

# Development application guidelines

## Canopy cover plan and canopy calculation chart

### What is the purpose of this?

A *canopy cover plan* illustrates the retained existing and proposed tree canopy for a development site. A *canopy calculation chart* itemizes and tabulates the contributions to tree canopy coverage for the site.

### Who should prepare this?

A *canopy cover plan* and *canopy calculation chart* should be prepared by a horticultural technician, certified arborist, landscape architect, architect, or engineer.

### When is this required?

A *canopy cover plan* and *canopy calculation chart* may be required as part of an application for:

- Plan of Subdivision
- Site Plan Control

### Why do we need this?

A *canopy cover plan* and *canopy calculation chart* is required to demonstrate a proposed development's contribution to the urban forest and town-wide canopy coverage target of 40%, as outlined in the sustainability policies of the Livable Oakville Plan.

To advance the town's objective, development proposals must demonstrate compliance with the applicable implementing regulations, standards and guidelines contained in the Zoning By-laws, North Oakville Urban Forest Strategic Management Plan (NOUFSMP), Livable By Design Manual documents, and other contributing documents. While the NOUFSMP applies to all development applications north of Dundas Street, Council has directed that it be used to inform development proposals south of Dundas Street.

### How should this be prepared?

A *canopy cover plan* should be a separate drawing from the landscape plan and be accompanied by a completed *canopy calculation chart* [refer to resources for a link to directions, sample plans and chart template]

The *canopy cover plan* and the *canopy calculation chart* must include the following information:

- the proposed canopy cover for the subject site and the required canopy cover target for the land use, as outlined in the NOUFSMP
- the size/extent of existing tree canopy to be retained (based on drip line) and the proposed tree canopy, as outlined in the NOUFSMP
- the soil volume of each landscape area where trees are proposed or existing trees are to remain (based on maximum 900mm depth of cover)
- the number of surface parking stalls, and the number of trees in or within 5m of the vehicle use area.

A *canopy cover plan* must demonstrate the following, along with information contained in the directions outlined in the *canopy calculation chart* materials:

- depict the total proposed canopy coverage on the *plan* as follows:

- 1 small stature tree (3-9m spread) equals 7.0m<sup>2</sup> and depicted with a 3.0m diameter circle
- 1 medium stature tree (10-13m spread) equals 78.5m<sup>2</sup> and depicted with a 10.0m diameter circle
- 1 large stature tree (14m spread and greater) equals 154.0m<sup>2</sup> and depicted with a 14.0m diameter circle
- depict the existing canopy to be retained on the *plan*. On the *chart*, the canopy cover of existing retained trees on the subject site is calculated at 1.5 times the existing canopy coverage as a credit for preserving existing trees.
- depict base information on the *plan* (similar to a standard tree inventory plan) that includes, but not limited to the location and description of:
  - all existing natural features
  - all proposed site works
  - all existing vegetation to be retained and appropriately inventoried
  - all proposed plant material, planting beds and sodded areas

**What else should we know?**

Recommend reviewing the specific requirements of your application with an Urban Designer in the Planning Services Department.

**What other resources are available?**

North Oakville Urban Forest Strategic Management Plan:

<http://www.oakville.ca/assets/2011%20planning/nco-noufsmp-12oct.pdf>

Livable by Design Manual:

<http://www.oakville.ca/business/urban-design-manual.html>

Town of Oakville - North Oakville Urban Design and Open Space Guidelines:

<http://www.oakville.ca/assets/2011%20planning/nco-urbdesguidelines-09nov09.pdf>

Conservation Halton - Landscape and Tree Preservation Guidelines:

<http://www.conservationhalton.ca/policies-and-guidelines>

Town of Oakville – Application forms and guidelines:

<http://www.oakville.ca/business/application-forms-guidelines.html>

# CANOPY CALCULATION CHART TEMPLATE

Submit a separate chart for on-site condition and for streetscape (municipal right-of-way)

**[#]** References direction for completing canopy coverage plan and chart

FILE NUMBER \_\_\_\_\_

FILE NAME \_\_\_\_\_

CANOPY COVER TARGET **[1]** \_\_\_\_\_ % (based on land use)

Tree #	Species	Stature (S,M,L) <b>[3]</b>	Soil Volume per Tree (m <sup>3</sup> ) <b>[2]</b>	Canopy Area (m <sup>2</sup> ) <b>[3]</b>	Canopy Area Sub-total (m <sup>2</sup> )
<b>Proposed Canopy On Site</b>					
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
<b>Subtotal of proposed canopy</b>					
<b>Existing Canopy On Site <b>[4]</b></b>					
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
<b>Subtotal of existing canopy</b>					
multiplied by bonus factor of 1.5					
<b>Existing Canopy Overhanging Site <b>[4]</b></b>					
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
<b>Subtotal of existing overhanging canopy</b>					
<b>Total # of Trees</b>					
<b>Total Canopy Area (m<sup>2</sup>)</b>					

**Canopy Summary**

Total Site Area	_____ m <sup>2</sup>
Site Canopy Cover	_____ %
Canopy Cover Target by Land Use <b>[1]</b>	_____ %

**Parking Area Summary **[5]****

Total Parking Spaces Proposed	_____ 0
Total # of Trees in or within 5m of Parking Area	_____ 0

## DIRECTIONS FOR CANOPY COVERAGE PLAN AND CHART:

This information is intended to provide guidance for the preparation of the 'Canopy Cover Plan' and the 'Canopy Calculation Chart'. The direction outlines the design standards contained in Section 7.4 of the North Oakville Urban Forest Strategic Management Plan (NOUFSMP). While the NOUFSMP applies to all development applications north of Dundas Street, Town Council has directed that these standards and objectives are also used to inform development south of Dundas Street to assist in achieving the town-wide canopy coverage target.

### **[1] Canopy Cover Targets**

The following are canopy coverage targets based on the land use categories in Zoning By-laws 2009-189 and 2014-014. The following list represents land use types commonly subject to development applications – for the full listing, refer to the NOUFSMP. Unless otherwise stated, the 'percentage per land use' is applicable to properties both north and south of Dundas Street.

- 20% for all Residential uses
- 15% for all Commercial uses
- 20% for all Employment / Industrial uses
- 25% for Institutional uses
- 20% for Public uses
- 15% for Storm Water Management uses
- 34% for Arterial, Avenue, and Collector Roads and Transit Ways

### **[2] Soil Volume**

- For new tree plantings, a soil volume of 30.0m<sup>3</sup> of good quality topsoil is required. The soil volume is calculated with a depth of cover between 750mm to a maximum of 900mm.
- If 30.0m<sup>3</sup> of soil volume cannot be accommodated within the planting bed, a 3000mm long by 300mm wide break-out zone must be constructed to allow the roots to access additional soil volume.
- Only 20% of engineered soil (the soil portion) is counted towards the target soil volume requirement.
- Soil volumes illustrated on the plan and in the chart must accurately reflect the soil volume available to each tree. The limits of a 'soil volume area' is delineated by structures, edges of hard surface paving, and property lines. In large open areas, calculated soil volume should not exceed an area twice the diameter of tree spread.

### **[3] Crown Area**

Illustrate the total projected canopy coverage on the Canopy Coverage Plan as follows:

**S:** 1 small stature (3-9m spread) equals 7.0m<sup>2</sup> – to be shown as 3.0m diameter circle

**M:** 1 medium stature (10-13m spread) equals 78.5m<sup>2</sup> – to be shown as 10.0m diameter circle

**L:** 1 large stature (14m spread and greater) equals 154.0m<sup>2</sup> – to be shown as 14.0m diameter circle

Note, any overlapping canopy is not counted twice.

### **[4] Existing Canopy**

- The existing canopy is measured at the current drip line of the existing tree(s)
- Existing canopy coverage from trees on the subject site can be credited with a bonus factor by multiplying the existing coverage by 1.5, which also includes canopy overhanging adjacent property(s)
- Existing canopy overhanging the subject site from trees on adjacent properties can be included as canopy coverage for the subject site. However, this overhanging canopy does not receive the bonus factor credit.

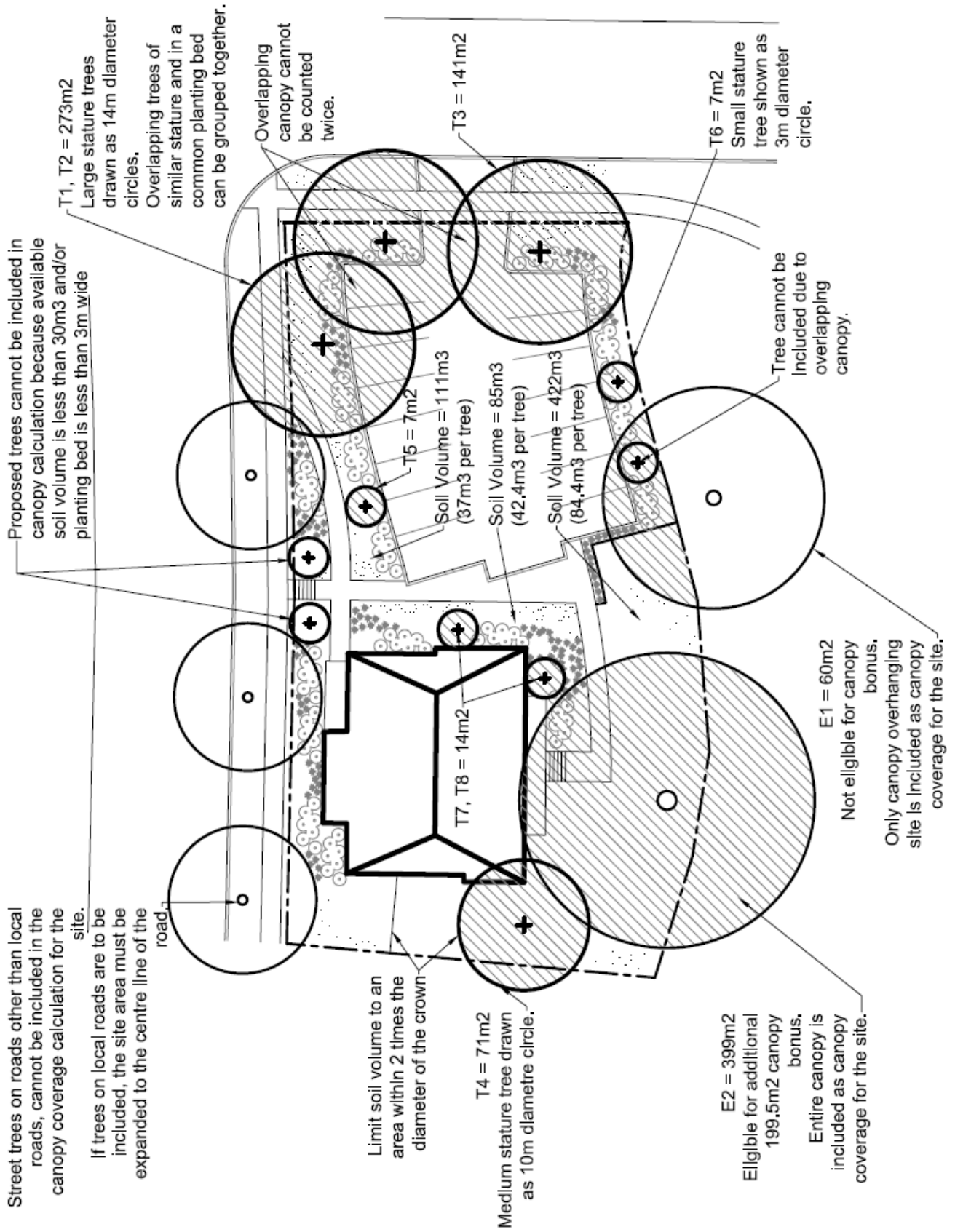
### **[5] Parking Areas**

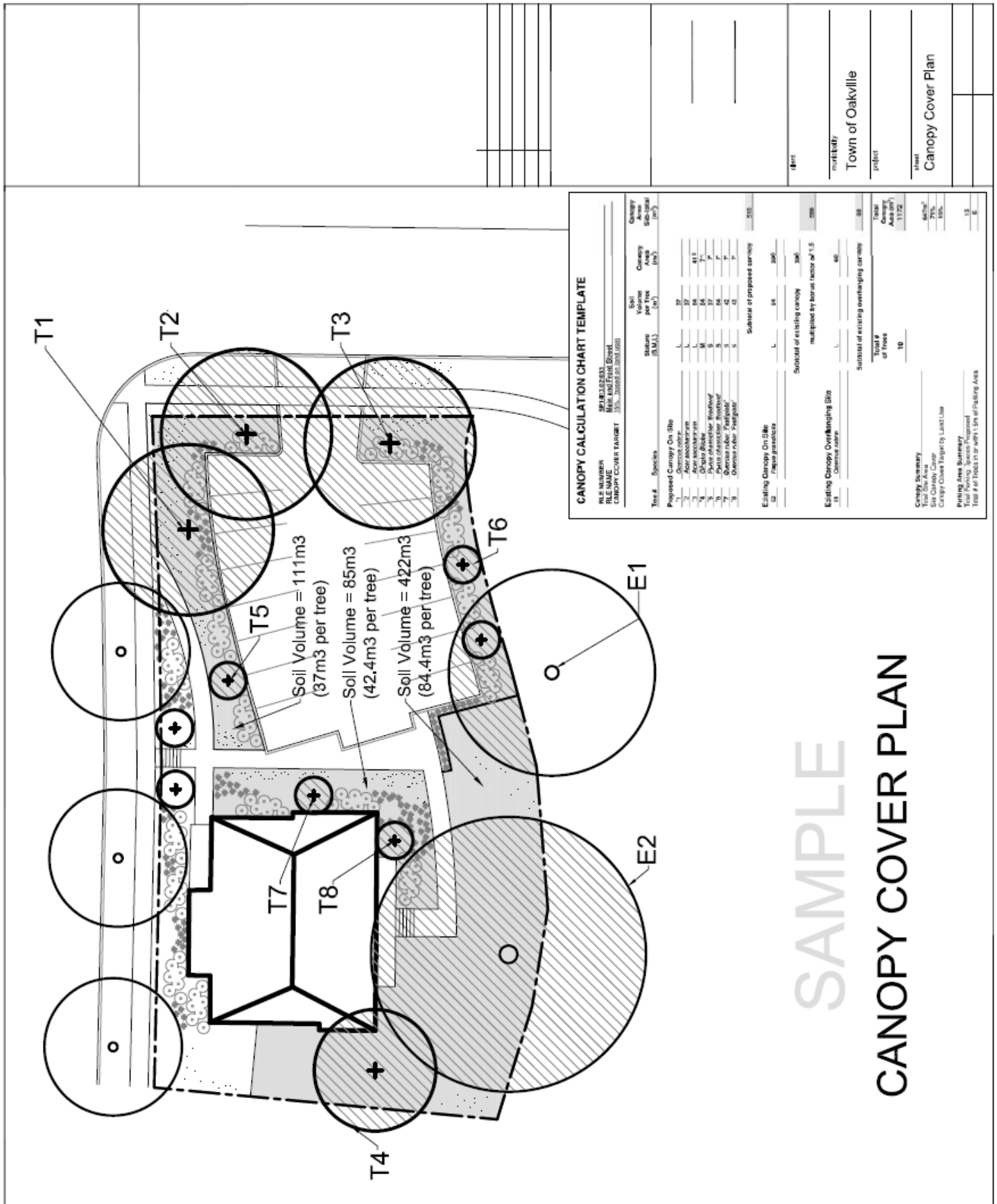
- A minimum of one (1) 60mm caliper deciduous tree planting for every five (5) parking spaces
- In parking lots with 76 or more parking stalls, all required trees must be located in and/or within 5.0m of surface parking area(s)
- All parking stalls must be within 30.0m of a tree

### **Tree Spacing**

- Small stature (3-9m spread): a minimum of 5.0m spacing on site and 8.0m spacing for street trees
- Medium stature (10-13m spread): a minimum of 10.0m spacing
- Large stature (14m spread and greater): a minimum of 14.0m spacing

# ILLUSTRATED CANOPY COVER GUIDE





# SAMPLE CANOPY COVER PLAN