



BURNSIDE

**Arborist Report (Revision 2)
Proposed Development
Ninth Line, Mississauga
City File No. OZ 20/016 W8**

**St. Mark and St. Demiana Church,
2188 Robinwood Court,
Mississauga, ON L5M 3B9**

**R.J. Burnside & Associates Limited
292 Speedvale Avenue West
Guelph ON N1H 1C4 CANADA**

**April 2023
300044049.0000**

Arborist Report
April 2023

Distribution List

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|--------------------|-----|-------|---------------------------------|
| 0 | Yes | Yes | City of Mississauga |
| 0 | Yes | Yes | St. Mark and St. Demiana Church |

Record of Revisions

| Revision | Date | Description |
|----------|------------------|--|
| 0 | March 20, 2020 | First Submission |
| 1 | January 19, 2022 | Address City Comments, Updated Site Plan |
| 2 | April 20, 2023 | Address City Comments, Updated Site Plan |

R.J. Burnside & Associates Limited

Report Prepared By:



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ISA Certified Arborist (ON-0861A) and Terrestrial Ecologist
KB:af

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1.0 Introduction

R.J. Burnside & Associates Limited (Burnside) has been retained by the St. Mark and St. Demiana Church to complete an Arborist Report in support of the proposed church development at Ninth Line, Mississauga (Subject Property).

The intent of this report is to identify impacts to trees that may result from the construction activities associated with the proposed development. This revised submission (report and figures) has been prepared in accordance with the City's Tree Preservation & Protection Standards, 2019-07-15 Revision and to address City comments and changes to the engineering plans.

2.0 Study Area

The Subject Property is situated within the western limits of the City of Mississauga, Region of Peel. The site is 3.93 ha in size, situated east of Ninth Line and south of Burnhamthorpe Road West (Figure T1). A small portion of the south edge of the property was used for wood cutting and the remainder for active crop agriculture at the time of the assessment.

The primary onsite vegetation is crop agriculture while the unmaintained outer perimeter of the site is dominated by common grasses, shrubs, and immature trees. Native and naturalized vegetation on the Subject Property is limited.

3.0 Methodology

The tree inventory and assessment were completed by Stewart Gibson, ISA Certified Arborist (ON-2321A) on February 18, 2020. Trees 10 cm and greater measured at 1.4 m from the base were included in the investigation. Trees were assessed by the arborist and locations were collected using a GPS for inclusion into the tree survey and development plans.

Trees located within the Subject Property as well as on lands immediately offsite that may be impacted by the proposed construction were included in the investigation.

The methodology used to assess the trees is provided in Appendix A.

The following data were collected for each tree:

- Species;
- DBH (cm);
- Condition (Good, Fair, Poor, or Dead);
- Additional comments (to supplement condition or location notes); and
- Ownership.

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A Minimum Tree Protection Zone (MTPZ) has been calculated based on a tree's DBH in accordance with the City's Tree Preservation & Protection Standards. A MTPZ is the minimum distance required to protect a tree from construction impacts that may include disturbances such as grading (cut or fill). The tree assessment data provides the MTPZ that results in the diameter of a circle around the centre of the tree, identifying its protection area.

Encroachment into the MTPZ will result in an injury or require removal depending on the extent of the encroachment. Generally, trees with a 25% encroachment or greater into the MTPZ are recommended for removal. As a result of this analysis, trees were given one of the two following preservation recommendations which are provided in the data on Figure T1:

- **Preserve:** Limited (<25%) or no encroachment into the MTPZ by proposed grading, tree assigned condition of Good, Good-Fair, Fair or Fair-Poor.
- **Remove:** Significant encroachment (25% and greater) into the MTPZ by grading and/or tree assigned condition of Poor.

Preservation recommendations, discussed above, are provided in the data based on the existing condition and proposed development impacts.

Locations and MTPZ's of the assessed trees, with the proposed development are provided on Figure T1. Limitations of this tree assessment are provided in Appendix B.

4.0 Proposed Development

The development is proposed to be completed in two phases. The development proposal for Phase 1 includes a new church building and parking lot for the southern portion of the development site. The north portion is reserved for the required Storm Water Management (SWM) pond and on-site sanitary wastewater treatment system.

Phase 2 will introduce additional parking spaces and a Community Center replacing the previously constructed SWM pond and On-Site Sanitary Treatment System. Phase 2 will be completed once municipal services along Ninth Line are in place to allow the connection to the sanitary system.

5.0 Findings

A total of 28 trees were individually assessed within and immediately adjacent to the subject property. Also, three groupings of immature planted trees are represented on Figure T1, north of the subject property that were included in the assessment.

No City-owned trees or Species at Risk tree species (e.g. Butternut) are located adjacent to the proposed development.

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5.1 Trees Recommended for Preservation

There are 20 trees recommended for preservation that are adequately setback from the proposed development (including grading) or can be reasonably protected and have a good or fair condition. Grading has been designed to avoid impacts to shared and offsite trees.

There are an additional 20 trees found in three small groupings north of the subject property. These trees have recently been planted and are generally in good condition. All 20 trees in the groupings are recommended for preservation and are adequately set back from the proposed development impacts.

Locations of Tree Protection Fence are illustrated on Figure T1 and the details of the fence construction and City's protection requirement notes are provided on Figure T2.



Photo 1: Tree #s 5 -13 (October 2, 2019)

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Photo 2: Tree #s 21 -28 (October 2, 2019)

5.2 Trees Recommended for Removal

Removal of 8 trees is required due to their conflict with the proposed development elements or significant expected impacts to the root zones (i.e., root severance and compaction). All trees required for removal are privately-owned and onsite.

6.0 Tree Replacement and Compensation

A landscape plan should be prepared to include the new plantings required to compensate for the tree removals 15 cm DBH and greater. Any additional compensation will be completed via cash-in-lieu payment as per the City's most recent Fees and Charges Document.

A single compensation tree is required for each 15 cm DBH increment removed. Table 1. The DBH of multi-stem trees is calculated by multiplying each stem diameter by itself (the square), adding up all stem amounts and calculating the square root of the total (as per the City's Tree Preservation Plan Terms of Reference (February 20, 2020)

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Table 1: Calculation of Compensation Trees

| Removal Tree ID Number | DBH | DBH Corrected for Multi-stemmed Trees | Compensation Trees Required |
|------------------------|--------------------------------|--|-----------------------------|
| 3 | 16, 11 | 19 | 1 |
| 4 | 16, 11 | 19 | 1 |
| 15 | 13, 15, 12, 14, 18, 22, 20, 12 | 45 | 3 |
| 16 | 32 | 32 | 2 |
| 21 | 31 | 31 | 2 |
| 25 | 15, 9 | 17 | 1 |
| 26 | 10, 14, 11 | 20 | 1 |
| 27 | 16, 12, 15 | 25 | 1 |
| | | Total compensation trees required | 12 |

All compensation plantings are recommended to be native or non-invasive ornamental species with tolerance to urban conditions and suitable for installation within the City of Mississauga. Species that require no maintenance once established should be the priority for plant selection.

7.0 Summary

Tree preservation and removal has been identified in this Arborist Report and the Tree Preservation Plan. Measures to ensure protection of the trees prior to and during the construction period are detailed to minimize impacts to preserved trees. Compensation for removed trees will be detailed in a landscape plan to be completed by others.

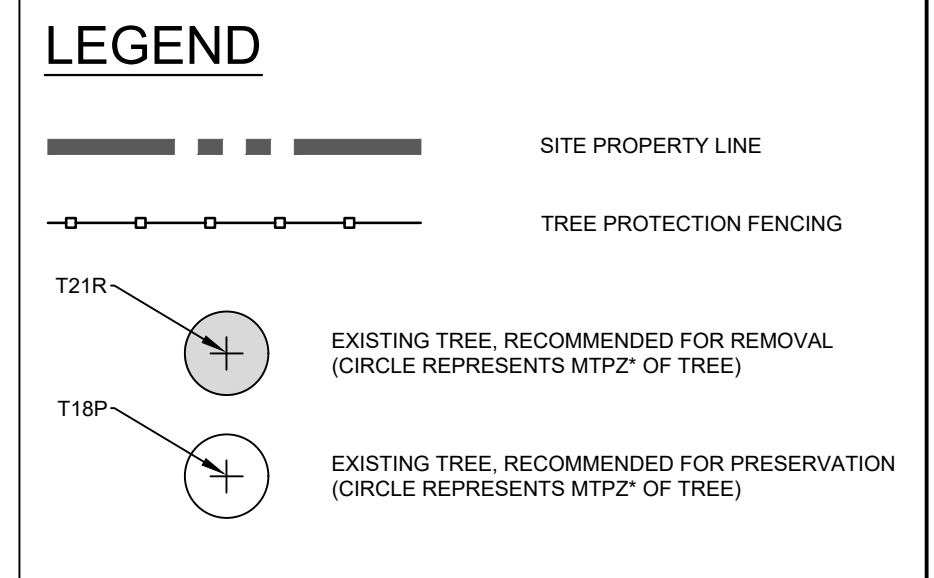
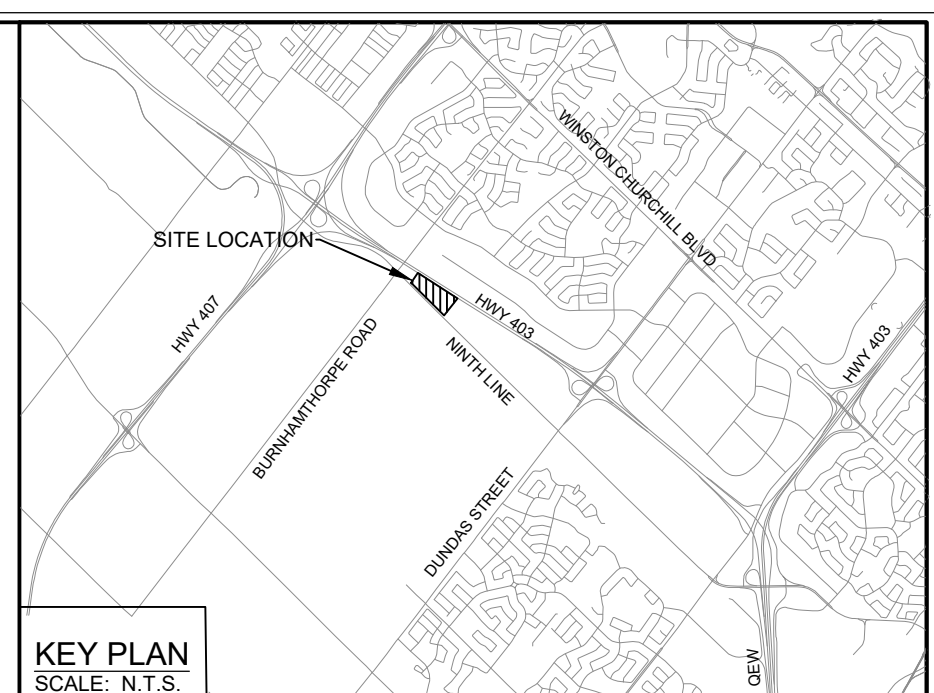
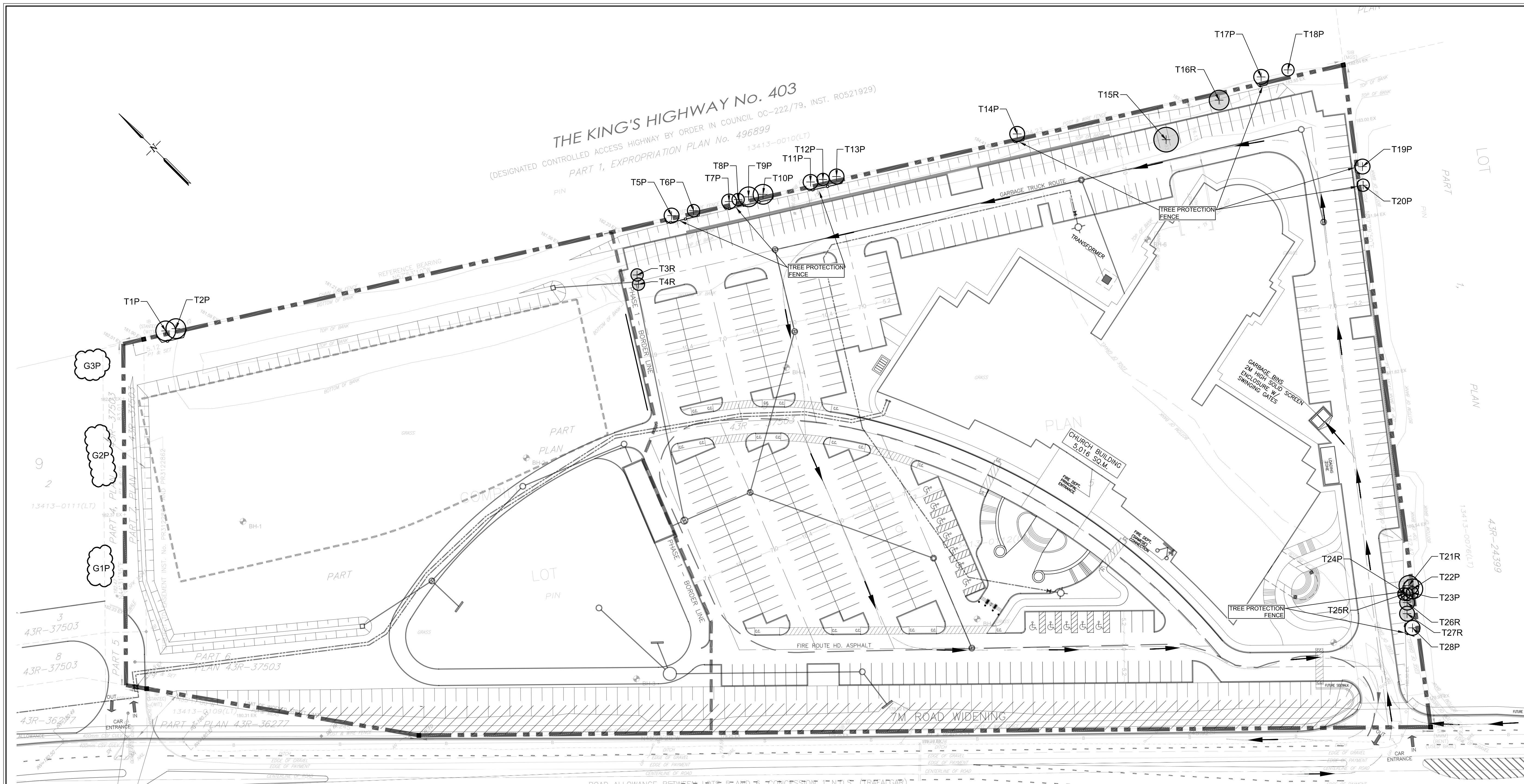


BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Figures



* MINIMUM TREE PROTECTION ZONE (MTPZ) IS CALCULATED BASED ON A TREE'S DIAMETER AT BREAST HEIGHT TO DETERMINE CRITICAL PROTECTION ZONES FOR TREES. SIGNIFICANT ENCROACHMENTS INTO MTPZ MAY RESULT IN SIGNIFICANT IMPACTS TO ROOTS AND REMOVAL OF THE TREE IS RECOMMENDED.

MIGRATORY BIRDS PROTECTION NOTE:
LAND CLEARING SHOULD BE COMPLETED OUTSIDE OF THE BREEDING BIRD SEASON (NESTING ZONE OR CORE BREEDING WINDOW, OR WHEN 41-100% ARE PREDICTED TO BE NESTING FOR ALL HABITAT TYPES, IS APPROXIMATELY MARCH 31 TO AUGUST 31).

IF THIS IS NOT POSSIBLE, A BIRD SPECIALIST SHOULD SURVEY THE SITE PRIOR TO CLEARING TO CONFIRM THAT NO ACTIVE NESTS OF MIGRATORY BIRDS ARE PRESENT. ANY ACTIVE NESTS SHOULD BE FENCED AND LEFT UNDISTURBED UNTIL YOUNGS HAVE FLEDGED, AS DETERMINED BY A QUALIFIED BIOLOGIST.

ALL TREE PRUNING AND REMOVALS SHOULD BE CARRIED OUT BY A QUALIFIED TREE SERVICE UNDER THE DIRECTION OF A CERTIFIED ARBORIST.

BENCHMARK
ELEVATIONS ARE REFERRED TO THE CANADIAN GEODETIC VERTICAL DATUM (CGVD-1928: PRE 1978) AND ARE DERIVED FROM CITY OF MISSISSAUGA BENCHMARK MONUMENT No. 1065, HAVING A PUBLISHED ELEVATION OF 178.912 METRES.

- Notes**
- This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without the written consent of this office is strictly prohibited.
 - The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
 - This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

NOT FOR CONSTRUCTION

| No. | Issue / Revision | Date | Auth. |
|-----|----------------------------------|-----------|-------|
| 0 | FOR CLIENT REVIEW | 2/28/2020 | K.B. |
| 1 | SITE PLAN APPROVAL | 3/20/2020 | K.B. |
| 2 | REVISED SITE PLAN, CITY COMMENTS | 1/11/2022 | K.B. |
| 3 | REVISED SITE PLAN, CITY COMMENTS | 4/20/2023 | K.B. |

| TREE ID | COMMON NAME | SCIENTIFIC NAME | CONDITION | DBH (CM) | MTPZ (M) | COMMENTS | OWNERSHIP | RECOMMENDATION |
|---------|----------------------|------------------------|-----------|-------------------------|----------|---|-------------------|----------------|
| T1 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 18,20,14,3 | 2.4 | - | PUBLIC - OFFSITE | PRESERVE |
| T2 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 25,18,12 | 2.4 | INJURY AT BASE (LOW) | PUBLIC - OFFSITE | PRESERVE |
| T3 | BLACK LOCUST | ROBINIA PSEUDO-ACACIA | GOOD | 16,11 | 1.5 | - | PRIVATE - ONSITE | REMOVE |
| T4 | BLACK LOCUST | ROBINIA PSEUDO-ACACIA | GOOD | 16,11 | 1.5 | CO-DOMINANT STEMS, FORK AT BASE | PRIVATE - ONSITE | REMOVE |
| T5 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 12,14,11 | 1.8 | - | PUBLIC - OFFSITE | PRESERVE |
| T6 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 10,10 | 1.5 | - | PUBLIC - OFFSITE | PRESERVE |
| T7 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 18,11 | 1.8 | - | PUBLIC - OFFSITE | PRESERVE |
| T8 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 15,12 | 1.5 | - | PUBLIC - OFFSITE | PRESERVE |
| T9 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 19,20,15 | 2.4 | - | PUBLIC - OFFSITE | PRESERVE |
| T10 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 19,16,14,15 | 2.4 | - | PUBLIC - OFFSITE | PRESERVE |
| T11 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 24,13 | 1.8 | - | PUBLIC - OFFSITE | PRESERVE |
| T12 | LITTLELEAF LINDEN | TILIA CORDATA | GOOD | 13,10,5 | 1.5 | - | PUBLIC - OFFSITE | PRESERVE |
| T13 | LITTLELEAF LINDEN | TILIA CORDATA | FAIR | 12,18,15 | 1.8 | - | PUBLIC - OFFSITE | PRESERVE |
| T14 | LITTLELEAF LINDEN | TILIA CORDATA | FAIR | 12,16,18 | 1.8 | - | PUBLIC - OFFSITE | PRESERVE |
| T15 | WHITE WILLOW | SALIX ALBA | GOOD-FAIR | 13,15,12,14,18,22,20,12 | 3 | MULTI STEMMED BASE, INDUSTRIAL DEBRIS AND LUMBER STACKED AT BASE. INJURY TO LATERAL BRANCHES (LOW) EPICORMIC GROWTH (LOW) | PRIVATE - ONSITE | REMOVE |
| T16 | SIBERIAN ELM | ULMUS PUMILA | POOR | 32 | 2.4 | 10% CROWN REMAINING, SIGNIFICANT DECAY AND SLOUGHING BARK | PRIVATE - ONSITE | REMOVE |
| T17 | APPLE | MALUS PUMILA | FAIR | 20,15 | 1.8 | CO-DOMINANT STEMS (LOW). EPICORMIC GROWTH (MODERATE) | PUBLIC - OFFSITE | PRESERVE |
| T18 | WHITE ELM | ULMUS AMERICANA | FAIR | 18 | 1.5 | INJURY TO TRUNK (LOW) | PUBLIC - OFFSITE | PRESERVE |
| T19 | APPLE | MALUS PUMILA | FAIR | 15,10,10,4,2 | 1.8 | MULTI-STEMMED BASE, INJURIES TO LATERAL BRANCHES (MODERATE), DEBRIS PILES AT NORTHERN EDGE OF TRUNK | PUBLIC - OFFSITE | PRESERVE |
| T20 | APPLE | MALUS PUMILA | FAIR | 13,6,4 | 1.5 | MULTI-STEMMED BASE | PUBLIC - OFFSITE | PRESERVE |
| T21 | WHITE ELM | ULMUS AMERICANA | GOOD | 31 | 2.4 | PAST PRUNING (LOW), MULTI-STEMMED NODE AT 1 M | PRIVATE - ONSITE | REMOVE |
| T22 | WHITE ELM | ULMUS AMERICANA | GOOD | 26,16,14 | 2.4 | - | PRIVATE - OFFSITE | PRESERVE |
| T23 | WHITE ELM | ULMUS AMERICANA | GOOD | 11 | 1.5 | - | PRIVATE - ONSITE | PRESERVE |
| T24 | WHITE ELM | ULMUS AMERICANA | GOOD | 16,3 | 1.5 | - | PRIVATE - ONSITE | PRESERVE |
| T25 | WHITE ELM | ULMUS AMERICANA | GOOD | 15,9 | 1.5 | - | PRIVATE - ONSITE | REMOVE |
| T26 | WHITE ELM | ULMUS AMERICANA | GOOD | 10,14,11 | 1.8 | - | PRIVATE - ONSITE | REMOVE |
| T27 | WHITE ELM | ULMUS AMERICANA | GOOD | 16,12,15 | 1.8 | - | PRIVATE - ONSITE | REMOVE |
| T28 | WHITE ELM | ULMUS AMERICANA | FAIR | 18,9,11 | 1.8 | CO-DOMINANT STEMS AT BASE POOR FORM, CROOKED TRUNK AT BASE | PRIVATE - ONSITE | PRESERVE |
| G1 | WHITE CEDAR | THUJA OCCIDENTALIS | - | 1-2 | - | FIVE WHITE CEDAR STAKED AND PLANTED 1.5 M ON CENTRE | PRIVATE - OFFSITE | PRESERVE |
| G2 | WHITE SPRUCE | PICEA GLAUCA | - | 2 | - | THREE WHITE SPRUCE PLANTED 2 M, TREES ARE STAKED | PRIVATE - OFFSITE | PRESERVE |
| G3 | COLORADO BLUE SPRUCE | PICEA PUNGENS 'GLAUCA' | - | - | - | GROUPING OF THREE STAKED 1.5M ON CENTRE | PRIVATE - OFFSITE | PRESERVE |

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Client
St. Mark and St. Demiana Coptic Orthodox Church
462 FALGARWOOD DRIVE
OAKVILLE, ON
L8H 1M3

Drawing Title
NINTH LINE MISSISSAUGA
TREE PRESERVATION PLAN

| Drawn | Checked | Designed | Checked | Date | Drawing No. |
|-------------|--------------|--------------|---------|----------|-------------|
| KB | KB | RS | JS | 23/04/19 | |
| Project No. | Contract No. | Revision No. | | | |
| 300044049 | | 1 | | | |

Scale: 1:500
0 5.0 10.0 20.0 30.0m

APPROVED TREE PRESERVATION SIGN SPECIFICATION
 BELOW IS THE APPROVED TREE PRESERVATION SIGN TEMPLATE. TREE PRESERVATION SIGNS ARE TO BE 16 INCHES BY 24 INCHES OR 40.64 CM BY 60.96 CM AND ON A WATERPROOF MATERIAL. INSTALLATION OF THE SIGNS IS MANDATORY, AND ALL ASSOCIATED COSTS OF THE SIGNAGE ARE THE SOLE RESPONSIBILITY OF THE APPLICANT. NO OTHER SIGNAGE IS PERMITTED TO BE FIXED ONTO ANY TREE PROTECTION HOARDING.

PROHIBITED ACTIVITIES WITHIN TREE PROTECTION ZONES

EXCEPT WHERE AUTHORIZED BY MISSISSAUGA FORESTRY THE FOLLOWING ACTIVITIES, INCLUDING, BUT NOT LIMITED TO, ARE PROHIBITED WITHIN THE TPZ:

- CONSTRUCTION ACTIVITIES
- STORAGE OF MATERIALS
- STORAGE OF EQUIPMENT
- EXCAVATION
- GRADE CHANGES
- CUTTING, TEARING, BREAKING TREE'S ROOTS, BRANCHES AND TRUNK
- DUMPING
- PARKING
- STRINGING CABLES/WIRES

ACTIVITY ALLOWED WITHIN TREE PROTECTION ZONES

IT IS TO BE UNDERSTOOD THAT ANY TYPE OF ACTIVITY WITHIN A TREE PROTECTION ZONE HAS AN INHERENT RISK OF CAUSING DAMAGE TO THE SUBJECT TREE. MISSISSAUGA FORESTRY ADVISES THAT ANY FORM OF ACTIVITY BE AVOIDED AT ALL COSTS BUT FULLY UNDERSTANDS THAT THERE MAY BE A NEED TO DO SO. ANY ACTIVITY WITHIN THE TREE PROTECTION ZONE MUST BE PRE-APPROVED BY MISSISSAUGA FORESTRY. BELOW ARE SOME OF THE ACTIVITIES THAT MISSISSAUGA FORESTRY RECOGNIZES AS ACCEPTABLE PRACTICES OF WORKING WITHIN TREE PROTECTION ZONES IF DONE APPROPRIATELY. ALL OTHER ACTIVITIES ARE TO BE AVOIDED UNLESS PRE-APPROVED BY MISSISSAUGA FORESTRY.

APPROVED TYPES OF ACTIVITIES

- EXCAVATION
 - ◆ ROOT EXPLORATION/ROOT PRUNING
 - ◆ FOUNDATION/BASEMENT CONSTRUCTION
 - ◆ UTILITY RELOCATION/REPAIR
 - ◆ DIRECTIONAL BORING - MINIMUM 1.2M DEPTH
- SITE ACCESSIBILITY
 - ◆ TEMPORARY ROAD/ENTRANCE
 - ◆ CONSTRUCTION WORKER ACCESS
 - ◆ MATERIAL DELIVERY

EXCAVATION

WHEN EXCAVATION IS NECESSARY WITHIN TREE PROTECTION ZONE PROPER CARE MUST BE TAKEN WHEN PERFORMING SUCH ACTIVITIES. EXCAVATION METHODS MUST BE PRE-APPROVED AND DOCUMENTED WITH THE CITY OF MISSISSAUGA FORESTRY. THE FOLLOWING METHODS ARE ACCEPTABLE AND MUST BE EITHER CONDUCTED OR SUPERVISED BY A CERTIFIED ARBORIST DURING THE ACTIVITY.

- HAND DIGGING
 - ◆ NO MECHANICAL ADVANTAGE SUCH AS EXCAVATOR, BACKHOE, OR SKID STEERS
- AIR ASSIST MACHINERY
 - ◆ AIR SPADE/AIR KNIFE USING 185 CFM PORTABLE AIR COMPRESSOR
 - ◆ AIR VACUUM UNIT
- HYDRO VAC
 - ◆ MAXIMUM WATER PSI OF 500 OR LESS
 - ◆ OSCILLATING NOZZLE
- ROOT PRUNING
 - ◆ ANY EXPOSED ROOTS WHICH ARE FRAYED OR DAMAGED SHALL BE PRUNED IN ACCORDANCE WITH GOOD ARBORICULTURE PRACTICES
 - ◆ PROLONGED EXPOSED ROOTS SHALL BE KEPT MOIST AND COVERED WITH MULCH OR MOISTENED BURLAP
- DIRECTIONAL BORING / MICRO TUNNELLING
 - ◆ ALL EFFORTS SHOULD BE MADE TO ROUTE ALL UNDERGROUND UTILITIES AROUND THE TPZ; IF THIS CANNOT BE ACHIEVED, UTILITIES SHOULD BE BORED OR TUNNELLED WITH A MINIMUM DEPTH OF 1.2M UNDER THE TPZ. BORING/TUNNELS SHOULD NOT GO DIRECTLY BENEATH THE TRUNK; INSTEAD THE BORING/TUNNELS SHOULD BE OFFSET BASED ON THE TREE DIAMETER

SITE ACCESSIBILITY

WHEN SITE ACCESSIBILITY IS NECESSARY WITHIN OR THROUGH TREE PROTECTION ZONE PROPER CARE MUST BE TAKEN WHEN PERFORMING SUCH ACTIVITIES. SITE ACCESSIBILITY METHODS MUST BE PRE-APPROVED AND DOCUMENTED WITH MISSISSAUGA FORESTRY. THE FOLLOWING METHODS ARE ACCEPTABLE BUT MUST BE RECOMMENDED BY A CERTIFIED ARBORIST AND DOCUMENTED WITHIN THE TREE PRESERVATION REPORT AND PLAN. MITIGATING MEASURES SUCH AS HORIZONTAL HOARDING/COMPACTION ALLEVIATION MEASURES MUST BE UNDER TAKEN WHEN SUCH ACTIVITIES OCCUR WITHIN THE TREE PROTECTION ZONE. BELOW ARE SOME APPROVED MITIGATING OPTIONS FOR WORKING WITHIN TREE PROTECTION ZONE.

- MULTIPLE LAYERED APPROACH
 - ◆ BOTTOM LAYER MUST CONSIST OF A PRE-APPROVED SYNTHETIC GEOTEXTILE MATERIAL
 - ◆ MIDDLE LAYER MUST CONSIST OF 8 - 12 INCHES OF COURSE WOOD CHIPS
 - ◆ TOP LAYER MUST CONSIST OF ¾ INCH HARD WOOD PLYWOOD
- TWO LAYER APPROACH
 - ◆ BOTTOM LAYER MUST CONSIST OF ¾ INCH HARD WOOD PLYWOOD LAID IN ONE DIRECTION OF ORIENTATION
 - ◆ TOP LAYER MUST CONSIST OF ¾ INCH HARD WOOD PLYWOOD LAID IN OPPOSITE DIRECTION OF ORIENTATION
 - ◆ BOTH LAYERS MUST THEN BE SCREWED TOGETHER AT 12 INCH SPACING
- STEEL PLATE
 - ◆ ¾ INCH STEEL PLATE SMOOTH FINISH ON GROUND SIDE NO CHECKER PLATE ON GROUND SIDE

ONSITE ARBORIST REQUIREMENTS

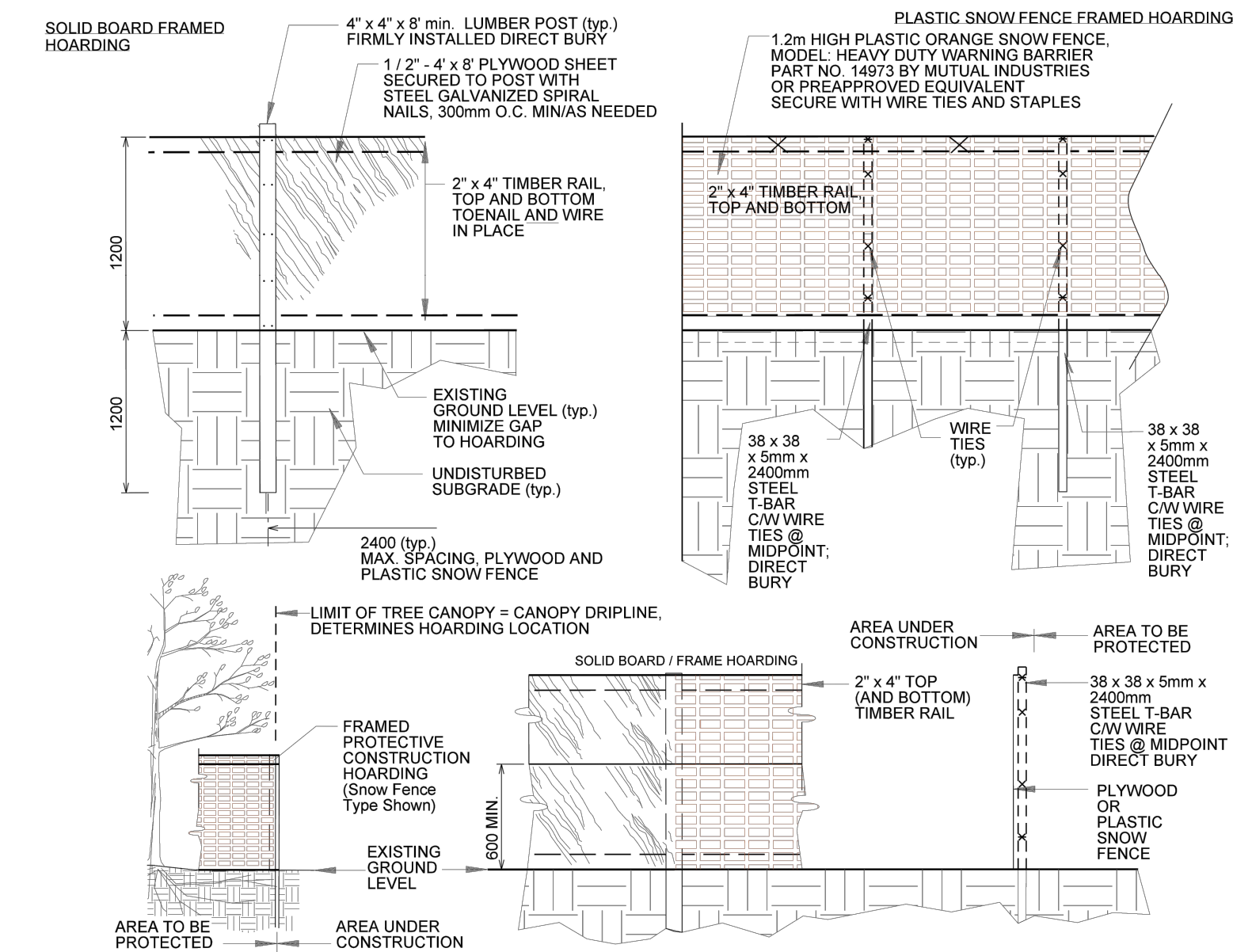
WHENEVER WORK IS REQUIRED WITHIN THE TREE PROTECTION ZONE AN ARBORIST MUST BE PRESENT AND EITHER PERFORMING OR SUPERVISING THE WORK AT HAND. BELOW ARE THE QUALIFICATIONS REQUIRED TO BE RECOGNIZED AS A COMPETENT ARBORIST BY MISSISSAUGA FORESTRY.

- HAVE A CURRENT CERTIFICATION IN GOOD STANDING FROM THE INTERNATIONAL SOCIETY OF ARBORICULTURE, CERTIFIED ARBORIST OR BOARD CERTIFIED MASTER ARBORIST; OR,
- HAVE COMPLETED AN APPRENTICESHIP IN ARBORICULTURE AND COMPLETED THE REQUIRED HOURS/Written EXAM TO BE A QUALIFIED ARBORIST IN THE EYES OF THE ONTARIO PROVINCIAL GOVERNMENT; OR,
- HAVE COMPLETED THE QUALIFICATIONS AND ARE A REGISTERED PROFESSIONAL FORESTER (RPF); OR,
- HAVE THE VERIFIABLE SKILLS AND EXPERIENCE TO PERFORM OR SUPERVISE SAID WORK WITHIN THE TREE PROTECTION ZONE.

02830-6

**Hoarding
 Framed Protective Construction Hoarding
 Solid Board- Plastic Snow Fence**

NOTE:
 TO BE USED AS A GUIDELINE ONLY
 NOT TO SCALE. REMOVE CITY TITLE BLOCK
 AND REDRAW TO REPRESENT SITE SPECIFIC
 CONDITIONS. ALL SITE SPECIFIC CONDITIONS
 ARE TO BE CONFIRMED BY THE PROJECT
 CONSULTANT.



- NOTES:**
1. HOARDING LOCATION AS PER DRAWINGS. HOARDING INSTALLATIONS ARE TO INCLUDE WOVEN GEOTEXTILE FABRIC FOR SEDIMENT CONTROL.
 2. NO MOBILIZATION OR CONSTRUCTION WORK TO OCCUR UNTIL HOARDING HAS BEEN INSPECTED AND APPROVED BY COMMUNITY SERVICES PROJECT MANAGER (CSPM). CONTRACTOR TO ARRANGE FOR A HOARDING INSPECTION WITH (CSPM), 48 HOUR NOTICE REQUIRED.
 3. HOARDING TO BE SUPPLIED, INSTALLED AND MAINTAINED BY THE CONTRACTOR THROUGH ALL PHASES OF WORK ON SITE.
 4. THE CONTRACTOR IS TO REMOVE AND DISPOSE THE HOARDING OFF SITE WHEN DIRECTED BY THE (CSPM).
 5. ALL WOOD PRODUCTS TO BE NEW AND LUMBER KUN DRIED SPF.
 6. ALL FASTENERS TO BE NEW GALVANIZED STEEL AND SECURELY INSTALLED. WIRE TIES MIN 3.5mm DIA. GALVANIZED STEEL.
 7. DO NOT ALLOW WATER TO COLLECT AND/OR POND ON EITHER SIDE OF THE HOARDING.
 8. WHEN INSTALLING DIRECT BURY TIMBER POSTS AND T-BARS, TAKE CARE TO AVOID VISIBLE AND ASCERTAINABLE TREE ROOTS.
 9. PLACE HOARDING AT LIMIT OF TREE CANOPY DRIP LINE OR BEYOND (E.G. FURTHER AWAY FROM TRUNK) OF TREE.
 10. HOARDED OFF AREA TO REMAIN UNDISTURBED. NO STOCKPILING, STAGING OR MOVEMENT OF VEHICLES TO OCCUR WITHIN PROTECTED AREA.
 11. FOR PROTECTION OF TREES AND ROOT SYSTEM, CONTRACTOR MAY BE REQUIRED TO PROVIDE WATERING, MULCHING, FERTILIZING, PRUNING OR OTHER ACTIVITIES TO ENSURE THE HEALTH OF THE TREE(S).
 12. ALL MEASUREMENTS IN MILLIMETRES UNLESS NOTED OTHERWISE (E.G. DIMENSIONAL LUMBER).
 13. CONTRACTOR RESPONSIBLE FOR LOCATES.

Detail: 02830-6 ORIGINAL DATE: Mar 08/18 REVISION DATE: Mar 08/18 MISSISSAUGA

| TREE PROTECTION ZONE TABLE | | |
|----------------------------|--|---|
| TRUNK DIAMETER (CM) | MINIMUM TREE PROTECTION ZONE (TPZ) DISTANCE FROM TRUNK (M) | MINIMUM TREE PROTECTION ZONE (TPZ) DISTANCE FROM TRUNK (M) FOR TREES IN OPEN SPACES AND WOODLANDS |
| <10 cm | 1.2 | 2.4 |
| 11-20 | 1.5 | 2.4 |
| 21-30 | 1.8 | 3.6 |
| 31-40 | 2.4 | 4.8 |
| 41-50 | 3 | 6 |
| 51-60 | 3.6 | 7.2 |
| 61-70 | 4.2 | 8.4 |
| 71-80 | 4.8 | 9.6 |
| 81-90 | 5.4 | 10.8 |
| 91-100 | 6 | 12 |
| >100 | 6 cm per 1 cm DBH | 12 cm per 1 cm DBH |

BENCHMARK
 ELEVATIONS ARE REFERRED TO THE CANADIAN GEODETIC VERTICAL DATUM (CGVD-1928: PRE 1978) AND ARE DERIVED FROM CITY OF MISSISSAUGA BENCHMARK MONUMENT No. 1065, HAVING A PUBLISHED ELEVATION OF 178.912 METRES.

- Notes**
1. This drawing is the exclusive property of R. J. Burnside & Associates Limited. The reproduction of any part without prior written consent of this office is strictly prohibited.
 2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
 3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

NOT FOR CONSTRUCTION

| No. | Issue / Revision | Date | Auth. |
|-----|----------------------------------|-----------|-------|
| 0 | FOR CLIENT REVIEW | 2/28/2020 | K.B. |
| 1 | SITE PLAN APPROVAL | 3/20/2020 | K.B. |
| 2 | REVISED SITE PLAN, CITY COMMENTS | 1/11/2022 | K.B. |
| 3 | REVISED SITE PLAN, CITY COMMENTS | 4/20/2023 | K.B. |

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Client
St. Mark and St. Demiana Coptic Orthodox Church
 462 FALGARWOOD DRIVE
 OAKVILLE, ON
 L6H 1K3

Drawing Title
NINTH LINE MISSISSAUGA
 TREE PRESERVATION PLAN DETAILS

| Drawn | Checked | Designed | Checked | Date | Drawing No. |
|--------------------------|--------------|--------------|--------------|----------|-------------|
| MD | KB | RS | JS | 23/04/19 | |
| Project No. 300044049 | Contract No. | CONTRACT NO. | Revision No. | 1 | T2 |
| Scale 1:500 | 0 | 5.0 | 10.0 | 20.0 | |

File: \\burnside\share\1907\Arbor\02830-6 - Ninth Line Mississauga\02_Protection\02_Protection\02830-6 - 19P - Final - Date: March 19, 2023 - 11:28 AM



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Appendix A

Tree Study Methodology

Appendix A: Tree Studies: Methodology

The list provided below represents all data that may be collected in the analysis of trees. Methodology descriptions should be reviewed with the column headings provided in the data. The columns represent the scope and extent of the tree assessment carried out.

Tree #: This number may be assigned by the tree assessor or predetermined by the surveyor or client. The number corresponds with the tree tag affixed to the tree, if tree tagging is part of the study's scope.

Species: Botanical name of the species and commonly used English name.

DBH (cm): Diameter at Breast Height measured using DBH tape or tree caliper (measured at 1.3 m).

Crown Reserve (m): Average measurement of the diameter or width of the dripline (extent of branches from the trunk). Generally, the trunk is the midpoint of this measurement. It is represented on the drawing(s) as a circle.

MTPZ (m): The Minimum Tree Protection Zone (MTPZ) provides the required setback of construction impacts from trees as listed by the municipal tree by-law and is scaled based on their DBH. This MTPZ represents a diameter of a circle of protection required for a tree. The extent of encroachment(s) into this MTPZ (e.g. grading) assist with the determination of preservation.

Note: A MTPZ may be used in the tree investigation where no municipal tree by-law exists to assist with determining impacts, recommending protection and prescribing mitigation.

Condition: A qualitative score of the combination of biological health and structural condition assigned as Good, Good-Fair, Fair, Fair-Poor, Poor or Dead.

Preservation Recommendation (Condition): Tree is recommended for preservation if has been assigned a condition rating of good or fair. Trees assigned poor condition ratings or are dead are generally recommended for removal.

Preservation Recommendation (Development): Tree is recommended for preservation if it can be incorporated into the proposed development, without significant impacts to the tree (including the rootzone). Trees recommended for removal are in conflict with the proposed development or significant impacts to the tree occur as a result of the development, impacting the short and long-term condition of the tree.

Preservation Recommendation (Final): A tree is recommended for preservation if it has been assigned a preservation recommendation for condition and development.

Comments: This section is intended to list additional information about the trees, as needed. Additional details on tree health or structure, as components of Condition, and the severity of the factor (e.g., severe crown dieback) may be included in this section that assisted the arborist with the qualification of the tree as Good, Fair or Poor.



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Appendix B

Limitations of Study

Appendix B: Limitations of Tree Studies

This report, drawings and data (i.e., qualitative and quantitative measurements) are intended to inform the recipient and reviewer(s) of the report of the tree(s) condition at the time of the assessment. The assessment may be limited by the following constraints:

1. Access – tree is located off-site or the on-site location is not reasonably accessed.
2. Weather – accumulated snow around the base or in branch attachments may obscure defects.
3. Season – biotic indications (e.g., foliage chlorosis or fungal fruiting bodies) are only obvious for a portion of the year.
4. Visual obstructions – Elements such as other trees' canopies can prevent the view of the entire tree.

The study is completed from the ground using a DBH tape or tree caliper. Non-invasive tools such as binoculars and a sounding hammer may be used to provide additional information about defects and characteristics. Excavation of the rootzone and other intensive analyses have not been completed unless stated.

It must be understood that trees may not manifest signs or symptoms (e.g., dieback) of some impacts (e.g., root compaction) immediately and so recent changes to the tree or its growing conditions prior to the assessment may not be apparent to the assessor. Also, changes to the tree condition resulting from damage, weather, infestations, defects, soil, decay, light, moisture, exposure, etc. may occur after the assessment.

No tree is without some level of risk, where a tree may fail and strike a target. Mitigation options, if provided, will not eliminate risk, but are prescribed treatments to reduce risk based on the measured and assessed factors at the time of assessment, subject to site and assessment constraints.

Identification of the ownership of assessed trees (i.e., on-site or off-site) made in the report is based on the legal survey. The assessor of trees uses the point location of the tree provided on the survey and the limits of property to assign ownership in the report and associated materials.