46	3	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A7	Manitoba Maple	MS: 18, 22, 22	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A8	Eastern White Pine	37	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A16	Northern Red Oak	48	3	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A21	White Spruce	30	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A22	Blue Spruce	30	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A23	Norway Maple	30	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A26	Silver Maple	MS: 11, 12, 14, 11, 18, 22	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A27	American Elm	MS: 18, 30, 32	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A30	Blue Spruce	30	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A39	Norway Maple	MS: 12, 14	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A46	Eastern White Pine	35	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A51	Eastern White Cedar	18	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A52	Scots Pine	30	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.



TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A54	Scots Pine	25	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A55	Scots Pine	22	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A56	Scots Pine	16	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A57	Scots Pine	14	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A64	Eastern White Cedar	30	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A72	White Spruce	18	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A73	White Spruce	20	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A74	White Spruce	26	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A75	White Spruce	28	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A76	White Spruce	31	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A85	Norway Spruce	29	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A91	White Spruce	29	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A92	White Spruce	29	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A96	Eastern White Cedar	MS: 10, 8	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A97	White Spruce	29	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A98	Sugar Maple	16	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A99	Paper Birch	MS: 15, 16	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A101	Eastern White Cedar	MS: 8, 11, 12, 13	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A104	Sugar Maple	MS: 12, 5	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A105	Red Maple	MS: 18, 27	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A109	Eastern White Pine	42	3	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A110	Apple sp.	MS: 10, 16, 17	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A112	Paper Birch	MS: 4, 5, 5, 5, 6	1.2	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A113	Paper Birch	MS: 9, 14, 15, 17, 18, 18	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A114	Trembling Aspen	37	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A115	Balsam Fir	15	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A116	Ash sp.	42	3	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A117	White Spruce	40	2.4	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A118	Sugar Maple	32	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A119	Red Maple	MS: 16, 18, 18, 25	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A120	Eastern White Pine	27	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A121	Eastern White Pine	33	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A125	Norway Maple	22	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A129	Norway Maple	25	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A130	Eastern White Pine	38	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A131	Paper Birch	31	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A132	Trembling Aspen	18	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A148	White Spruce	15	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A149	Paper Birch	MS: 12, 12, 11, 7, 9, 16, 13	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A151	White Spruce	18	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A152	Northern Red Oak	42	3	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A211	Scots Pine	47	3	Excavation for the proposed roundabout will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A212	Scots Pine	18	1.8	Excavation for the proposed roundabout will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A216	Eastern White Cedar	25	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A217	Emerald cedar	MS: 10, 10, 10, 8, 4	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A219	Scots Pine	24	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A220	Eastern White Cedar	24	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A221	Eastern White Cedar	22	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A226	Norway Maple	30	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A235	Eastern White Cedar	MS: 20, 20, 20, 18, 10, 8	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A238	Norway Maple	30	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A240	Scots Pine	35	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A241	White Spruce	15	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A242	White Spruce	30	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A254	Eastern White Pine	55	3.6	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A256	Cherry sp.	20	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A257	Paper Birch	MS: 12, 14	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A258	Eastern White Cedar	17	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A259	Silver Maple	MS: 12, 12, 15, 15, 8, 10, 14	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A260	Silver Maple	38	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A264	Norway Maple	15	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A265	Paper Birch	16	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A266	Black Walnut	30	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A267	Cherry sp.	17	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A268	Black Pine	37	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A269	Black Pine	34	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A270	Black Pine	31	2.4	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A271	Black Pine	24	1.8	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A272	Paper Birch	MS: 16, 16	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A273	Black Locust	MS: 48, 48	3	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A282	Scots Pine	49	3	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A283	Scots Pine	49	3	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A284	Scots Pine	47	3	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A285	Scots Pine	52	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A286	Scots Pine	52	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A287	Scots Pine	52	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A288	Scots Pine	52	3.6	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A293	Eastern White Cedar	38	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

TREE #	SPECIES	DBH (cm)	TPZ	INJURY	MITIGATION & SURVIVAL
A302	Scots Pine	53	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A303	Scots Pine	55	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A304	Scots Pine	54	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A305	Scots Pine	52	3.6	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A315	Norway Spruce	26	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A317	Siberian Elm	26	1.8	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A318	Trembling Aspen	29	1.8	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A319	American Elm	MS: 36, 37	2.4	Excavation for the proposed sidewalk and cycle lane will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A320	Paper Birch	MS: 10, 4, 4, 12	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
A321	Poplar sp.	25	1.8	Excavation for the proposed sidewalk, cycle lane, and bioswale / planting strip will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.
TG2 (7 trees)	Eastern White Cedar / Eastern White Pine	MS: 10 to 20	1.8	Excavation for the proposed sidewalk will cause potential damage to roots.	Root pruning and air-spade / hydro-vacuum excavation. See note for tree # 202.

## 6.4 TREE PRESERVATION

Trees that are well beyond construction limits with no encroachment into the TPZ can be retained. These trees will not require tree protection hoarding. Trees where construction limits will either encroach into the TPZ or will be

within proximity of the TPZ and / or dripline, will require tree protection hoarding. Table 6.5 details trees by category (retain or preserve), location, tree ID, and minimum TPZ distances for trees.

**Table 6.4 – Minimum Tree Protection Zone Determination**

TRUNK DIAMETER	MINIMUM PROTECTION DISTANCES REQUIRED (CITY OWNED & PRIVATE TREES)	MINIMUM PROTECTION DISTANCES REQUIRED. TREES IN AREAS PROTECTED BY THE RAVINE AND NATURAL FEATURE PROTECTION BY-LAW
		Whichever of the two is greater
<10cm	1.2m	The dripline or 1.2m
10 to 29cm	1.8m	The dripline or 3.6m
30 to 40cm	2.4m	The dripline or 4.8m
41 to 50cm	3.0m	The dripline or 6.0m
51 to 60cm	3.6m	The dripline or 7.2m
61 to 70cm	4.2m	The dripline or 8.4m
71 to 80cm	4.8m	The dripline or 9.6m
81 to 90cm	5.4m	The dripline or 10.8m
91 to 100cm	6.0m	The dripline or 12.0m
>100cm	6 cm protection for each 1cm of diameter	12cm protection for each 1cm of diameter or the dripline

\*City of Toronto (July 2016). *Tree Protection Policy and Specifications for Construction Near Trees*. Toronto Parks, Forestry and Recreation, Urban Forestry.

**Table 6.5 – Tree Preservation Table**

CATEGORY	LOCATION	TREE NUMBERS	MIN. TPZ	QUANTITY
Retain	Town	208, 506, 507, 509, 534, 535, A154, A155, A228, A229, A232, A233, A234, A262, A37, A53, A68, TG5 (5 trees), TG6 (10 trees), TG9 (6 trees), 505, 508, 518, 532, A227, A230, A231, 533, A153, and TG17 (4 tree)	N/A	51
	Private	A108, A17, A18, A19, A20, A239, A261, A263, A322, A323, A324, A65, A66, A67, TG13 (23 trees), and TG14 (8 trees)	N/A	45
<b>Total</b>				<b>96</b>
Preserve	Town	202, 203, 204, 207, 503, 504, 530, 531, A11, A25, A26, A54, A58, A55, A56, A57, A85, A91, A92, A94, A96, A98, A99, A101, A104, A149, A200, A201, A235, A267, A272, A275, A317, A318, A320, and A321	1.8	36
		519, A27, A30, A52, and A64	2.4	5



		A31, A32, A16, A202, A282, A283, and A284	3	7
	Private	A112	1.2	1
		538, 539, A7, A15, A24, A38, A39, A40, A45, A47, A51, A63, A72, A73, A74, A75, A97, A105, A106, A107, A110, A113, A115, A119, A120, A125, A128, A129, A132, A137, A138, A139, A140, A148, A151, A212, A215, A216, A217, A219, A220, A221, A241, A255, A256, A257, A258, A259, A264, A265, A271, A274, A315, and TG2 (7 trees)	1.8	60
		527, 528, A8, A21, A22, A23, A46, A49, A76, A114, A117, A118, A121, A127, A130, A131, A218, A226, A238, A240, A242, A260, A266, A268, A269, A270, A293, and A319	2.4	28
		A152, A109, A116, A211, A273, A5, and A6	3	7
		A254, A285, A286, A287, A288, A302, A303, A304, and A305	3.6	9
		A1	6	1
		A2	6.3	1
<b>Total</b>				<b>155</b>

#### Tree Protection Notes:

There are **155 trees** detailed in Table 6.5 to be preserved in the study area. To protect these trees, install the following fence type:

- Continuous plastic snow fence, 1.22m (4') height wood frames on a 38 x 89mm (2" x 4") wood frame for all trees installed at the extent of TPZs. Hoarding to be secured to the ground and installed with screws.

Tree protective hoarding is to be:

- Installed prior to construction;
- Installed per the minimum TPZ distances detailed on Appendix A and shown on the Tree Preservation Plans;
- Installed as shown on TP-4 of the Tree Preservation Plans and per manufacturers recommendations.

# 7 MITIGATION MEASURES

The survival rates for trees, which are in proximity to construction, are dependent on the resultant changes to a variety of environmental and anthropogenic factors. These construction activities bring about changes to a variety of environmental features such as the existing microclimate that includes winds, air temperature, soil moisture, amount of available sunlight, soil quality, and the level of the water table. Increased human activities may also damage the structure and/or physiological activities of the trees. The full effects of any damage that occurs may not appear until several years after its occurrence. Thus, it is essential that both vegetative clearing and preservation methods follow the guidelines below and those generally accepted as keeping with good horticultural and construction practices. The guidelines are subject to adjustments deemed reasonable and appropriate considering the proximity and number of trees involved and the site-specific servicing requirements.

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## 7.1 GENERAL MITIGATION MEASURES

- Where mitigative measures are not feasible and cannot be implemented and excavation must be done mechanically, root and tree damage are to be minimized through light duty machinery i.e. bobcat, that can excavate soil in the same direction of the roots and not across and under the supervision of a certified arborist. Any roots exposed are to be pruned neatly and cleanly.
- Any roots exposed during grading are to be pruned using good arboricultural practices and per the guidelines in this report;
- Areas where excavation, grading and construction have compacted soil within a reduced TPZ, at the completion of construction, scarify soil to a depth of 100mm. Restore disturbed areas as per Landscape Plans and /or the following methods below;
  - Water trees periodically during construction;
  - After construction it is recommended that a 75mm depth layer of mulch be placed in a 2m radius around the trunks of these trees.
- The tree protection fencing will be maintained until all construction is completed, soils are stabilized, and all the equipment has been removed from the site.
- Prior to the commencement of tree removals, all limits of the locations of the tree preservation fencing must be clearly staked in the field, installed per approved plans, and approved by the contract administrator. All trees within the TPZ must be left standing. The tree removals must be coordinated in accordance and compliance with the Migratory Bird Convention Act (MBCA).
- All removals must be felled into the work area to ensure that damage does not occur to the trees within the TPZ.
- Upon completion of the tree removals, all felled trees are to be removed from the site, and all should be brush chipped. All brush, roots and wood debris must be shredded into pieces that are smaller than 25 mm in size to ensure that any insect pests that could be present within the wood are destroyed.
- The Canadian Food and Inspection Agency (CFIA) has issued a prohibition of movement where the Emerald Ash Borer (EAB) has been confirmed. EAB has been found within the Town of Innisfil and it is within the EAB Regulated Area. This directive pertains to the movement of regulated materials (including but not limited to ash wood or bark and ash wood chips or bark chips) from a regulated area. EAB regulated articles moving out of a regulated area must be accompanied by a Movement Certificate issued by the CFIA. Refer to the EAB Regulated Areas of Canada found on the CFIA website.
- Tree protection fencing must be constructed and installed as per the details on the approved Tree Preservation Plan. Upon installation of the fencing, the contractor will contact the contract administrator to review and approve the fencing and its location prior to commencement of any grading work.

- Areas within the TPZ are not to be used for any type of storage (e.g. storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the TPZ or dripline of trees designated for preservation within or adjacent to the construction zone.
- No grade changes shall occur within TPZ unless approved as part of this report. If any grade changes may occur, either as a cut or fill situation, the consulting certified arborist must be notified prior to such work occurring to ensure that all precautions to preserve the tree are made.
- Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees.
- If it is necessary to remove additional limbs or portions of trees after construction has commenced, to accommodate the construction, the consulting certified arborist is to be informed and under their direction the removal is to be executed carefully and in full accordance with arboricultural techniques, by a certified arborist.

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## 7.2 AIR-SPADE / HYDRO-VACUUM EXCAVATION

Where excavation will occur within the softscape boulevard and TPZs will be reduced, air-spade excavation is recommended to minimize the damage to roots within a TPZ.

**This measure is to be used for all trees requiring root pruning (118 trees). Refer to Table 6.2 – Root Pruning Table.** Prior to excavation and construction the following measures are to be applied:

- At the limit of the TPZ and proposed grading or construction activity, hydro-vacuum excavate to a depth of 300mm along the length of the TPZ distance and at a width of 0.5m to expose roots;
- Ensure that the pressure used from the hydro-vacuum is such that it will not damage roots during excavation;
- Prune any roots in this area using good arboricultural practices per the guidelines in this report or under the supervision of a certified arborist;
- Backfill with excavated material and reinstate to original condition or better;
- Upon completion reinstate tree protection fencing to original location;
- Water trees periodically during construction;
- Restore disturbed areas with a layer of 75mm depth mulch in a 2m radius around the trees.
- It is recommended that this measure be applied while a certified arborist is present.

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## 7.3 ROOT PRUNING PRACTICES

- All approved root pruning is to take place by or under the supervision of an certified arborist and in accordance with the Toronto Tree Protection Specifications.
- Pruned root ends shall be neatly and squarely trimmed, and the area shall be backfilled with clean native fill as soon as possible to prevent desiccation and promote root growth.
- The exposed roots shall not be allowed to dry out and an appropriate watering schedule shall be undertaken (e.g. water bi-weekly to field capacity between **June 1st and September 15th**) so that the roots maintain optimum soil moisture during construction and backfilling operations.
- Backfilling shall occur immediately and shall be with clean uncontaminated topsoil from an approved source. It is recommended that texture of backfill be coarser than existing soils, and that backfill comes into clean contact with existing soils (remove air pockets, sod, etc.)
- Pruning to be conducted by a certified arborist.

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## 7.4 BRANCH PRUNING PRACTICES

- All limbs damaged or broken during the course of construction should be pruned cleanly, utilizing by-pass secateurs in accordance with approved horticultural practices. Should there be a potential risk of transfer of disease from infected to non-infected trees, tools must be disinfected after pruning each tree by dipping in methyl hydrate. This practice is particularly important during periods of tree stress and when pruning many members of the same genera, within which a disease could be spread quickly (i.e., Verticillium Wilt on Maples or Fireblight on genera of the Rosaceae family).
- All pruning cuts should be made to a growing point such as a bud, twig or branch, cut just outside the branch collar (the swollen area at the base of the branch that sometimes has a bark ridge), and perpendicular to the branch being pruned rather than as close to the trunk as possible. This minimizes the site of the wound. No stubs should be left. Poor cut location, poor cut angle and torn cuts are not acceptable.
- Extensive pruning is best completed before plants break dormancy. Pruning should be limited to the removal of no more than 25% of the total bud and leaf bearing branches. Pruning should include the careful removal of:
  - Deadwood;
  - branches that are weak, damaged, diseased and those which will interfere with construction activity,
  - secondary leaders of conifers,
  - trunk and root suckers,
  - trunk waterspouts, and
  - tight V-shaped or weak crotches (included unions).
- Any branches that overhang the work area and require pruning are to be pruned using good arboricultural practices utilizing by-pass secateurs in accordance with approved horticultural practices and/or American National Standard (ANSI) A300 (Part 1) – 2008 Pruning.
- The Contractor must report immediately any damage to trees such as broken limbs, damage to roots, or wounds to the main trunk or stem systems so that the damage can be assessed immediately.
- Pruning to be conducted by a certified arborist.

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## 7.5 MIGRATORY BIRD PROTECTION:

- To reduce the possibility of contravention of the MBCA, vegetation removal should be scheduled to occur outside of the overall bird nesting season of **April 1 to August 31**. Some birds may nest before and after this peak bird nesting season due to annual seasonal fluctuations. If a nest of a migratory bird is found within the construction area outside of this nesting period, it still receives protection.
  - In addition to the bird nesting season, tree removals should also occur outside of the active period for bats (e.g. up to the end of September), therefore considering the bird nesting and bat active seasons, clearing of trees is permitted between **October 1 to March 31**.
- If vegetation must be removed during the overall bird nesting season:
  - Nest and nesting activity searches will be conducted in areas defined as simple habitat (i.e., the CUM1-1 community) by a qualified Biologist no more than 24 hours prior to vegetation removal. Nesting activity will be documented when it consists of confirmed breeding evidence, as defined by OBBA criteria (Cadman, 2009).
  - If an active nest or confirmed nesting activity of a migratory bird is observed in simple habitat, regardless of the timing window recommended, a species-specific buffer area following ECCC guidelines will be applied to the nest or confirmed nesting activity wherein no vegetation removal will be permitted until the young have fledged from the nest. The radius of the buffer will depend on species, level of disturbance and

landscape context (ECCC 2018), which will be confirmed by a qualified Biologist, but will protect a minimum of 10 m around the nest or nesting activity.

- The results of all nest searches will be documented at the end of each survey day in a Technical Memorandum, including information on the searcher, date, time conducted, weather conditions, habitat type, vegetation community type, observations of breeding activity, observations of confirmed nests including co-ordinates, and, if required, the buffer applied to identified breeding/nesting sites.
- If vegetation removal must occur in complex habitats within the above-listed timing windows and absolutely cannot be avoided, the same Best Management Practices (BMPs) such as nest and nesting activity searches described above will be undertaken.

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## 7.6 CONSTRUCTION IMPLEMENTATION

- Prior to construction, a site meeting shall be held with the Contractor and Contract Administrator to review the clearing limits and confirm the installation location for the temporary tree protection fence.
- Tree protection barriers shall be clearly staked in the field and approved by the Contract Administrator prior to construction to ensure correct positioning of fencing and avoid unnecessary disturbance.
- To avoid root zone impacts on trees to be retained, excavated material shall not be stored against the tree protection barrier.
- All removals should be felled into the work area to ensure that damage does not occur to the trees within the TPZ. Upon completion of the tree removals, all felled trees are to be removed from the site, and all brush chipped. All brush, roots and wood debris should be shredded into pieces that are smaller than 25 mm in size to ensure that any insect pests that could be present within the wood are destroyed.

## 8 CONCLUSION

Trees within the study area are a mix of deciduous and coniferous trees ranging from young, semi-mature and mature trees. Trees in the northern portion of the study area are primarily naturally occurring within farmland and wooded areas while those in the central and southern portions are primarily planted and within residential and commercial areas. Most trees are situated on Town property or on the front lawns of private property. Additionally, several sections of the study area are within LSRCA limits.

Impacts to trees in proximity to the proposed works will be quite high and will require the removal of three hundred and forty-nine (349) trees. In addition to tree removals, one-hundred and twenty (120) trees will require root pruning and air-spade / hydro-vacuum excavation. Given the implementation of the mitigation measures enclosed in this report, including protection of trees beyond the construction limits, significant impacts to trees to be preserved are not anticipated.

Vegetation has been recommended to be retained or preserved beyond the construction limits. Proposed mitigation measures will minimize the detrimental effects from construction activities and will help to ensure that good tree health will continue. Care should be taken to protect trees to be preserved with tree protection fencing as illustrated on the attached plans. Tree protection fencing shall be erected prior to the start of the proposed works and maintained for the duration of the work. Priority should be given to protecting vegetation that will not be impacted by grading and construction as this vegetation along property lines provides a visual barrier, shade, noise and wind buffer between properties.

## 9 LITERATURE CITED

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- Lily, Sharon. J. 2010. Arborists' Certification Study Guide. International Society of Arboriculture.
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- Canadian Food Inspection Agency. January 14, 2021 (5<sup>th</sup> Revision). D-03-08: Phytosanitary Requirements to Prevent the Introduction Into and Spread Within Canada of the Emerald Ash Borer, *Agrilus planipennis* (Fairmaire).
- Canadian Food Inspection Agency. Areas Regulated for the Emerald Ash Borer. Mapping. Date Modified: 2021-03-16. <https://www.inspection.gc.ca/plant-health/plant-pests-invasive-species/directives/forest-products/d-03-08/areas-regulated/eng/1347625322705/1347625453892>
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- Government of Canada. 1994. Migratory Birds Convention Act, S.C. 1994, c. 22.
- Government of Canada. Migratory Birds Regulations. C.R.C., c. 1035. Last amended on May 30, 2018.
- Government of Ontario. 2007. Endangered Species Act, 2007, S.O. 2007, c. 6.
- Tree Care Industry Association. 2008. ANSI-A300-Part 1. Tree Shrub and Other Woody Plant Management – Standard Practices. Pruning.

# 10 LIMITATIONS OF ASSESSMENT

- It is our policy to attach the following clause regarding limitations. We do this to ensure that the client is aware of what is technically and professionally realistic in retaining trees.
- The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These include a visual examination 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 and direction of lean (if any), the general condition of the trees and the surrounding site, and the proximity of property and people. Except where specifically noted, the trees were not cored, probed or climbed and there was no detailed inspection of the root crowns involving excavations.
- 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.
- While reasonable efforts have been made to ensure that the subject trees are healthy, no guarantees are offered, or implied, that these trees or any of their parts will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or its component parts under all circumstances. Inevitably, a standing tree will always pose some level of risk. Most trees have the potential for failure under adverse weather conditions, and the risk can only be eliminated if the tree is removed.



# APPENDIX

# A

## TREE PRESERVATION TABLES

## Appendix A: Tree Preservation Tables

Project: 25th Sideroad Innisfil															
Field Work Completed By: Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin															
Date of Field Work: October 18-20, 26, and 29, 2021															
Weather: Approx 7C, sun and cloud															
Tree Condition Assessment Criteria:															
Tree Condition:															
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.															
Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CS - Canopy Structure: assessment of scaffold branches, unions and canopy															
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CV - Canopy Vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown															
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
Colour Coding Legend:															
Trees to be Retained															
Trees to be Preserved															
Trees to be Removed															
Minimum TPZ reduction															
Trees to be Pruned															
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
501	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	109	F	F	P	8	14	Town	6.54	Remove	Peeled bark, EAB, dead and broken branches, almost zero canopy	Encroachment into the root zone and poor health.
502	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	MS: 31,15,20	P	P	P	5	14	Town	2.4	Remove	Multi stem at base, potentially dead, no canopy, peeling bark, EAB	Encroachment into the root zone and poor health.
503	ULMUAME	<i>Ulmus americana</i>	American Elm	1	MS: 17,17	F	G	G	4	13	Town	1.8	Preserve/TPZ reduction	Multi stem at 0.75 m	
A1	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	95	P	P	F	7	16	Private	6	Preserve/Prune/TPZ reduction	Canopy overhanging public property to road, trunk wounds, missing bark, fruiting bodies, lots of dead broken branches, lots of cavities, not much canopy	
A2	TILIAME	<i>Tilia americana</i>	American Basswood	1	MS: 95,105	F	G	G	8	16	Private	6.3	Preserve/Prune/TPZ reduction	Multi stem at base, canopy overhanging road, slight lean	
TG1	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	10	40 to 50	G-F	G-F	G-F	Up to 7m	16	Private	3	Remove	Canopies overhanging road/gravel on side of road	Encroachment into the root zone
504	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	27	G	G	G	4	13	Town	1.8	Preserve/Prune/TPZ reduction		
A3	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	30	G	G	G	5	11	Private	2.4	Remove	Topped under powerlines, on other side of ditch/creek, didn't tag	Encroachment into the root zone
A4	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	17	G	G	G	2.5	6	Private	1.8	Remove	On other side of ditch/creek, didn't tag	Encroachment into the root zone
TG2	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	5	10 to 20	G	G	G	2.5	6	Private	1.8	Preserve/Prune/TPZ reduction	Topped under powerlines	
TG2	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	2	10 to 20	G	G	G	5	Up to 8	Private	1.8	Preserve/Prune/TPZ reduction	Topped under powerlines	
A5	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	47	G	G	G	8	16	Private	3	Preserve/Prune/TPZ reduction	Canopy overhanging ROW	
A6	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	46	G	G	G	8	16	Private	3	Preserve/Prune/TPZ reduction	Canopy overhanging ROW	
A7	ACERNEG	<i>Acer negundo</i>	Manitoba Maple	1	MS: 18,22,22	F	G	G	4	10	Private	1.8	Preserve/Prune	Multi stem at base	
A8	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	37	G	G	G	7	13	Private	2.4	Preserve/Prune	Canopy overhangs ROW	
A9	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	MS: 18,20	F	F	F	3	10	Private	1.8	Remove	Multi stem at 0.5 m, not much canopy, didn't tag on other side of ditch /on front lawn	Encroachment into the root zone
A10	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	25	G	G	F	4	10	Private	1.8	Remove	Missing some canopy, didn't tag on other side of ditch /on front lawn	Encroachment into the root zone
505	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	MS: 25,30	F	G	G	4	14	Town	2.4	Retain	Multi stem at base, slight lean	
506	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	18	F	G	G	2	10	Town	1.8	Retain	Slight lean	
507	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	24	F	G	G	3	14	Town	1.8	Retain	Slight lean	
508	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	30	F	G	G	3	14	Town	2.4	Retain	Slight lean	
509	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	24	F	G	G	2.5	14	Town	1.8	Retain	Slight lean	
A11	ROBIPSE	<i>Robinia pseudoacacia</i>	Black Locust	1	MS: 7,10	F	G	G	4	8	Town	1.8	Preserve	Multi stem at 0.5 m, didn't tag on other side of creek	Encroachment into the root zone
A12	ROBIPSE	<i>Robinia pseudoacacia</i>	Black Locust	1	MS: 8,12,16	F	G	G	4	10	Private	1.8	Remove	Multi stem at 0.5 m, didn't tag on other side of creek	Encroachment into the root zone
A13	ROBIPSE	<i>Robinia pseudoacacia</i>	Black Locust	1	MS: 10,12	F	G	G	4	10	Town	1.8	Remove	Multi stem at 0.5 m, didn't tag on other side of creek	Encroachment into the root zone
A14	ROBIPSE	<i>Robinia pseudoacacia</i>	Black Locust	1	MS: 11,19	F	G	G	4	10	Town	1.8	Remove	Multi stem at 0.5 m, didn't tag on other side of creek	Encroachment into the root zone
A15	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 22,15,12	F	G	G	3.5	10	Private	1.8	Preserve	Multi stem at base, didn't tag, on other side of creek/on front lawn	
A16	QUERRUB	<i>Quercus rubra</i>	Northern Red Oak	1	48	G	G	G	6	14	Town	3	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A17	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	52	G	G	G	6	16	Private	3.6	Retain	Didn't tag, on property line/in front lawn	
A18	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	48	F	G	G	6	16	Private	3	Retain	Didn't tag, on property line/in front lawn, leaning	
A19	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	52	G	G	G	6	16	Private	3.6	Retain	Didn't tag, on property line/in front lawn	
A20	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	MS: 42, 23	F	G	G	8	16	Private	3	Retain	Didn't tag, on property line/in front lawn, multi stem at 1m	
A21	PICEGLA	<i>Picea glauca</i>	White Spruce	1	30	G	G	G	5	15	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	

**Appendix A: Tree Preservation Tables**

Project:		25th Sideroad Innisfil		Field Work Completed By:		Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin									
Date of Field Work:		October 18-20, 26, and 29, 2021		Weather:		Approx 7C, sun and cloud									
Tree Condition Assessment Criteria:				Tree Condition:											
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.				Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CS - Canopy Structure: assessment of scaffold branches, unions and canopy				Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
Colour Coding Legend:															
Trees to be Retained				Trees to be Removed				Minimum TPZ reduction							
Trees to be Preserved								Trees to be Pruned							
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A22	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	30	G	G	P	4	15	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn.	
A23	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	30	G	G	G	4	13	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A24		<i>Morus alba 'Pendula'</i>	Weeping Mulberry	1	10	G	G	G	1.5	4	Private	1.8	Preserve	Didn't tag, on property line/in front lawn	
A25	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	11	G	G	G	3	5	Town	1.8	Preserve	Didn't tag, on property line/in front lawn	
A26	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	MS: 11,12,14,11,18,22	F	G	G	5	15	Town	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn, multi stem at base	
A27	ULMUAME	<i>Ulmus americana</i>	American Elm	1	MS: 18,30,32	F	G	G	6	16	Town	2.4	Preserve/Prune	Didn't tag, on property line/in front lawn	
A28	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	30	G	F	G	4	7	Town	2.4	Remove	Didn't tag, on property line/in front lawn, topped under powerlines	Encroachment into the root zone
A29	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	32	G	F	G	4	7	Town	2.4	Remove	Didn't tag, on property line/in front lawn, topped under powerlines	Encroachment into the root zone
A30	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	30	G	F	G	4	7	Town	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, topped under powerlines	
A31	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	MS: 11,45,25	F	G	G	7	16	Town	3	Preserve	Didn't tag, on property line/in front lawn, multi stem at 0.5 m	
A32	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	49	F	G	G	7	16	Town	3	Preserve	Didn't tag, on property line/in front lawn, leaning, multi stem at 1.5 m	
TG3	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	3	10 to 19	G to F	G	G	Up to 3	Up to 14	Town	1.8	Remove	Some multi stem, TG on fence line	Encroachment into the root zone
TG3	ULMUAME	<i>Ulmus americana</i>	American Elm	1	18	G	G	F	4	13	Town	1.8	Remove	Missing canopy - unsure if just due to season	Encroachment into the root zone
TG3	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	5	20 to 29	G to F	G	G	Up to 3	Up to 14	Town	1.8	Remove	Some multi stem	Encroachment into the root zone
TG3	ULMUAME	<i>Ulmus americana</i>	American Elm	1	25	F	G	G	4	14	Town	1.8	Remove	Lean	Encroachment into the root zone
A33	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	38	F	G	G	3	16	Private	2.4	Remove	Didn't tag, in front lawn, trunk wounds - looks like remnants of broken stem	Encroachment into the root zone
A34	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	MS: 15, 36	F	G	G	4	16	Private	2.4	Remove	Didn't tag, in front lawn, multi stem at 0.5 m	Encroachment into the root zone
A35	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	18	F	G	G	3	9	Town	1.8	Remove	Didn't tag, on property line/in front lawn, slight lean, topped under powerlines	Encroachment into the root zone
TG4	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	14	10 to 19	G to F	G	G	Up to 12	Private	1.8	Remove	Some multi stem	Encroachment into the root zone	
TG4	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	2	10 to 19	G to F	G	G	Up to 12	Town	1.8	Remove	Some multi stem	Encroachment into the root zone	
TG4	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	20 to 29	F	F	F	Up to 12	Town	1.8	Remove	Topped under powerlines	Encroachment into the root zone	
A36	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	30	G	G	G	4	16	Private	2.4	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone
510	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	15	G	G	G	3	11	Town	1.8	Remove		Encroachment into the root zone
A37	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	10	G	G	G	2.5	8	Town	1.8	Retain	Didn't tag, on property line/in front lawn	
A38	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	11	G	G	G	2.5	7	Private	1.8	Preserve	Didn't tag, on property line/in front lawn	
A39	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	MS: 12,14	F	G	G	3	10	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn, multi stem at base	
A40	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	MS: 18,21, 23	F	G	G	2	10	Private	1.8	Preserve	Didn't tag, on property line/in front lawn, multi stem at base	
511	AESCHIP	<i>Aesculus hippocastanum</i>	Horse Chestnut	1	37	G	G	F	4	12	Private	2.4	Remove	Lots of leaves browning and dry	Encroachment into the root zone
512	PICEGLA	<i>Picea glauca</i>	White Spruce	1	24	G	G	F	3	11	Private	1.8	Remove	Appears to be topped	Encroachment into the root zone
513	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 13,11	F	G	G	2	12	Private	1.8	Remove	Multi stem at base	Encroachment into the root zone
514	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	12	G	G	G	2	12	Private	1.8	Remove		Encroachment into the root zone
515	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 11, 7	F	G	G	2	12	Private	1.8	Remove	Multi stem at base	Encroachment into the root zone
516	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	14	G	G	G	2	12	Private	1.8	Remove		Encroachment into the root zone
TG5	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	2	10 to 19	G	G	G	3	12	Town	1.8	Retain		
TG5	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	3	10 to 19	F	G	G	2	12	Town	1.8	Retain	Multi stem at base	
TG6	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	10	10 to 19	F	G	G	Up to 3	7	Town	1.8	Retain	Multi stem at base	
517	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	11	G	G	G	2	7	Town	1.8	Remove		Encroachment into the root zone
A41	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	42	F	G	G	5	15	Town	3	Remove	Y at 4 m	Encroachment into the root zone
A42	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	14	F	G	G	3	8	Town	1.8	Remove	Slight lean	Encroachment into the root zone
A43	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	10	G	G	G	3	8	Town	1.8	Remove		Encroachment into the root zone
A44	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	12	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A45	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	14	G	G	P	2	14	Private	1.8	Preserve	Didn't tag, on property line/in front lawn, needles all dead or missing	

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Project:		25th Sideroad Innisfil		Field Work Completed By:		Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin									
Date of Field Work:		October 18-20, 26, and 29, 2021		Weather:		Approx 7C, sun and cloud									
Tree Condition Assessment Criteria:				Tree Condition:											
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.				Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CS - Canopy Structure: assessment of scaffold branches, unions and canopy				Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
Colour Coding Legend:															
Trees to be Retained				Trees to be Removed											
Trees to be Preserved				Minimum TPZ reduction											
				Trees to be Pruned											
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A46	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	35	G	G	G	6	15	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A47	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	14	G	G	F	2	14	Private	1.8	Preserve	Didn't tag, on property line/in front lawn, some needles dead or missing	
A48	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	MS: 3,4,5,8,15,18	P	P	P	4	15	Town	1.8	Remove	Mostly dead, some sprouts at base	Encroachment into the root zone and poor health.
A49	PICEABI	<i>Picea abies</i>	Norway Spruce	1	30	G	G	G	4	15	Private	2.4	Preserve		
A50	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	P	P	P	3.5	10	Town	1.8	Remove	Mostly dead	Encroachment into the root zone and poor health.
A51	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	18	G	G	G	4	10	Private	1.8	Preserve/Prune/TPZ reduction		
A52	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	30	G	G	G	4	14	Town	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A53	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 10,12,28,15,18	F	G	G	4	14	Town	1.8	Retain	Didn't tag, on property line/in front lawn, multi stem at base	
A54	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	F	G	6	14	Town	1.8	Preserve/Prune	Crown to one side, pruned under hydro line	
A55	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	22	G	F	G	6	13	Town	1.8	Preserve/Prune/TPZ reduction	Crown to one side, pruned under hydro line	
A56	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	16	G	F	F	6	9	Town	1.8	Preserve/Prune/TPZ reduction	Crown to one side, pruned under hydro line	
A57	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	14	G	F	G	2	13	Town	1.8	Preserve/Prune/TPZ reduction	Galls/large bumps on most branches	
A58	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 17, 23	F	G	F	4	15	Town	1.8	Preserve	Crown missing on one stem	
A59	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	15	P	P	P	4	12	Town	1.8	Remove	Didn't tag, on property line/in front lawn, almost dead	Encroachment into the root zone and poor health.
A60	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	43	F	F	F	5	14	Town	3	Remove	Multi stem at 1.5 m, lots of dieback in upper branches	Encroachment into the root zone
A61	PICEGLA	<i>Picea glauca</i>	White Spruce	1	24	G	G	G	4	14	Town	1.8	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone
A62	ACERRUB	<i>Acer rubrum</i>	Red Maple	1	20	G	G	G	5	14	Town	1.8	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone
A63	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 10,10,12,14,12,12,14	F	G	G	4	12	Private	1.8	Preserve	Didn't tag, on property line/in front lawn	
A64	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	30	G	G	G	5	12	Town	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A65	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	27	G	G	G	2.5	13	Private	1.8	Retain	Didn't tag, on property line/in front lawn	
A66	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	26	G	G	G	2.5	13	Private	1.8	Retain	Didn't tag, on property line/in front lawn	
A67	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	23	G	G	G	2.5	13	Private	1.8	Retain	Didn't tag, on property line/in front lawn	
A68	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	MS: 10,10,11,11	P	P	P	3	10	Town	1.8	Retain	Didn't tag, on property line/in front lawn, mostly dead	
A69	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	70	G	F	G	7	17	Town	4.2	Remove	Some dieback	Encroachment into the root zone
A70	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	65	G	F	G	6	17	Town	4.2	Remove	Some dieback	Encroachment into the root zone
A71	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	65	F	F	G	6	17	Town	4.2	Remove	Slight lean, one cut stem, some dead branches	Encroachment into the root zone
518	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	32	G	G	G	4	13	Town	2.4	Retain		
519	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	37	G	G	G	4	13	Town	2.4	Preserve		
520	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	F	G	3	11	Town	1.8	Remove	Top broken	Encroachment into the root zone
521	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	32	G	G	G	3.5	13	Town	2.4	Remove		Encroachment into the root zone
522	PICEGLA	<i>Picea glauca</i>	White Spruce	1	22	G	G	G	3.5	12	Town	1.8	Remove		Encroachment into the root zone
523	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	29	G	G	G	3.5	13	Town	1.8	Remove		Encroachment into the root zone
524	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	23	G	G	G	3	13	Town	1.8	Remove		Encroachment into the root zone
525	PICEGLA	<i>Picea glauca</i>	White Spruce	1	18	G	G	G	2	13	Town	1.8	Remove		Encroachment into the root zone
A72	PICEGLA	<i>Picea glauca</i>	White Spruce	1	18	G	G	G	3	13	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn	
A73	PICEGLA	<i>Picea glauca</i>	White Spruce	1	20	G	G	G	3	13	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn	
A74	PICEGLA	<i>Picea glauca</i>	White Spruce	1	26	G	G	G	3	13	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A75	PICEGLA	<i>Picea glauca</i>	White Spruce	1	28	G	G	G	3	14	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A76	PICEGLA	<i>Picea glauca</i>	White Spruce	1	31	G	G	G	4	14	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	

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Project:		25th Sideroad Innisfil		Field Work Completed By:		Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin									
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Colour Coding Legend:															
Trees to be Retained				Trees to be Removed				Minimum TPZ reduction							
Trees to be Preserved								Trees to be Pruned							
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A77	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	35	G	G	G	4	12	Town	2.4	Remove		Encroachment into the root zone
A78	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	MS: 14,16	G	G	G	5	7	Town	1.8	Remove		Encroachment into the root zone
A79	ULMUAME	<i>Ulmus americana</i>	American Elm	1	MS: 33,19	F	F	G	5	14	Town	2.4	Remove	Lean at top, multi stem at base	Encroachment into the root zone
A80	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	MS: 5,8,10	F	F	F	5	7	Town	1.8	Remove	Leaning, crown to one side, some dieback	Encroachment into the root zone
A81	PICEGLA	<i>Picea glauca</i>	White Spruce	1	28	G	G	G	3	12	Town	1.8	Remove		Encroachment into the root zone
A82	PICEGLA	<i>Picea glauca</i>	White Spruce	1	25	G	F	G	3	10	Town	1.8	Remove	Topped under powerlines	Encroachment into the root zone
A83	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 5,10,10,7	F	G	G	3.5	8	Town	1.8	Remove	Multi stem at 0.75 m	Encroachment into the root zone
A84	ACERNEG	<i>Acer negundo</i>	Manitoba Maple	1	MS: 18,27,29	F	G	G	6	13	Private	1.8	Remove	Multi stem at base	Encroachment into the root zone
A85	PICEABI	<i>Picea abies</i>	Norway Spruce	1	29	G	F	G	4	14	Town	1.8	Preserve/Prune/TPZ reduction	Crown to one side, didn't tag, on property line/in front lawn	
A86	ULMUAME	<i>Ulmus americana</i>	American Elm	1	35	G	G	G	6	14	Town	2.4	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone
A87	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	MS: 17, 19	P	P	P	3	14	Town	1.8	Remove	Didn't tag, on property line/in front lawn, almost dead	Encroachment into the root zone and poor health.
A88	ULMUAME	<i>Ulmus americana</i>	American Elm	1	18	G	G	G	3	14	Town	1.8	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone
A89	TILIAME	<i>Tilia americana</i>	American Basswood	1	MS: 30,11,15,28	F	G	F	4	14	Town	3	Remove	Didn't tag, on property line/in front lawn, multi stem at base, missing a lot of top canopy, a couple of cut stems	Encroachment into the root zone
A90	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	20	G	G	G	3	14	Town	2.4	Remove	Slight lean	Encroachment into the root zone
A91	PICEGLA	<i>Picea glauca</i>	White Spruce	1	29	G	G	G	4	15	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A92	PICEGLA	<i>Picea glauca</i>	White Spruce	1	29	G	G	G	4	15	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
526	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	21	G	G	G	4	15	Town	1.8	Remove	Slight lean	Encroachment into the root zone
A93	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	38	F	F	F	3	11	Town	2.4	Remove	Lean, cavities in lower trunk, pruned so canopy is to one side, some dieback	Encroachment into the root zone
A94	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 15,25	F	G	G	3	12	Town	1.8	Preserve	Didn't tag, on property line/in front lawn, multi stem at base, dead Ash at base	
A95	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	MS: 13,14	F	F	F	4	12	Town	1.8	Remove	Didn't tag, on property line/in front lawn, lean, multi stem at base, crown to one side	Encroachment into the root zone
A96	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 10,8	F	G	G	3	11	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at 1.4 m	
TG7	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	10	10 to 19	G to F	G	G	2	11	Town	1.8	Remove	Some multi stem	
A97	PICEGLA	<i>Picea glauca</i>	White Spruce	1	29	G	G	G	3	16	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn	
A98	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	16	G	G	G	3	13	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn	
A99	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 15,16	F	G	G	4	13	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at base	
A100	TILIAME	<i>Tilia americana</i>	American Basswood	1	MS: 10,11,12,14	F	G	F	3	11	Town	1.8	Remove	Didn't tag, on property line/in front lawn, multi stem at base, missing leaves	Encroachment into the root zone
A101	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 8,11,12,13	F	G	G	2	10	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at base	
A102	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 38,40	F	G	G	4	15	Town	2.4	Remove	Didn't tag, on property line/in front lawn, multi stem at base	Encroachment into the root zone
A103	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	36	G	G	F to P	3	15	Town	2.4	Remove	Didn't tag, on property line/in front lawn, canopy browning, doesn't look healthy	Encroachment into the root zone
A104	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	MS: 12,5	F	G	G	3	10	Town	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at base	
A105	ACERRUB	<i>Acer rubrum</i>	Red Maple	1	MS: 18,27	F	G	G	4.5	15	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn, multi stem at base	
A106	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	14	G	F	G	3	9	Private	1.8	Preserve	Didn't tag, on property line/in front lawn, topped under powerlines	
A107	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 11,20	F	G	G	3	12	Private	1.8	Preserve	Didn't tag, on property line/in front lawn, multi stem at base	
A108	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 4,5,7,10	F	G	G	2	11	Private	1.8	Retain	Didn't tag, on property line/in front lawn, multi stem at base	

**Appendix A: Tree Preservation Tables**

Project: 25th Sideroad Innisfil														Field Work Completed By: Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin													
Date of Field Work: October 18-20, 26, and 29, 2021														Weather: Approx 7C, sun and cloud													
Tree Condition Assessment Criteria:														Tree Condition:													
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.														Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)													
CS - Canopy Structure: assessment of scaffold branches, unions and canopy														Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)													
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown														Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)													
Colour Coding Legend:																											
Trees to be Retained				Trees to be Removed				Minimum TPZ reduction						Trees to be Pruned													
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation												
A109	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	42	G	G	G	7	17	Private	3	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn													
A110	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	MS: 10,16,17	F	G	G	5	10	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at 1 m													
A111	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	15	G	G	G	4	13	Private	1.8	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone												
A112	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 4,5,5,5,5,6	P	P	P	3	8	Private	1.2	Preserve/Prune	Didn't tag, on property line/in front lawn, sprouts at base, main stem dead													
A113	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 9,14,15,17,18,18	F	G	G	3	15	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, multi stem at base													
A114	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	37	G	F	F	4	15	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, some dark branches, wood pecker holes, some dieback													
A115	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	15	G	G	G	3	15	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn													
A116	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	42	P	P	P	6	15	Private	3	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, almost dead													
A117	PICEGLA	<i>Picea glauca</i>	White Spruce	1	40	G	G	G	6	18	Private	2.4	Preserve/Prune	Didn't tag, on property line/in front lawn													
A118	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	32	G	G	G	6	17	Private	2.4	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn													
A119	ACERRUB	<i>Acer rubrum</i>	Red Maple	1	MS: 16,18,18,25	F	G	G	5	17	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn, multi stem at base													
A120	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	27	G	G	G	5	17	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn													
A121	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	33	G	G	G	5	17	Private	2.4	Preserve/Prune	Didn't tag, on property line/in front lawn													
A122	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	39	F	G	G	5	18	Town	2.4	Remove	Didn't tag, on property line/in front lawn, multi stem at 2 m	Encroachment into the root zone												
A123	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	38	G	G	G	5	18	Town	2.4	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone												
A124	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	43	G	G	G	5	18	Private	3	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone												
A125	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	22	G	G	G	4	13	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, some leaves with tar spots													
A126	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	18	G	F	F	2.5	14	Town	1.8	Remove	Didn't tag, on property line/in front lawn, trunk wounds, dead branches	Encroachment into the root zone												
TG8	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	10	G	G	G	2.5	14	Town	1.8	Remove		Encroachment into the root zone												
TG8	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	2	10	G	G	G	2	13	Town	1.8	Remove		Encroachment into the root zone												
A127	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	38	F	F	F	5	17	Private	2.4	Preserve	Fruiting bodies up trunk, dead branches, dark coloured braches, top of leader broken													
A128	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	12	G	G	G	2	10	Private	1.8	Preserve														
A129	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	25	F	G	G	4	14	Private	1.8	Preserve/Prune/TPZ reduction	Didn't tag, on property line/in front lawn, Y at 2.5 m													
A130	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	38	G to F	G	G	6	17	Private	2.4	Preserve/Prune	Slight curve in trunk													
A131	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	31	G	G	G	5	16	Private	2.4	Preserve/Prune	Didn't tag, on property line/in front lawn, slight lean													
A132	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	18	G	G	G	4	16	Private	1.8	Preserve/Prune	Didn't tag, on property line/in front lawn, slight lean													
A133	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	28	G	G	F	5	16	Town	1.8	Remove	Didn't tag, on property line/in front lawn, some dieback													
A134	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	20	G	G	G	2	15	Town	1.8	Remove	Didn't tag, on property line/in front lawn	Encroachment into the root zone												
A135	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	11	G	F	G	3	7	Town	1.8	Remove	Topped under powerline	Encroachment into the root zone												
A136	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	29	G	G	G	4	17	Private	1.8	Remove		Encroachment into the root zone												
A137	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	11	G	G	G	3	13	Private	1.8	Preserve/Prune		Encroachment into the root zone												
A138	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	11	G	G	G	3	13	Private	1.8	Preserve/Prune		Encroachment into the root zone												
A139	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	MS: 12,5	G	G	G	2	13	Private	1.8	Preserve		Encroachment into the root zone												
A140	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	11	G	G	G	2	13	Private	1.8	Preserve		Encroachment into the root zone												
A141	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	10	G	G	G	2	13	Private	1.8	Preserve/Prune		Encroachment into the root zone												
A142	ABIEBAL	<i>Abies balsamea</i>	Balsam Fir	1	10	G	G	G	2	13	Private	1.8	Preserve/Prune		Encroachment into the root zone												
A143	PICEGLA	<i>Picea glauca</i>	White Spruce	1	18	G	G	G	5	15	Town	1.8	Remove		Encroachment into the root zone												
A144	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	12	G	G	G	3	11	Town	1.8	Remove		Encroachment into the root zone												
A145	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	36	G	G	G	6	16	Town	2.4	Remove		Encroachment into the root zone												
A146	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	12	G	G	G	2	11	Town	1.8	Remove		Encroachment into the root zone												
A147	LARILAR	<i>Larix laricina</i>	American Larch	1	15	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone												



### Appendix A: Tree Preservation Tables

Project:		25th Sideroad Innisfil		Field Work Completed By:		Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin									
Date of Field Work:		October 18-20, 26, and 29, 2021		Weather:		Approx 7C, sun and cloud									
Tree Condition Assessment Criteria:				Tree Condition:											
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.				Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CS - Canopy Structure: assessment of scaffold branches, unions and canopy				Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown				Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)											
Colour Coding Legend:															
Trees to be Retained				Trees to be Removed											
Trees to be Preserved				Minimum TPZ reduction											
				Trees to be Pruned											
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A148	PICEGLA	<i>Picea glauca</i>	White Spruce	1	15	G	G	G	4	12	Private	1.8	Preserve/Prune/TPZ reduction	Some dieback on lower branches	
TG9	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	6	10 to 11	G	F	F	1.5	8	Town	1.8	Retain	Dieback	
527	ACERNEG	<i>Acer negundo</i>	Manitoba Maple	1	MS: 37,17	F	G	G	5	13	Private	2.4	Preserve/Prune/TPZ reduction	Multi stem at 1.4 m, leaning against fence	
528	ACERNEG	<i>Acer negundo</i>	Manitoba Maple	1	33	F	G	G	6	14	Private	2.4	Preserve/Prune/TPZ reduction	Leaning	
A149	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 12,12,11,7,9,16,13	F	F	F	4	14	Town	1.8	Preserve/Prune/TPZ reduction	Multi stem at base, one dead stem, dieback	
A150	LARILAR	<i>Larix laricina</i>	American Larch	1	17	G	F	G	3	13	Town	1.8	Remove	Appears to be topped	Encroachment into the root zone
A151	PICEGLA	<i>Picea glauca</i>	White Spruce	1	18	G	G	G	4	14	Private	1.8	Preserve/Prune		Encroachment into the root zone
529	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	20	F	F	F	4	9	Town	1.8	Remove	Sapsucker holes, dieback, appears to be topped	Encroachment into the root zone
530	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	19	F	G	F	4	11	Town	1.8	Preserve/Prune/TPZ reduction	Sapsucker holes, dieback	
531	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	21	P	F	F	2	8	Town	1.8	Preserve/Prune/TPZ reduction	Bark stripped, one dead stem, multi at 2 m	
A152	QUERRUB	<i>Quercus rubra</i>	Northern Red Oak	1	42	G	G	G	6	17	Private	3	Preserve/Prune		
532	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	36	G	G	F	6	15	Town	2.4	Retain	Some dieback, frost crack	
533	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	46	G	G	G	8	14	Town	3	Retain		
A153	Pinustr	<i>Pinus strobus</i>	Eastern White Pine	1	55	G	G	G	6	25	Town	3.6	Retain		
A154	PICEGLA	<i>Picea glauca</i>	White Spruce	1	10	G	G	G	2	8	Town	1.8	Retain		
A155	PICEGLA	<i>Picea glauca</i>	White Spruce	1	10	G	G	G	2	8	Town	1.8	Retain		
A156	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	20	F	F	F	6	10	Town	1.8	Remove	Main stem cut at base	Encroachment into the root zone
A157	PICEGLA	<i>Picea glauca</i>	White Spruce	1	15	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A158	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	F	G	G	3	9	Town	1.8	Remove	Peeling bark	Encroachment into the root zone
A159	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	40	P	G	G	5	20	Town	2.4	Remove	EAB evidence, dead?	Encroachment into the root zone
A160	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	33	G	G	G	5	15	Town	2.4	Remove	Codominant stems, woodpecker holes	Encroachment into the root zone
A161	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	4	9	Town	1.8	Remove	Woodpecker holes	Encroachment into the root zone
A162	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	G	G	G	2	12	Town	1.8	Remove		Encroachment into the root zone
A163	Fagugra	<i>Fagus grandifolia</i>	American Beech	1	15	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A164	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	15	G	G	G	4	9	Town	1.8	Remove		Encroachment into the root zone
A165	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	12	G	G	G	3	12	Town	1.8	Remove		Encroachment into the root zone
A166	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	90	G	G	G	8	30	Town	5.4	Remove		Encroachment into the root zone
A167	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	12	G	G	G	3	9	Town	1.8	Remove		Encroachment into the root zone
A168	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	15	F	G	G	3	8	Town	1.8	Remove	Heavy lean	Encroachment into the root zone
A169	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	12	G	G	G	3	9	Town	1.8	Remove		Encroachment into the root zone
A170	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	G	G	G	3	9	Town	1.8	Remove		Encroachment into the root zone
A171	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	30	G	G	G	4	20	Town	2.4	Remove		Encroachment into the root zone
A172	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	20	G	G	G	4	13	Town	1.8	Remove		Encroachment into the root zone
A173	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	25	G	G	G	3	15	Town	1.8	Remove		Encroachment into the root zone
A174	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	30	G	G	G	3	15	Town	2.4	Remove		Encroachment into the root zone
A175	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A176	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	11	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A177	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	20	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A178	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	50	G	G	G	8	25	Town	3	Remove		Encroachment into the root zone
A179	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	18,20	G	G	G	4	15	Town	1.8	Remove	Mechanical damage at base	Encroachment into the root zone
A180	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A181	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	20	G	G	G	4	12	Town	1.8	Remove		Encroachment into the root zone
A182	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	23	G	G	G	4	12	Town	1.8	Remove	Behind property fence	Encroachment into the root zone
TG10	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	7	40 to 60	G	G	G	6	30	Town	3.6	Remove	Behind property fence	Encroachment into the root zone
TG10	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	5	10	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
TG10	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	2	20 to 29	G	G	G	7	15	Town	1.8	Remove		Encroachment into the root zone
TG10	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	10	G	G	G	3	8	Town	1.8	Remove		Encroachment into the root zone
TG10	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	10	G	G	G	2	8	Town	1.8	Remove		Encroachment into the root zone
TG10	Tililame	<i>Tilia americana</i>	American Basswood	1	18	G	G	G	4	10	Town	1.8	Remove		Encroachment into the root zone
TG10	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	12	G	G	G	2	8	Town	1.8	Remove		Encroachment into the root zone
A183	Pinustr	<i>Pinus strobus</i>	Eastern White Pine	1	70	G	G	G	8	30	Town	4.2	Remove	Behind property fence	Encroachment into the root zone
A184	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	25	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone

## Appendix A: Tree Preservation Tables

Project: 25th Sideroad Innisfil															
Field Work Completed By: Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin															
Date of Field Work: October 18-20, 26, and 29, 2021															
Weather: Approx 7C, sun and cloud															
Tree Condition Assessment Criteria:															
Tree Condition:															
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.															
Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CS - Canopy Structure: assessment of scaffold branches, unions and canopy															
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown															
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
Colour Coding Legend:															
Trees to be Retained				Trees to be Removed				Minimum TPZ reduction							
Trees to be Preserved				Trees to be Pruned				Trees to be Pruned							
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A185	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	25	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A186	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A187	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	13	G	G	G	3	8	Town	1.8	Remove		Encroachment into the root zone
A188	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	65	F	G	G	6	30	Town	4.2	Remove	Codominant stems	Encroachment into the root zone
A189	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	65	G	G	G	6	30	Town	4.2	Remove		Encroachment into the root zone
A190	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A191	Acerrub	<i>Acer rubrum</i>	Red Maple	1	MS: 10 to 20	G	G	G	6	18	Town	1.8	Remove		Encroachment into the root zone
A192	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	28	G	G	P	5	10	Town	1.8	Remove	Dead needles	Encroachment into the root zone and poor health.
A193	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	40	G	G	P	5	15	Town	2.4	Remove	Dead needles	Encroachment into the root zone and poor health.
A194	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	40	G	G	G	5	16	Town	2.4	Remove		Encroachment into the root zone
A195	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	3	8	Town	1.8	Remove		Encroachment into the root zone
A196	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	16	G	G	G	2	7	Town	1.8	Remove		Encroachment into the root zone
A197	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	20	G	G	G	5	25	Town	1.8	Remove		Encroachment into the root zone
A198	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	35	G	G	G	5	25	Town	2.4	Remove		Encroachment into the root zone
A199	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	30	G	G	G	4	8	Town	2.4	Remove		Encroachment into the root zone
A200	Acerrpla	<i>Acer platanoides</i>	Norway Maple	1	5 stems 10 to 12	G	G	G	5	8	Town	1.8	Preserve/Prune		
A201	Acerrpla	<i>Acer platanoides</i>	Norway Maple	1	5 stems 10 to 12	G	G	G	5	8	Town	1.8	Preserve/Prune		
A202	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	46	G	G	G	8	20	Town	3	Remove		
A203	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A204	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	18	G	G	G	2	8	Town	1.8	Remove		Encroachment into the root zone
A205	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	6	25	Town	1.8	Remove		Encroachment into the root zone
A206	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	12,8	F	G	G	3	8	Town	1.8	Remove	Lean	Encroachment into the root zone
A207	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	15	G	G	G	5	10	Town	1.8	Preserve		
A208	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A209	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	50	G	G	G	6	25	Town	3	Remove		Encroachment into the root zone
A210	Poputre	<i>Populus tremuloides</i>	Trembling Aspen	1	25	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
A211	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	47	G	G	G	5	20	Private	3	Preserve/Prune/TPZ reduction		
A212	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	18	G	G	G	4	15	Private	1.8	Preserve/Prune/TPZ reduction		
A213	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	3	8	Private	1.8	Remove		
A214		<i>Syringa reticulata</i>	Ivory-silk Lilac	1	20,18,8	G	G	G	4	8	Private	1.8	Remove		
201	Acerrub	<i>Acer rubrum</i>	Red Maple	1	32,21,14,10	F	F	G	5	18	Town	2.4	Remove	Some wounds on trunk, pruned for hydro	Encroachment into the root zone
202	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	25,16,14,10	F	G	G	3	8	Town	1.8	Preserve/Prune/TPZ reduction	Some wounds on trunk	
A215	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20,16	G	G	G	3	8	Private	1.8	Preserve	Codominant stems	
A216	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	25	G	G	G	3	8	Private	1.8	Preserve/Prune		
A217	THUJOCC	<i>Thuja occidentalis</i>	Emerald cedar	1	10,10,10,8,4	G	G	G	2	6	Private	1.8	Preserve/Prune/TPZ reduction		
A218	Poputre	<i>Populus tremuloides</i>	Trembling Aspen	1	33	G	G	G	4	25	Private	2.4	Preserve/Prune		
203		<i>Thuja occidentalis</i> 'Smaragd'	Emerald Green Cedar	1	10,6,6,6,6	G	G	G	0.5	6	Town	1.8	Preserve/TPZ reduction		
204		<i>Thuja occidentalis</i> 'Smaragd'	Emerald cedar	1	10,8,4	G	G	G	0.5	6	Town	1.8	Preserve/TPZ reduction		
205	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	38	G	G	G	4	18	Town	2.4	Remove		Encroachment into the root zone
206	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	42	G	G	G	5	18	Town	3	Remove		Encroachment into the root zone
207	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	2	8	Town	1.8	Preserve		
TG11	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	45	<10	G	G	G	1	5	Town	1.2	Remove	Hedge	Encroachment into the root zone
TG12	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	6	35 to 40	G	G	G	6	30	Town	2.4	Remove		Encroachment into the root zone
A219	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	24	G	G	G	4	12	Private	1.8	Preserve/Prune/TPZ reduction		
A220	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	24	F	G	G	3	10	Private	1.8	Preserve/Prune/TPZ reduction	Mechanical damage at base	
A221	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	22	G	G	G	3	10	Private	1.8	Preserve/Prune/TPZ reduction		
A222	Picegla	<i>Picea glauca</i>	White Spruce	1	45	F	F	P	5	30	Private	3	Remove	Mechanical damage at base, codominant stems, exposed roots	Encroachment into the root zone



### Appendix A: Tree Preservation Tables

Project:		25th Sideroad Innisfil		Field Work Completed By:		Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin									
Date of Field Work:		October 18-20, 26, and 29, 2021		Weather:		Approx 7C, sun and cloud									
Tree Condition Assessment Criteria:		TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.		Tree Condition:		Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)									
CS - Canopy Structure: assessment of scaffold branches, unions and canopy		CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown		Tree Condition:		Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)									
Colour Coding Legend:		Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)		Trees to be Retained		Trees to be Pruned									
Trees to be Preserved		Trees to be Removed		Minimum TPZ reduction		Trees to be Pruned									
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A223		<i>Syringa reticulata</i>	Ivory-silk Lilac	1	MS: 12,11,8,8	P	P	P	4	8	Town	1.8	Remove	Dead stems, suckers	Encroachment into the root zone and poor health.
TG13	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	20	10 to 20	G	G	G	3	10	Private	1.8	Retain		
TG13	Picegla	<i>Picea glauca</i>	White Spruce	2	20	G	G	G	3	15	Private	1.8	Retain		
TG13	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	20	G	G	G	3	20	Private	1.8	Retain		
TG14	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	8	10 to 15	G	G	G	2	8	Private	1.8	Retain		
A224	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	28	G	G	G	5	10	Town	1.8	Remove	Some dieback	Encroachment into the root zone
A225	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	28	G	G	G	5	10	Town	1.8	Remove		Encroachment into the root zone
A226	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	30	G	G	G	5	10	Private	2.4	Preserve/Prune/TPZ reduction	Frost crack	
A227	pinusyl	<i>Pinus sylvestris</i>	Scots Pine	1	30	G	G	G	6	30	Town	2.4	Retain		
A228	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	5	30	Town	1.8	Retain		
A229	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10	G	G	G	2	8	Town	1.8	Retain		
A230	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	30	G	G	G	4	10	Town	2.4	Retain		
A231	pinusyl	<i>Pinus sylvestris</i>	Scots Pine	1	30	G	G	G	3	20	Town	2.4	Retain		
A232	poputre	<i>Populus tremuloides</i>	Trembling Aspen	1	20	G	G	G	3	10	Town	1.8	Retain		
A233	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	10	G	G	G	2	8	Town	1.8	Retain		
A234	Tiliame	<i>Tilia americana</i>	American Basswood	1	18	G	G	G	4	10	Town	1.8	Retain		
A235	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	MS: 20,20,20,18,10,8	G	G	G	4	10	Town	1.8	Preserve/Prune		
A236	acerpla	<i>Acer platanoides</i>	Norway Maple	1	30	G	G	G	5	10	Town	2.4	Remove		Encroachment into the root zone
A237	Tiliame	<i>Tilia americana</i>	American Basswood	1	15	G	G	G	4	10	Private	1.8	Remove		Encroachment into the root zone
A238	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	30	G	G	G	5	10	Private	2.4	Preserve/Prune/TPZ reduction		
A239	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	20	G	G	G	5	8	Private	1.8	Retain		
A240	pinusyl	<i>Pinus sylvestris</i>	Scots Pine	1	35	G	G	G	6	30	Private	2.4	Preserve/Prune		
A241	Picegla	<i>Picea glauca</i>	White Spruce	1	15	G	G	G	3	10	Private	1.8	Preserve/Prune/TPZ reduction		
A242	picegla	<i>Picea glauca</i>	White Spruce	1	30	G	G	G	5	25	Private	2.4	Preserve/Prune/TPZ reduction		
A243	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	20	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A244	pinustr	<i>Pinus strobus</i>	Eastern White Pine	1	40	G	G	G	6	35	Town	2.4	Remove		Encroachment into the root zone
TG15	pinustr	<i>Pinus strobus</i>	Eastern White Pine	3	25 to 30	G	G	G	5	25	Town	2.4	Remove		Encroachment into the root zone
TG15	Tiliame	<i>Tilia americana</i>	American Basswood	2	20 to 30	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
TG16	pinustr	<i>Pinus strobus</i>	Eastern White Pine	1	25	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
TG16	pinusyl	<i>Pinus sylvestris</i>	Scots Pine	2	25	G	G	G	4	20	Town	1.8	Remove		Encroachment into the root zone
TG16	thujocc	<i>Thuja occidentalis</i>	Eastern White Cedar	1	10	G	G	G	3	8	Town	1.8	Remove		Encroachment into the root zone
TG16	Tiliame	<i>Tilia americana</i>	American Basswood	2	10 to 30	G	G	G	5	15	Town	2.4	Remove		Encroachment into the root zone
TG16	Poputre	<i>Populus tremuloides</i>	Trembling Aspen	1	10	G	G	G	3	10	Town	1.8	Remove		Encroachment into the root zone
A245	Tiliame	<i>Tilia americana</i>	American Basswood	1	MS: 30,30	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
A246	Tiliame	<i>Tilia americana</i>	American Basswood	1	MS: 30,15	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
A247	Tiliame	<i>Tilia americana</i>	American Basswood	1	MS: 45,20	G	G	G	7	25	Town	3	Remove		Encroachment into the root zone
A248	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	MS: 18,18	G	G	G	4	10	Town	1.8	Remove		Encroachment into the root zone
A249	Tiliame	<i>Tilia americana</i>	American Basswood	1	MS: 40,30,30,20	G	G	G	8	25	Town	2.4	Remove		Encroachment into the root zone
A250	Tiliame	<i>Tilia americana</i>	American Basswood	1	MS: 40,28	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
A251	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	6	20	Town	1.8	Remove		Encroachment into the root zone
A252	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	40	G	G	G	6	30	Town	2.4	Remove		Encroachment into the root zone
A253	pinusyl	<i>Pinus sylvestris</i>	Scots Pine	1	25	G	G	G	6	20	Town	1.8	Remove		Encroachment into the root zone
A254	pinustr	<i>Pinus strobus</i>	Eastern White Pine	1	55	G	G	G	8	30	Private	3.6	Preserve/Prune		
A255	picegla	<i>Picea glauca</i>	White Spruce	1	20	G	G	G	5	8	Private	1.8	Preserve		
208	Acerpla	<i>Acer platanoides</i>	Norway Maple	1	27	G	G	G	5	10	Town	1.8	Retain		
A256	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	20	G	G	G	4	8	Private	1.8	Preserve/Prune		
A257	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 12,14	F	G	G	5	13	Private	1.8	Preserve/Prune/TPZ reduction	Multi stem at base	
A258	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	17	G	G	G	3	9	Private	1.8	Preserve/Prune		
A259	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	MS: 12,12,15,15,8,10,14	F	G	G	6	16	Private	1.8	Preserve/Prune/TPZ reduction	Multi stem at base	

### Appendix A: Tree Preservation Tables

Project: 25th Sideroad Innisfil														Field Work Completed By: Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin													
Date of Field Work: October 18-20, 26, and 29, 2021														Weather: Approx 7C, sun and cloud													
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Colour Coding Legend:																											
Trees to be Retained				Trees to be Removed				Minimum TPZ reduction																			
Trees to be Preserved								Trees to be Pruned																			
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation												
A260	ACERSAC	<i>Acer saccharinum</i>	Silver Maple	1	38	G	G	G	6	16	Private	2.4	Preserve/Prune/TPZ reduction														
A261	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	17	G	G	G	1.5	9	Private	1.8	Retain														
A262	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	10	G	G	G	1	8	Town	1.8	Retain														
534	ACERNEG	<i>Acer negundo</i>	Manitoba Maple	1	MS: 17,7,19	F	F	F	5	12	Town	1.8	Retain	Multi stem at base, lacking canopy													
A263	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	MS: 12,10,10,6	F	G	F	3	11	Private	1.8	Retain	Multi stem at 0.5 m													
A264	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	15	G	G	G	4	10	Private	1.8	Preserve/Prune/TPZ reduction	Tar spots on some leaves													
A265	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	16	G	G	G	3	10	Private	1.8	Preserve/Prune/TPZ reduction	Slight lean													
A266	JUGLNIG	<i>Juglans nigra</i>	Black Walnut	1	30	F	F to P	F	6	11	Private	2.4	Preserve/Prune/TPZ reduction	Trunk wounds, branch wound, approx 50% dead broken branches, leaves browning at edges													
A267	PRUN_SP	<i>Prunus sp.</i>	Cherry sp.	1	17	G	G	G	5	8	Town	1.8	Preserve/Prune														
A268	PINUNIG	<i>Pinus nigra</i>	Austrian Pine	1	37	G	G	G	5	15	Private	2.4	Preserve/Prune/TPZ reduction														
A269	PINUNIG	<i>Pinus nigra</i>	Austrian Pine	1	34	G	G	G	5	15	Private	2.4	Preserve/Prune/TPZ reduction														
A270	PINUNIG	<i>Pinus nigra</i>	Austrian Pine	1	31	G	G	G	5	15	Private	2.4	Preserve/Prune/TPZ reduction														
A271	PINUNIG	<i>Pinus nigra</i>	Austrian Pine	1	24	G	G	G	5	14	Private	1.8	Preserve/Prune/TPZ reduction														
A272	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 16,16	F	G	G	4	12	Town	1.8	Preserve/Prune	Multi stem at base													
A273	ROBIPSE	<i>Robinia pseudoacacia</i>	Black Locust	1	MS: 48,48	F	F	G	4.5	18	Private	3	Preserve/Prune/TPZ reduction	Multi stem at base, some dead and broken branches													
A274	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	12	G	G	G	1	6	Private	1.8	Preserve/TPZ reduction														
A275		<i>Morus alba 'Pendula'</i>	Weeping Mulberry	1	14	F	F	F	3	5	Town	1.8	Preserve	Some dieback, trunk and branch connection wounds, canopy mostly to one side													
TG17	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	50 to 59	G	G	G	Up to 6	Up to 20	Town	3.6	Retain	Sapsucker holes													
TG17	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	10 to 20	F	G	G		Up to 8	Town	1.8	Retain	Significant lean													
TG17	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	20 to 29	F	G	G		Up to 12	Town	1.8	Retain	Significant lean													
TG17	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	30 to 40	G	G	G	Up to 5	Up to 16	Town	2.4	Retain														
535	PYRU_SP	<i>Pyrus sp.</i>	Pear sp.	1	12	G	G	G	2	7	Town	1.8	Retain														
536	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	17	G	F	F	3	9	Private	1.8	Remove	Dead broken branches, 50% dieback	Encroachment into the root zone												
537	ACERPLA	<i>Acer platanoides</i>	Norway Maple	1	19	F	P	P	3	9	Private	1.8	Remove	Dead broken branches, significant dieback, cracks in bark	Encroachment into the root zone and poor health.												
538	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	21	G	G	G	4	7	Private	1.8	Preserve/Prune/TPZ reduction	Sprouts at base													
539	MALU_SP	<i>Malus sp.</i>	Apple sp.	1	MS: 15,15,9,9,7,10,10	F	F	F	4	9	Private	1.8	Preserve/Prune/TPZ reduction	Multi stem at base, dead branches, branch rubbing, dieback, sooty appearance of some stems													
A276	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	48	G	G	G	6	16	Town	3	Remove		Encroachment into the root zone												
A277	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	38	G	G	G	6	16	Town	2.4	Remove		Encroachment into the root zone												
A278	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	38	G	G	G	5	16	Town	2.4	Remove		Encroachment into the root zone												
TG18	POPOTRE	<i>Populus tremuloides</i>	Trembling Aspen	4	10 to 20	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone												
A279	POPOTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	49	G	F	G	6	16	Town	3	Remove	Dead broken branches	Encroachment into the root zone												
A280	POPOTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	25	G	G	G	6	14	Town	1.8	Remove		Encroachment into the root zone												
TG19	POPOTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	10 to 20	G	G	G	3	14	Town	1.8	Remove		Encroachment into the root zone												
TG19	ACERSAS	<i>Acer saccharum</i>	Sugar Maple	1	10 to 20	G	G	G	5	14	Town	1.8	Remove		Encroachment into the root zone												
TG19	LARILAR	<i>Larix laricina</i>	American Larch	1	30 to 40	G	G	G	6	16	Town	2.4	Remove		Encroachment into the root zone												
TG19	QUERRUB	<i>Quercus rubra</i>	Northern Red Oak	2	10 to 20	G	G	G	6	15	Town	1.8	Remove		Encroachment into the root zone												
A281	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	43	G	F	F	6	16	Private	3	Remove	Needles orange, dead branches	Encroachment into the root zone												
A282	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	49	G	G	G	6	16	Town	3	Preserve/Prune/TPZ reduction														

## Appendix A: Tree Preservation Tables

Project: 25th Sideroad Innisfil															
Field Work Completed By: Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin															
Date of Field Work: October 18-20, 26, and 29, 2021															
Weather: Approx 7C, sun and cloud															
Tree Condition Assessment Criteria:															
Tree Condition:															
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.															
Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CS - Canopy Structure: assessment of scaffold branches, unions and canopy															
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown															
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)															
Colour Coding Legend:															
Trees to be Retained															
Trees to be Preserved															
Trees to be Removed															
Minimum TPZ reduction															
Trees to be Pruned															
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A283	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	49	G	G	G	6	16	Town	3	Preserve/Prune/TPZ reduction		
A284	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	47	G	G	G	6	16	Town	3	Preserve/Prune/TPZ reduction		
A285	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	G	G	6	16	Private	3.6	Preserve/Prune/TPZ reduction		
A286	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	G	G	6	16	Private	3.6	Preserve/Prune/TPZ reduction		
A287	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	G	F	6	16	Private	3.6	Preserve/Prune/TPZ reduction	Needles orange	
A288	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	G	G	6	16	Private	3.6	Preserve/Prune/TPZ reduction		
A289	PICEGLA	<i>Picea glauca</i>	White Spruce	1	23	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone
A290	PICEGLA	<i>Picea glauca</i>	White Spruce	1	18	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone
A291	PICEGLA	<i>Picea glauca</i>	White Spruce	1	16	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone
A292	PICEGLA	<i>Picea glauca</i>	White Spruce	1	35	G	G	G	4	16	Town	2.4	Remove		Encroachment into the root zone
A293	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	38	G	G	G	5	14	Private	2.4	Preserve/Prune		
A294	THUJOCC	<i>Thuja occidentalis</i>	Eastern White Cedar	1	38	G	G	G	5	14	Town	2.4	Remove		Encroachment into the root zone
A295	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	60	G	F	G	7	22	Town	3.6	Remove	Dead broken branches	Encroachment into the root zone
A296	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	67	G	G	G	7	22	Town	4.2	Remove		Encroachment into the root zone
A297	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	59	G	G	G	7	22	Town	3.6	Remove		Encroachment into the root zone
A298	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	67	G	G	G	7	22	Town	4.2	Remove		Encroachment into the root zone
A299	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	59	G	G	G	7	21	Town	3.6	Remove		Encroachment into the root zone
A300	PINUSTR	<i>Pinus strobus</i>	Eastern White Pine	1	59	G	G	G	7	21	Town	3.6	Remove		Encroachment into the root zone
TG20	ACERPLA	<i>Acer platanoides</i>	Norway Maple	8	10 to 20	G	G	G	4	14	Town	1.8	Remove		Encroachment into the root zone
TG20	FRAX_SP	<i>Fraxinus sp.</i>	Ash sp.	1	10 to 20	P	P	P	4	14	Town	1.8	Remove	Multi stem, most of canopy dead	Encroachment into the root zone and poor health.
A301	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	62	G	G	G	6	20	Private	4.2	Remove		Encroachment into the root zone
A302	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	53	G	G	G	6	20	Private	3.6	Preserve/Prune/TPZ reduction		
A303	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	55	G	G	G	6	20	Private	3.6	Preserve/Prune/TPZ reduction		
A304	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	54	G	G	G	6	20	Private	3.6	Preserve/Prune/TPZ reduction		
A305	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	F	F	6	20	Private	3.6	Preserve/Prune/TPZ reduction	Some dead broken branches, needles orange	
A306	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	52	G	G	G	6	20	Town	3.6	Remove		Encroachment into the root zone
A307	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	37	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
A308	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	40	G	G	G	6	20	Town	2.4	Remove		Encroachment into the root zone
A309	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	42	G	G	G	6	20	Town	3	Remove		Encroachment into the root zone
A310	PINUSYL	<i>Pinus sylvestris</i>	Scots Pine	1	49	G	G	G	6	20	Town	3	Remove		Encroachment into the root zone
A311	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 8,8,7,14,15	F	G	G	6	15	Town	1.8	Remove	Multi stem at base	Encroachment into the root zone
A312	TILIAME	<i>Tilia americana</i>	American Basswood	1	MS: 40,38,30	F	G	F	6	18	Town	2.4	Remove	Multi stem at base, leaves fallen	Encroachment into the root zone
A313	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	18	G	G	G	2	10	Town	1.8	Remove		Encroachment into the root zone
A314	PICEPUN	<i>Picea pungens</i>	Blue Spruce	1	23	G	G	G	2	11	Town	1.8	Remove		Encroachment into the root zone
A315	PICEABI	<i>Picea abies</i>	Norway Spruce	1	26	G	G	G	5	14	Private	1.8	Preserve/Prune/TPZ reduction		
A316	ULMUPUM	<i>Ulmus pumila</i>	Siberian Elm	1	26	F	G	G	7	14	Town	1.8	Remove	Lean	Encroachment into the root zone
A317	ULMUPUM	<i>Ulmus pumila</i>	Siberian Elm	1	26	G	G	G	5	14	Town	1.8	Preserve/Prune/TPZ reduction		
A318	POPUTRE	<i>Populus tremuloides</i>	Trembling Aspen	1	29	G	G	G	4	15	Town	1.8	Preserve/Prune/TPZ reduction		
A319	ULMUAME	<i>Ulmus americana</i>	American Elm	1	MS: 36,37	F	G	G	6	16	Private	2.4	Preserve/Prune/TPZ reduction	Multi stem at 0.5 m	
A320	BETUPAP	<i>Betula papyrifera</i>	Paper Birch	1	MS: 10,4,4,12	F	G	F	2	8	Town	1.8	Preserve/Prune/TPZ reduction	Multi stem at base, lots of leaves fallen	

### Appendix A: Tree Preservation Tables

<b>Project:</b> 25th Sideroad Innisfil	<b>Field Work Completed By:</b> Tiffany Waters (ON-2590A) and Avery Tyrell, and Carlene Perkin	<b>Weather:</b> Approx 7C, sun and cloud
<b>Date of Field Work:</b> October 18-20, 26, and 29, 2021	<b>Tree Condition:</b>	
<b>Tree Condition Assessment Criteria:</b>	<b>Tree Condition:</b>	
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Colour Coding Legend:															
Trees to be Retained					Trees to be Removed			Minimum TPZ reduction							
Trees to be Preserved					Trees to be Pruned										
Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	TI	CS	CV	Dripline Radius (m)	Height (m)	Tree Location /	Tree Protection	Recommendation	Comments - Health	Comments - Removal/Preservation
A321	POPU_SP	<i>Populus sp.</i>	Poplar sp.	1	25	F	F	P	6	15	Town	1.8	Preserve/Prune/TPZ reduction	Lean, missing canopy, dead branches	
TG21	POP Utre	<i>Populus tremuloides</i>	Trembling Aspen	16	10 to 20	G	G	G	3	15	Town	1.8	Remove		Encroachment into the root zone
A322	PICEGLA	<i>Picea glauca</i>	White Spruce	1	37	G	G	G	4	15	Private	2.4	Retain		
A323	PICEABI	<i>Picea abies</i>	Norway Spruce	1	49	G	G	G	5	16	Private	3	Retain		
A324	PICEABI	<i>Picea abies</i>	Norway Spruce	1	43	G	G	G	5	16	Private	3	Retain		

# APPENDIX

# B

## SITE PHOTOS







Tree # 501 Nearly dead Ash tree near the northern limit of the study area, on the east side of 25th Sideroad



Tree Grouping TG1- Group of White Pine trees located in the northern portion of the study area, on the east side of 25th Sideroad



Tree # A27 – Mature American Elm with co-dominant leaders that has been pruned away from the adjacent powerlines



Trees # A28 to A32 – Three Blue Spruces and two Silver Maples at the northeast corner of Lockhart Drive and 25th Sideroad



Tree Grouping TG3 – Consisting of Eastern White Cedar and American Elm



Tree # 511 – Horse Chestnut with dry, browning leaves



Trees # A54 to A57– Group of Scots Pines that have been pruned under powerlines



Trees # A72 to A76 – White Spruces in good condition



25th SIDEROAD, INNISFIL - TREE INVENTORY  
TREE INVENTORY PHOTOGRAPHS

Date: November 2021

Project No: 211-02067-00

Appendix B





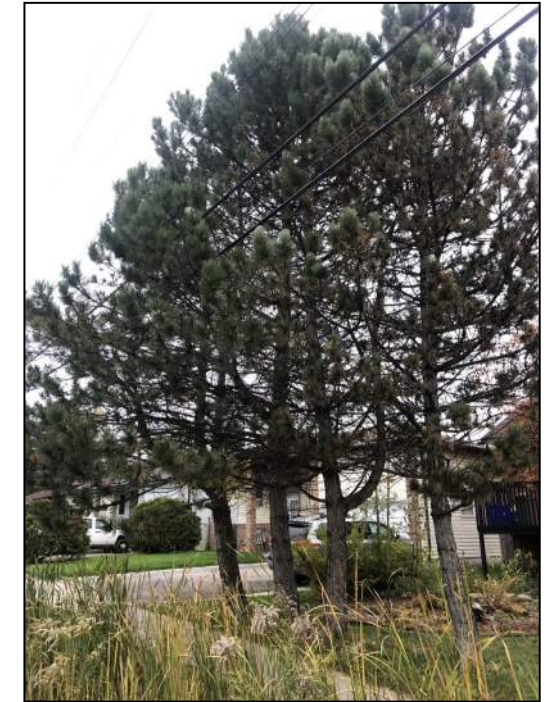
Tree Grouping TG9 —Eastern White Cedars in fair condition



Tree # 533 – Norway Maple in good condition



Tree #A256 – Prunus sp. In front lawn on west side of 25th Sideroad, in central-southern portion of study area



Trees # A268 to A271 – Black Pines in good condition on the east side of 25th Sideroad



Tree #A275 – Weeping Mulberry in fair condition with dieback and branch wounds



Tree #535 – Pear sp. In good condition, on Innisfil Beach Road, west of 25th Sideroad



Trees # A285 to A288 – Scots Pines in good to fair condition on the west side of 25th Sideroad, southern portion of study area



Tree Grouping TG21 – Group of Trembling Aspen at southwest corner of Ninth Line and 25th Sideroad



25th SIDEROAD, INNISFIL - TREE INVENTORY  
TREE INVENTORY PHOTOGRAPHS

Date: November 2021

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Appendix B