



Welwyn Consulting

October 15, 2015

1220 Stavebank Road
Mississauga, Ontario
L5G 2V2

**SUBJECT: Arborist Report and Tree Preservation Plan
1220 Stavebank Road, Mississauga**

Dear Erin:

Attached please find the Arborist Report and Tree Preservation Plan which has been prepared for the above listed property.

This report includes an evaluation of all trees on or within 6 metres of the subject site's property lines with a diameter at breast height (DBH) of **15cm or greater**. This evaluation includes the DBH, height, canopy spread, health, and structural condition of all trees that may be affected by the currently proposed site plan. This report also provides a Tree Preservation Plan for the property, including the appropriate Tree Protection Zones (TPZ).

This information complies with The City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006*.

Included in the report (if required) are Valuation Appraisals of any City-owned trees as required by the City of Mississauga to obtain the necessary tree permits.

This letter is part of the Arborist Report and Tree Preservation Plan and may not be used separately. Please feel free to contact me to discuss this report further.

Best regards,

Tom Bradley B.Sc. (Agr)
ASCA Registered Consulting Arborist #492
ISA Certified Arborist #ON-1182A
ISA Certified Tree Risk Assessor
Butternut Health Assessor #257 (OMNR)
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Arborist Report and Tree Preservation Plan

1220 Stavebank Road, Mississauga

Prepared For

1220 Stavebank Road
Mississauga, Ontario
L5G 2V2

Prepared By

Tom Bradley
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ISA Certified Tree Risk Assessor
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Prepared On

October 15, 2015



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Summary

This Arborist Report and Tree Preservation Plan addresses all trees with a diameter at breast height (D.B.H.) of 15cm or greater and within 6 metres of the subject site that may be affected by the proposed property development and provides recommendations for their preservation and/or removal. This report also includes hoarding distances for the Tree Protection Zones (TPZ) and provides recommendations for current and future tree health care.

Based upon the Tree Inventory for this property, there are **15 trees** that may be affected by the proposed site development plan:

- 12 trees on the subject site, 4 of which are below the established “top of bank” on lands regulated by the Credit Valley Conservation Authority (CVCA)
- 3 neighbouring trees within 6 metres of the subject site property line
- No shared ownership trees along any subject site property lines
- No City-owned trees within proximity to the subject site

Table 1: Tree Preservation and Removal

<u>TREES TO PRESERVE</u>	<u>TREE NUMBER</u>	<u>TOTAL</u>
i) Subject Site Trees	1, 2, 12 (subject site) 6, 7, 8, 9 (CVCA lands)	7
ii) Neighbouring Trees	3, 4, 5	3
iii) City-owned Trees	0	<u>0</u>
	#of Trees To Be Preserved:	10
<u>TREES TO BE REMOVED</u>	<u>TREE NUMBER</u>	<u>TOTAL</u>
i) Subject Site Trees	10, 11 (dead - EAB), 13, 14, 15 (conflict)	5
ii) Neighbouring Trees	0	0
iii) City-owned Trees	0	<u>0</u>
	#of Trees To Be Removed:	5
	Total trees on or adjacent to subject site:	15

Specific tree-related issues on this site:

- 1.) A Certified Consulting Arborist shall be on-site during the proposed building foundation excavation to determine the size and quantity of Tree #12's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. Please refer to Page 8 and the photos on Page 21 of this report for further information.



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Introduction

This Arborist Report and Tree Preservation Plan provides the current condition of all trees with a D.B.H of 15cm or greater on or adjacent to the subject site that may be affected by the proposed site development plan, including any City and/or neighbouring trees within 6 metres of the subject site's property lines as indicated by the attached site plan in Appendix A. The intent of the Tree Preservation Plan is to retain as many trees on the site as is reasonable through the use of Tree Protection Zones (TPZ) and other generally recognized arboricultural practices and to minimize the potential impact of construction injury to the trees.

Assignment

I was contacted by Stonemill Developments on behalf of the client, _____, to provide an Arborist Report and Tree Preservation Plan, as required by the City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006* to minimize the impact that the proposed construction may have on the trees on or adjacent to this property. My report shall list specific trees to be preserved or removed, recommend any immediate maintenance required to create a safer environment for contractors and the property owner and provide a long-term tree preservation and management plan for the site.

Limits of Assignment

This report is limited to assessing and documenting the health and structural condition of the trees with a D.B.H of 15cm or greater on or 6 metres from the subject site during my site survey on September 24, 2015. My evaluation is based upon a visual inspection of the trees from the ground, and the analysis of photos and any samples taken during that inspection.

Unless specifically stated in the report:

- 1.) Neither aerial inspections nor root excavations were performed on any trees on site or within 6 metres of the subject site.
- 2.) A Level 2 "Basic" assessment using the 2011 International Society of Arboriculture (I.S.A.) *Best Management Practices* was used for tree evaluations within this report.

Purpose and Use

The purpose of this report is to document the current health and structural condition of the trees with a D.B.H of 15cm or greater on and within 6 metres of the subject site property, and to provide an Arborist Report and Tree Preservation Plan that complies with the City of Mississauga's *Private Tree Protection By-Law 254-12* and *Site Plan Control By-Law 0293-2006*.

This report is intended for the exclusive use of Stonemill Developments on behalf of the client, _____. Upon submission by and payment to Welwyn Consulting, this report will become their property to use at their discretion.



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Observations

The proposed development is located in an established residential area near the intersections of Stavebank Road and Mineola Road within the City of Mississauga. This site presently contains a residential dwelling that will be demolished and replaced with a new home. I visited the site on September 24, 2015 to conduct my tree inventory and take photographs of the trees on site, as well as any neighbouring or City-owned trees that may be affected by the proposed site plan.



Photo #1



Photo #2

Figure #1: These 2 photos show the front and back yard of the property at 1220 Stavebank Road as they appeared during the tree inventory conducted on September 24, 2015.

Appendices

Appendix A contains the most current site plan supplied by Stonemill Developments Inc. and provides the following information:

- The location of the trees on or adjacent to the subject site
- Property lines for the subject site and neighbouring properties
- Property lines for City-owned lands adjacent to the subject site
- All existing buildings and hard surfaces
- An outline of the proposed building

Appendix B contains the Tree Inventory for this site. All trees were assigned numbers, and measured for diameter at breast height (DBH=1.4m), height, and canopy spread. The trees' health and structural condition were evaluated, which provides the basis for their recommended preservation or removal.

Appendix C contains the Tree Appraisal values for any City-owned trees on municipal property adjacent to the subject site that may be impacted by the proposed site plan.

Appendix D contains selected photos of trees on this site.



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Trees to Preserve (10)

Prior to any work commencing, an on site meeting should take place with the following people to discuss the Tree Preservation Plan:

- A Certified Consulting Arborist
- A representative from the City of Mississauga's Urban Forestry Department
- The property owner(s) and any Architects, Engineers, and contractors involved with the project

▪ **Trees #1 and 2 Red Maple and Norway Maple (subject site)**

These 2 trees are located in the front yard of 1220 Stavebank Road between a rock wall to the north and an existing semi-circular driveway to the south. The east entrance of the existing semi-circular driveway shall be re-used and the remainder of the driveway shall be removed. These 2 trees shall be protected for the duration of the proposed construction activities on this site and no injury is anticipated.

These 2 trees shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 10 of this report should result in the trees' continued survival.

▪ **Trees #3, 4 and 5 Neighbouring trees**

These 3 trees are located on the neighbour's property west of the subject site at 1220 Stavebank Road. The proposed subject site building foundation shall be moved approx. 2m further east of its current location, which is anticipated to reduce the potential for root injury to these 3 trees. These 3 trees must be protected for the duration of the proposed construction activities on this site and no injury is anticipated.

These 3 neighbouring trees must be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 10 of this report should result in the trees' continued survival.

▪ **Trees #6-9 Trees below "top of bank" (CVCA lands)**

These 3 trees are located below the established "top of bank" south of the rear yard at 1220 Stavebank Road on lands regulated by the Credit Valley Conservation Authority (CVCA). These 3 trees must be protected for the duration of the proposed construction activities on this site and no injury is anticipated.

These 3 CVCA regulated trees must be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 10 of this report should result in the trees' continued survival.



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■ **Tree #12** **Black Walnut (subject site)**

This large-caliper tree is located in the rear yard of 1220 Stavebank Road. The proposed building foundation will encroach approximately 2m (plus an anticipated 90cm over-dig) into the west portion of the minimum required 6.0m Tree Protection Zone (TPZ) for this tree.

This tree shall be preserved. Full implementation of the Tree Care Recommendations, Tree Preservation Plan and Tree Preservation Guidelines starting on Page 10 of this report should result in the tree's continued survival.

NOTE:

2.) *A Certified Consulting Arborist shall be on-site during the proposed building foundation excavation to determine the size and quantity of Tree #12's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action should reduce the potential for root injury caused by the excavating equipment, and provide any pruned roots with the best opportunity to regenerate.*



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Trees to Remove (5)

Prior to construction, all trees scheduled for removal should be removed to grade level to increase the safety for both the property owner and any contractors.

- **Trees #10 and 11 Green Ash (2) (subject site)**
 These 2 trees are dead due to infestation from Emerald Ash Borer (EAB) and may be removed without a permit from Urban Forestry.
- **Trees #13-15 Black Walnut, Green Ash and Redcedar (subject site)**
 These 3 trees are in conflict with the proposed site plan and should be safely removed to grade level prior to the commencement of on-site construction activities. Note that Trees #13 and 14 are below the 15cm DBH threshold for protection under the City of Mississauga's Private Tree Protection By-Law and may be removed without a permit from Urban Forestry.

Replacement Tree Planting

Below is the Tree Replacement Plan Policy from The City of Mississauga's *Private Tree Protection By-Law 254-12*:

- (2) Where the planting of a Replacement Tree(s) has been imposed as a condition, the Commissioner may require any one or more of the following:
 - (a) the Replacement Tree(s) be located on the same Lot in a location, number, size; and/or species to the satisfaction of the Commissioner;
 - (b) a replanting plan be filed to the satisfaction of the Commissioner;
 - (e) a written undertaking by the Owner to carry out the replacement planting;
 - (f) monies or a letter of credit in a form satisfactory to the Commissioner be delivered to the Commissioner to cover the costs of the Replacement Trees, and the maintenance of the Tree(s) for a period of up to two (2) years; or
 - (g) payment of each Replacement Tree not replanted on the Owner's Lot be made into the City's Replacement Tree Planting Fund. The payment for each such Tree shall be the cost of each street Tree planting as provided in the Fees and Charges By-law.

Based upon a 1:1 ratio, the City of Mississauga may require replacement trees to be planted as compensation for the mature trees being removed as a result of re-development of the site at 1220 Stavebank Road. In accordance with the Tree By-Law, replacement trees are to be native in species, a minimum 60mm caliper for deciduous trees and a minimum 1.80m high for coniferous trees.

The payment in lieu of replacement tree planting has been set by the City of Mississauga at \$452.00/tree.



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Tree Care Recommendations

Cabling

Cabling is a practice which provides physical support for trees with structurally weak limbs, co-dominant stems, any branch or trunk unions with included bark, and tree species generally known to be weak-wooded. An aerial inspection of the tree's structural condition should be performed prior to cable installation, and any dead, diseased, or hazardous wood should be removed. Cabled trees should be inspected annually to assess both the cabling hardware and the tree's structural condition. Cabling reduces but does not eliminate a tree's hazard or failure potential.

- **There are no trees recommended for cabling on this site at this time.**

Fertilization

Current research conducted through the International Society of Arboriculture (I.S.A.) indicates that preserved trees within close proximity of proposed construction activities should not be fertilized during the 1st year following construction injury. Uptake of nutrients and water in compacted soils can be reduced and fertilizer salts may actually remove water from a tree's root zone. If and when supplemental fertilization is deemed necessary, products which stimulate root growth should be employed over those that stimulate shoot and foliage growth and be applied at low application rates.

Supplemental fertilization needs should be assessed by a Certified Consulting Arborist upon completion of all on-site construction activities, and any recommendations should be based on site-specific soil nutrient deficiencies determined primarily through soil testing and secondarily by visual analysis of nutrient deficiencies in foliage, twigs, buds, and roots.

Pruning

Pruning is a practice which removes dead, diseased, broken, rubbing, crossing, and hazardous limbs 2.5 cm and larger from trees to create a safer working environment and improve tree health and vigor. Pruning also provides an excellent opportunity for an aerial inspection of the structural integrity of the tree(s). All pruning should be completed prior to any site demolition or construction.

Tree #3: Northern Catalpa (neighbouring tree)

- **Request the removal of large-caliper hazardous deadwood from this tree**



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Root Pruning/Air Spade/Hydro-Vac

Root pruning is performed to minimize a tree's potential loss of structural stability through root removal and/or injury due to excavation within close proximity of its root zone. While not always feasible for all projects, root pruning should occur in late autumn during tree dormancy and ideally one full growing season prior to any on-site construction or demolition to allow for root regeneration. Root pruning should be performed by a Certified Arborist in accordance with generally recognized standards and principles within the field of Arboriculture. *Air-Spade and Hydro-Vac technologies provide two of the least invasive methods for root zone excavation, and should be performed under the supervision of a Certified Arborist.*

General Methodology (other than air spade/hydro-vac)

Under the direction of a Certified Consulting Arborist and using hand and/or mechanical excavation techniques, the soil shall be carefully removed starting approximately 4-6m (where feasible) from the tree's base perpendicular to the edge of the proposed building foundation area. Digging in a line parallel to the roots rather than across them should minimize cracking of any large roots near the tree's base. The soil shall be removed in shallow layers to minimize the potential for striking any large roots that may have been close to the soil surface.

■ **Tree #12: Black Walnut (subject site)**

A Certified Consulting Arborist shall be on-site during the proposed building foundation excavation to determine the size and quantity of Tree #12's roots that could be affected. Any roots in the immediate area of the excavation shall be assessed and, if feasible and reasonable, properly pruned by the attending Arborist. This action should reduce the potential for root injury caused by the excavating equipment, and provide any pruned roots with the best opportunity to regenerate.

Irrigation

An irrigation plan for preserved trees should be designed and implemented with the assistance of a Certified Consulting Arborist. The amount and frequency of irrigation will depend on factors such as soil type, local and seasonal precipitation patterns, duration of droughts, and the amount of construction activity near specific trees. The top 30 cm of soil in a tree's root zone should be kept moist without being saturated. Infrequent deep watering produces trees with deeper roots, while frequent shallow watering produces shallow-rooted trees. *When combined with soil aeration improvement techniques such as vertical mulching, drill holes, and radial trenching, an adequate but not excessive supply of moisture to a tree's root zone can be an effective and efficient way to help alleviate construction injury.* Preserved trees should be monitored at regular intervals by a Certified Consulting Arborist for signs of drought stress or excess irrigation.

- **An irrigation plan will be developed upon determination of tree injury levels after completion of any required root pruning.**



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Horizontal Mulching

It may be determined by the Certified Consulting Arborist that trees within close proximity of construction activities will require a layer of composted wood chip mulch applied to the root zones inside the TPZ hoarding. Decomposed wood mulch 5–10 cm (2–4 inches) deep applied to a tree's root zone should help to retain soil moisture, regulate soil temperature, and provide a natural organic source of nutrients in their elemental form over time. Piling of mulch against the tree stem must be avoided. Fresh wood chip mulch shall be applied to a depth of 30 cm beneath steel plates or plywood on vehicle and equipment traffic areas within close proximity to the TPZ to distribute weight on the soil and help reduce potential root zone soil compaction.

- **There are no specific mulching requirements at this time.**

Root Zone Aeration Improvements

Aeration improvement techniques such as drill holes, vertical mulching, soil fracturing, and radial trenching have the ability to reduce various degrees of soil compaction by increasing the amount of soil macro and micropores. Any form of root zone aeration improvement should be performed post-construction and under the supervision of a Certified Consulting Arborist to help remediate soil compaction caused by construction activity near preserved trees.

- **There are no root zone aeration improvements required on this site at this time.**

Transplanting

Transplanting of larger caliper trees, through either hand digging or tree spade, allows for relocation and retention of desirable trees that might have otherwise been removed due to conflict with the proposed property construction design. Trees should be tree-spaded out by a reputable operator, and are best transplanted during dormancy in late autumn. No construction activity should take place near re-located trees either before or after transplantation.

Any transplanted trees should be fertilized using a complete fertilizer with a preferred nitrogen/phosphorus/potassium ratio of 1-2-2, with the Nitrogen component in slow release form. A 10 cm layer of composted wood mulch should be applied to the root zone, and the tree should receive regular irrigation for a period of at least one year. The tree may also require staking for a period of 1 year to provide stability while it re-establishes its root system.

- **There are no trees to be transplanted on this site at this time.**



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Tree Preservation Plan

The following Tree Preservation Plan should be implemented prior to any on-site construction activity.

Hoarding

Hoarding is used to define the **Tree Protection Zone (TPZ)**, which protects a tree's root zone, trunk, and branches from injury during both construction and landscaping phases of the project. Hoarding should be installed prior to any construction activity, and remain intact until construction and landscaping is completed. **No** TPZ should be used for the temporary storage of building materials, storage or washing of equipment, or the dumping of construction debris, excess fill, or topsoil.

As required by the City of Mississauga, hoarding shall be constructed of 4x8 plywood sheets using 2x4 top and bottom rail construction supported by 4x4 wooden posts. A TPZ may be constructed of orange safety fencing using 2x4 top and bottom rail construction and supported by t-bar supports when protecting street trees where site line obstruction is a concern. TPZ signage should be posted in visible locations on the TPZ hoarding. T-bar supports for solid hoarding will only be allowed through pre-approval from the City of Mississauga's Development and Design Department.

The architect of record for the project should update the most current site plan/grading plan to include all existing trees properly plotted and numbered and all TPZ hoarding locations clearly indicated.

Hoarding Installation

A diagram of the proposed hoarding plan for this site can be found in Appendix A on Page 18 of this report. The recommended radial distances from the trunk for installation of TPZ hoarding are listed in Appendix B starting on Page 19 of this report, and the hoarding should be installed using the following guidelines:

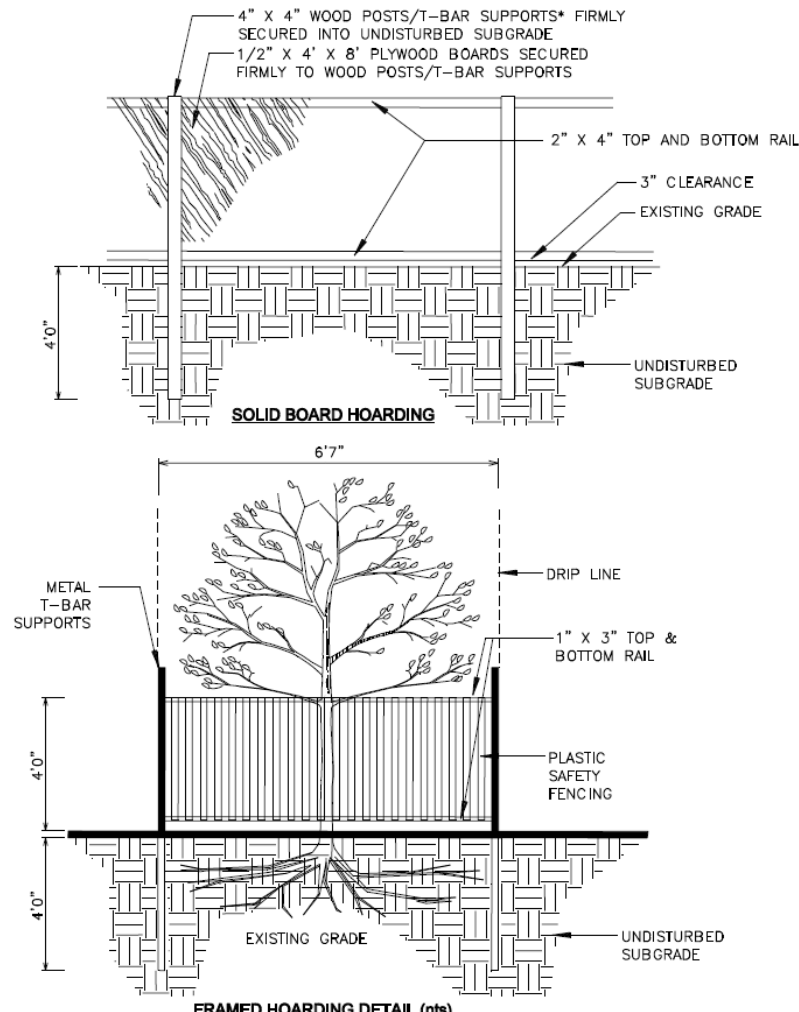
- 1) All TPZ hoarding shall be placed at the recommended radial distance from the base of all trees to be protected or up to all existing and/or proposed hard surfaces to allow for construction.
- 2) Any large numbers of trees that can be grouped together in a closed box or continuous line system for protection should have their TPZ hoarding placed at the recommended radial distance from the base of all of the largest peripheral trees of the system, or up to all existing and/or proposed hard surfaces to allow for construction.
- 3) Encroachment within a tree's TPZ will require a special permit from the City of Mississauga and/or on-site supervision by a Certified Consulting Arborist during any proposed excavation activities for root pruning and assessment.



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City of Mississauga TPZ Hoarding Specifications

The diagram below provides the City of Mississauga's standards for Tree Protection Zone (T.P.Z) hoarding.



NOTES:

1. HOARDING DETAILS TO BE DETERMINED FOLLOWING INITIAL SITE INSPECTION.
 2. HOARDING TO BE APPROVED BY DEVELOPMENT AND DESIGN.
 3. HOARDING MUST BE SUPPLIED, INSTALLED AND MAINTAINED BY THE APPLICANT THROUGHOUT ALL PHASES OF CONSTRUCTION, UNTIL APPROVAL TO REMOVE HOARDING IS OBTAINED FROM DEVELOPMENT AND DESIGN.
 4. DO NOT ALLOW WATER TO COLLECT AND POND BEHIND OR WITHIN HOARDING.
- * T-BAR SUPPORTS FOR SOLID HOARDING WILL ONLY BE ALLOWED WITH PRE APPROVAL FROM DEVELOPMENT AND DESIGN.



SCALE: N.T.S.
DATE: JAN, 2008

DEVELOPMENT & DESIGN CONSTRUCTION HOARDING



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Tree Preservation Plan Summary

I.) Pre-Construction Phase

- If necessary, have the Certified Consulting Arborist schedule an on-site meeting with a representative from the City of Mississauga's Urban Forestry Department, the property owner(s), and any Architects, Engineers, and contractors involved with the project to discuss the Tree Preservation Plan.
- Complete all Tree Care Recommendations, including pruning and any required tree removals.
- Install Tree Protection Zone (TPZ) hoarding as required.
- Where required, apply composted wood mulch to tree root zones within the TPZ hoarding, and apply fresh wood mulch over steel plates and/or plywood to any high-traffic areas immediately adjacent to the TPZ hoarding to help reduce soil compaction.
- If feasible, root-prune any preserved trees adjacent to excavation areas prior to construction under the supervision of a Certified Consulting Arborist.
- Establish an irrigation plan with the assistance of a Certified Consulting Arborist.

II.) Construction Phase

- Maintain and respect TPZ hoarding throughout the construction phase. Do not store or dump materials in this area.
- Continue irrigation plan as directed by a Certified Consulting Arborist.
- Prune any roots exposed during excavation under the supervision of a Certified Consulting Arborist.
- On-going monitoring by a Certified Consulting Arborist to evaluate construction injury/stress and make recommendations.

III.) Post-Construction Phase

- Remove hoarding only after permission from the City of Mississauga.
- Continue irrigation program as directed by a Certified Consulting Arborist.
- Supplemental fertilizer needs assessment by a Certified Consulting Arborist.
- Post-construction monitoring of all trees by a Certified Consulting Arborist.

NOTE:

Post-Construction Monitoring

Construction injury may take several years to become apparent. All preserved trees should be inspected by a Certified Consulting Arborist on a semi-annual basis for a period of up to 2 years to pro-actively address any tree health related issues as they occur.



ASSUMPTIONS AND LIMITING CONDITIONS

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, by-laws, or other governmental regulations.

Care has been taken to obtain all information from reliable sources, and all data has been verified insofar as possible. The consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

Loss or alteration of any part of this report invalidates the entire report.

Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone other than the person to whom it is addressed without the prior expressed written or verbal consent of the consultant/appraiser.

Neither all nor any part of the contents of this report, nor any copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media without the prior expressed written or verbal consent of the consultant/appraiser particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society, institute, or any initialed designation conferred upon the consultant/appraiser as stated in his/her qualification.

This report and the values expressed herein represent the opinion of the consultant/appraiser, and the consultant/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as either engineering or architectural reports or surveys.

Unless expressed otherwise: 1) Information contained in this report covers only those items that were examined and reflections the condition of those items at the time of inspection, and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.



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CERTIFICATE OF PERFORMANCE

I, Tom Bradley, certify that:

- I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of any evaluation or appraisal is stated in the attached report and the Limits of Assignment.
- I have no current or prospective interest in the vegetation of the property that is the subject of this report, and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts.
- My compensation is not contingent upon the reporting of a pre-determined conclusion that favours the cause of the client or any other party, or upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.
- My analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a Registered Consulting Arborist through the *American Society of Consulting Arborists (A.S.C.A)*, and both a Certified Arborist and Certified Tree Risk Assessor with the *International Society of Arboriculture (I.S.A)*. I have been involved in the fields of Arboriculture and Horticulture in a full-time capacity for a period of more than 20 years.

Signed: _____

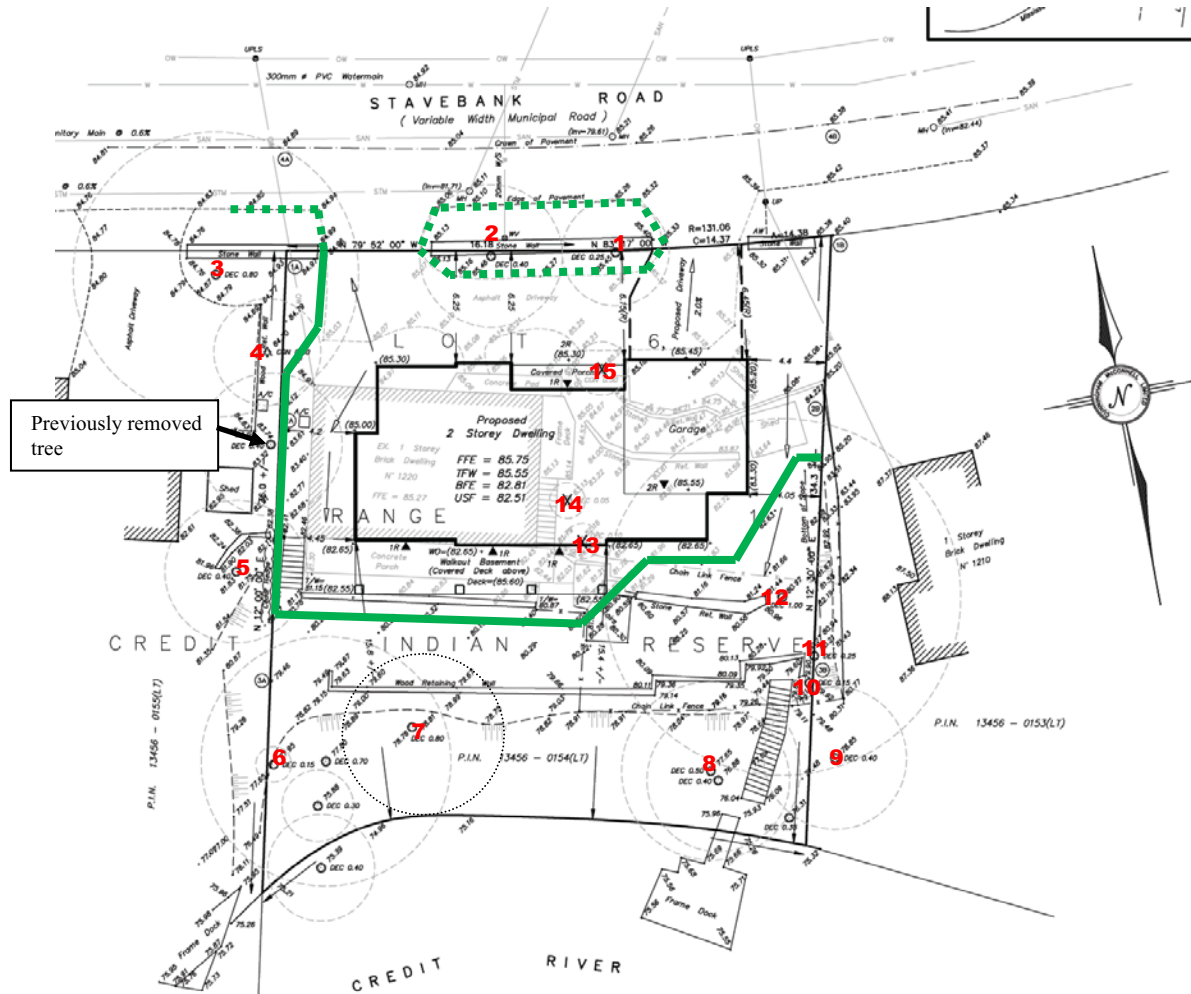
Date: October 15, 2015



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Appendix A: Proposed Site Plan

Note: The proposed Tree Protection Zone (TPZ) hoarding is shown as green lines and is not to scale on this drawing.



Legend:

Solid Hoarding



Framed Hoarding



NOTES:

1.) Three (3) trees to be removed:

- Tree #13 – Black Walnut (DBH = 9cm)
- Tree #14 – White Ash (DBH = 6cm)
- Tree #15 – Eastern Redcedar (DBH = 18cm)

2.) A Certified Arborist shall be on-site during excavation of proposed building foundation within proximity of northwest side of Tree #12 (Black Walnut – DBH = 98cm)



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Appendix B: Tree Survey

I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
1	Subject Site	Red Maple	<i>Acer rubrum</i>	24.5	12	10	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union 2m from tree base; rock wall on north side of tree stem; driveway on south side of tree stem; lower branch canopy clearance pruned 2m from tree base	Preserve: TPZ = 1.8m
2	Subject Site	Norway Maple	<i>Acer platanoides</i>	38	16	10	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with narrow included bark union 2.5m from tree base; rock wall on north side of tree stem; driveway on south side of tree stem; lower branch canopy clearance pruned 2m from tree base	Preserve: TPZ = 2.4m
3	Neighbour	Northern Catalpa	<i>Catalpa bignonioides</i>	80	20	15	Good	Fair	Large-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union 4m from tree base; lower branch canopy clearance pruned 6m from tree base and shaded on north side	Preserve: TPZ = 4.8m
4	Neighbour	White Cedar	<i>Thuja occidentalis</i>	15, 19, 22 (33)	12	5	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with narrow included bark union 1m from tree base; branch canopy shaded and reduced on northwest side	Preserve: TPZ = 2.4m
5	Neighbour	Black Walnut	<i>Juglans nigra</i>	40	22	16	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems with included bark union 4m from tree base; rock wall at north tree base	Preserve: TPZ = 2.4m
6	Subject Site/ CVCA	White Oak	<i>Quercus alba</i>	45	26	12	Good	Fair	Small-caliper deadwood in canopy; small aspect ratio co-dominant stems (3) with narrow included bark union 10m from tree base; tree located below established "top of bank"	Preserve: TPZ = 3.0m
7	Subject Site/ CVCA	Red Oak	<i>Quercus rubra</i>	55	28	16	Good	Good	Small-caliper deadwood in canopy; branch canopy above 6m; tree located below established "top of bank"	Preserve: TPZ = 3.6m



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I.D #	Owner	Tree Species Common Name	Tree Species Botanical Name	DBH (cm)	Height (m)	Canopy (m)	Tree Health	Structural Condition	Comments	Minimum TPZ unless otherwise indicated
8	Subject Site/ CVCA	Red Oak	<i>Quercus rubra</i>	28, 35 (45)	18	12	Good	Fair	Small-caliper deadwood in canopy; large aspect ratio co-dominant stems with included bark union at tree base; tree located below established "top of bank"	Preserve: TPZ = 3.0m
9	Subject Site/ CVCA	White Ash	<i>Fraxinus americana</i>	20	12	4	Good	Good	Small-caliper deadwood in canopy; branch canopy shaded by adjacent large tree; tree located below established "top of bank"	Preserve: TPZ = 1.8m
10	Subject Site	Green Ash	<i>Fraxinus pennsylvanica</i>	17	10	4	---	---	Dead tree due to Emerald Ash Borer (EAB)	Remove: Potential safety hazard
11	Subject Site	Green Ash	<i>Fraxinus pennsylvanica</i>	22	12	4	---	---	Dead tree due to Emerald Ash Borer (EAB)	Remove: Potential safety hazard
12	Subject Site	Black Walnut	<i>Juglans nigra</i>	98	26	20	Good	Good	Small-caliper deadwood in canopy; lower branch canopy clearance pruned 8m from tree base; multiple co-dominant stems (5) with included bark unions 10m from tree base	Preserve: TPZ = 6.0m <i>Arborist on-site during building foundation excavation</i>
13	Subject Site	Black Walnut	<i>Juglans nigra</i>	9	10	4	Good	Good	Small-caliper deadwood in canopy; <u>below 15cm DBH threshold for protection under City of Mississauga's Private Tree Protection By-Law</u>	Remove: Proposed site plan in conflict with the tree
14	Subject Site	White Ash	<i>Fraxinus americana</i>	6	8	2	Good	Good	Small-caliper deadwood in canopy; <u>below 15cm DBH threshold for protection under City of Mississauga's Private Tree Protection By-Law</u>	Remove: Proposed site plan in conflict with the tree May be removed without a permit
15	Subject Site	Eastern Redcedar	<i>Juniperus virginiana</i>	18	12	4	Good	Good	Small-caliper deadwood in canopy	Remove: Proposed site plan in conflict with the tree



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Appendix C: Site Photos



Photo #3



Photo #4

Figure #2: Potential root pruning on northwest side of Tree #12

The above photos provide the following information:

- Photo #3 shows the approximate area of the southeast portion of the proposed building foundation excavation which may potentially injure the root system of Tree #12 (Black Walnut – subject site – DBH = 98cm). The minimum required TPZ for this tree is 6.0m
- Photo #4 shows the rock retaining wall to the west of Tree #12.

Please refer to Page 8 of this report for further information.