

11034936 Canada Inc.

Tree Conservation Report

100 Steacie Drive, Ottawa, Ontario

CIMA+ file number: A001489

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November 21, 2024 – Review 002



11034936 Canada Inc.

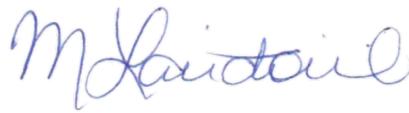
Tree Conservation Report

100 Steacie Drive, Ottawa, Ontario

CIMA+ file number: A001489



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Table of involved resources

The following individuals have been involved in the study and writing of the report as technical experts within the project team:

Name	Discipline
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Amal Siddiqui	Biologist (B.Sc., M.F.C), Terrestrial Field Work & Technical Reporting
Jake Zientek	Junior Technician (GDipFW Tech), Terrestrial Field Work

Register of issues			
Issue No.	Reviewed by	Date	Description of the review
001	AS, ML	2024-10-10	Update based on City comments
002	AS, ML	2024-11-18	Update based on City comments

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List of Acronyms and Definitions

DBH	Diameter-at-breast Height
EIS	Environmental Impact Study
ESA	<i>Endangered Species Act, 2007</i> (Provincial)
ISA	International Society of Arboriculture
GPS	Global Positioning System
NAD 83	North American Datum 1983
UTM	Universal Transverse Mercator
LIO	Land Information Ontario
MECP	Ministry of Environment, Conservation and Parks
MNR	Ministry of Natural Resources
OMNR/MNRF/MNDMNRF	Ontario Ministry of Natural Resources (old name) Ministry of Natural Resources and Forestry (old name) Ministry of Northern Development, Mines, Natural Resources and Forestry
SAR	Species at Risk (in this report they refer to species that are provincially or federally listed as endangered or threatened and receive protection under ESA or SARA)

1. INTRODUCTION

11034936 Canada Inc. (Brigil), the Client, is planning to begin construction on a residential development located at 100 Steacie Drive, part of Lot 6, Concession 3 in the City of Ottawa (formerly Kanata Township). Bowfin Environmental Consulting (Bowfin) previously completed a combined Environmental Impact Study / Tree Conservation Report (EIS/TCR) for this project (Bowfin, 2021). As of 2022, Bowfin merged its services with CIMA+ who has taken over the mandate of updating this Tree Conservation Report (TCR) as per the City of Ottawa's *Tree Conservation Report Guidelines* (2021).

The Legal Description of the properties discussed in this report are as follows:

- + 100 Steacie Drive (the Site): PART OF LOTS 6 AND 7, CONCESSION 3, BEING PARTS 1, 2, 3, 4, 5, 6, 7, 8, 9, AND 10 ON PLAN 4R21324, FORMERLY MARCH, NOW OTTAWA, PIN 045111631
- + 41 Station Road (adjacent landowner): PT LT 6, CON 3, as in N514205, KANATA/MARCH

1.1 Purpose

The purpose of this TCR is to determine what woody vegetation would be retained and protected on the site. The field methodology and findings of the tree inventory are outlined in the sections below. In addition, this report will help determine the project's potential impacts and provide general recommendations to avoid and/or mitigate tree loss and injury. Note that these avoidance and mitigation measures are also provided in the accompanying updated Environmental Impact Study (EIS) (CIMA+, 2024).

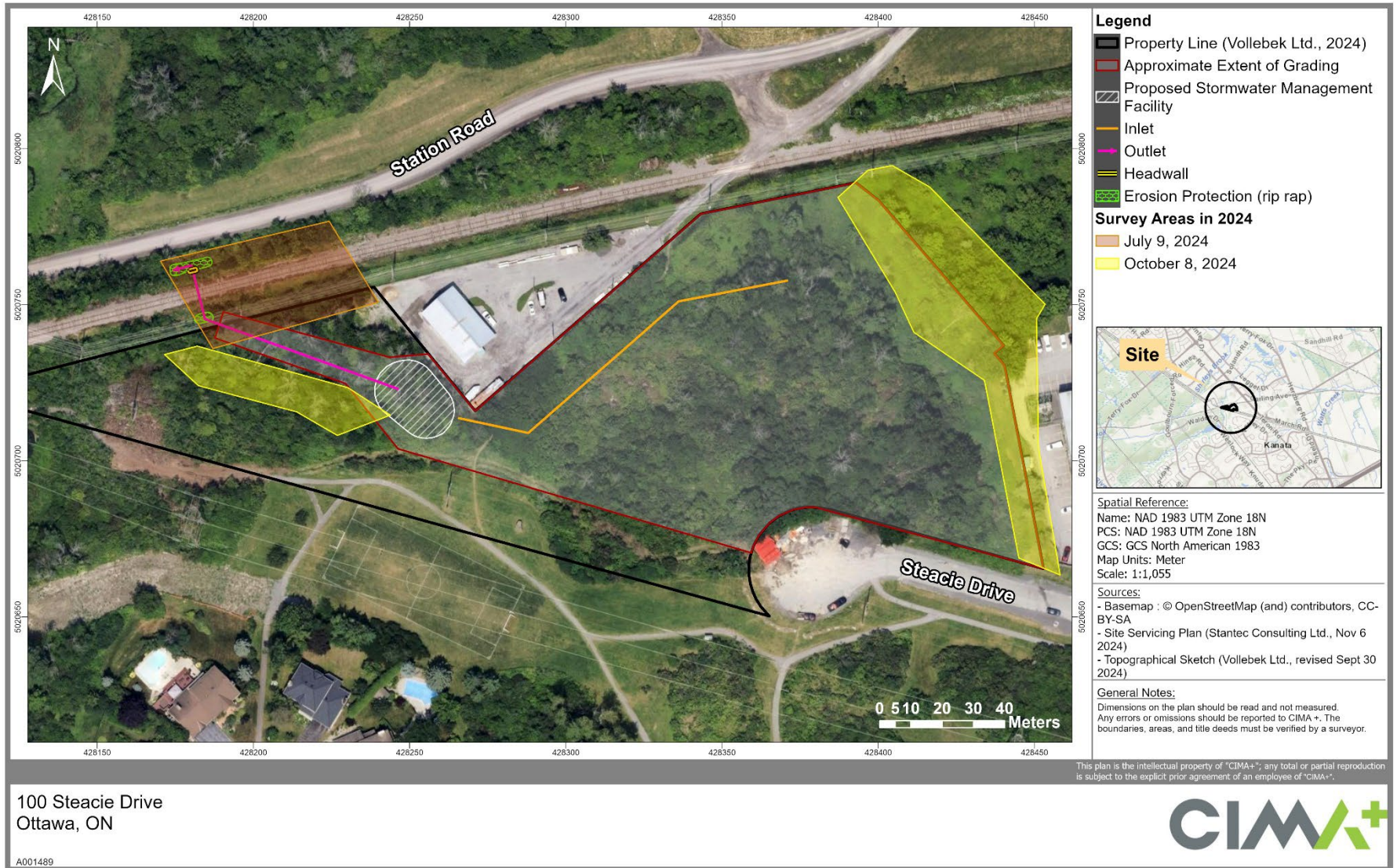


Figure 1: Site Location, Proposed Works, and 2024 Survey Areas

2. CITY OF OTTAWA TREE PROTECTION BY-LAW

The Site is located within the limits of City of Ottawa's Tree Protection By-law No. 2020-340 (January 1, 2021). The intent of this By-Law is to protect municipal trees, municipal natural areas within the City of Ottawa, and trees on private property in the urban area of the City of Ottawa.

Under the Tree Protection By-law, the following trees cannot be injured or removed without a permit (City of Ottawa, 2021):

- + *All City-owned trees throughout the urban and rural area.*
- + *All trees 10 cm or more in diameter at breast height on private properties within the urban area that are subject to a Planning Act application for Site Plan, Plan of Subdivision, or Plan of Condominium.*
- + *All trees 10 cm or more in diameter at breast height on private properties within the urban area that are over 1 hectare in size.*
- + *All distinctive trees on private properties 1 hectare or less in size, where distinctive trees are defined as:*
 - *Trees measuring 30 cm or more in diameter at breast height within the inner urban area (urban lands inside the Greenbelt).*
 - *Trees measuring 50 cm or more in diameter at breast height within the suburban area (urban lands outside the Greenbelt).*

The Tree Protection By-law requires permits to be obtained before City-owned trees or protected privately owned trees are removed. It also sets out requirements for compensation to be provided when trees are removed, so that they can be replaced.

A Tree Conservation Report (TCR) is required as a part of the application package for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 centimeters in diameter or greater on the site and/or if there is a tree on an adjacent site that has a Critical Root Zone (CRZ) extending onto the development site. The purpose of the TCR is to demonstrate how tree cover will be retained and protected on the site, including mature trees, stands of trees, and hedgerows, using a design with nature approach. A design with nature approach incorporates the natural features of a site into the design and engineering of a proposed development. The TCR will also show which trees must be removed on a site to accommodate the proposed development.

3. METHODOLOGY

The initial tree inventory was undertaken by Bowfin staff in 2020, with methods and results presented in the previous iteration of the TCR (Bowfin, 2021). Additional site visits were completed in 2024 by CIMA+; on July 9, 2024, by Jake Zientek (G. Dip. Fish & Wildlife Tech) and Amal Siddiqui (B.Sc. Biology, Master of Forestry & Conservation) and on October 8, 2024, by Amal Siddiqui. The purpose of the 2024 visits were two-fold: to collect data on the trees that could

be impacted from the new alignment of the stormwater management outlet (**Figure 1**) and to address comments from the City from an email received September 04, 2024.

Information collected on individual trees included:

- + UTM coordinates using a high-precision GPS unit (Arrow 100® Submeter GNSS Receiver) set at 18T NAD83
- + Species
- + Diameter-at-breast height (dbh)
- + Overall health
- + Presence/Absence of species at risk (SAR) trees (butternut, black ash)

The location of individual trees are depicted on Map 1 and Map 2.

To address comments from the City, additional information on individual trees in the Groupings was collected in 2024, particularly for Grouping B. Specifically, Trees 1 and 2 in Grouping B and Tree 9 in Grouping C were reassessed to determine if they were viable for retention. As well, information was collected on individual trees within approximately 20 m on either side of the property line in Grouping B (20 m was used as it exceeded the critical root zone of any neighbouring trees and would capture any trees that may be impacted). As a result, the entirety of Grouping B was surveyed in 2024, and has thus been eliminated and replaced by individual trees on the Maps and Tables. Groupings A and C remain. Note that for Tree Groupings A and C, the largest dbh within the range of trees surveyed was used to determine the critical root zone.

Nomenclature used in this report follows the Southern Ontario Plant List (Bradley, 2007) for both common and scientific names which are based on Newmaster *et al.* (1998). Authorities for scientific names are given in Newmaster *et al.* (1998).

1.1 Tree Size

Size refers to trunk diameter at breast height (DBH or caliper) measured in centimetres at 1.4 m above the ground. Where trees had more than one trunk from the base, the size of each trunk was recorded. Where trees forked to codominant trunks, each trunk was measured, or the diameter was measured at the narrowest point below the fork.

1.2 Tree Condition

Each tree was given an overall health condition rating of: Good, Unhealthy, or Dead. The following is a summary of how the ratings are determined:

- | | |
|------------|--|
| GOOD: | No apparent or minor problems with health and/or structural form. |
| UNHEALTHY: | Major problems with health and structural form. For <i>Fraxinus</i> spp., includes evidence of infestation by the emerald ash borer (EAB). |
| DEAD: | Dead. |

4. RESULTS & DISCUSSION

4.1 2024 Survey Results

4.1.1 July 2024 Visit

The weather was cloudy (cloud cover of 100%) and calm (Beaufort scale of 0). The air temperature was 24°C.

Only trees with a dbh equal to or greater than 10 cm were recorded. Of the twelve (12) individual trees identified, one (1) green ash is anticipated to be removed (**Map 2**). All twelve individuals were City-owned, falling within the railroad corridor, which is listed as City of Ottawa Lands on geoOttawa's Public Owned Lands layer. Results from the 2024 visit are summarized in **Table 1** below, as well as in **Appendix B**.

Table 1: Summary of Individual Trees on Site (July 2024 Survey Area)

Species	Scientific Name	Count	Size Range (DBH cm)	No. Live	No. Unhealthy	No. Dead	No. to be Removed
American Elm	<i>Ulmus americana</i>	2	14-20	2	2	0	0
Black Cherry	<i>Prunus serotina</i>	1	13	1	0	0	0
Green Ash	<i>Fraxinus pennsylvanica</i>	9	10-22	9	9	0	1
Total		12	10-22	12	11	0	1

4.1.2 October 2024 Visit

The weather was clear (10% cloud cover) with light air (Beaufort scale of 1). The air temperature was 8°C.

Trees 1 and 2 remain in overall fair health but Tree 9 was found to be dead.

Trees 1 and 2 were just within the property line. It is important to note that there is existing underground infrastructure in this area. The grading plan was reviewed, and it was determined that neither Tree 1 nor 2 can be retained due to grading and the existing underground watermain running along the east edge of the property.

As noted in the methods, the trees along the property line as well as trees in what was previously referred to as Grouping B were surveyed.

- + Seven (7) trees were found to be ≥ 10 cm in dbh. The majority of these were Manitoba maples.
- + Of the 7 trees, 5 were privately owned by the adjacent landowner (41 Station Road), and 2 were privately owned by the Client (3223701 Canada Inc).

- + Of the trees on the neighbouring lands (41 Station Road), 2 trees had a CRZ that was partially within the lands to be developed (Trees 35, 36).

Results from this visit are summarized in Table 2, as well as in Appendix B.

Table 2: Summary of Individual Trees on Site (October 2024 Survey Area)

Species	Scientific Name	Count	Size Range (DBH cm)	No. Live	No. Unhealthy	No. Dead	No. to be Removed
Manitoba Maple	<i>Acer negundo</i>	5	19-34	5	0	0	2
Sugar Maple	<i>Acer saccharum</i>	1	23	1	0	0	0
Green Ash	<i>Fraxinus pennsylvanica</i>	1	15	1	1	0	0
Total		7	15-34	7	1	0	2

4.2 Overall Results (2020 and 2024 combined)

The property (roughly 2.2 ha) was composed primarily of cultural thicket and manicured lawn (parkland) with small communities of cultural meadows, green ash (inclusion), and windrows. The woody vegetation was dominated by shrubs (i.e., Tatarian honeysuckle, staghorn sumac). The majority of trees identified were green ash, with some American elm, white ash, and black cherry. The property was flat with bedrock knoll on the east side. In the adjacent lands, Kizell Drain and its associated valley were located to the west, and a railroad ditch to the north (see EIS, CIMA+, 2024).

A summary of trees surveyed by Bowfin (2020) and CIMA+ (2024) is provided in **Appendix B**. Note that one (1) SAR butternut was identified on the Site with a dbh of 7 cm; this is discussed in the accompanying EIS. Due to its size (<10 cm dbh), the butternut is not included in this report. **There were no other species at risk or special concern trees with a minimum dbh of 10 cm.**

5. IMPACT ASSESSMENT

An impact assessment was undertaken to determine impacts to trees on-Site as a result of the project's activities. Trees within the extent of grading, dead trees, or individuals with CRZs within the extent of grading, are all recommended for removal. The extent of the grading was reviewed following the receipt of the City's comments (dated October 10, 2024) and there was no possibility of retaining Trees 1 or 2.

Trees outside the construction limits that will likely not be impacted by the project are proposed for retention and protection through the mitigation measures outlined below. The results of the impact assessment are summarized below in **Table 2**.

In summary:

- + A total of 90 trees were surveyed.

- + A total of 72 trees are planned for removal
 - 70 are privately owned by the Client
 - 2 are City-owned
- + The remaining 18 trees fall outside the area to be graded.
- + Five (5) remaining trees were privately owned by the adjacent landowner (41 Station Road) and are planned to be retained.
- + One (1) City-owned green ash individual planned for removal due to the installation of erosion protection measures (**Map 2**).
- + One (1) dead American elm outside the limits of construction is also planned for removal; this individual is City-owned (**Map 2**).
- + The remainder of grouping C are planned for retention.
- + Critical root zones for 2 trees (Trees 35, 36), as well as areas to be retained within Grouping C, fall within construction limits; mitigation measures are provided below. Trees 35 and 36, sugar maple and Manitoba maple respectively, are situated on the adjacent property (41 Station Road). Note that the CRZs for both 35 and 36 also fall within the extent of the existing underground watermain.
- + Of the trees recommended for removal, 24 are green ash in poor condition, 10 are American elm, and 10 are black cherry (**Table 4**). The 18 trees that could be retained are all outside the limits of construction, though most ash individuals surveyed were in poor condition and the American elm individuals to be retained were deemed to be unhealthy. (**Map 1, Map 2, Table 4**).

Table 3: Impact Assessment for Trees on Site (dbh ≥10 cm)

Trees to be Removed	Trees to be Pruned	Trees to be Retained
72	0	18

6. MITIGATION MEASURES AND CONSTRUCTION MANAGEMENT

6.1 Tree Protection Measures

As noted above, avoidance and mitigation measures associated with other natural heritage features are provided in the accompanying EIS. The EIS must be referenced when planning the timing of tree removal.

The most typical construction damage to trees is root damage from compaction and severance. While the drip line of a tree's canopy is typically thought to be associated with the root area, the root zones can extend significantly beyond the drip line of the tree, sometimes up to 2 or 3 times the height of the tree.

While the trees to be retained have their CRZs outside of the extent of construction, they would still be at risk of contact with and damage from heavy equipment. Generally, to protect these

trees, the movement of heavy equipment should remain outside of the CRZs, and workers educated on the protection measures outlined below.

To successfully preserve trees that are recommended for on-site retention, as well as those identified as being impacted, the following series of mitigation measures is recommended. These recommended measures largely center on the minimum CRZ of trees, as defined by the City's Tree Conservation Report Guidelines (2021). Again, a copy of these measures is in the updated EIS (CIMA+, 2024) which provides a single source for all natural heritage measures.

Avoidance and Mitigation Measures for Trees

- + Refer to the EIS (CIMA+, 2024) for appropriate timing windows for tree removal to avoid impacts to other natural heritage features (i.e., bird nests, species at risk and their habitat)
- + The City of Ottawa's Tree Protection (By-law No. 2020-340), Part VI states that harm to all protected trees will require an approval, tree permit, or distinctive tree permit from the General Manager (Section 73). As such, a permit for the removal of trees that are 10 cm or larger in diameter is required for privately-owned property within the City's urban area (Part IV, Section 39).
- + The edge of the property and the extent of construction/grading should be clearly defined on the site plans and in the field.
- + All trees within the work area/area to be graded will be removed. Prior to clearing of vegetation, trees to be protected/retained will be flagged on Site. When clearing near trees next to neighbouring lands, mitigation measures to prevent harm to the root systems of trees adjacent to the proposed works will be implemented to protect them from indirect harm:
 - Sturdy fencing will be installed outside of the Critical Root Zone (CRZ) (defined by the City as 10x the DBH) of the trunk of the closest trees to the work area. Fencing will be retained until construction activities have been completed, as per City of Ottawa's Tree Protection (By-law No. 2020-340), Part VI:
 - Tree protection fencing shall be at least 1.2 metres in height and installed in such a way that the fence cannot be altered (Section 74). Other measures may be required by the General Manager.
 - Where authorized by the General Manager, fenced tree protection areas may be reduced for construction; appropriate mitigation measures shall be provided (e.g., plywood, woodchips or steel plating over roots, pruning, use of tunnelling or boring for excavation (Section 75).
 - No grading or activities that may cause soil compaction (such as heavy machinery and stockpiling of materials) will be allowed within the fenced area.
 - Furthermore, no machinery maintenance or refueling or stockpiling is permitted within 5 m of the outer edge of this fencing.
 - Exhaust fumes from all equipment will be directed away from the canopy of the trees to be retained.
 - If roots of trees on adjacent lands become exposed during site alterations, they will be buried immediately with soil or covered with filter cloth or woodchips and kept moist until the roots can be buried permanently.

- Any roots that must be cut will be cut cleanly to allow for healing.
- + Section 76 of the City's Tree Protection (By-law No. 2020-340), Part VI requires the following, unless otherwise directed by the General Manager:
 - Do not place any material or equipment within the CRZ of a tree to be retained.
 - Do not raise or lower the existing grade within the CRZ of a tree to be retained.
 - Do not extend any hard surface or significantly change landscaping within the CRZ of a tree to be retained.
- + If the construction will have to encroach into a tree's minimum CRZ, installing a temporary layer of 150 mm deep partially composed wood chips mulch over the root zone can help to protect roots from compaction damage, and conserve soil moisture levels.
- + Section 77 of the City's Tree Protection (By-law No. 2020-340), Part VI requires the following, unless otherwise directed by the General Manager:
 - Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.
 - No signs, notices or posters should be attached to any trees;
 - Ensure that no damage comes to the root system, trunk, or branches of a tree.
- + Any landscape plans will include native species as much as possible. Exceptions would only be made based on the advice of the landscape consultant. It is our understanding that the plantings of native trees and shrubs is typically not an issue, but that herbaceous vegetation can often not withstand the pressures from road maintenance etc.

6.2 Tree and Root Pruning

- + No trees have been recommended for pruning, as their minimum CRZ are untouched by the grading limits. If, during excavation, any roots are encountered while working outside the CRZ, they should be cut off cleanly with sharp pruning tools rather than allow them to be torn by large equipment; clean cuts will help to minimize decay and entry points for disease.
 - Do not damage the root system, trunk, or branches of any tree.
 - All exposed roots of trees to be retained should be covered in a minimum of 5 cm of firm soil within 24 hours of exposure.
- + If root pruning is implemented, the crown of the tree should be reduced proportionately under the direction of a Certified Arborist or Registered Forester, to decrease wind sail. Pruning should be kept to thinning cuts (no major limb removal), and crowns should be monitored, and maintenance carried out for two (2) years after root pruning to remove any dieback under the direction of a Certified Arborist or Registered Forester.
- + Where branches are likely to hang in the way of passing equipment, the branches should be pruned by a Certified Arborist or Registered Forester to avoid tearing and undue injury to the tree.

- + All pruning work must be performed under the supervision and guidance of a qualified tree professional in accordance with the latest ANSI A300 Pruning Standards and best management practices identified by the International Society of Arboriculture.

7. CONCLUSIONS & NEXT STEPS

The City of Ottawa's Tree Protection By-law No. 2020-340 describes the rules that govern tree ownership in Ottawa and the responsibility of tree maintenance, including administration and enforcement. As per Part IV: Sections 42 – 44 Prohibition: *No person shall injure or destroy a tree without a permit*. Sections 45 to 48 - Application for tree permit stipulates the process to apply for a permit under this by-law.

Therefore, it is recommended that consultation should be undertaken with the City prior to construction to confirm the requirements for tree removal permits associated with the municipal tree protection by-law. Where required, tree removal permits must be obtained from the City **prior** to the start of construction. As there are two trees on the neighbouring lands that may be impacted by the activities due to their CRZ extending into the Site, the client will initiate discussions with the neighbouring landowner to determine next steps and come to an agreement. **No work within the CRZ of these two trees will be undertaken until the discussion is completed.**

Follow appropriate timing windows for clearing of vegetation to protect wildlife and migratory birds (i.e., birds and bats) as indicated in the EIS (CIMA+, 2024) or most recent guidelines available at the time of clearing.

8. STUDY LIMITATIONS AND CONSTRAINTS

The assessment presented in this report has been made using accepted standard arboriculture techniques as outlined in the *Council of Tree and Landscape Appraisers Guide for Plant Appraisal, 10th Edition, Second Printing (2020)*. These techniques include visual examination of above-ground parts of each tree or trees in each group. The trees observed were not climbed, cored, or dissected, and excavation for detailed root crown inspection was not performed. Since some symptoms may only be present seasonally, the extent of observations that can be made may be limited by the time of year in which the inspection took place.

Since trees are living organisms, their health and vigour continually change over time due to seasonal variations, changes in site conditions, and other factors. For this reason, the assessment presented in this report is valid at the time of inspection, and no guarantee is made about the continued health of trees that are deemed to be in good condition. It is recommended that the trees be reassessed periodically to identify changes in condition. While every standing tree has the potential for failure and therefore poses some risk, a tree assessment is a good indication of present health and potential problems that could arise in the future.

CIMA+ has prepared this report for the sole use of the client. Any use of this report by a third party, as any decision based on this report, is the singular responsibility of the third party. **CIMA+** will not be held responsible for eventual damages towards a third party resulting from decisions taken, or based, on this report.

9. REFERENCES

Bowfin Environmental Consulting. (2020). Tree Conservation Report. 10 pp.

CIMA+. (2024). 100 Steacie Drive – Environmental Impact Study Update. 33 pp + Appendices.

Bradley, David. 2007. Southern Ontario Vascular Plant Species List. Prepared by Southern Science and Information Section, Ontario Ministry of Natural Resources, Peterborough, Ontario. 57pp.

Neuf Architects. (2024). Steacie Drive Site Plan dated January 1, 2024. 1 pp.

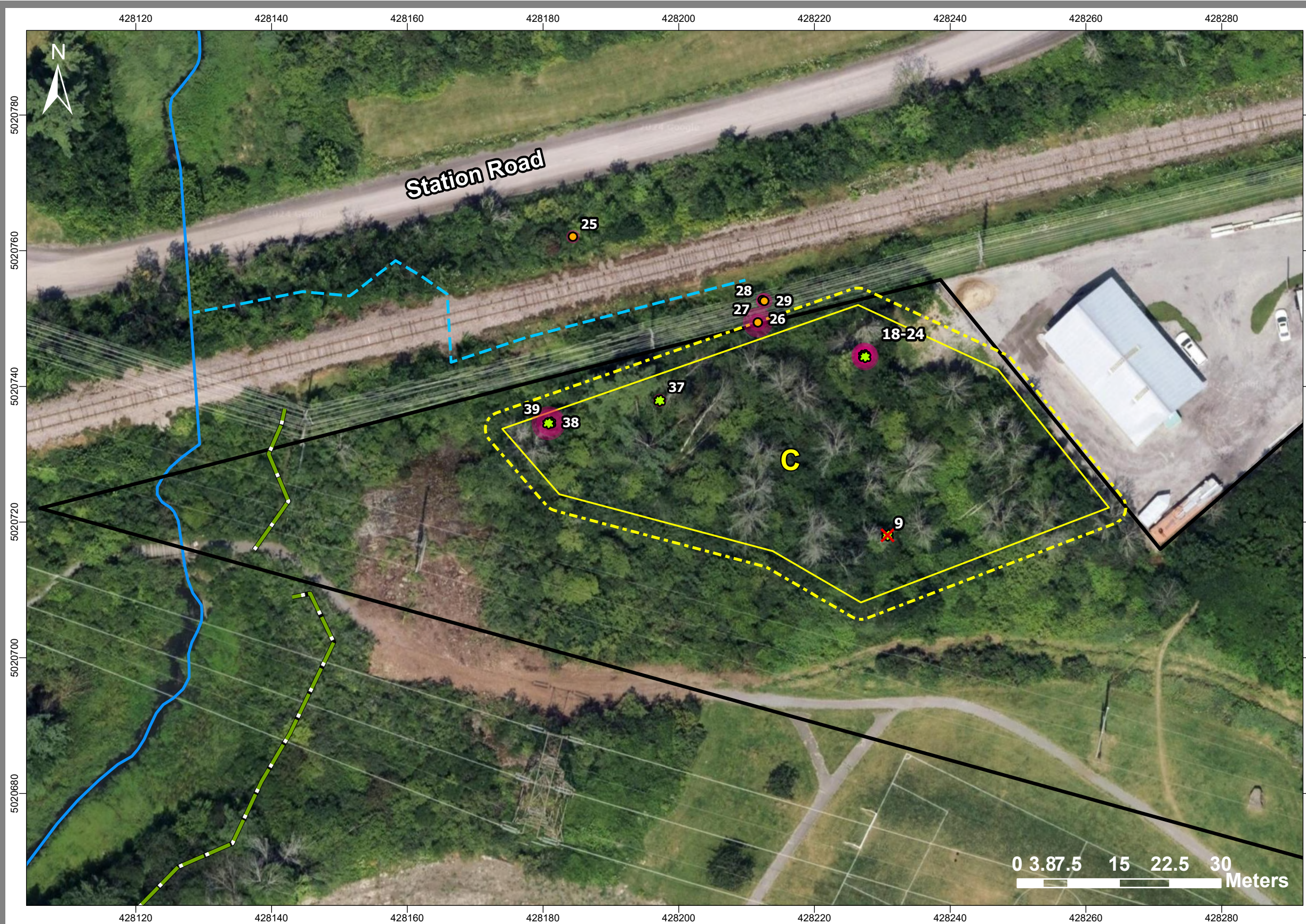
Newmaster, S.G., A. Lehela, P.W.C Uhlig, S. McMurray and M.J. Oldham. (1998). Ontario plant list. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, ON, Forest Research Information Paper No. 123. 550 pp. + appendices.

City of Ottawa. (2020) Tree Protection (By-law No. 2020-340).

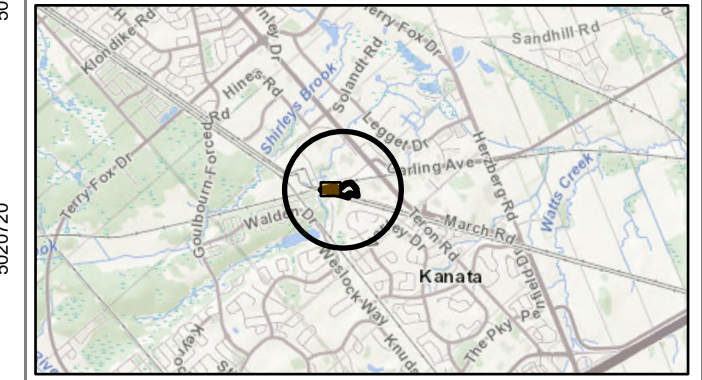
A

Appendix A Tree Conservation Report Maps 1, 2





- Legend**
- Property Line (Vollebek Ltd., 2024)
 - Watercourse (OHN)
 - Railroad Ditch
 - Edge of Valleyland
- Tree Information**
- Dead Individual
 - Grouping
 - Grouping Critical Root Zone
 - Individual Tree Critical Root Zone
- Ownership**
- 3223701 Canada Inc.
 - City



Spatial Reference:
 Name: NAD 1983 UTM Zone 18N
 PCS: NAD 1983 UTM Zone 18N
 GCS: GCS North American 1983
 Map Units: Meter
 Scale: 1:594

Sources:
 - Basemap : © OpenStreetMap (and) contributors, CC-BY-SA
 - Site Servicing Plan (Stantec Consulting Ltd., Nov 6 2024)
 - Topographical Sketch (Vollebek Ltd., revised Sept 30 2024)

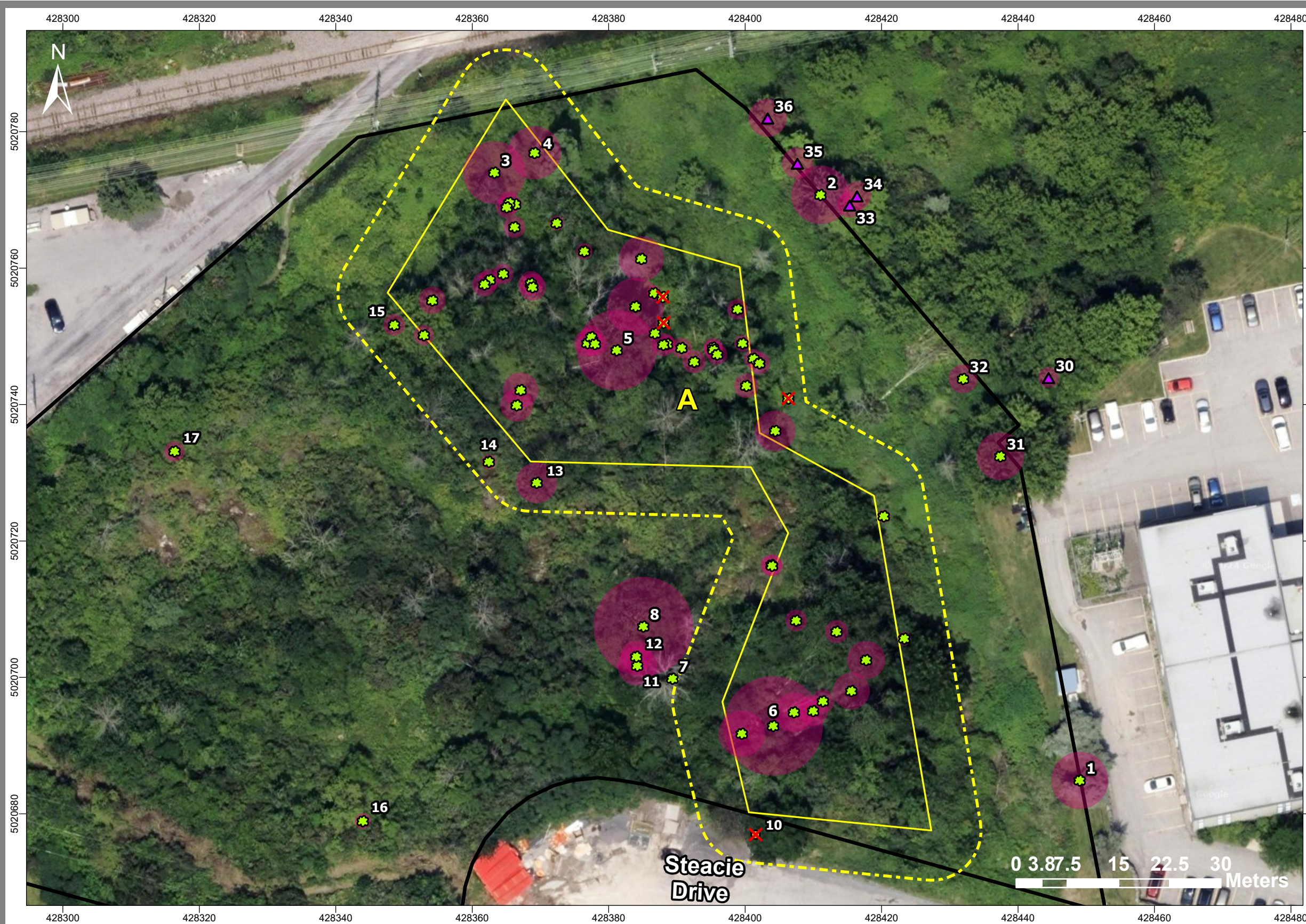
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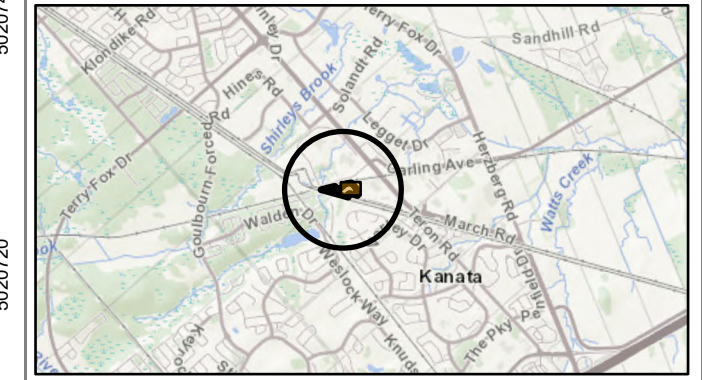
100 Steacie Drive
 Ottawa, ON

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- Legend**
- Property Line (Vollebek Ltd., 2024)
 - Tree Information**
 - Dead Individual
 - Grouping
 - Grouping Critical Root Zone
 - Individual Tree Critical Root Zone
 - Ownership**
 - 3223701 Canada Inc.
 - City
 - 41 Station Road



Spatial Reference:
 Name: NAD 1983 UTM Zone 18N
 PCS: NAD 1983 UTM Zone 18N
 GCS: GCS North American 1983
 Map Units: Meter
 Scale: 1:591

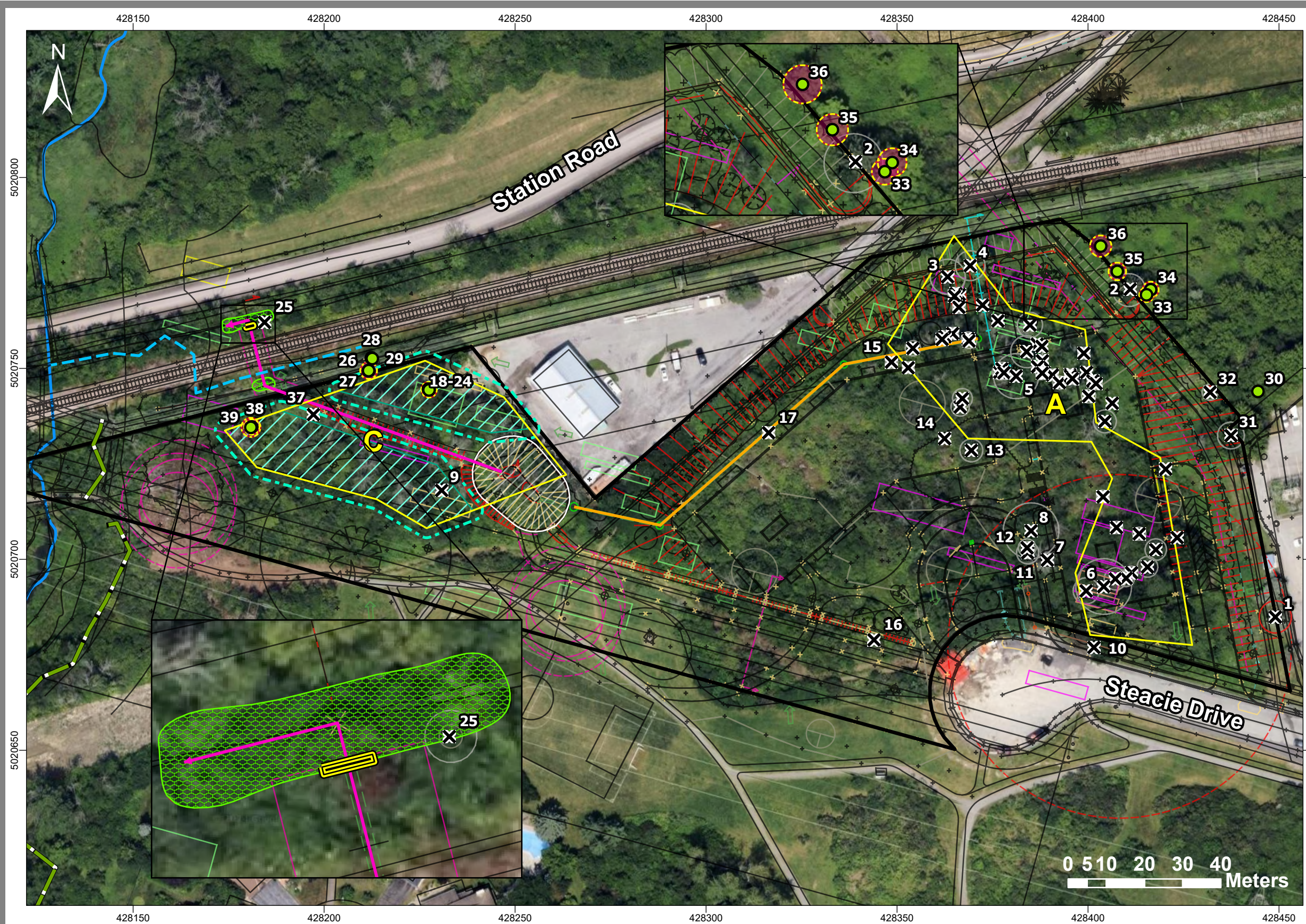
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Legend

- Property Line (Vollebek Ltd., 2024)
- Proposed Stormwater Management Facility
- Inlet
- Outlet
- Headwall
- Erosion Protection (rip rap)
- Watercourse (OHN)
- Railroad Ditch
- Edge of Valleyland
- Grouping
- Individual Tree Critical Root Zone

Action to be Taken

- Remove
- Retain
- Areas to be Retained within Groupings
- Areas to be Retained - Critical Root Zone
- Tree Protection Fencing

Spatial Reference:
 Name: NAD 1983 UTM Zone 18N
 PCS: NAD 1983 UTM Zone 18N
 GCS: GCS North American 1983
 Map Units: Meter
 Scale: 1:1,055

Sources:
 - Basemap : © OpenStreetMap (and) contributors, CC-BY-SA
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B

Appendix B Detailed Tree Grouping and Tree Information (2020, 2024)



Table 4: Detailed Information on Tree Groupings and Individuals Surveyed (2020, 2024)

Tree ID	Species	UTM Coordinates (NAD 83)	DBH (cm)	Health	Comments	Ownership	To Be Removed
Tree Groupings**							
A	American Elm Black Cherry Black Walnut Freeman's Maple Grey Birch Manitoba Maple Trembling Aspen White Ash White Pine White Spruce	18 T 428354 5020705	10-73	Good	Most ash in poor condition or dead. Most American elm dead. Average DBH: 20cm	3223701 Canada Inc.	Y (Within Subject Lands)
C	American Elm Bur Oak White Ash White Pine	18T 428206 5020743	10-25	Poor	Average DBH: 20cm	3223701 Canada Inc.	Y (Within Subject Lands)
Individual Trees (Bowfin 2020)							
1	Willow Species	18 T 428449 5020686	42	Good		3223701 Canada Inc.	Y
2	White Spruce	18 T 428408 5020770	43	Good		3223701 Canada Inc.	Y
3	White Ash	18 T 428365 5020762	46	Poor	2 Stems	3223701 Canada Inc.	Y
4	White Ash	18 T 428363 5020775	39	Unhealthy	2 Stems	3223701 Canada Inc.	Y
5	Willow Species	18 T 428369 5020778	59	Good	2 Stems	3223701 Canada Inc.	Y
6	Freeman's Maple	18 T 428381 5020749	73	Good	2 Stems	3223701 Canada Inc.	Y
7	White Ash	18 T 428404 5020694	35	Dead	Some shoots	3223701 Canada Inc.	Y
8	White Ash	18 T 428389 5020701	73	Unhealthy		3223701 Canada Inc.	Y

Tree ID	Species	UTM Coordinates (NAD 83)	DBH (cm)	Health	Comments	Ownership	To Be Removed
9	Black Cherry	18 T 428385 5020708	39	Dead	Tree 9 was reassessed in October 2024 and found to be dead.	3223701 Canada Inc.	Y
10	American Elm	18T 428401 5020677	15	Dead		City	Y
11	Black Cherry	18T 428384 5020701	29	Good		3223701 Canada Inc.	Y
12	Black Cherry	18T 428384 5020702	23	Good		3223701 Canada Inc.	Y
13	Black Cherry	18T 428369 5020728	30	Good		3223701 Canada Inc.	Y
14	American Elm	18T 428362 5020731	11	Good		3223701 Canada Inc.	Y
15	Green Ash	18T 428348 5020751	16	Unhealthy		3223701 Canada Inc.	Y
16	Manitoba Maple	18T 428343 5020678	12	Good	7 stems	3223701 Canada Inc.	Y
17	Manitoba Maple	18T 428316 5020733	15	Good		3223701 Canada Inc.	Y
Individual Trees (CIMA+ 2024)							
18	Black Cherry	18T 428227 5020744	13	Good		3223701 Canada Inc.	N
19	American Elm	18T 428227 5020744	14	Unhealthy		3223701 Canada Inc.	N
20	American Elm	18T 428227 5020744	20	Unhealthy		3223701 Canada Inc.	N
21	Green Ash	18T 428227 5020745	19	Unhealthy (EAB)	Poor health, evidence of emerald ash borer present on all individuals	3223701 Canada Inc.	N
22	Green Ash	18T 428227 5020745	12	Unhealthy (EAB)		3223701 Canada Inc.	N
23	Green Ash	18T 428227 5020743	11	Unhealthy (EAB)		3223701 Canada Inc.	N
24	Green Ash	18T 428227 5020743	10	Unhealthy (EAB)		3223701 Canada Inc.	N
25	Green Ash	18T 428184 5020762	10	Unhealthy (EAB)		City	Y

Tree ID	Species	UTM Coordinates (NAD 83)	DBH (cm)	Health	Comments	Ownership	To Be Removed
26	Green Ash	18T 428211 5020749	13	Unhealthy (EAB)		City	N
27	Green Ash	18T 428211 5020749	22	Unhealthy (EAB)		City	N
28	Green Ash	18T 428212 5020753	10	Unhealthy (EAB)		City	N
29	Green Ash	18T 428212 5020753	12	Unhealthy (EAB)		City	N
30*	Green Ash	18T 428444 5020744	15	Unhealthy (EAB)	Assessed in October 2024, previously part of Tree Grouping B.	41 Station Road	N
31*	Manitoba Maple	18T 428437 5020732	34	Good		3223701 Canada Inc	Y
32*	Manitoba Maple	18T 428431 5020743	32	Good		3223701 Canada Inc	Y
33*	Manitoba Maple	18T 428415 5020769	19	Good		41 Station Road	N
34*	Manitoba Maple	18T 428416 5020770	21	Good		41 Station Road	N
35*	Sugar Maple	18T 428407 5020775	23	Good		41 Station Road	N
36	Manitoba Maple	18T 428403 5020782	28	Good	Assessed in October 2024	41 Station Road	N
37	Black Cherry	18T 428197 5020737	10	Good	Reassessed in October 2024, part of Tree Grouping C	3223701 Canada Inc	N
38	Green Ash	18T 428181 5020734	20	Unhealthy (EAB)		3223701 Canada Inc	N
39	Green Ash	18T 428180 5020734	25	Unhealthy (EAB)		3223701 Canada Inc	N

*Previously part of Grouping B

**Note that Grouping B was eliminated after the October 2024 visit and replaced with data on individual trees, as the entirety of the Grouping was surveyed.

Table 5: Summary of 2020 and 2024 Data for Individual Trees on Site with dbh ≥10 cm

Species	Scientific Name	Count	Size Range (dbh cm)	No. Live	No. Dead	No. to be Removed	No. to be Retained
American Elm	<i>Ulmus americana</i>	12	10-28	8	4	10	2
Black Cherry	<i>Prunus serotina</i>	11	10-39	10	1	9	1
Black Walnut	<i>Juglans nigra</i>	2	10-19	2	0	2	0
Bur Oak	<i>Quercus macrocarpa</i>	1	12	1	0	1	0
Green Ash	<i>Fraxinus pennsylvanica</i>	35	10-33	35	0	24	11
Grey Birch	<i>Betula populifolia</i>	1	16	1	0	1	0
Freeman's Maple	<i>Acer x freemanii</i>	1	73	1	0	1	0
Manitoba Maple	<i>Acer negundo</i>	7	12-34	7	0	4	3
Sugar Maple	<i>Acer saccharum</i>	1	23	1	0	0	1
Silver Maple	<i>Acer saccharinum</i>	1	42	1	0	1	0
Trembling Aspen	<i>Populus tremuloides</i>	1	20	1	0	1	0
White Ash	<i>Fraxinus americana</i>	13	15-55	13	0	13	0
White Pine	<i>Pinus strobus</i>	1	18	1	0	1	0
White Spruce	<i>Picea glauca</i>	1	43	1	0	1	0
Willow sp.	<i>Salix spp.</i>	2	42-59	2	0	2	0
Total		90	10-73	85	5	72	18