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**Arborist Report
Proposed Development of 3415 Ninth
Line, Mississauga**

**The Diocese of Mississauga,
Vancouver and Western Canada,
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Mississauga, ON L5M 3B9**

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**February 21, 2020
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Arborist Report
February 21, 2020

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1.0 Introduction

R.J. Burnside & Associates (Burnside) have been retained by the Diocese of Mississauga, Vancouver, and Western Canada to complete an Arborist Report in support of the proposed St. Mark and St. Demiana Church Development located at 3415 Ninth Line, Mississauga (Subject Property).

The intent of this Tree Preservation Report is to identify impacts to trees that may result from the construction activities associated with the proposed development.

2.0 Study Area

The Subject Property is situated within the western limits of the City of Mississauga, Region of Peel. The site is described as being 39,302 m² (9.7 acres) in size, situated east of Ninth Line and south of Burnhamthorpe Road West (Figure T1). The south portion of the property is presently used for vehicle and equipment storage; the remainder of the property is used for active agriculture.

The primary vegetation on-site is soybean crop while the unmaintained outer perimeter of the site is described as being dominated by common grasses, shrubs, and small trees. Vegetation within the Study Area is limited.

3.0 Methodology

The tree inventory and assessment was completed by Stewart Gibson, ISA Certified Arborist (ON-2321A) on February 18, 2020. Trees 10 cm and greater were included in the investigation. Trees were assessed by the arborist and locations were collected using a GPS for inclusion into the 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); and
- Additional comments (to supplement condition or location notes).

The Minimum Tree Protection Zone (MTPZ) provided in the data (Figure T1) was calculated based on a tree's DBH in accordance with the City of Toronto's Tree Protection Policy and Specification for Construction Near Trees (July 2016). This measurement specifies the minimum distance required to protect a tree from

construction impacts to critical portions of the rootzone. 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, 381 parking spaces and 12 handicap parking spaces located for the southern half of the development site. The north half 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 previous 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. Furthermore, three groupings of newly planted trees are represented on Figure T1, north of the subject property.

5.1 Trees Recommended for Preservation

There are 14 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.

There are 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.

Erosion and Sediment Control Fencing (ESC) will be installed along the limits of the development to reduce impacts to off-site trees recommended for preservation. All construction related activities (i.e. site alteration, excavation, and equipment storage) are not acceptable beyond the limits of the ESC fencing.

5.2 Trees Recommended for Removal

Removal of 14 trees is recommended due to their conflict with the proposed development elements or significant expected impacts to the root zones (i.e., root severance and compaction). The associated Tree Preservation Plan identifies the locations of trees to be removed.

Two trees (T19 and T20) are located immediately east of the subject property that are recommended for removal. These two trees will be removed subject to an agreement with the adjacent landowner based on the grading encroachment needs of the project.

6.0 Tree Replacement and Compensation

A landscape plan should be prepared to include the new plantings required to compensate for the removals. Any additional compensation will be completed via Cash in Lieu payments as per the City's most recent Fees and Charges Document.

All compensation plantings are recommended to be native or non-invasive ornamental species with tolerance to urban conditions and suitable for installation within the TRCA jurisdiction. 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.



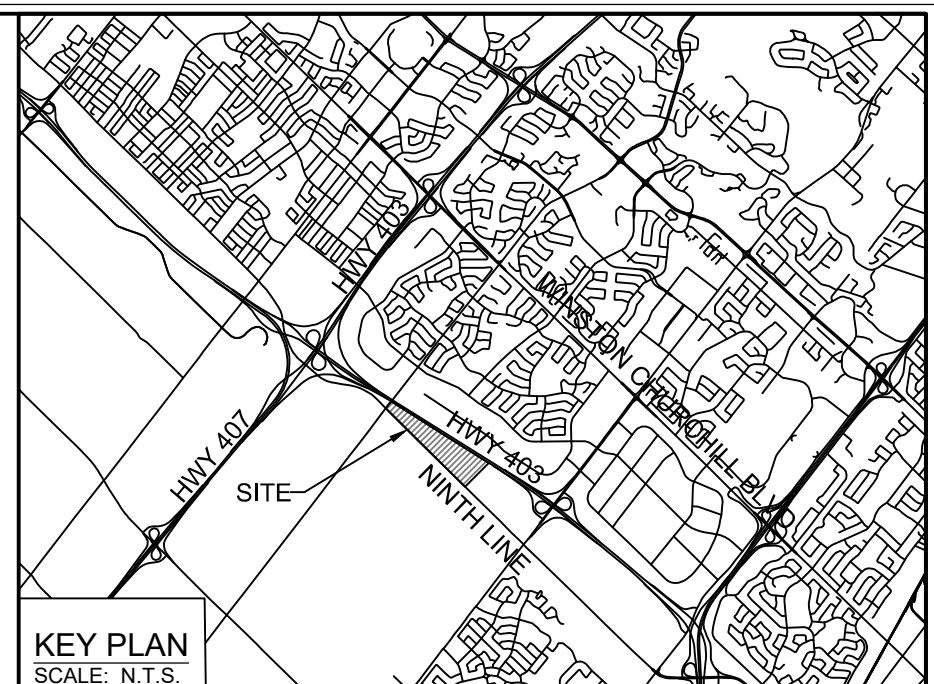
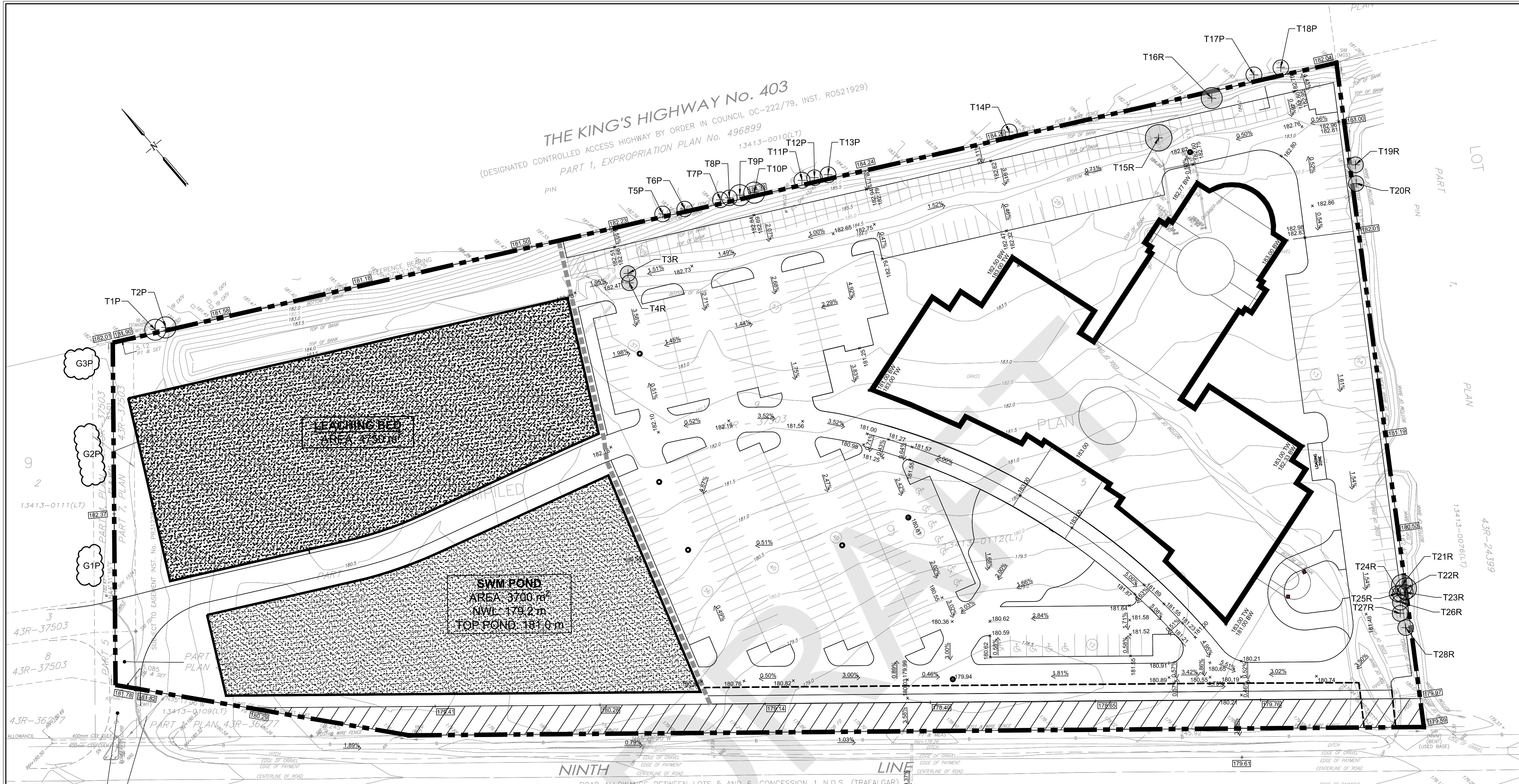
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Figure

Figure

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LEGEND

- SITE PROPERTY LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED GRADE
- EXISTING GRADE
- OVERLAND FLOW ROUTE
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING TREE, RECOMMENDED FOR REMOVAL (CIRCLE REPRESENTS MTPZ* OF TREE)
- EXISTING TREE, RECOMMENDED FOR PRESERVATION (CIRCLE REPRESENTS MTPZ* OF TREE)

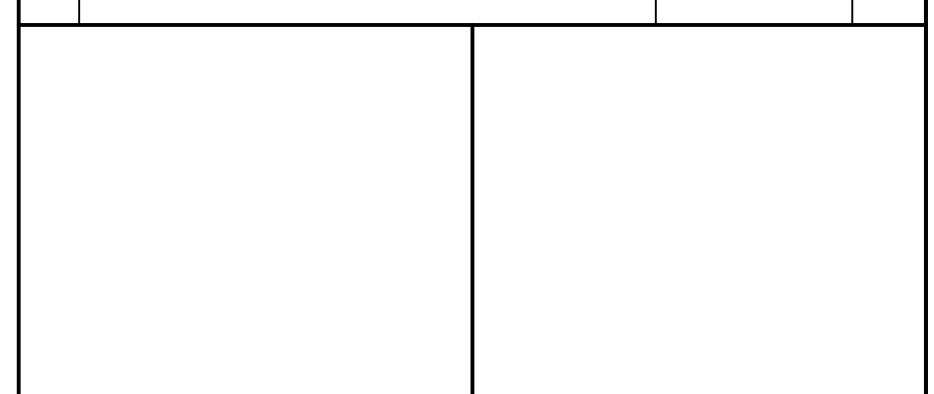
* MINIMUM TREE PROTECTION ZONE (MTPZ) IS CALCULATED BASED ON A TREE'S DIAMETER AT BREAST HEIGHT TO DETERMINE CRITICAL PROTECTION ZONES FOR TREES. SIGNIFICANT ENCROACHMENTS INTO MTPZ MAY RESULT IN SIGNIFICANT IMPACTS TO ROOTS AND REMOVAL OF THE TREE IS RECOMMENDED

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 prior 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	----	



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Client
**THE DIOCESE OF MISSISSAUGA,
VANCOUVER, AND WESTERN CANADA**

Drawing Title
NINTH LINE MISSISSAUGA

TREE PRESERVATION PLAN

Drawn	Checked	Designed	Checked	Date	Drawing No.
HN	SG	RS	JS	20/02/20	
Project No. 300044049	Contract No.	Revision No. 0			
Scale 1:500	0	5.0	10.0	20.0	

T1

TREE ID	COMMON NAME	BOTANICAL NAME	CONDITION	DBH(CM)	MTPZ(M)	COMMENTS	RECOMMENDATION
T1	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	18,20,14,3	5.1	-	PRESERVE
T2	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	25,18,12	5.13	INJURY AT BASE (LOW)	PRESERVE
T3	BLACK LOCUST	ROBINIA PSEUDO-ACACIA	GOOD	16,11	3.79	-	REMOVE
T4	BLACK LOCUST	ROBINIA PSEUDO-ACACIA	GOOD	16,11	3.79	CO-DOMINANT STEMS. FORK AT BASE	REMOVE
T5	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	12,14,11	3.81	-	PRESERVE
T6	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	10,10	3.74	-	PRESERVE
T7	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	18,11	3.81	-	PRESERVE
T8	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	15,12	3.79	-	PRESERVE
T9	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	19,20,15	5.11	-	PRESERVE
T10	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	19,16,14,15	5.12	-	PRESERVE
T11	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	24,13	3.87	-	PRESERVE
T12	LITTLELEAF LINDEN	TILIA CORDATA	GOOD	13,10,5	3.77	-	PRESERVE
T13	LITTLELEAF LINDEN	TILIA CORDATA	FAIR	12,18,15	3.86	-	PRESERVE
T14	LITTLELEAF LINDEN	TILIA CORDATA	FAIR	12,16,18	3.87	-	PRESERVE
T15	WHITE WILLOW	SALIX ALBA	GOOD-FAIR	13,15,12,14,18,22,20,12	6.44	MULTI STEMMED BASE, INDUSTRIAL DEBRIS AND LUMBER STACKED AT BASE. INJURY TO LATERAL BRANCHES (LOW) EPICORMICK GROWTH (LOW)	REMOVE
T16	SIBERIAN ELM	ULMUS PUMILA	POOR	32	5.12	10% CROWN REMAINING, SIGNIFICANT DECAY AND SLOUGHING BARK	REMOVE
T17	APPLE	MALUS PUMILA	FAIR	20,15	3.85	CO-DOMINANT STEMS (LOW). EPICORMICK GROWTH (MODERATE)	PRESERVE
T18	WHITE ELM	ULMUS AMERICANA	FAIR	18	3.78	INJURY TO TRUNK (LOW)	PRESERVE
T19	APPLE	MALUS PUMILA	FAIR	15,10,10,4,2	3.81	MULTI-STEMMED BASE, INJURIES TO LATERAL BRANCHES (MODERATE), DEBRIS PILES AT NORTHERN EDGE OF TRUNK	REMOVE
T20	APPLE	MALUS PUMILA	FAIR	13,6,4	3.75	MULTI-STEMMED BASE	REMOVE
T21	WHITE ELM	ULMUS AMERICANA	GOOD	31	5.11	PAST PRUNING (LOW), MULTI-STEMMED CROTCH AT 1 M	REMOVE
T22	WHITE ELM	ULMUS AMERICANA	GOOD	26,16,14	5.14	-	REMOVE
T23	WHITE ELM	ULMUS AMERICANA	GOOD	11	3.71	-	REMOVE
T24	WHITE ELM	ULMUS AMERICANA	GOOD	16,3	3.76	-	REMOVE
T25	WHITE ELM	ULMUS AMERICANA	GOOD	15,9	3.77	-	REMOVE
T26	WHITE ELM	ULMUS AMERICANA	GOOD	10,14,11	3.8	-	REMOVE
T27	WHITE ELM	ULMUS AMERICANA	GOOD	16,12,15	3.85	CO-DOMINANT STEMS AT BASE	REMOVE
T28	WHITE ELM	ULMUS AMERICANA	FAIR	18,9,11	3.83	POOR FORM, CROOKED TRUNK AT BASE	REMOVE
G3	COLORADO BLUE SPRUCE	PICEA PUNGENS 'GLAUCA'	-	-	-	GROUPING OF THREE COLORADO SPRUCE, STILL STAKED AND RECENTLY PLANTED, ONE AND A HALF METRES SPACING	PRESERVE
G2	WHITE SPRUCE	PICEA GLAUCA	2	-	-	THREE WHITE SPRUCE PLANTED 2 M, TREES ARE STILL STAKED. FOLLOWED BY GROUPING OF NINE WHITE CEDAR TREES, ALL TREES APPROXIMATELY 2 CM DBH	PRESERVE
G1	WHITE CEDAR	THUJA OCCIDENTALIS	1 - 2	-	-	FIVE WHITE CEDAR TREES RECENTLY PLANTED APPROXIMATELY 1 TO 2 CM DBH, STILL STAKED AND PLANTED 1.5 M ON CENTRE	PRESERVE



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Appendix A

Tree Study Methodology

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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

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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.