



Arborist Report  
&  
Tree Preservation Plan

231 Cobourg Street  
Ottawa, ON  
K1N 8J2

Prepared for:

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## **INTRODUCTION:**

I have been retained by Mr. Judah Mulalu of *Ten 2 Four Architecture Inc.*, to complete an arborist report concerning the above subject site. The purpose of this report is to provide a tree preservation plan, with recommendations, regarding all regulated trees affected by the proposed development. All field work was completed by the author of this report being Cletus Gavin ASCA Registered Consulting Arborist # 613 on February 10, 2017

## **HISTORY AND ASSIGNMENT:**

I have been advised by Mr. Mulalu that the above subject site is scheduled for development, which includes the demolition of the existing building and the construction of a proposed three storey building as per the Tree Preservation Plan – TPP-1 in Appendix I. As the consulting arborist retained for this project, *The Tree Specialists Inc.*, can be further retained (if necessary) to act as the Project Consulting Arborist (PCA) to provide on-site monitoring and any necessary remedial actions as required by the municipality.

The assignment is as follows:

1. Survey all regulated trees that will be affected by the proposed project, assess their condition and determine if they are suitable for preservation.
2. Provide recommendations for tree preservation.
3. Determine if proposed construction will adversely affect the health of such trees.

## **ASSUMPTION AND LIMITING CONDITIONS:**

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however *The Tree Specialists, Inc.* can neither guarantee nor be responsible for the accuracy of information provided by others.
2. Excerpts or alterations to the report, without the authorization of the author or his company invalidates its intent and/or implied conclusions. This report may not be used for any expressed purpose other than its intended purpose and alteration of any part of this report invalidates the report.
3. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection; and 2) the inspection was made using accepted arboricultural techniques and is limited to visual examination of accessible items without climbing, dissection, probing or coring and detailed root examination involving excavation. While reasonable efforts have been made to assess trees outlined in this report, there is no warranty or guarantee, expressed or implied, that problems or deficiencies with the tree(s) or any part(s) of them may not arise in the future. All trees should be inspected and re-assessed periodically.
4. The determination of ownership of any subject tree(s) is the responsibility of the owner and any civil or common-law issues, which may exist between property owners with respect to trees, must be resolved by the owner. A recommendation to remove or maintain tree(s) does not grant authority to encroach in any manner onto adjacent private properties

**TREE SURVEY AND RECOMMENDATIONS:**

See TPP-1 plan in Appendix I for tree location, Table #1 for species identification, condition, and recommendations and Appendix II for corresponding Digital Images.

Table #1: 231 Cobourg Street - Ottawa

Tree #	Species	DBH <sup>1</sup> (cm)	Condition <sup>2</sup>	Category <sup>3</sup>	Comments	Suitability <sup>4</sup> for Conservation	Recommendation	C <sup>5</sup> R Z (M)
180	<i>Acer platanoides</i>	37	Fair	4	- deadwood - encroached upon by <2%	Good	Preserve	3.7
181	<i>Acer platanoides</i>	33	Fair	4	- deadwood, storm break - clear of proposed construction - shall retain its existing root structure	Moderate	Preserve	3.3
182	<i>Ulmus americana</i>	26	Fair	1	- deadwood - heavily encroached upon by proposed construction	Moderate	Remove	2.6
183	<i>Ulmus americana</i>	15	Poor	1	- deadwood, in decline, low LCR - heavily encroached upon by proposed construction	Poor	Remove	1.5
184	<i>Ulmus americana</i>	44	Poor	1	- deadwood, in decline, 70% dead - heavily encroached upon by proposed construction	Poor	Remove	4.4
185	<i>Thuja occidentalis</i>	30	Fair	1	- deadwood - in conflict with proposed construction	Moderate	Remove	3.0
186	<i>Thuja occidentalis</i>	33	Fair	1	- deadwood - in conflict with proposed construction	Moderate	Remove	3.3
187	<i>Ulmus americana</i>	57	Fair	1	- deadwood, poor union, storm break - heavily encroached upon by proposed construction	Moderate	Remove	5.7
C1	<i>Acer platanoides</i>	33	Fair	4	- deadwood, in decline, decay evident - clear of proposed construction - shall retain its prescribed CRZ	Moderate	Preserve	3.3

<sup>1</sup> **DBH – Diameter** at Breast Height is a measurement in centimeters, using a caliper tape, of the tree stem at 1.37 meters above existing grade.

<sup>2</sup> **Condition** – A rating of Poor/Fair/Good/ Excellent was determined for each tree by visually assessing all the above ground components of the tree, using acceptable arboricultural procedures as recommended in the “*Guide for Plant Appraisal*”, prepared under contract by the “*Council of Tree & Landscape Appraisers (CTLA)*”, an official publication of the *International Society of Arboriculture (I.S.A.)*, 9<sup>th</sup> Edition, 2000”.

<sup>3</sup> **Category #:**

0. Tree NOT regulated under City of Ottawa Tree by-laws.
1. Trees with diameters of 10 cm or more, situated on private property on the subject site.
2. Trees with diameters of 10 cm or more, situated on private property, within 6 m of the subject site.
3. Trees of all diameters situated on City owned parkland within 6 m of the subject site.
4. Trees of all diameters situated within the City road allowance adjacent to the subject site.

<sup>4</sup> **Suitability for Conservation** - A rating of Poor/Moderate/Good is assigned to each tree taking in to account four factors which include, 1) Tree health 2) Structural integrity 3) Species response and 4) Tree Age and longevity, as recommended in the “*For Tree Care Operation – Trees, Shrubs, and Other Woody Plant Maintenance Standard Practice*” prepared as part of the “*ANSI A300 Standards*”.

<sup>5</sup> **CRZ** – Minimum tree protection zone distance as mandated by *The Tree Specialists Inc.*

## **SITE NOTES AND COMMENTS:**

### City Owned Trees:

1. As listed above, there are nine regulated trees involved with this project, three of which are located within the City road allowance, being trees no. 180, 181 and C1. Tree no. C1 is clear of proposed development, shall retain its prescribed CRZ and as such, will not be disturbed during construction.
2. Tree no. 181 is situated adjacent to an existing structure, being the interlocking sidewalk. With the above in mind, proposed construction will not infringe on the existing root structure of this tree as the existing hard surface structures protect the roots from disturbance and if protected by hoarding, as outlined in the Tree Protection Plan, will not adversely affect the trees current condition.
3. Tree no. 180 is also situated adjacent to the existing sidewalk however it is encroached upon by proposed construction by <2%. Such encroachment is located on the outer edge of the critical root zone. Roots disturbed within this area are likely to be no larger than 1-3cm in diameter and can easily be ameliorated by retaining a qualified arborist to supervise excavation, root prune as required and fertilize to promote root regeneration. This tree is healthy and vigourous and has an excess of stored energy (carbohydrates) to easily recover from this minor disturbance. Written permission from forestry services must be obtained to injure any tree growing on City property.

### Privately Owned Trees located on the Subject Site:

1. There are six regulated trees located on the subject site, being trees no. 182-187. All six trees are either in conflict with or are heavily encroached upon by proposed construction and as such, are recommended for removal. A tree permit issued by Planning and Growth Management is required before any tree 10cm in diameter or larger can be removed.
2. All other trees located on or within 6.0m of the subject site have a DBH of less than 10cm, are non-regulated trees and as such, were not included in this report.
3. To further protect the trees scheduled for preservation from the potential of construction disturbance, I recommend implementing the below listed tree preservation recommendations. Details for each recommendation are listed in the *Tree Preservation Specification* schedule in Appendix III.

- Erect all hoarding prior to construction and ensure no materials, equipment or personnel are allowed within CRZ during construction.
- If required, hand-dig any excavation located within the CRZ.
- Prune any exposed roots with a diameter less than 5.0 cm to promote regeneration and reduce possible infection. All roots greater than 5.0 cm in diameter must be preserved.
- Apply a one-year slow release deep root low nitrogen fertilizer, such as an 8-30-30, to promote increased vigor and vitality.
- Retain a Project Consulting Arborist (PCA), throughout the entire construction process, to observe and ensure that all above recommendations are being followed.

**SUMMARY TABLE:**

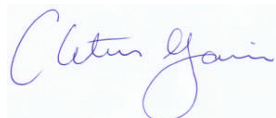
Tree Category	Total	Scheduled for Preservation		Remove
		Preserve	Preserve with Injury	
1 (Privately owned tree the subject site)	6	0	0	6
4 (City owned tree)	3	2	1	0
<b>Total</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>6</b>

**CONCLUSIONS:**

As listed in the Summary Table above, nine regulated trees are involved with this project, three of which are located within the City road allowance. One City owned tree cannot maintain 100% of its prescribed CRZ and as such, is to be injured. Written permission from forestry services must be obtained to injure any tree growing on City property. Six privately owned trees located on the subject site are in conflict with or are heavily encroached upon by proposed construction and are to be removed. A tree permit issued by Planning and Growth Management is required before any tree 10cm in diameter or larger can be removed. With the above in mind, it is my professional opinion that if the above listed tree preservation recommendations are implemented, proposed construction will not adversely affect the long term health and/or existing condition of all trees scheduled for preservation.

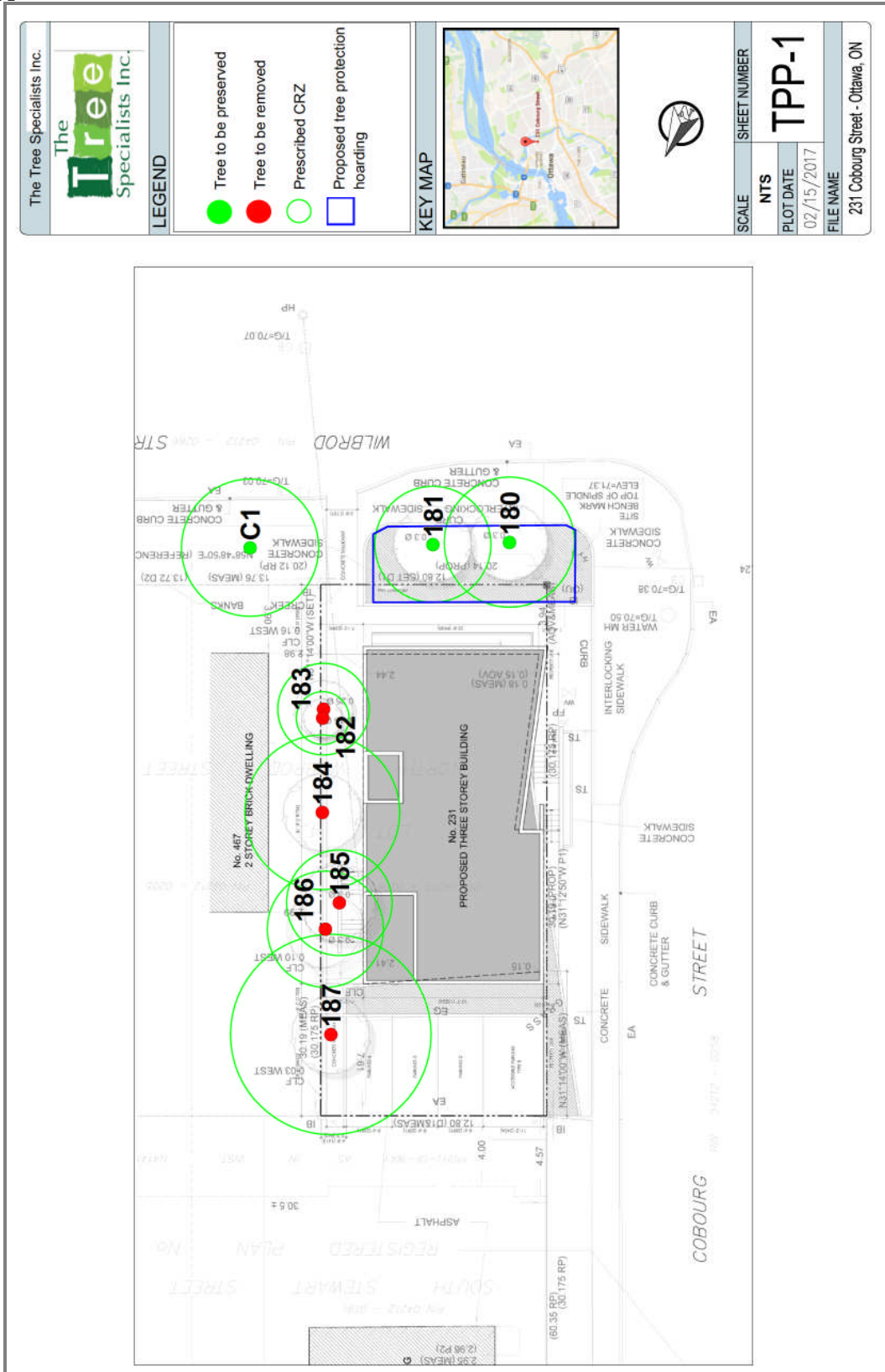
Trusting this report meets your needs. For further information, you may contact me directly at (905)-469-1717 or at [cgavin@thetreespecialists.com](mailto:cgavin@thetreespecialists.com).

THE TREE SPECIALISTS, INC.



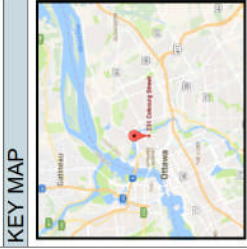
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Appendix I: Tree Preservation Plan – TPP-1



The Tree Specialists Inc.  
**The Tree Specialists Inc.**

- LEGEND**
- Tree to be preserved
  - Tree to be removed
  - Prescribed CRZ
  - Proposed tree protection hoarding



SCALE	SHEET NUMBER
NTS	<b>TPP-1</b>
PLOT DATE	02/15/2017
FILE NAME	231 Cobourg Street - Ottawa, ON



**Appendix II:**

**DIGITAL IMAGES**

Photo #1: Trees no. 180, 181 and C1 looking east.





Photo #2: Trees no. 182-186 looking northwest.



Photo #3: Tree no. 187 looking east.





### Appendix III:

## Tree Preservation Specification Details.

### 1.0 ESTABLISH CRITICAL ROOT ZONE

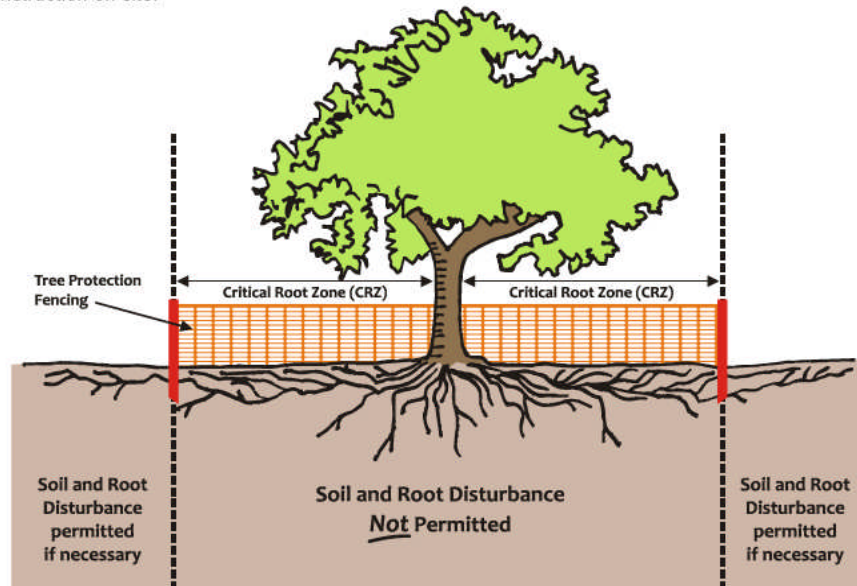
The purpose of the critical root zone (CRZ) is to prevent root damage, soil compaction and soil contamination. Workers and machinery shall not disturb the critical root zone in any way. To prevent access, the following is required:

1.1 Install hoarding as per attached Site Plan Survey in Appendix I.

1.2 Hoarding shall consist of the following:

#### CITY OF OTTAWA TREE PROTECTION MEASURES

The following protection measures must be implanted for retained trees, both on site and on adjacent sites, prior to any tree removal or site works and maintained for the duration of construction on site.



- Erect a 1 metre high fence at the \*critical root zone (CRZ) of trees;
- do not place any material or equipment within the CRZ of the tree;
- do not attach any signs, notices or posters to any tree;
- do not raise or lower the existing grade within the CRZ without approval;
- tunnel or bore when digging within the CRZ of a tree;
- do not damage the root system, trunk or branches of any tree;
- ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.

\*The critical root zone (CRZ) is established as being 10 cm from the trunk of a tree for every cm of trunk DBH. The CRZ is calculated as  $DBH \times 10$  cm.

If tree roots are exposed during construction, they shall be immediately reburied with soil or covered with filter cloth or woodchips and kept moist until they can be buried permanently.

For retained Butternut trees the tree protection fencing should be erected at a 25 metre radius around the tree.

## 2.0 ROOT PRUNING

Where possible, hand dig areas closest to each tree to prevent any unnecessary tearing or pulling of roots. Removal of roots that are greater than 2.5 centimetres in diameter or roots that are injured or diseased should be performed as follows:

- 2.1 Preserve the root bark ridge (similar in structure to the branch bark ridge). Directional Root Pruning (DRP) is the recommended technique and should be used during hand excavation around tree roots. Roots are similar to branches in their response to pruning practices. With DRP, objectionable and severely injured roots are properly cut to a lateral root that is growing downward or in a favorable direction.
- 2.2 All roots needing to be pruned or removed shall be cut cleanly with sharp hand tools, by a Certified Arborist or by the PCA.
- 2.3 No wound dressings/pruning paint shall be used to cover the ends of each cut.
- 2.4 All roots requiring pruning shall be cut using any of the following tools:
  - Large or small loppers
  - Hand pruners
  - Small hand saws
  - Wound scribes
- 2.5 Avoid prolonged exposure of tree roots during construction - keep exposed roots moist and dampened with mulching materials, irrigation or wrap in burlap if exposed for longer than 4 hours.

## 3.0 ESTABLISH MAINTENANCE PROGRAM

**All maintenance work must be completed by the approved Project Consulting Arborist.**

*Pre-Construction:*

- 3.1 Prune trees to remove deadwood, objectionable limbs while maintaining crown form.

*During- Construction:*

- 3.2 Irrigate critical root zones during drought conditions, June – September, to reduce drought stress.
- 3.3 Inspect the site every month to ensure that all hoarding is in place and in good condition. Inspect the trees to monitor condition.

*Post-Construction:*

- 3.4 Inspect the trees two times per year – May and September – to monitor condition for a minimum of 2 additional years.

#### 4.0 LANDSCAPING

Any landscaping completed within the critical root zones, after construction is completed and hoarding has been removed, cannot cause damage to any of the trees or their roots. The trees must be protected for the same reasons listed above but without using hoarding.

4.1 **No grade changes** are permitted which include adding and/or removing soil.

4.2 **No excavation** is permitted that can cause damage to the roots of the tree.

4.3 **No heavy equipment** can be used to compact the soil within the tree preservation zone.

4.4 Any hard -surface sidewalks, paths, etc. should be constructed using permeable products such as interlocking stone, etc.