

**Tree Inventory and Preservation Plan Report  
23, 25, 27, 29, and 31 Helene Street North,  
53 Queen Street East, and 70 Park Street East  
Mississauga, Ontario**

prepared for

**MPCT DIF 70 Park Street East LP  
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prepared by



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KUNTZ FORESTRY CONSULTING Inc. Project P3508

## Introduction

Kuntz Forestry Consulting Inc. was retained by MPCT DIF 70 Park Street East LP to complete a Tree Inventory and Preservation Plan for a proposed development for the property located at 23, 25, 27, 29, and 31 Helene Street North, 53 Queen Street East, and 70 Park Street East in Mississauga, Ontario. The subject property is located at the northeast corner of the intersection of Park Street East and Helene Street North, within a mixed-use area.

The work plan for this tree preservation study included the following:

- Prepare inventory of the tree resources greater than 10cm diameter at breast height (DBH) on and within six metres of the subject property and trees of all sizes within the City road right-of-way;
- Evaluate potential tree saving opportunities based on proposed site plans; and,
- Document the findings in a Tree Inventory and Preservation Plan Report.

The results of the evaluation are provided below.

## Methodology

Trees greater than 10cm DBH on and within six metres of the subject property and trees of all sizes within the City road right-of-way were included in the tree inventory. Trees were located using the topographic survey provided for the subject property, aerial imagery, and measurements taken from known points in-field. Trees were tagged with the numbers 650-670.

Tree resources were assessed utilizing the following parameters:

**Tree #** – Number assigned to trees that corresponds to Figure 1.

**Species** – Common and botanical names provided in the inventory table.

**DBH** – Diameter (centimeters) at breast height, measured at 1.4 m above the ground.

**Condition** – Condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G).

**Crown Dieback** – Percentage of dead branches within the crown.

**Dripline** – Crown radius.

**Comments** – Any other relevant tree condition information.

Refer to Figure 1 for the tree locations and Table 1 for the results of the tree inventory. See Appendix A for photographs of the trees.

## Existing Site Conditions

The subject property is currently occupied by a 27-storey apartment building, a 3 storey parking garage with retail units on the first floor, associated amenity spaces and an outdoor parking lot. Tree resources exist in the form of landscape trees. Refer to Figure 1 for the existing site conditions.

## Tree Resources

The tree inventory was conducted on 1 November 2022. The inventory documented a total of 21 trees on and within six metres of the subject property. Refer to Table 1 for the detailed tree

inventory and Figure 1 for the location of trees reported in the tree inventory. See Appendix A for photographs of the trees.

Tree resources were comprised of Austrian Pine (*Pinus nigra*), Norway Maple (*Acer platanoides*), Little leaf Linden (*Tilia cordata*), Thornless Honey Locust (*Gleditsia triacanthos 'inermis'*), Red Oak (*Quercus rubra*), Northern Catalpa (*Catalpa speciosa*), White Ash (*Fraxinus americana*), Horse Chestnut (*Aesculus hippocastanum*), and Hybrid Elm (*Ulmus spp.*)

## Proposed Development

The proposed development includes the demolition of the 4-storey parking garage, and the construction of a 38-storey mixed use building with retail uses, a day care, and an outdoor open space at grade and residential units above. Refer to Figure 1 for the proposed site plan.

## Discussion

The following sections provide a discussion and analysis of tree impacts and tree preservation relative to the proposed work and existing conditions.

### *Development Impacts / Tree Removal*

The removal of 15 trees is required to accommodate the proposed development. The required tree removals include Trees 650 - 664. Trees 650 – 652 conflict with proposed streetscaping. Trees 653 – 656 conflict directly with the proposed building. Trees 657 – 664 conflict with the proposed vehicular entrance from Park Street.

All trees to be removed are greater than 15cm DBH. Trees 650 - 655 are located within a municipal right-of-way. Permits are required prior to the removal of these trees.

Refer to Figure 1 for the location of trees identified for removal.

### *Tree Preservation*

The preservation of the remaining six (6) trees including Trees 665 - 670 will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures must be implemented prior to the proposed demolition to ensure tree resources designated for retention are not impacted by the proposed development.

The City of Mississauga requires tree protection fencing to be installed at the dripline, as indicated on the City of Mississauga's "Tree Preservation Hoarding" detail. Refer to Figure 1 for the location of tree driplines. Although this level of protection cannot be respected for Trees 665, 667, 668, 669, and 670, work is not expected to occur within the minimum tree protection zones (mTPZ) that are required by the City of Mississauga. Therefore, the trees are expected to respond well to construction.

The minimum tree protection zones (mTPZs) are based on the trunk diameter of the tree as follows:

| Diameter at Breast Height (cm) | Minimum Tree Protection Zone (m)<br>(from edge of stem) |
|--------------------------------|---|
| <10                            | 1.2   |
| 10 – 20                        | 1.5   |
| 21 – 30                        | 1.8   |
| 31 – 40                        | 2.4   |
| 41 – 50                        | 3.0   |
| 51 – 60                        | 3.6   |
| 61 – 70                        | 4.2   |
| 71 – 80                        | 4.8   |
| 81 – 90                        | 5.4   |
| 91 – 100                       | 6.0   |
| 101 – 110                      | 6.6   |

Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes and tree preservation fence details.

### *Tree Compensation*

The City of Mississauga requires replacement for any by-law protected tree removals. The ratio of required replacement plantings per tree is below:

| DBH of Tree to be Removed | Number of Replacement Plantings |
|---------------------------|---------------------------------|
| 6-15                      | 1                               |
| 16-30                     | 2                               |
| 31-45                     | 3                               |
| 46-60                     | 4                               |
| 61-75                     | 5                               |
| 76-90                     | 6                               |
| 91-105                    | 7                               |
| 106-120                   | 8                               |
| >120                      | 9                               |

A total of 48 replacement plantings is required for the 15 trees identified for removal.

### *Tree Valuation*

A valuation was calculated for all trees within the City road right-of-way. Refer to Table 2 for the individual tree value computations. See below for the methodology used to calculate the appraised value of the trees. The value was calculated using the Trunk Formula Technique. This method is described in the Guide for Plant Appraisal, 10<sup>th</sup> Edition (CTLA 2018). The Ontario Supplement (2021) provides regionally relevant data pertaining to basic costs for trees.

### Trunk Formula Technique

This method is used for trees that are larger than what is commonly available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement (2021). Refer to the Ontario Supplement (2021) for species specific Unit Tree Costs.

The Basic Tree Cost is calculated by multiplying the unit tree cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).

The appraised value is therefore calculated using the following equation:

*Basic Tree Cost = Appraised Tree Trunk Area X Unit Tree Cost*

*Appraised Value = Basic Tree Cost X Condition Rating X Functional Limitation Rating X External Limitation Rating*

Functional Limitation Ratings and External Limitation Ratings are calculated according to the methods outlined in the guide. Condition ratings were calculated based on the assessed condition of the trees on the site and in accordance with the guide. The final values were rounded to the nearest \$100 for values greater than \$2000, and to the nearest \$5 for values less than \$2000.

## Results

The total appraised value of trees within the City road right-of-way, including Trees 650 – 655, 665, and 667 was calculated at \$ 33,910.

## **Summary and Recommendations**

Kuntz Forestry Consulting Inc. was retained by MPCT DIF 70 Park Street East LP to complete a Tree Inventory and Preservation Plan for the proposed development for the property located at 23, 25, 27, 29, and 31 Helene Street North, 53 Queen Street East, and 70 Park Street East in the City of Mississauga, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 21 trees on and within six metres of the subject property. The removal of 15 trees will be required to accommodate the proposed development. The remaining six (6) trees can be saved provided proper tree protection is installed as per Figure 1.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for tree protection fencing locations and general Tree Protection Plan Notes and tree preservation fence details.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.
- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.
- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

- Site visits, pre, during and post construction are recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

**Kuntz Forestry Consulting Inc.**

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## References

Guide for Plant Appraisal, 10<sup>th</sup> Edition, 2018. Council of Landscape and Tree Appraisers.  
International Society of Arboriculture, Champaign, Illinois.

RPAC (Regional Plant Appraisal Committee) 2021, Ontario Supplement to the Council of Tree and Landscape Appraisers (CTLA) Guide for Plant Appraisal, 10<sup>th</sup> Edition (third printing). December 2021.

### Limitations of Assessment

*Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.*

*Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.*

*Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.*

*Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.*

*Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.*

**Table 1. Tree Inventory**

| Location: 70 Park St E, Mississauga |                        |                                       |      |     |     |     |     |     |      | Date: 1 November 2022   | Surveyors: IB |          |
|-------------------------------------|------------------------|---------------------------------------|------|-----|-----|-----|-----|-----|------|---|---------------|----------|
| Tree #                              | Common Name            | Scientific Name                       | DBH  | TI  | CS  | CV  | CDB | DL  | mTPZ | Comments  | Owner         | Action   |
| 650                                 | Norway Maple           | <i>Acer platanoides</i>               | 25   | G   | G/F | G   |     | 3.0 | 1.8  | Union at 3m, asymmetrical crown (L)   | Public        | Remove   |
| 651                                 | Norway Maple           | <i>Acer platanoides</i>               | 18   | G   | G   | G   |     | 2.0 | 1.5  |   | Public        | Remove   |
| 652                                 | Norway Maple           | <i>Acer platanoides</i>               | 17   | G/F | G   | G   |     | 2.0 | 1.5  | Frost crack (L)   | Public        | Remove   |
| 653                                 | Northern Catalpa       | <i>Catalpa speciosa</i>               | 43   | F   | F   | G   |     | 5.0 | 3.0  | Leaning south (L), trunk injury (M), poor form (L)                                      | Public        | Remove   |
| 654                                 | Little Leaf Linden     | <i>Tilia cordata</i>                  | 70   | G   | F   | G   |     | 6.0 | 4.2  | Union at 2.5m and 4.5m, asymmetrical crown (M)  | Public        | Remove   |
| 655                                 | Little Leaf Linden     | <i>Tilia cordata</i>                  | 68   | G   | G   | G   |     | 5.0 | 4.2  |   | Public        | Remove   |
| 656                                 | White Ash              | <i>Fraxinus americana</i>             | 39   | F   | G/F | P   | 50  | 5.0 | 2.4  | Cracks (M), crown dieback (H)   | Private       | Remove   |
| 657                                 | Austrian Pine          | <i>Pinus nigra</i>                    | ~51  | G/F | F   | G/F |     | 6.0 | 3.6  | Leaning north (L), asymmetrical crown (M)   | Private       | Remove   |
| 658                                 | Austrian Pine          | <i>Pinus nigra</i>                    | 51   | G   | F   | G/F |     | 5.0 | 3.6  | Asymmetrical crown (M)  | Private       | Remove   |
| 659                                 | Austrian Pine          | <i>Pinus nigra</i>                    | ~45  | G   | F   | G/F |     | 4.5 | 3.0  | Asymmetrical crown (M)  | Private       | Remove   |
| 660                                 | Austrian Pine          | <i>Pinus nigra</i>                    | ~28  | G   | F/P | G/F |     | 2.5 | 1.8  | Asymmetrical crown (M), poor form (M), bowed (L)  | Private       | Remove   |
| 661                                 | Austrian Pine          | <i>Pinus nigra</i>                    | 40   | G   | F   | G/F |     | 4.0 | 2.4  | Asymmetrical crown (M)  | Private       | Remove   |
| 662                                 | Austrian Pine          | <i>Pinus nigra</i>                    | 35   | G/F | G   | G/F |     | 3.5 | 2.4  | Exposed roots (L), asymmetrical crown (M)   | Private       | Remove   |
| 663                                 | Austrian Pine          | <i>Pinus nigra</i>                    | 38   | F   | F/P | F   |     | 4.0 | 2.4  | Exposed roots (L), leaning south (L), asymmetrical crown (H), poor vigor (L)            | Private       | Remove   |
| 664                                 | Thornless Honey Locust | <i>Gleditsia triacanthos intermis</i> | 51   | F   | F/P | G/F |     | 8.0 | 3.6  | Exposed roots (L), leaning south (M), union at 3m, poor form (M)                        | Private       | Remove   |
| 665                                 | Horse Chestnut         | <i>Aesculus hippocastanum</i>         | 72   | F/P | F   | G/F |     | 6.5 | 4.8  | Strangling root (L), root injury (M), cavity (M), union at 4.5m, asymmetrical crown (M) | Public        | Preserve |
| 666                                 | Hybrid Elm             | <i>Ulmus spp.</i>                     | 18   | F   | F   | G   |     | 4.0 | 1.5  | Strangling root (M), exposed roots (L), union at 2m                                     | Private       | Preserve |
| 667                                 | Red Oak                | <i>Quercus rubra</i>                  | 24.5 | G   | G   | G   |     | 4.0 | 1.8  |   | Public        | Preserve |
| 668                                 | Hybrid Elm             | <i>Ulmus spp.</i>                     | 19   | F   | F   | G   |     | 3.5 | 1.5  | Exposed roots (H), union at 1.8m, asymmetrical crown (L), root injury (L)               | Private       | Preserve |
| 669                                 | Hybrid Elm             | <i>Ulmus spp.</i>                     | 19   | F   | F   | G   |     | 3.5 | 1.5  | Exposed roots (H), root injury (M), asymmetrical crown (M)                              | Private       | Preserve |
| 670                                 | Hybrid Elm             | <i>Ulmus spp.</i>                     | 24   | G   | G/F | G   |     | 3.5 | 1.8  | Union at 1.4m   | Private       | Preserve |



| Codes   |                              |                                      |
|---|------------------------------|--------------------------------------|
| DBH   | Diameter at Breast Height    | (cm)                                 |
| TI  | Trunk Integrity              | (G, F, P)                            |
| CS  | Crown Structure              | (G, F, P)                            |
| CV  | Crown Vigor                  | (G, F, P)                            |
| CDB   | Crown Die Back               | (%)                                  |
| DL  | Dripline in Radius           | (m)                                  |
| mTPZ  | Minimum Tree Protection Zone | (m)                                  |
| Owner   | Ownership                    | (Public, Private, Neighbour, Shared) |
| ~ = estimate; (VL) = very light; (L) = light; (M) = moderate;<br>(H) = heavy; (VH) = very heavy |                              |                                      |

**Table 2. City Tree Valuation**

|   |                    |                               |      |    | Appraised<br>Trunk<br>Area | Unit Tree<br>Cost (RPAC) | Basic<br>Tree<br>Cost | Depreciation        |                                    |                                  | Appraised<br>Value | Rounded /<br>Final<br>Value |
|---|--------------------|-------------------------------|------|----|----------------------------|--------------------------|-----------------------|---------------------|------------------------------------|----------------------------------|--------------------|-----------------------------|
|   |                    |                               |      |    |                            |                          |                       | Condition<br>Rating | Functional<br>Limitation<br>Rating | External<br>Limitation<br>Rating |                    |                             |
| Location: 70 Park Street East Mississauga |                    |                               |      |    |                            |                          |                       |                     |                                    |                                  |                    |                             |
| Tree #                                    | Common Name        | Scientific Name               | DBH  | OC | (cm <sup>2</sup> )         |                          | \$                    | %                   | %                                  | %                                | \$                 | \$                          |
| 650                                       | Norway Maple       | <i>Acer platanoides</i>       | 25   | G  | 491                        | \$4.77                   | \$2,341               | 0.70                | 0.65                               | 0.90                             | \$959              | \$ 960.00                   |
| 651                                       | Norway Maple       | <i>Acer platanoides</i>       | 18   | G  | 254                        | \$4.77                   | \$1,214               | 0.70                | 0.65                               | 0.90                             | \$497              | \$ 495.00                   |
| 652                                       | Norway Maple       | <i>Acer platanoides</i>       | 17   | G  | 227                        | \$4.77                   | \$1,083               | 0.70                | 0.65                               | 0.90                             | \$443              | \$ 445.00                   |
| 653                                       | Northern Catalpa   | <i>Catalpa speciosa</i>       | 43   | F  | 1452                       | \$8.21                   | \$11,923              | 0.55                | 0.60                               | 0.90                             | \$3,541            | \$ 3,500.00                 |
| 654                                       | Little Leaf Linden | <i>Tilia cordata</i>          | 70   | G  | 3848                       | \$6.65                   | \$25,592              | 0.70                | 0.70                               | 0.90                             | \$11,286           | \$ 11,300.00                |
| 655                                       | Little Leaf Linden | <i>Tilia cordata</i>          | 68   | F  | 3632                       | \$6.65                   | \$24,151              | 0.60                | 0.70                               | 0.90                             | \$9,129            | \$ 9,100.00                 |
| 665                                       | Horse Chestnut     | <i>Aesculus hippocastanum</i> | 72   | P  | 4072                       | \$8.46                   | \$34,445              | 0.40                | 0.50                               | 0.90                             | \$6,200            | \$ 6,200.00                 |
| 667                                       | Red Oak            | <i>Quercus rubra</i>          | 24.5 | G  | 471                        | \$8.03                   | \$3,786               | 0.80                | 0.70                               | 0.90                             | \$1,908            | \$ 1,910.00                 |
| <b>Total</b>                              |                    |                               |      |    |                            |                          |                       |                     |                                    |                                  | <b>\$33,910</b>    |                             |

| Codes |                              |           |
|-------|------------------------------|-----------|
| DBH   | Diameter at Breast<br>Height | (cm)      |
| OC    | Overall Condition            | (G, F, P) |

## Appendix A. Site Photographs



Tree 650



Tree 651



Tree 652



Tree 653



Tree 654



Tree 655





Tree 656



Tree 657 – 659 (left – right)



Tree 660 – 662 (left – right)





Tree 660 – 662 (left – right)



Tree 665



Tree 666 – 667 (left – right)



Tree 668 – 670 (left – right)