3856, 3866 & 3876 Navan Road
Tree Conservation Report

Proposed Church and Service Building
Project No. 160410200

Prepared for:
St. George and St. Anthony Coptic Orthodox Church

Prepared by:
Stantec Consulting Ltd.

February 12, 2019
Revised July 9, 2019

Sign-off Sheet

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Prepared by _____

(signature)

Isabelle Lalonde, Landscape Architect

Table of Contents

EXECUTIVE SUMMARY ..... **I**

GLOSSARY ..... **II**

1.0 INTRODUCTION **1.1**

2.0 TREE ASSESSMENT **2.3**
2.1 METHODOLOGY 2.3
2.2 OBSERVATIONS 2.3
2.2.1 Existing Vegetation 2.3
2.2.2 Species-at-Risk 2.3
2.3 VEGETATION QUALITY AND SUITABILITY FOR RETENTION 2.4

3.0 PROPOSED DEVELOPMENT & TREE RETENTION RECOMMENDATIONS **3.5**
3.1 PROPOSED DEVELOPMENT 3.5
3.2 TREE RETENTION RECOMMENDATIONS 3.5
3.2.1 Tree Retention 3.5
3.2.2 Tree Removal 3.7
3.2.3 Compensation Planting 3.8

4.0 CONCLUSION **4.9**

5.0 REFERENCES ..... ERROR! BOOKMARK NOT DEFINED.

LIST OF TABLES

Table 1 Retention Qualities 2.4

LIST OF FIGURES

Figure 1: Location Plan 1.1

Executive Summary

This Tree Conservation Report has been prepared in support of Site Plan Application to permit the development of 3856, 3866 & 3876 Navan Road in Ottawa, Ontario. This project proposes the construction of a church and service building.

The 1.42 hectares property is located south of Navan Road, southeast of the intersection of Diamond Way and Navan Road within the City of Ottawa. It consists of three parcels of land currently undeveloped covered by naturalized areas including a meadow and groupings of trees. The site is described legally as Parts 1, 2, and 3 Plan 4R-26690 being part of Lot 7, Concession 11, Geographic Township of Cumberland, now in the City of Ottawa. The site is designated "Village" of Notre-Dame-des-Champs in the City of Ottawa Official Plan. The property is designated Rural Institutional R1 Zone Rl1 (835r) in the 2008 City of Ottawa Comprehensive Zoning By-law.

This Tree Conservation Report will summarize the condition of the current vegetation and define trees to be retained and / or removed to permit the development of this project. A Tree Assessment Investigation was conducted to review the species and health condition of the existing vegetation growing at and in periphery of the site in Ottawa and on adjacent land. The construction of this project is planned to occur in 2019-2020.

Glossary

Critical Root Zone (CRZ)	Zone under a tree where there should be no disturbance before, during and after construction. The CRZ is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter.
Diameter at Breast Height (DBH)	Diameter of a tree trunk measured at 1.4 metre above ground, standardized by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture. DBH are generally measured in centimetres.
Dieback	Condition in which the ends of the branches are dying.
Distinctive Tree	Any tree with a DBH of 50 centimetres or greater.
Drip Line	Perimeter of the area under a tree delineated by the crown.
Leader	The primary terminal shoot or trunk of a tree.
Sapling	A young tree measuring one (1) to two (2) metres high and having a DBH of two (2) to four (4) centimetres.
Scaffold Branches	The permanent or structural branches of a tree.
Seedling	A plant grown from a seed with a height of not more than one (1) metre.
Significant Tree	Tree / shrub deemed valuable because it is unusually beautiful or distinctive, comparatively old, distinctive in size or structure for its species, rare or unusual in the subject area, provides a habitat for rare or unusual wildlife species in the subject area, or has an historical, cultural, or landmark significance.
Significant Woodland	Woodland that contain mature stands of trees 80 years or older, have interior forest habitat more than 100 metres from forest edge, and are adjacent to a surface water feature.
Specimen Tree	Individual tree located in the middle of a field or open space. A specimen tree is not automatically a significant tree.
Stress	Any factor that negatively affects the health of a tree.

Structural Defect	Flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure.
Topping (Topped)	Cutting back a tree to buds, stubs, or laterals not large enough to become a new leader on the tree.
Tree Protection Zone (TPZ)	The area surrounding a tree that is marked and fenced off and where there is no storage of materials of any kind, no parking or moving of vehicles, and no disturbance of the soil or grade.
Tree Shoots	Tree shoots are sprouts that emerge from dormant buds along the trunk or branch of a tree. In an urban environment shoots are often associated with stress to the tree. Trees with severe dieback due to winter injury, drought and salt spray often produce many shoots as a means of compensating for the loss of leaf surface due to stress or injury.
Tree Suckers	Tree suckers are sprouts that form from the roots of existing trees and tend to form new trees or shrubs. In an urban environment suckers can be associated with stress to the tree and are prevalent after a disturbance such as when mature trees are cut down. Some tree species have the tendency to sucker.
Vigour	Overall health; capacity to grow and resist stress.

1.0 INTRODUCTION

Stantec Consulting Ltd. was retained by St. George and St. Anthony Church to complete a Tree Conservation Report for 3856, 3866 & 3876 Navan Road in support of a Site Plan Application to permit the construction of a new church and service building including a paved parking area. The site is situated south of Navan Road, southeast of the intersection of Diamond Way and Navan Road within the City of Ottawa. The site is described legally as Parts 1, 2, and 3 Plan 4R-26690 being part of Lot 7, Concession 11, Geographic Township of Cumberland, now in the City of Ottawa. The site is designated "Village" of Notre-Dame-des-Champs in the City of Ottawa Official Plan. The property is designated Rural Institutional R1 Zone Rl1 (835r) in the 2008 City of Ottawa Comprehensive Zoning By-law.

Figure 1: Location Plan

The objectives of this Tree Conservation Report are:

- To describe the existing woody vegetation growing on site including trees and large shrubs. The description for each tree and / or large shrubs will include species, size, vigour, and health condition.
- To assess the environmental value and suitability for retention of the woody vegetation.

- To evaluate the anticipated impact of the proposed development on the existing woody vegetation.
- To provide recommendations related to tree protection and mitigation measures to reduce negative impact on the woody vegetation to be retained.
- To provide recommendations for the development of a compensation planting plan.

2.0 TREE ASSESSMENT

A Tree Assessment Investigation was conducted on August 9 and August 22, 2018, by Julie Mulligan, Landscape Architect at Stantec Consulting Ltd., and Molly Smith, Landscape Architectural Intern, to review the species and health condition of the existing vegetation growing at 3856, 3866 & 3876 Navan Road in Ottawa. In addition, our investigation included the assessment of trees growing in the road right-of-way and within 5 metres of the property lines.

2.1 METHODOLOGY

A complete assessment of every specimen tree over 10cm in DBH growing on the subject lands or in close proximity of property line was completed. The DBH of trees was measured on site during the Tree Assessment Investigation. The species were determined based on bark, bud, and leaves identification. The vigour was assessed based on visible defects only.

The location of the trees, as shown on the ***Current Vegetation Plan (TC-01),*** was established based on site observations. Location of all vegetation shown on drawing TC-01 is for reference only. The location of all trees should be confirmed by a surveyor and landscape architect or arborist.

2.2 OBSERVATIONS

The subject lands are relatively flat with a gentle slope towards the south. The vegetation observed on the subject lands consists predominantly in a meadow with groupings of trees and specimen trees at the periphery of the parcels.

2.2.1 Existing Vegetation

In general, the trees inventoried on this property appeared in healthy condition, are of various sizes and show no significant signs of disease. A total of 37 trees and two (2) vegetation groups were assessed as part of this assessment. Tree species composition included mostly deciduous species with only three (3) coniferous trees. The complete list of all trees inventoried is described in the ***Tree Inventory*** table inserted on the ***Current Vegetation Plan (TC-01)***. This table shall be read in conjunction with the Tree Inventory Plan and is inserted at the end of this report.

2.2.2 Species-at-Risk

No trees considered as species-at-risk or endangered species were observed on or adjacent to the property.

2.3 VEGETATION QUALITY AND SUITABILITY FOR RETENTION

Existing trees growing on and around the subject lands provide a mature character to the property. Although a quantity of trees growing on this property show good health conditions, other factors should be evaluated when establishing the suitability for retention of a tree. These factors include the following:

- Structural condition;
- Age and expected longevity of the tree;
- Species invasiveness; and
- Species response and tolerance to disturbance.

By considering all the factors listed above, trees recommended for retention will have a higher chance to respond positively to new site conditions for an extended period of time while providing a safe environment for the property users.

In addition to the factors listed above, ***Table 1 – Retention Qualities*** describes the suitability for each tree species for retention. The suitability for retention considers the capacity of the trees to survive to stress and changes in their environment. Moreover, the suitability for retention should also study the proposed development of the property including grading works around the Critical Root Zones (CRZ) of trees and the proximity to construction, access roads, and / or built structures. This type of analysis will be completed in the following section of this report.

Table 1 - Retention Qualities

Tree Species (*Botanical Name* / Common Name)	Remarks	Suitability for Retention
Acer negundo / Manitoba maple	Invasive and opportunistic species. Branches have tendency to lean and break easily.	Moderate to Poor
Betula papyrifera / White birch	Intolerant of soil compaction and increased light especially in the root zone.	Moderate to Poor
Juglans nigra / Black walnut	Sensitive to excavation work.	Moderate to Poor
Picea glauca / White spruce	Tolerant to drought.	Good to Moderate
Pinus banksiana / Jack pine	Tolerates some fill in sandy soils.	Good to Moderate
Populus tremuloides / Trembling aspen	Tolerant to compaction.	Good to Moderate
Prunus serotina / Black cherry	Very young plants are adaptive to altered environment while older plants often decline over time following any disturbance.	Poor

3.0 PROPOSED DEVELOPMENT & TREE RETENTION RECOMMENDATIONS

3.1 PROPOSED DEVELOPMENT

The project for 3856, 3866 & 3876 Navan Road proposes the construction of a church and service building with associated asphalt drive aisles, walkways, septic field, and landscaping. The construction of the church and service building will necessitate the removal of the meadow and most of the existing vegetation growing on the subject lands. The proposed development shown on the ***Tree Preservation Plan (TC-02)*** illustrates the location of the proposed buildings and affiliated infrastructure.

3.2 TREE RETENTION RECOMMENDATIONS

3.2.1 Tree Retention

The Site Plan developed for this application proposes limited locations where trees may be preserved. As indicated on the Tree Preservation Plan, Stantec recommends the preservation of four (4) trees growing on the property, and all plant material growing on adjacent land and in the road right-of-way including eight (8) trees assessed during the tree investigation. Based on the Tree Assessment Investigation, all trees to be retained and growing on the subject lands show good health condition. As indicated in table 1 above, these trees also present good retention qualities.

To ensure tree survival during and after construction, mitigation measures should be considered during construction. Adequate protection of the trees to be retained and their immediate environment is crucial for the survival of these trees. As such, the Contractor shall apply the following measures to prevent damages to these trees.

3.2.1.1 Tree Health Monitoring

Trees located adjacent to construction works will experience change in their immediate environment. As a result, tree health should be monitored. Photographs of trees to remain should be taken prior to construction, if possible when the trees are in full leaf, as a record of their condition. Monitoring tree health both during and after construction should be made a priority. Actions should be taken as early as possible if / when the health of a protected tree declines. Damages may include:

- Physical damage on tree bark;
- Broken branches;
- Compaction of root systems due to equipment and materials stored within the protected areas;

- Cutting of the roots; and
- Root exposure following excavation adjacent to trees to be preserved.

Services of an arborist should be used in order to give adequate care to damaged trees.

Trees that have died or have been damaged beyond repair by the Contractor during construction shall be removed and replaced by the Contractor as directed by the project landscape architect.

3.2.1.2 Temporary Tree Protection Fencing

The roots of a tree are located in the top 150 to 250 millimetres of soil and can very easily be inadvertently damaged. To ensure protection of the root system of trees to remain, temporary tree protection fencing shall be installed at the critical root zone (CRZ) of trees located inside or adjacent to the construction area. **The CRZ of a tree is the zone around the trunk where there should be no disturbance before, during, and after construction. The CRZ is established as being 10 centimetres from the trunk for every centimetre of trunk diameter.**

Temporary tree protection fencing shall be installed according to the detail inserted as drawing ***TC-03 – Temporary Tree Protection Fence*** at the end of this report. Fencing shall be maintained in good repair at all times during construction operations, and shall only be removed upon completion and when agreed by the contract administrator. Temporary removal of fencing shall not be permitted without the approval from the contract administrator.

Within the CRZ of trees, as delineated by temporary tree protection fencing there should be:

- No disturbance or alteration of the existing grade without approval including addition of fill, excavation, or scraping of the soil;
- No installation of signs, notices or posters on trees;
- No storage of construction materials, surplus soil, construction waste, or equipment;
- No disposal (dumping or flushing) of contaminants or liquids; and,
- No movement of vehicles (personal or business), equipment or pedestrians.

Section 3.2.1.3 addresses mitigation strategies should disturbances or alterations within the tree protection zone be unavoidable.

3.2.1.3 Work within Protected Areas

3.2.1.3.1 Excavation Work

To ensure the roots are not disturbed more than necessary and where excavation works are unavoidable within the CRZ of trees, the following mitigation measures shall be used:

- **All excavation within the CRZ of trees shall be by hand or hydro excavation using the smallest tools.** Root cutting shall be made using a sharp spade or knife at the limit of disturbance prior to any construction activities.
- **The Contractor shall only tunnel or bore within the CRZ,** instead of creating a trench.

- **Any roots that are exposed by construction activities must be covered with native topsoil immediately,** to ensure that the roots do not dry out or have any further damage occur to them.

In all those instances where root pruning is required, the service of a Certified Arborist or Qualified Tree Worker under the supervision of a Certified Arborist shall be retained. In addition, all remedial works must be conducted by a certified care professional to ensure proper care is administered in order to enable the continued health of the trees.

3.2.1.3.2 Grading Work

Where re-grading is required within the CRZ, it should be performed by hand under the supervision of a Certified Arborist.

3.2.1.4 Additional Protection Measures

The following mitigation measures shall also be followed:

- When working near vegetation, **the Contractor shall ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy**.
- **Where limbs or portions of trees are removed to accommodate construction work, they will be removed carefully in accordance with accepted arboricultural practices.**
- **Where necessary, the trees will be given an overall pruning to restore their appearance**. Not more than one-third of the total branching shall be removed during a single operation. The services of a Certified Arborist shall be retained for this task.

3.2.2 Tree Removal

In order to provide a safe environment, we recommend the removal of all trees located inside or close to the limit of construction. The following measures shall be observed when removing trees and vegetation on the subject lands.

3.2.2.1 Clearing and Grubbing of Trees

It should be noted that no tree shall be removed without the City of Ottawa written approval.

Any trees designated for removal and located outside a protected area will have the stumps completely excavated and removed unless such removal will adversely affect existing trees / ecology to remain. **When removing trees located adjacent to construction limits, special consideration shall be taken to prevent damages to adjacent trees to be retained.**

3.2.2.2 Wildlife Protection

Clearing operations are prohibited during the breeding migratory bird period which extends from April 15 to August 15 of any year for most migratory birds. Should tree removal during this period be unavoidable, the contractor is required to retain the services of a qualified Avian

Biologist who will conduct a breeding migratory bird screening. This screening will identify and ensure there is no evidence of breeding migratory bird activities including active nests. Tree removal will be allowed within five days of conducting the screening.

3.2.3 Compensation Planting

In general, the number of proposed trees for this development should compensate for the loss of vegetation on site and should propose a mix of deciduous trees with some coniferous. In addition, we recommend the following:

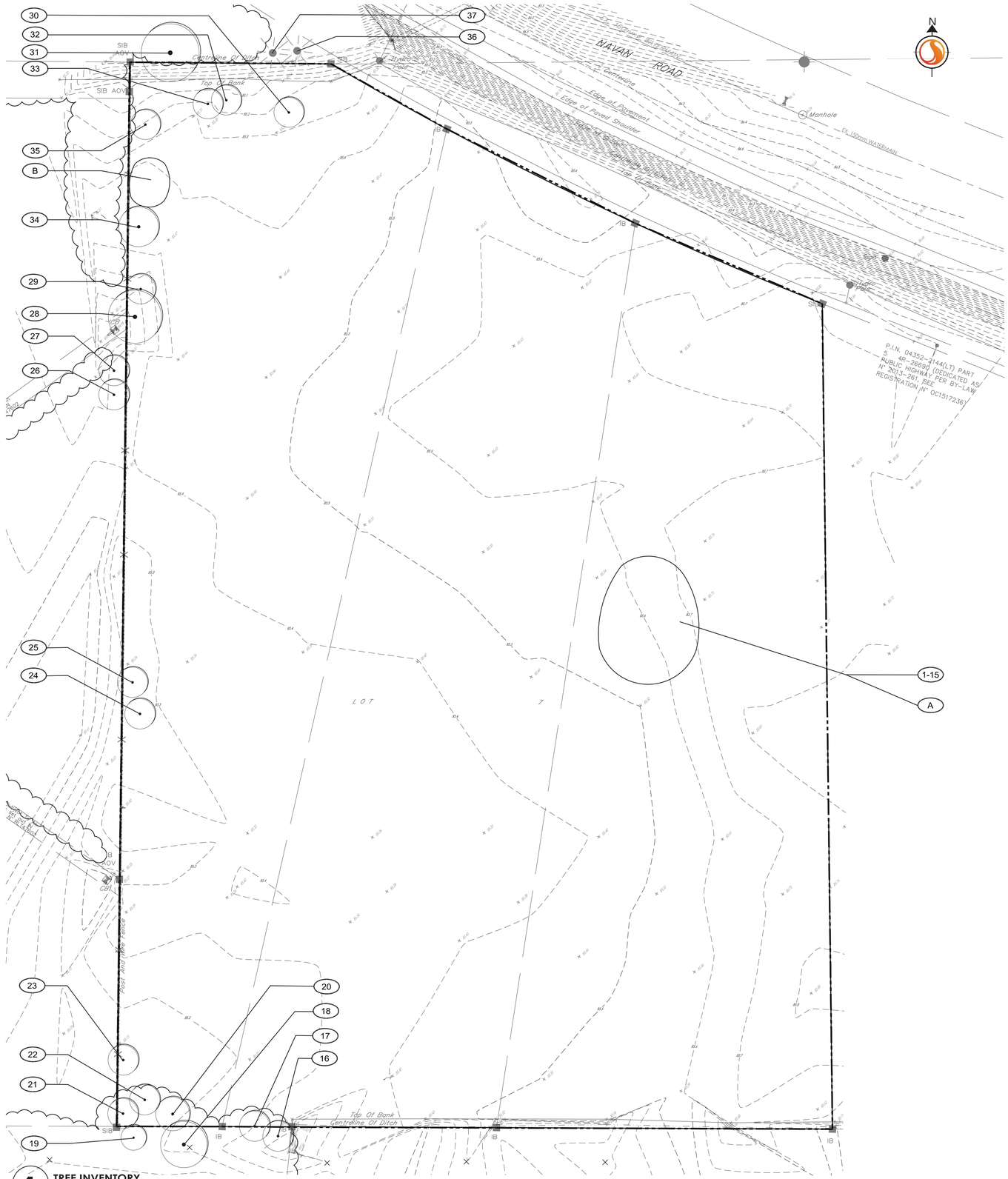
- Planting of locally appropriate native species of trees, shrubs and ornamental plants.
- Planting of non-invasive tree, shrubs, and perennials species;
- Tree species selected to compensate tree loss shall not necessarily correspond to tree species removed on site. Tree species adequate for this site and neighbourhood include maples, spruces, oaks, and cedars;
- Planting of shrubs and perennials shall also be included as part of this development to compensate for the loss of the meadow. A mix of ornamental and native species shall be used to reflect the residential character of the neighbourhood and the type of development.

4.0 CONCLUSION

The proposed development only provides the ***opportunity to preserve trees growing along the property lines*** creating a transitional zone to the residential character of the adjacent properties. To ensure survival of the trees to be retained, protection measures recommended in this report shall be applied. Preservation of those trees will be possible by ***limiting the footprint of the work area and visually delineating the protected zones from the construction zones***. By installing a tree protection fence, damages to trunks, branches, and root systems will be limited.

By following the mitigation recommendations outlined in this report and ***ensuring compensation planting of a mix of trees and shrubs is included as part of this development,*** we believe this development will integrate well to the community.

APPENDIX A - DRAWINGS



TREE INVENTORY

TREE ASSESSMENT CONDUCTED: August 9th, 2018 and August 22, 2018

ALL TREES OVER 10 DBH

PLANT ID	BOTANICAL NAME	COMMON NAME	DBH (cm)	HEALTH/ CONDITION	REMARKS
1	*Populus tremuloides*	Trembling Aspen	10	Good to Fair	
2	*Betula papyrifera*	White Birch	20	Good	
3	*Populus tremuloides*	Trembling Aspen	11	Good	
4	*Betula papyrifera*	White Birch	12	Good	
5	*Betula papyrifera*	White Birch	10	Good	
6	*Betula papyrifera*	White Birch	11	Poor	
7	*Betula papyrifera*	White Birch	17	Good	Almost fused together
8	*Populus tremuloides*	Trembling Aspen	11	Good to Fair	Almost fused together
9	*Salix spp*	Willow	10	Good to Fair	Almost fused together
10	*Pinus banksiana*	Jack Pine	14	Poor	
11	*Betula papyrifera*	White Birch	16	Good	Mulit-stem (4 stem)
12	*Betula papyrifera*	White Birch	15	Good	
13	*Populus tremuloides*	Trembling Aspen	10	Good	
14	*Betula papyrifera*	White Birch	10	Good	
15	*Betula papyrifera*	White Birch	13	Fair	
16	*Acer negundo*	Manitoba Maple	15	Good	Multistem; 1 m south off of property line
17	*Acer negundo*	Manitoba Maple	15	Good	On property line
18	*Acer negundo*	Manitoba Maple	45	Good	Multistem; 3 m south off of property line
19	*Prunus serotina*	Black Cherry	15	Poor	1.5m south off of property line
20	*Acer negundo*	Manitoba Maple	25	Good to Fair	
21	*Acer negundo*	Manitoba Maple	25	Good	
22	*Acer negundo*	Manitoba Maple	20	Good	
23	*Acer negundo*	Manitoba Maple	15	Fair	Against fence
24	*Acer negundo*	Manitoba Maple	17	Good to Fair	Against fence
25	*Acer negundo*	Manitoba Maple	18	Fair	Against fence
26	*Juglans nigra*	Black Walnut	35	Good	On neighbours property near shed 1.5m from fence
27	*Juglans nigra*	Black Walnut	35	Good	On neighbours property near shed 1.5m from fence
28	*Acer negundo*	Manitoba Maple	38	Good to Fair	Multistem; 3 stems
29	*Acer negundo*	Manitoba Maple	15	Good to Fair	
30	*Populus tremuloides*	Trembling Aspen	26	Good	
31	*Acer negundo*	Manitoba Maple	50	Good	On neighbours property, .5m away from property line
32	*Populus tremuloides*	Trembling Aspen	16	Good	
33	*Populus tremuloides*	Trembling Aspen	15	Good	
34	*Populus tremuloides*	Trembling Aspen	22	Good	
35	*Acer negundo*	Manitoba Maple	12	Good to Fair	Mulit-stem
36	*Picea glauca*	White Spruce	25	Fair	On neighbours property, .5m away from property line
37	*Picea glauca*	White Spruce	25	Fair	On neighbours property, .5m away from property line

VEGETATION GROUPS

A	Trees 1 through 15, plus 17 Aspen and White Birch, all under 10 cm in good condition
B	Grove comprised of Paper Birch, Trembling Aspen and White Birch. Sizes range from 11 cm to 18 cm. In good to fair condition;
Note	Suckering Green Ash near access point

Stantec

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Legend

- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING VEGETATION GROUP
- EXISTING FORESTED AREA
- 000 — TREE IDENTIFICATION KEY
- PROPERTY LINE

Notes

1. DRAWING TO BE READ IN CONJUNCTION WITH TREE CONSERVATION REPORT.
2. TOPOGRAPHIC SURVEY AND BENCHMARK COMPLETED BY ARPENTAGE DUTRISAC SURVEYING INC. DATED SEPTEMBER 27, 2016.
3. SITE PLAN PREPARED BY TEMPRANO & YOUNG ARCHITECTS INC. DATED JULY 11, 2019.
4. GEOTECHNICAL REPORT PREPARED BY STANTEC CONSULTING LTD. DATED MARCH 9, 2018.

Revision	By	Appd.	YY.MM.DD
3 REVISED SITE PLAN	GM	ILL	19.07.12
2 RE-ISSUED FOR SITE PLAN APPROVAL	MHS	ILL	19.02.22
1 ISSUED FOR SITE PLAN APPROVAL	MHS	ILL	19.02.12

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	MHS	JMM	ILL	18.08.15

Permit-Seal

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ISABELLE L. LALONDE
OALA
2019-07-12
MEMBER

Client/Project

ST. GEORGE AND ST. ANTHONY COPTIC ORTHODOX CHURCH

3856, 3866 & 3876 NAVAN ROAD

OTTAWA, ON, CANADA

Title

CURRENT VEGETATION PLAN

Project No.	Scale	Drawing No.	Sheet	Revision
160410200	1:300 (0 3 9 15m)	TC-01	1 of 2	3

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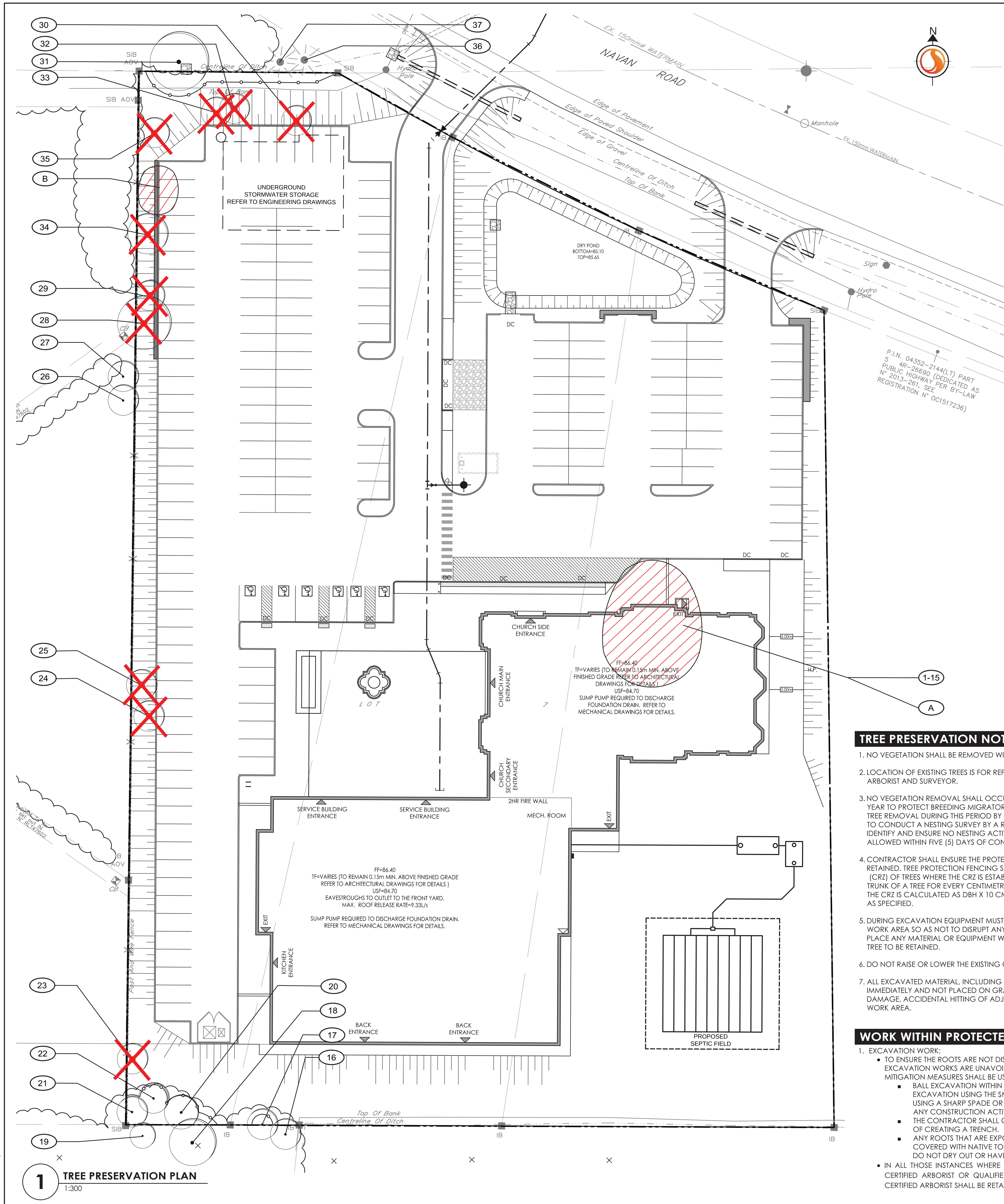

1 TREE PRESERVATION PLAN
1:300

EXISTING VEGETATION SCHEDULE

TREE ASSESSMENT CONDUCTED: August 9th, 2018 and August 22, 2018

ALL TREES OVER 10 DBH

PLANT ID	BOTANICAL NAME	COMMON NAME	DBH (cm)	HEALTH/ CONDITION	REMARKS
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VEGETATION GROUPS

A	Trees 1 through 15, plus 17 Aspen and White Birch, all under 10 cm in good condition; TO BE REMOVED
B	Grove comprised of Paper Birch, Trembling Aspen and White Birch. Sizes range from 11 cm to 18 cm. In good to fair condition; TO BE REMOVED
Note	Suckering Green Ash near access point

TREE PRESERVATION NOTES

1. NO VEGETATION SHALL BE REMOVED WITHOUT MUNICIPAL WRITTEN APPROVAL.
2. LOCATION OF EXISTING TREES IS FOR REFERENCE ONLY AND SHALL BE CONFIRMED BY AN ARBORIST AND SURVEYOR.
3. NO VEGETATION REMOVAL SHALL OCCUR BETWEEN APRIL 15 AND AUGUST 15 OF ANY YEAR TO PROTECT BREEDING MIGRATORY BIRDS, AS WELL AS AT RISK BAT SPECIES. SHALL TREE REMOVAL DURING THIS PERIOD BY UNAVOIDABLE, THE CONTRACTOR IS REQUIRED TO CONDUCT A NESTING SURVEY BY A REGISTERED PROFESSIONAL AVIAN BIOLOGIST TO IDENTIFY AND ENSURE NO NESTING ACTIVITIES ARE PRESENT. TREE REMOVAL WILL BE ALLOWED WITHIN FIVE (5) DAYS OF CONDUCTING THE SURVEY.
4. CONTRACTOR SHALL ENSURE THE PROTECTION OF MATURE TREES IDENTIFIED TO BE RETAINED. TREE PROTECTION FENCING SHALL BE INSTALLED AT THE CRITICAL ROOT ZONE (CRZ) OF TREES WHERE THE CRZ IS ESTABLISHED AS BEING 10 CENTIMETRES FROM THE TRUNK OF A TREE FOR EVERY CENTIMETRE OF TRUNK DIAMETER AT BREAST HEIGHT (DBH). THE CRZ IS CALCULATED AS DBH X 10 CM. TREE PROTECTION FENCING SHALL BE INSTALLED AS SPECIFIED.
5. DURING EXCAVATION EQUIPMENT MUST BE MAINTAINED WITHIN THE CONFINES OF THE WORK AREA SO AS NOT TO DISRUPT ANY TURF OR TREE ROOTS UNNECESSARILY. DO NOT PLACE ANY MATERIAL OR EQUIPMENT WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE TO BE RETAINED.
6. DO NOT RAISE OR LOWER THE EXISTING GRADE WITHIN THE CRZ WITHOUT APPROVAL
7. ALL EXCAVATED MATERIAL, INCLUDING IMPORTED MATERIAL, MUST BE REMOVED IMMEDIATELY AND NOT PLACED ON GRASS OR NEAR TREES IN ORDER TO PREVENT ROOT DAMAGE, ACCIDENTAL HITTING OF ADJACENT TREES, AND TURF DAMAGE OUTSIDE OF WORK AREA.
8. CONTRACTOR SHALL MINIMIZE SOIL COMPACTION BY KEEPING OPERATION OF MACHINERY AND EQUIPMENT CONFINED TO DESIGNATED WORK AREA.
9. DO NOT ATTACH ANY SIGNS, NOTICES, OR POSTERS TO ANY TREES
10. CONTRACTOR SHALL KEEP A SPILL KIT ON SITE.
11. CONTRACTOR SHALL DEVELOP AN EMERGENCY RESPONSE PLAN.
12. CONTRACTOR SHALL AVOID SOIL CONTAMINATION AND FUTURE LIABILITY BY CONFINING THE OILING AND REFUELING OF MACHINERY AND EQUIPMENT TO DESIGNATED STAGING AREA.
13. NO FUEL IS TO BE STORED WITHIN THE CRITICAL ROOT ZONE (CRZ) OF ANY TREE AND EXHAUST FUMES FROM ALL EQUIPMENT MUST NOT BE DIRECTED TOWARDS ANY TREE'S CANOPY.
14. CONTRACTOR SHALL PREVENT ANY DAMAGE TO THE ROOT SYSTEM, TRUNK OR BRANCHES OF ANY TREES TO BE RETAINED ON SITE AND ON ADJACENT PROPERTIES.
15. STORAGE OF EQUIPMENT AND VEHICLES WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES IS STRICTLY PROHIBITED.
16. WHERE LIMBS OR PORTIONS OF TREES ARE REMOVED TO ACCOMMODATE CONSTRUCTION WORK, THEY WILL BE REMOVED CAREFULLY IN ACCORDANCE WITH ACCEPTED ARBORICULTURAL PRACTICES.
17. WHERE NECESSARY, THE TREES WILL BE GIVEN AN OVERALL PRUNING TO RESTORE THEIR APPEARANCE. NOT MORE THAN ONE THIRD OF THE TOTAL BRANCHING SHALL BE REMOVED DURING A SINGLE OPERATION. THE SERVICES OF A CERTIFIED ARBORIST SHALL BE RETAINED FOR THIS TASK.

WORK WITHIN PROTECTED AREAS

1. EXCAVATION WORK:
   - TO ENSURE THE ROOTS ARE NOT DISTURBED MORE THAN NECESSARY AND WHERE EXCAVATION WORKS ARE UNAVOIDABLE WITHIN THE CRZ OF TREES, THE FOLLOWING MITIGATION MEASURES SHALL BE USED:
     - BALL EXCAVATION WITHIN THE CRZ OF TREES SHALL BE BY HAND OR HYDRO EXCAVATION USING THE SMALLEST TOOLS. ROOT CUTTING SHALL BE MADE USING A SHARP SPADE OR KNIFE AT THE LIMIT OF DISTURBANCE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
     - THE CONTRACTOR SHALL ONLY TUNNEL OR BORE WITHIN THE CRZ, INSTEAD OF CREATING A TRENCH.
     - ANY ROOTS THAT ARE EXPOSED BY CONSTRUCTION ACTIVITIES MUST BE COVERED WITH NATIVE TOPSOIL IMMEDIATELY, TO ENSURE THAT THE ROOTS DO NOT DRY OUT OR HAVE ANY FURTHER DAMAGE OCCUR TO THEM.
   - IN ALL THOSE INSTANCES WHERE ROOT PRUNING IS REQUIRED, THE SERVICE OF A CERTIFIED ARBORIST OR QUALIFIED TREE WORKER UNDER THE SUPERVISION OF A CERTIFIED ARBORIST SHALL BE RETAINED. IN ADDITION, ALL REMEDIAL WORKS MUST BE CONDUCTED BY A CERTIFIED CARE PROFESSIONAL TO ENSURE PROPER CARE IS ADMINISTERED IN ORDER TO ENABLE THE CONTINUED HEALTH OF THE TREES.
2. GRADING WORK
   - WHERE RE-GRADING IS REQUIRED WITHIN THE CRZ, IT SHOULD BE PERFORMED BY HAND UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.

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Legend

- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING VEGETATION GROUP
- EXISTING FORESTED AREA
- 000 TREE IDENTIFICATION KEY
- EXISTING TREE TO BE REMOVED
- EXISTING VEGETATION GROUP TO BE REMOVED
- PROPOSED TEMPORARY TREE PROTECTION FENCE REFER TO DRAWING TC-03
- PROPERTY LINE

Notes

1. DRAWING TO BE READ IN CONJUNCTION WITH TREE CONSERVATION REPORT.
2. TOPOGRAPHIC SURVEY AND BENCHMARK COMPLETED BY ARPENTAGE DUTRISAC SURVEYING INC. DATED SEPTEMBER 27, 2016.
3. SITE PLAN PREPARED BY TEMPRANO & YOUNG ARCHITECTS INC. DATED JULY 11, 2019.
4. GEOTECHNICAL REPORT PREPARED BY STANTEC CONSULTING LTD. DATED MARCH 9, 2018.

Revision	By	Appd.	YY.MM.DD
3 REVISED SITE PLAN	GM	ILL	19.07.12
2 RE-ISSUED FOR SITE PLAN APPROVAL	MHS	ILL	19.02.22
1 ISSUED FOR SITE PLAN APPROVAL	MHS	ILL	19.02.12

File Name: 160410200_LB.dwg	Dwn.	Chkd.	Dsgn.	YY.MM.DD
	MHS	JMM	ILL	18.08.15

Permit-Seal

Client/Project
ST. GEORGE AND ST. ANTHONY COPTIC ORTHODOX CHURCH
3856, 3866 & 3876 NAVAN ROAD
OTTAWA, ON, CANADA

Title
TREE PRESERVATION PLAN

Project No. 160410200 | Scale 1:300 (0 3 9 15m)

Drawing No. TC-02 | Sheet 2 of 2 | Revision 3

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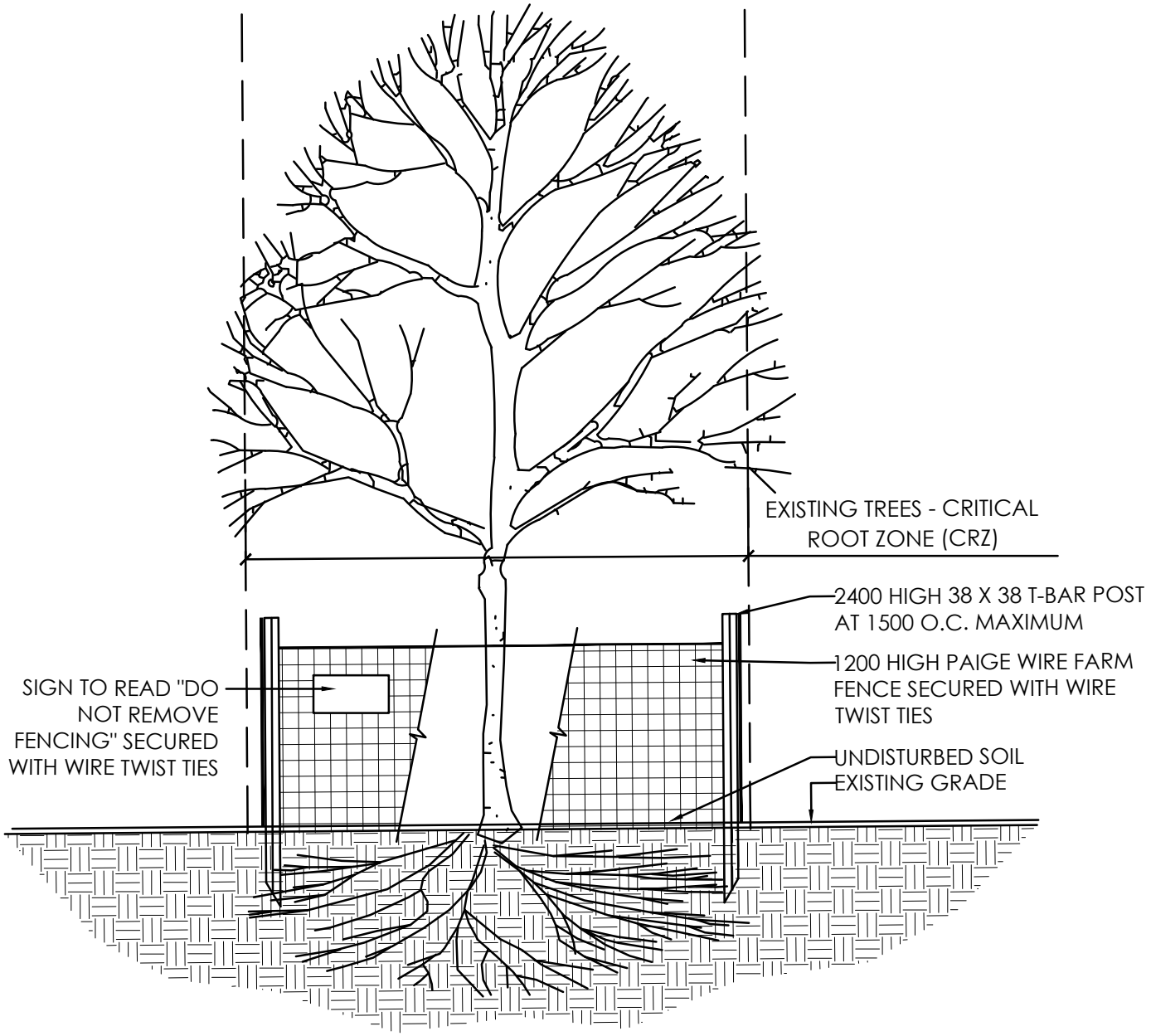

NOTES:

1. GROUPS OF TREES TO BE PROTECTED SHALL BE TREATED IN A LIKE MANNER WITH FENCING AROUND THE ENTIRE STAND(S).
2. PRUNE BRANCHES TO REMOVE DAMAGED OR OBJECTIONABLE BRANCHES. DO NOT PRUNE LEADERS.
3. TREE PROTECTION SHALL REMAIN UNTIL SUBSTANTIAL PERFORMANCE OF THE PROJECT.
4. IF TREES ARE BEING AFFECTED BY CONSTRUCTION, A WATER AND FERTILIZING PROGRAM WILL BE REQUIRED TO THE SATISFACTION OF THE CITY.

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3856, 3866 & 3876 NAVAN ROAD

Project No.
160410200

Title
TEMPORARY TREE PROTECTION FENCE

Revision	Date
2	2019.07.10

Reference Sheet	Figure No.
TC-03	1

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