



**TREE MANAGEMENT REPORT**  
**Project: 2022-22**

**Proposed Residential Development**  
**83-85 Hickory St. W &**  
**265-267 Hemlock St. W**  
**Waterloo, ON N2L 3R4**

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By:

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On behalf of:

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## **1. Introduction**

Hill Design Studio was retained by DCB Development Canada Inc. to provide arboricultural consultation services in support of a proposed multi-unit residential development at 83-85 Hickory St. W and 265-267 Hemlock St. W in Waterloo, ON.

### **1.1 Proposed Development**

The Owner of the site is proposing to construct a 6-storey apartment building with underground parking on the property.

### **1.2 Existing Conditions**

The subject site consists of 4 individual properties, each lot containing a single detached dwelling. As a whole, the subject site slopes from the west property line down to the east property line at Hemlock St. There is also a cross slope from the south property line sloping down towards Hickory St at the north of the subject site. The site contains 4 single detached dwellings, lawn and garden areas with tree plantings throughout the site. Adjacent to the site along the west property line are single detached residential properties. The property to the south contains a 5-storey apartment building with a paved parking area at the back.

## **2. Methodology**

### **2.1 Site Work**

The tree inventory and assessment were conducted by Catherine Hodgins, ISA Certified Arborist, on August 3, 2022. The Surveyor's Real Property Report with Topographic Information for this site prepared by McKechnie Surveying, along with Region of Waterloo GIS mapping aerial photography, were used as the base information for the Tree Management Plan (See Figure 1). Masri O Architects prepared the site plan which, along with the proposed site grading and servicing plan prepared by MTE, impacted tree preservation and removal decisions.

### **2.2 Tree Inventory Requirements**

Each tree on site was assigned a number located on the TMP and data in the following categories were recorded for each:

- ... Species (botanical and common name)
- ... Diameter at Breast Height (DBH in cm)
- ... Canopy Diameter (drip line in m)
- ... Biological Health Rating (Condition)
- ... Ownership
- ... Results of Assessment (Preserve or Remove)
- ... Additional Notes

Trees within 6m of the subject site on adjacent property were also inventoried.

## 2.3 Protection of Bats and Migratory Birds

Tree removal operations may impact bat habitat and breeding bird habitat, both of which are protected by the Ministry of Natural Resources and Forestry. Any tree removal operations will need to satisfy the requirements of the Endangered Species Act with regard to bat habitat, and the Migratory Bird Convention Act with regard to breeding bird habitat, determination of which is outside the scope of this report.

## 3. Observations and Recommendations

### 3.1 Tree Inventory Data Summary

A total of 56 trees were inventoried in this report. Specific data as noted in 2.2 above was recorded for each tree and locations with identification numbers are shown on the Tree Management Plan (See Figure 1). Trees located within 6m of the property lines on adjacent sites were also inventoried and identified as noted in 2.2. 35 trees are within the subject site's property lines and 16 trees are located on adjacent properties and 5 trees are planted in the City boulevards.

The majority of trees on site are a mix of native, opportunistic and cultural species including Silver Maple (*Acer saccharinum*), Sugar Maple (*Acer saccharum*), Norway Maple (*Acer platanoides*), Manitoba Maple (*Acer negundo*), Black Walnut (*Juglans nigra*), and White Cedar (*Thuja occidentalis*).

The remaining species composition on site contains native, cultural, and opportunistic species such as Tree of Heaven (*Ailanthus altissima*), Horse Chestnut (*Aesculus hippocastanum*), Siberian Elm (*Ulmus pumila*), White Spruce (*Picea glauca*), Mountain Ash (*Sorbus aucuparia*), Ash species (*Fraxinus sp.*), Honey Locust (*Gleditsia triacanthos var. inermis*), Ivory Silk Lilac (*Syringa reticulata*), and Austrian Pine (*Pinus nigra*).

Generally, trees on site are mature and their condition can be categorized as 'Fair'. Generally, trees on adjacent properties are mature and their condition can be categorized as 'Fair'.

### 3.2 Recommendations

The Site Plan prepared by Masri O Architects proposes development across the entire subject site, offering no opportunity for tree preservation within the property boundary.

Trees are recommended for protection where:

1. Volume of post-development undisturbed root zone is judged to be sufficient to sustain the tree in good health;
2. Existing health is strong enough to warrant the preservation attempt;
3. The tree poses no liability risk (failure, falling limbs etc.) to person or property; and
4. Tree species are suitable for the location in relation to the proposed development.

Accordingly, given the location of development proposed on site, it is our recommendation that 35 of the trees on the site should be removed due to the following:

... 35 trees will be impacted by the proposed construction of the apartment building, underground parking area, and/or grading disturbance within root zones.

It is also our recommendation 16 identified trees on the adjacent properties and 5 identified City owned boulevard trees should be preserved. Tree protection fencing is recommended to be installed

in the location shown on the Tree Management Plan and will conform to the detail as shown (See Figure 1). The fences will remain in place undisturbed until construction has been completed, reducing the construction impacts to these trees.

The 5 trees (#21A, 22, 33-35) located within the City owned boulevards are not expected to be significantly impacted by the construction as the existing concrete sidewalk and curbs surrounding these trees are to remain. Tree protection fencing is to be installed as shown on the TMP to reduce the chances of accidental construction impacts. An arborist is to be onsite during the excavation within the driplines of trees #33 and #35 to ensure proper root pruning techniques are followed should root disturbance occur.

Trees located on the adjacent properties to the west of the subject site (#8A-11A, 14A, 17, 39-45, 47, 53 and 55) are to be preserved and protected as per the TMP. Trees #8A-11A, 17, and 39-45 are behind an existing retaining wall to remain. It is not anticipated their roots will be significantly impacted during construction due to their location behind the wall. An arborist is to be onsite during the excavation within the driplines of the trees along the west property line to ensure proper root pruning techniques are followed should root disturbance occur. These trees will also require any limbs overhanging the proposed construction area be pruned only with a signed letter of understanding from the adjacent property owners.

It is also recommended that an arborist should review all trees to be preserved twice a year for 2 years post construction, and to issue a letter detailing the current health of the trees and advise on any remedial actions if required.

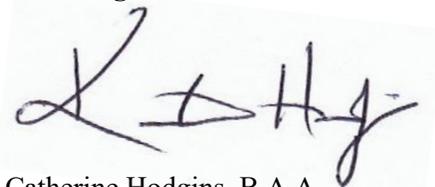
#### 4. Conclusion

Based on the proposed site plan, it is our opinion that due to the anticipated impacts of the proposed development, 35 trees within the property boundary will need to be removed.

As long as the tree protection fencing is installed and maintained for the duration of construction activities as per the Tree Management Plan, it is our opinion the identified trees on the City owned boulevard and adjacent properties proposed for preservation will be appropriately protected.

#### Report Prepared By:

##### Hill Design Studio



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### *Appendix 1. – Limits of Assessment*

The following discussion is provided to ensure interested parties are clearly aware of the technical and professional limitations on recommendations for the retention of existing trees.

- 1) The assessment of the trees presented in this report has been made using accepted arboricultural techniques based on visual examination of the tree, structure, location and proximity to people and structures, to the extent possible at the time of year the inspection was conducted. Except where specifically noted in the report, assessment was based on visual inspection only.
- 2) Trees are living organisms, and their health and vigour constantly change over time. Decline in health can be attributed to many causes, including changes in site conditions, seasonal variations in weather conditions, insects, disease, or other environmental impacts. Accordingly, the assessment presented in this report is valid only for the time of inspection. Periodic re-assessment of trees to be impacted is recommended to ensure validity of the conclusions presented.
- 3) While reasonable efforts have been made to ensure that the trees recommended for retention are healthy, no guarantees are offered or implied that these trees will maintain health or structure over time. It is both professionally and practically impossible to predict absolutely the performance of any tree, or group of trees, or their component parts over time. An existing tree will always pose some risk or potential for failure in the event of adverse environmental conditions, and this risk can only be eliminated if the tree is removed.

*Figure 1. Tree Management Plan L1*