

**NORTH EAST BOLTON  
SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B**

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**LANDSCAPE STANDARDS  
AND  
DESIGN GUIDELINES**

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THE CORPORATION  
OF THE  
TOWN OF CALEDON

prepared by  
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Adopted by the Town of Caledon Council  
September 27, 1999







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**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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## **1.0 Introduction**

### **1.1 Objective**

This document sets out the landscape standards and design principles to be followed in the development of the lands of RESIDENTIAL POLICY AREA B (hereinafter also referred to as SECONDARY PLAN AREA B) in the NORTH EAST BOLTON SECONDARY PLAN, in accordance with Condition 31, Schedule A, **Draft Plan of Subdivision 21T-97003C**, which states that:

*[P]rior to the registration of the plan, a Landscape and Urban Design Guidelines [sic] for the whole of Policy Area B shall be prepared to the satisfaction of the Town of Caledon's Director of Planning and Development. [p. 4]*

The purpose of this document, *Landscape Standards and Design Guidelines*, is to set standards for landscape design and construction in SECONDARY PLAN AREA B, as well as to guide and maintain the consistency of design themes throughout the policy area.

This document has been prepared with reference to and with excerpts from (a) the *Bolton Tertiary Plan Area Landscape Standards and Design Guidelines* (Town of Caledon, 1996), (b) the *Stormwater Management Practices: Planning and Design Manual* (Ministry of Environment and Energy, 1994); and (c) the *North East Bolton Secondary Plan* (KLM Planning Partners, May, 1998).

### **1.2 Location**

NORTH EAST BOLTON SECONDARY PLAN RESIDENTIAL POLICY AREA B is approximately 38 hectares (94 acres) of land lying adjacent to the northeast boundary of the already-developed Bolton Settlement Area in the Town of Caledon (hereinafter also referred to as the Municipality and the Town), in the Regional Municipality of Peel (see Map No. 1, page 4). To the north, SECONDARY PLAN AREA B is bounded by Columbia Way (10<sup>th</sup> Sideroad); to the east and south, the limits will be established by the Toronto Region Conservation Authority (TRCA), either in the field or by "fill and regulation limit mapping"; and to the west, the SECONDARY PLAN AREA borders on Mount Hope Road (8<sup>th</sup> Line).

The location of Major and Minor Roads, the entry focus for the neighbourhood, the stormwater management pond, and several blocks of open space for SECONDARY PLAN AREA B are shown on Map No. 2 (p. 5). Map No. 3 (p. 6) shows the anticipated internal street pattern for SECONDARY PLAN AREA B.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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### **1.3 Scope and Intent of Design Guidance**

The *Landscape Standards and Design Guidelines* for SECONDARY PLAN AREA B have the following purposes:

- a) To establish a quality and consistency of landscape design that will help create an attractive neighbourhood easily marketed by developers and the Town.
- b) To serve as an information package showing prospective homeowners the quality of landscaping that will characterize their subdivision.
- c) To provide developers and their landscape architects with direction in preparing detailed landscape plans for each subdivision application.
- d) To assist Town staff in reviewing for approval each development application, so that each application is in keeping with the overall "vision" for SECONDARY PLAN AREA B.

**Landscape standards** consist of construction details, specifications, and notes pertaining to landscape categories. These standards shall be considered minimum requirements for the landscape issues they address.

The **design guidelines** consist of plan views, cross-sections, and lists of plant species intended to guide applicants in designing streetscapes and naturalization areas.

The design and construction of parks within SECONDARY PLAN AREA B is subject to the policies and procedures of the Parks and Recreation Department of the Town of Caledon, and therefore is beyond the scope of this document.

The consultants for each development application within SECONDARY PLAN AREA B are responsible for reviewing this document and ensuring their site design is in conformity.

The consultants are also responsible for ensuring the relevant details and specifications are included in their landscape submissions.

All landscape standards and guidelines in this report found as details with title blocks are available to the developer and/or the landscape architect in digital format for importing directly into computer-generated landscape drawings.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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## **1.4 The Organization of this Document**

This document outlines the *minimum* expectations for landscape design and construction in the development of lands adjoining the existing Bolton Settlement Area. Developers are welcome to exceed the standards set out in this document, provided they stay within the design guidelines.

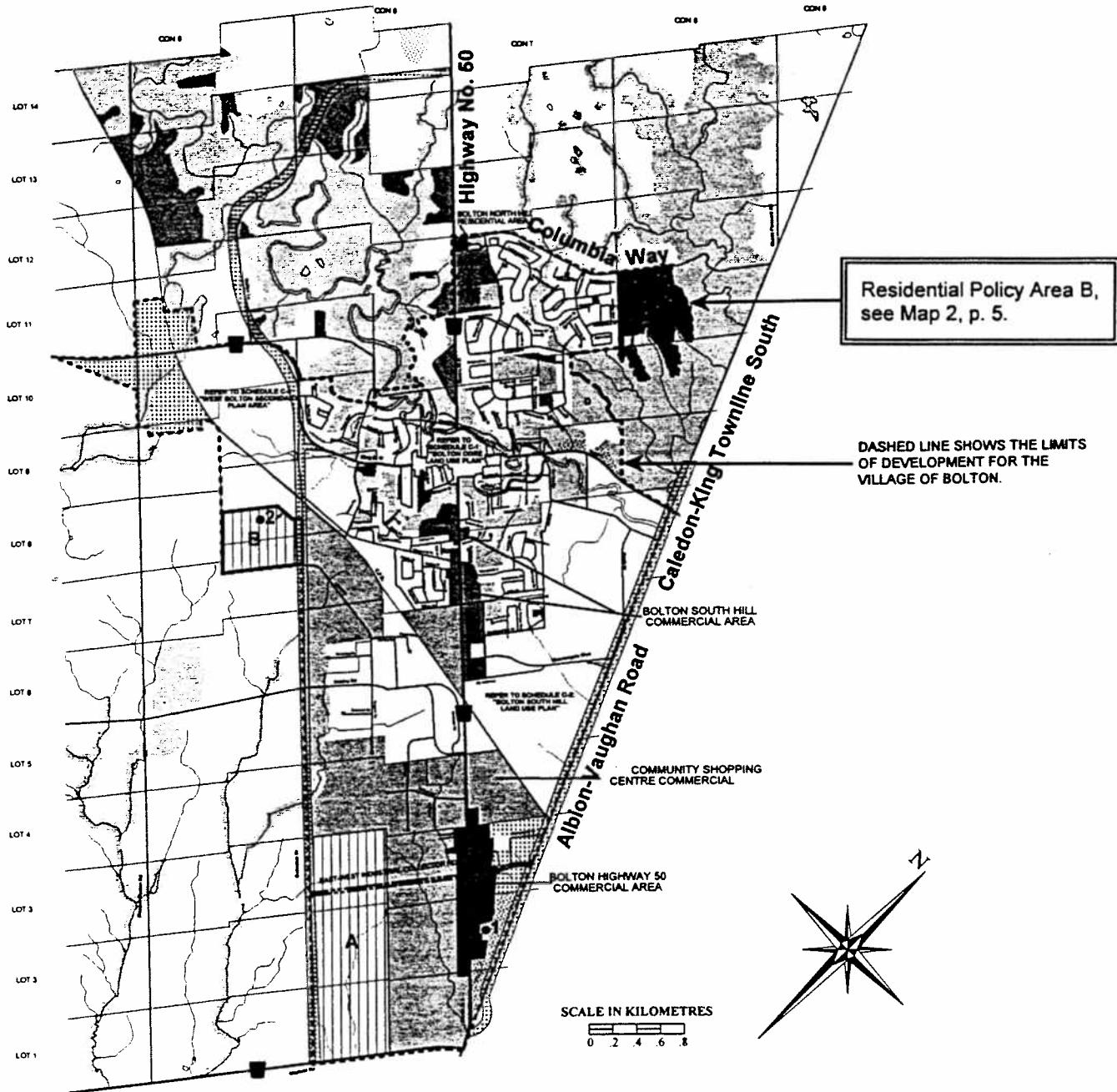
The *Landscape Standards And Design Guidelines* for SECONDARY PLAN AREA B is organized under the following headings:

- A) Streetscapes: This section deals with the design and construction of streetscapes for Major and Minor Roads, for the main entrance to the neighbourhood, and for Internal Streets.
- B) Naturalization Areas: This section outlines the landscape design and construction requirements of open space blocks, edge treatments next to conservation lands, fencing around park lands, and the stormwater management pond.
- C) Approvals and Implementation: This section describes the obligations of the developer in obtaining municipal approvals for landscape plans, working drawings, and completed construction, pointing out the roles of the developer's landscape architect and principal contractor in the process.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

MAP NO. 1\*

**LOCATION OF  
NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B**

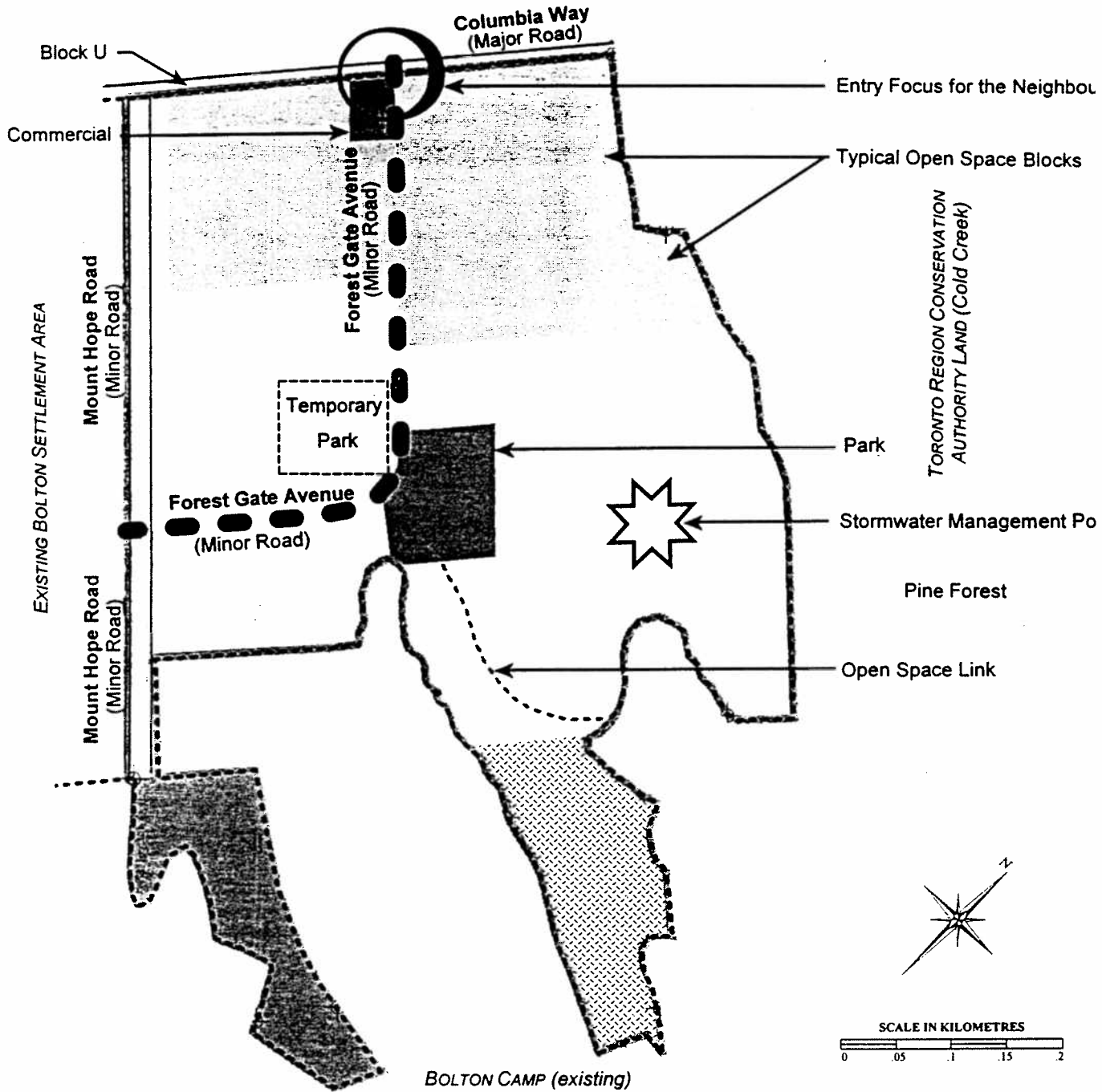


\* Schedule C of the Bolton Land Use Plan, October 1, 1998.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

MAP NO. 2\*

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B**



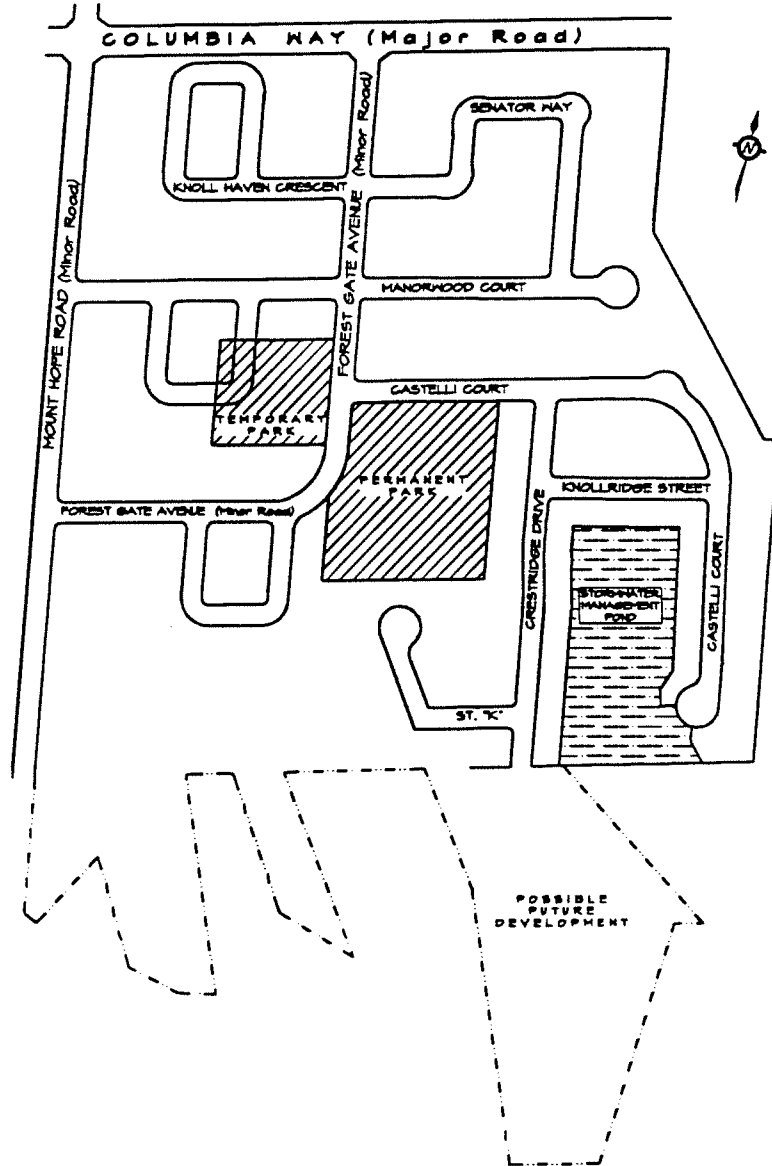
NOTE: For internal street pattern, refer to Map No. 3.

\* Schedule C-4 of the North East Bolton Land Use Plan, October 1, 1998.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

MAP NO. 3

**INTERNAL STREET LAYOUT  
FOR  
NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B**



Not to Scale

Composite map compiled using (1) information from the *Preliminary Draft Plan*, (2) Clint Developments' road layout, and (3) Cumming Cockburn Ltd. report entitled *Municipal Servicing and Stormwater Management Report: Residential Policy Area B, OPA114, Bolton, Town of Caledon, March 1998, Appendix B.*

## **2.0 Streetscape Standards and Guidelines**

### **2.1 General Streetscape Standards**

The standard details and specifications found in this section govern planting and fence construction along roads of all classifications (viz., Major Roads, Minor Roads and Internal Streets). The species and sizes of plants to be installed may vary according to road classification. They are discussed in more detail under the sections dealing with planting for Major Roads, planting for Minor Roads, and planting for Internal Streets.

#### **2.1.1 Notes for Streetscape Submission Drawings**

The following notes pertaining to layout requirements are to be included on all streetscape submission drawings:

##### **NOTE 1**

Depicted on this plan are the species and the approximate location of street trees. Once driveways, utilities and light standards have been installed, the exact location of street trees will be determined on site by the Landscape Architect and approved by the Municipality prior to planting.

##### **NOTE 2**

Minimum clearances for Street Trees (when trees are planted 1.5m from the curb):

- \* 2 m from water hydrants
- \* 2 m from driveways
- \* 2 m from neighbourhood mailboxes
- 3 m from hydro transformers
- 5 m from street lights
- 15 m minimum from street line (street intersection as measured from the back of the curb) *and* behind the daylight triangle as per the *Geometric Design Standards For Ontario Highways*
- 18 m from face of all warning and regulatory signs

When the minimum distances noted above are not achievable, trees may be planted in an alternate location, 0.5m from the property line (80cm behind the sidewalk) and adjacent to any fences, or just inside the street line on private property, as might be the case in a cul-de-sac. If a tree is planted in an alternate location, the distances marked with an asterisk must still be maintained.

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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**NOTE 3**

The tree pits and planting beds for all trees and shrubs located within 1 metre of underground utilities are to be hand dug.

**NOTE 4**

Minimum clearance for Fences:

1 m from fire hydrants.

**2.1.2 List of Details and Specifications for Streetscape Submission Drawings**

The standard details and specifications are as follows:

- Page 9 Deciduous Tree Planting (PLA-1)
- Page 10 Coniferous Tree Planting (PLA-2)
- Page 11 Shrub Planting (PLA-3)
- Page 12 Cedar Hedge Planting with Chain Link Fence (PLA-4)
- Page 13 Chain Link Fence (FEN-1)
- Page 14 Privacy Fence with Gate (FEN-2)
- Page 15 Specifications for Streetscapes – Part 1 (SPE-1a)  
(General & Plant Material)
- Page 16 Specifications for Streetscapes – Part 2 (SPE-1b)  
(Bed Preparation, Preliminary Acceptance, Guarantee & Maintenance)
- Page 17 Specifications for Streetscapes – Part 3 (SPE-1c)  
(Final Acceptance)

WILTPROOF IN NURSERY PRIOR TO DELIVERY

PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF TREE. DO NOT TRIM LEADER BRANCH.

SET TREE 75-100mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT

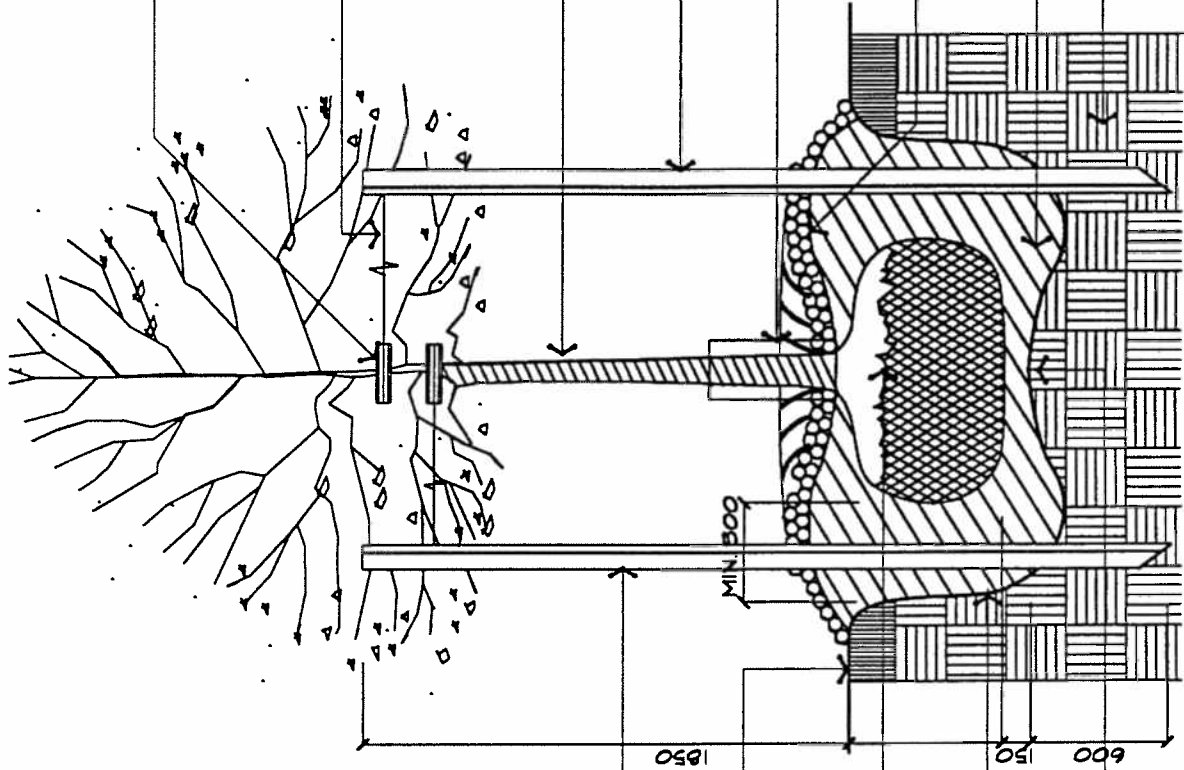
SET TREE STAKES JUST INSIDE TREE PIT AS SHOWN

FINISHED GRADE

CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL, INCLUDING ALL TIE ROPE AND WIRE

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE TREE PIT PRIOR TO PLANTING

PROVIDE 75mm SOIL MOUND AT BASE OF PIT AS SHOWN



12mm DIAMETER BLACK RUBBER HOSE LOOPED ABOVE FIRST STRONG BRANCH

12-GAUGE GALVANIZED WIRE ENCLOSED IN 12mm DIAMETER RUBBER HOSE SECURED AROUND TREE TRUNK. PROVIDE WIRE TURNBUCKLE FOR TENSION ADJUSTMENT.

IF CONTRACTOR ELECTS TO WRAP TREE TRUNK, TREE TO BE WRAPPED WITH APPROVED TREE WRAP AFTER VISUAL INSPECTION BY LANDSCAPE ARCHITECT. WRAP TO EXTEND FROM TOP OF ROOTBALL TO ABOVE GUYWIRE HOSE LOCATION. PROVIDE MIN. 10mm OVERLAP. WRAP TO BE REMOVED PRIOR TO FINAL INSPECTION.

TWO 2400mm, LONG 50mm SQUARE PRESSURE-TREATED WOOD STAKES SECURED INTO GROUND AS SHOWN

PROVIDE APPROVED RODENT GUARD WHERE REQUIRED AND FOR ALL NATURALIZED AREAS

CONSTRUCT 100mm SOIL SAUCER AROUND TREE BASE AND COVER WITH 75mm APPROVED SHREDDED WOOD MULCH

SPECIFIED SOIL MIXTURE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT

COMPACTED SUBGRADE

NTS

# NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DRAWING TITLE: **DECIDUOUS TREE PLANTING (80mmφ OR LESS)**

DETAIL NO:

THE CORPORATION OF THE TOWN OF CALEDON



PLA-1

TREE SHALL BE MEASURED TO HEIGHT OF LAST YEAR'S GROWTH

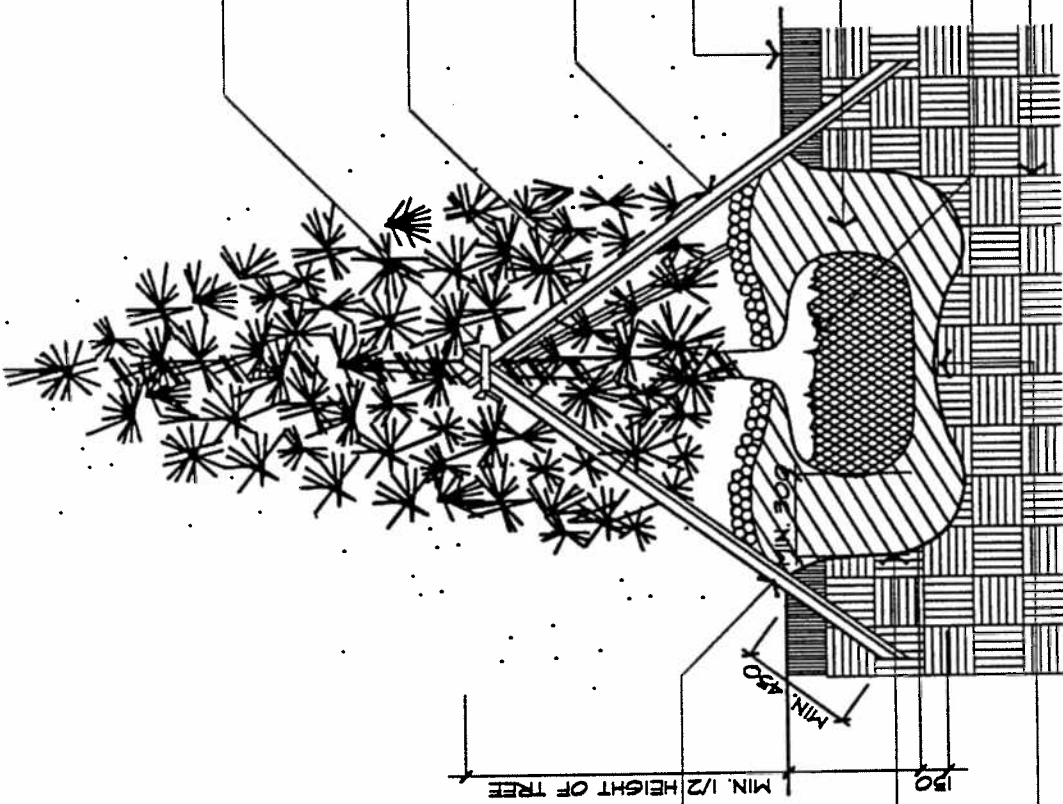
PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF TREE. DO NOT TRIM LEADER BRANCH.

SET TREE 75 TO 100mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT

SET TREE STAKES JUST INSIDE TREE PIT, AS SHOWN. TREE PIT TO EXTEND BEYOND THE MAXIMUM REACH OF TREE BRANCHES.

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE TREE PIT PRIOR TO PLANTING

PROVIDE 75mm SOIL MOUND AT BASE OF PIT AS SHOWN



SECURE STAKES TO MAIN TREE TRUNK WITH BURLAP ROPE. ENSURE THAT THE STAKES DO NOT CONTACT EXPOSED TREE BARK

THREE 50mm SQUARE PRESSURE-TREATED WOOD STAKES SECURED INTO GROUND A MINIMUM OF 450mm, AS SHOWN. LENGTH OF STAKES AND HEIGHT OF CROSSING TO BE ADJUSTED TO ACCOMMODATE TREE SIZE

CONSTRUCT 100mm SOIL SAUCER AROUND TREE BASE AND COVER WITH 75mm APPROVED SHREDDED WOOD MULCH

FINISHED GRADE

SPECIFIED SOIL MIXTURE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT

CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL, INCLUDING ALL TIE ROPE AND WIRE

COMPACTED SUBGRADE

NTS

THE CORPORATION OF THE TOWN OF CALEDON

DRAWING TITLE: **CONIFEROUS TREE PLANTING**

DETAIL NO: **PLA-2**

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

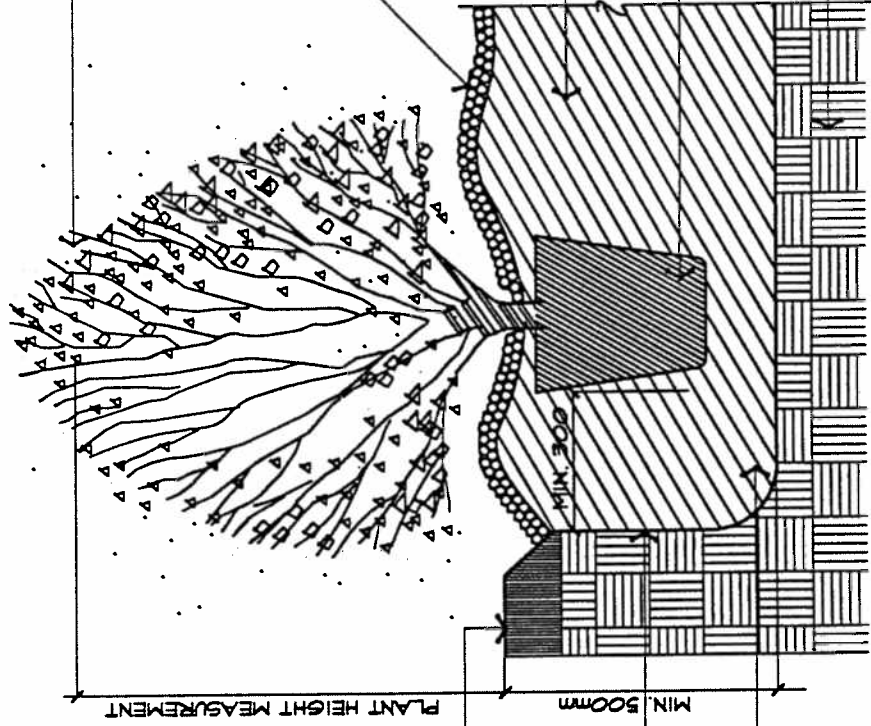
PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF SHRUB. DO NOT TRIM LEADER BRANCH.

CONSTRUCT 100mm SOIL SAUCER AROUND TREE BASE AND COVER WITH 75mm APPROVED SHREDDED WOOD MULCH OVER ENTIRE BED AREA

SPECIFIED SOIL MIXTURE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT

REMOVE NURSERY POTS OR WRAP PRIOR TO PLANTING

COMPACTED SUBGRADE



SHRUB HEIGHT SHALL BE MEASURED FROM FINISHED GRADE TO UPPER MAIN MASS OF SHRUB BRANCHES

SHRUBS PLANTED IN GROUPS SHALL BE SET IN CONTINUOUS BEDS AS SHOWN ON PLAN

SET SHRUBS 50mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT

PLANTING METHOD ILLUSTRATED APPLIES EQUALLY TO BARE ROOT, POTTED OR B&B NURSERY STOCK

FINISHED GRADE

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE SHRUB BED PRIOR TO PLANTING

EXCAVATE AND PREPARE PLANTING BED TO MINIMUM 500mm DEPTH AS SPECIFIED

NTS

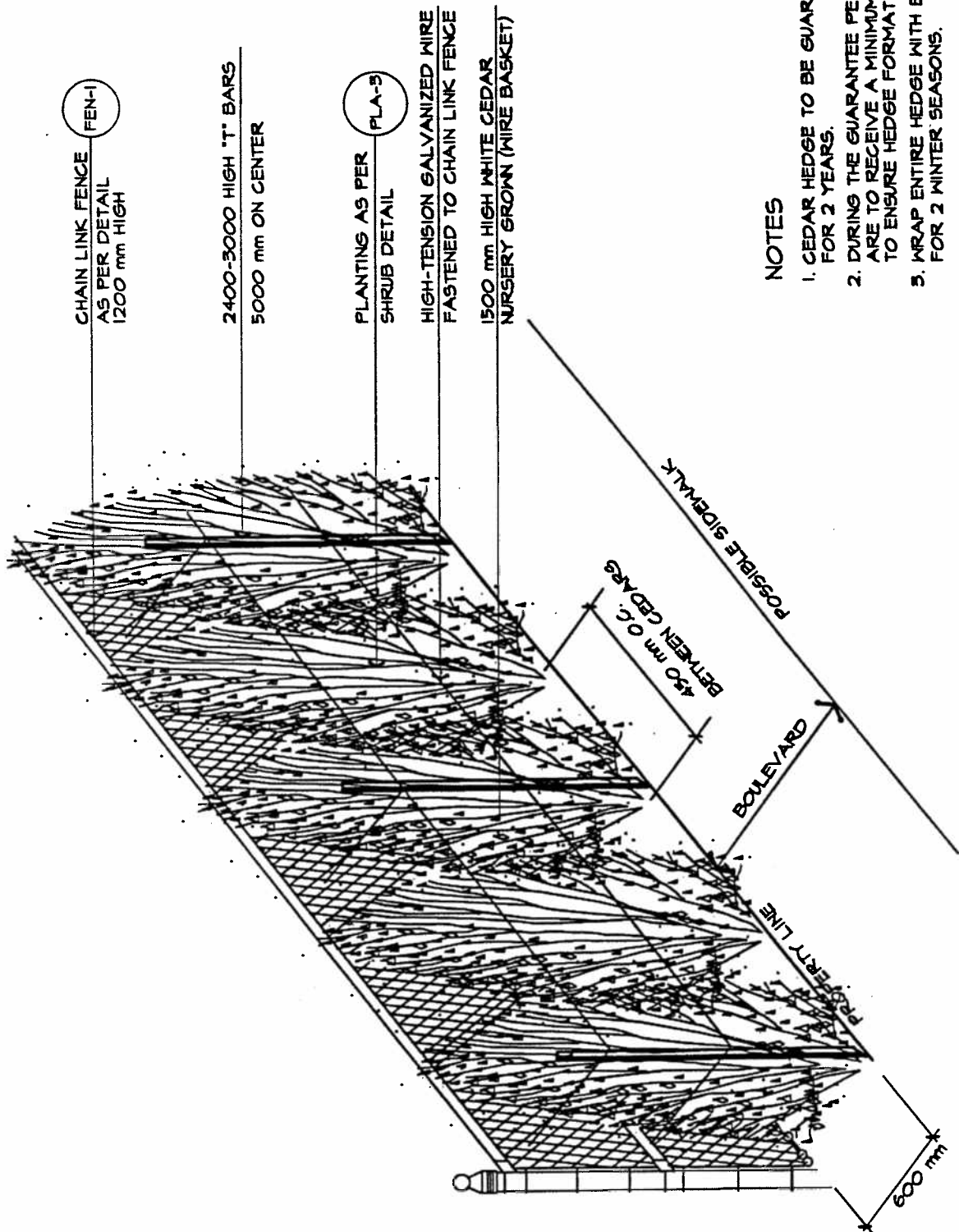
NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DETAIL NO:  
PLA-3

DRAWING TITLE: SHRUB PLANTING



THE CORPORATION OF THE TOWN OF CALEDON



CHAIN LINK FENCE  
FEN-1  
AS PER DETAIL  
1200 mm HIGH

2400-3000 HIGH "T" BARS  
5000 mm ON CENTER

PLANTING AS PER  
SHRUB DETAIL  
PLA-3

HIGH-TENSION GALVANIZED WIRE  
FASTENED TO CHAIN LINK FENCE

1500 mm HIGH WHITE CEDAR  
NURSERY GROWN (WIRE BASKET)

**NOTES**

1. CEDAR HEDGE TO BE GUARANTEED FOR 2 YEARS.
2. DURING THE GUARANTEE PERIOD, CEDARS ARE TO RECEIVE A MINIMUM OF 2 PRUNINGS TO ENSURE HEDGE FORMATION.
3. WRAP ENTIRE HEDGE WITH BURLAP FOR 2 WINTER SEASONS.

NTS

THE CORPORATION  
OF THE  
TOWN OF CALEDON

**DRAWING TITLE:** CEDAR HEDGE PLANTING WITH CHAIN LINK FENCE

**DETAIL NO.:** PLA-4

**PREPARED BY:**

**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS**

CHAIN LINK FENCE FABRIC TO BE BLACK-VINYL-COATED 3.5mm GALVANIZED WOVEN WIRE WITH 50mm MESH OPENINGS. FASTEN TO RAILS AND LINE POSTS WITH 4-GAUGE GALVANIZED AND COATED WIRE MAXIMUM 450mm O.C.

VARIES - 3000mm MAX. O.C.

HEIGHT VARIES SEE PLAN

ALL POST CAPS AND STANDARD DECORATIVE FITTINGS AS SUPPLIED BY MANUFACTURER

KNUCKLED TOP & BOTTOM EDGES

TOP EDGE FASTENERS 450mm O.C.

STRETCHER BAR BANDS 300mm O.C. IF STEEL 5x19mm, IF ALUMINUM 5x19mm

STEEL STRETCHER BAR 5x19mm MINIMUM

89mm O.D. TERMINAL POSTS INSTALLED AT ALL ENDS, CORNERS AND GATES

45mm O.D. BRACE RAILS TO BE INSTALLED AT ALL ENDS, CORNERS AND IN FENCING ON STEEP INCLINES

DROP-FORGED ADJUSTABLE TURNBUCKLE AT BOTH ENDS

FINISHED GRADE

45mm O.D. TOP RAIL RANDOM LENGTHS JOINED WITH 180mm COUPLINGS

60mm LINE POSTS

SINGLE STRAND TENSION WIRE - 5mm THICK OR 45mm BOTTOM RAIL AS REQUIRED BY MUNICIPALITY

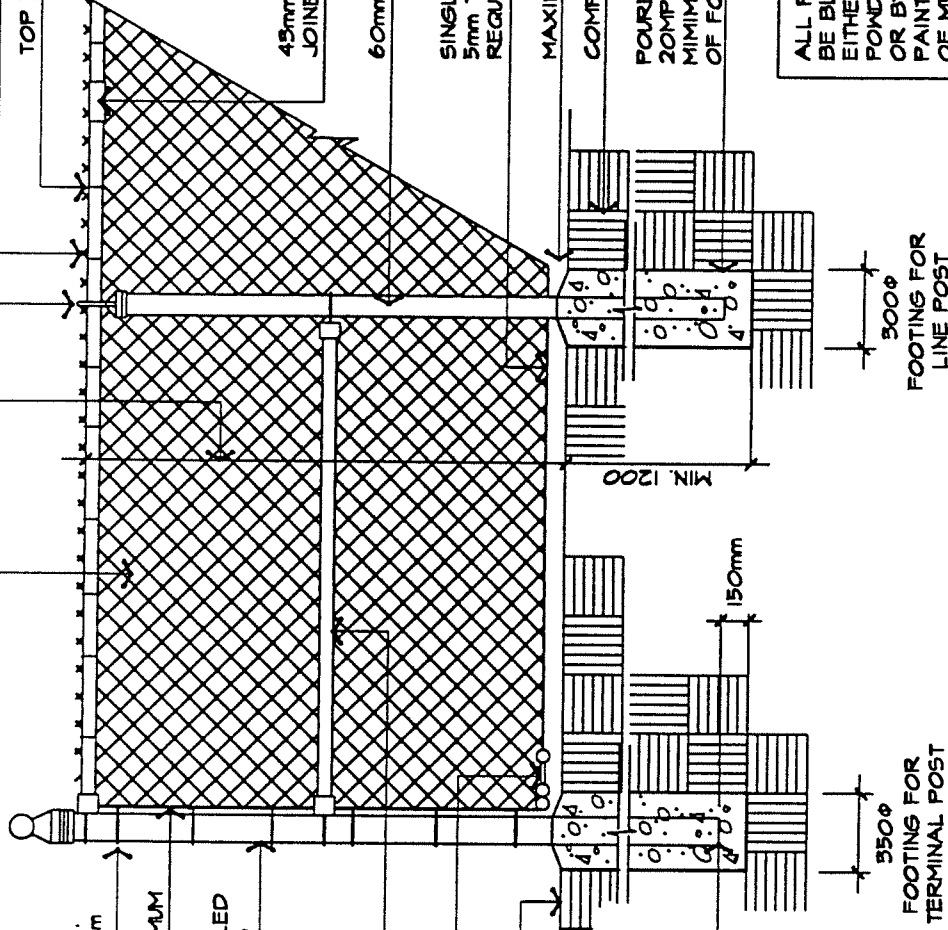
MAXIMUM 75mm CLEARANCE

COMPACTED SUBGRADE

POURED CONCRETE FOOTINGS TO BE 20MPa @ 28 DAYS, TESTED CSA MINIMUM STANDARDS. SLOPE TOP OF FOOTING AWAY FROM POST.

ALL POSTS AND MESH TO LIE ON PRIVATE PROPERTY; NO ABOVE-GROUND FENCE ELEMENTS SHALL INTRUDE ONTO PUBLIC PROPERTY, INCLUDING THE ROAD RESERVE.

ALL POST AND FITTING FINISHES TO BE BLACK GLOSS ENAMEL APPLIED EITHER BY FACTORY-CONTROLLED POWDER COATING & BAKING PROCESS OR BY PRIMING AND ELECTROSTATICALLY PAINTING ON SITE PRIOR TO INSTALLATION OF MESH, WHICHEVER METHOD IS APPROVED BY THE LANDSCAPE ARCHITECT.



MIN. 1200

150mm

500φ  
FOOTING FOR  
TERMINAL POST

500φ  
FOOTING FOR  
LINE POST

NTS



THE CORPORATION  
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TOWN OF CALEDON

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DRAWING TITLE: CHAIN LINK FENCE

DETAIL NO:

FFN-1

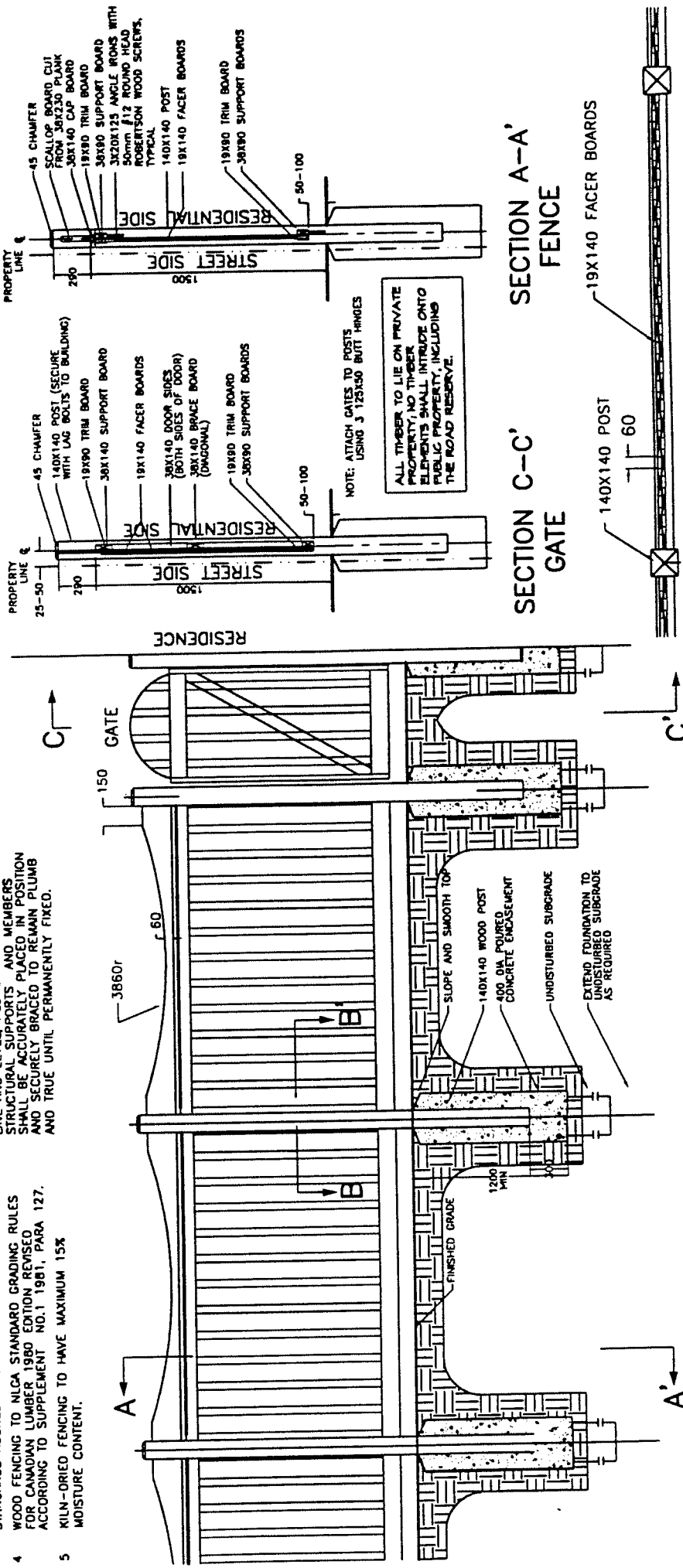
# PRIVACY FENCING NOTES


- 1 ALL MATERIALS, COMPONENTS AND WORKMANSHIP TO CONFORM WITH LOCAL BY-LAWS.
- 2 CONSTRUCT WOOD FENCING IN ACCORDANCE WITH CAN3-DB6-M80 EXCEPT WHERE SPECIFIED.
- 3 LUMBER IDENTIFICATION: BY GRADE STAMP OF AN AGENCY CERTIFIED BY THE CANADIAN LUMBER STANDARDS ACCREDITATION BOARD.
- 4 WOOD FENCING TO NLCA STANDARD GRADING RULES FOR CANADIAN LUMBER 1980 EDITION REVISED ACCORDING TO SUPPLEMENT NO.1 1981, PARA 127.
- 5 KILN-DRIED FENCING TO HAVE MAXIMUM 15% MOISTURE CONTENT.

- 6 ALL WOOD MEMBERS TO BE WESTERN RED CEDAR.
- 7 METAL FASTENERS: TO CSA B111-1974, TABLE 22, GALVANIZED FINISH; SIZES AS RECOMMENDED IN CSA 086-1976, UNLESS SPECIFIED OTHERWISE.
- 8 THE WORK SHALL BE LAID OUT TRUE TO LINE AND LEVEL, PLUMB AND TRUE. STRUCTURAL SUPPORTS AND MEMBERS SHALL BE ACCURATELY PLACED IN POSITION AND SECURELY BRACED TO REMAIN PLUMB AND TRUE UNTIL PERMANENTLY FIRED.

- 9 WOOD MEMBERS SHALL BE TREATED WITH TWO COATS OF SIKKENS STAIN, COLOUR GREY.
- 10 FASTENING SHALL BE BY NAILS, SPIKES, BOLTS, ANGLE IRONS OR FRAMING ANCHORS AS DETAILED. ALL NUTS AND BOLTS SHALL BE COUNTERSUNK WHERE EXPOSED.

- 11 SELECT BOARDS FOR GOOD APPEARANCE. ALL MEMBERS SHALL BE FREE OF WAHES AND BARK. ALL TORN GRAIN SHALL BE PLANED OR SANDED SMOOTH. MEMBERS EXHIBITING MODERATE OR HEAVY KNOTS SHALL BE WELL-DISTRIBUTED THROUGHOUT THE FENCE FACE.
- 12 STEP FENCE PANELS TO A MAXIMUM OF 150mm AT POSTS AS REQUIRED TO MEET GRADE.





THE CORPORATION  
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TOWN OF CALEDON

DRAWING TITLE: **PRIVACY FENCE WITH GATE**

DETAIL NO: **FEN-2**

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

# SPECIFICATIONS

## A. GENERAL

- i) These Specifications are to be read in conjunction with the General Conditions of the contract, as prepared by and available at the offices of Alexander Budrevics and Associates Ltd.
- ii) Prior to commencing work, the Contractor shall:
  - 1. Become familiar with the plans, details, and specifications of this project,
  - 2. Visit the site to ascertain and take account of existing conditions and any deviations from the plans in work by others, and
  - 3. Finalize all design alternatives in consultation with the Landscape Architect.
- iii) Prior to excavating, the Contractor shall verify the location of all underground utilities. In the event of a conflict between a proposed tree location and an underground service, the exact location of the tree shall be determined on site by the landscape architect and/or the Town's representative.
- iv) The Contractor shall, at his or her own expense, repair any damage to existing utilities, structures, facilities, etc. done in the performance of his work.
- v) All site work shall conform to the *Canadian National Master Construction Specifications*, a copy of which can be obtained from Construction Specifications Canada, 100 Lombard St., Suite 200, Toronto, Ontario M5C 1M3; Tel. (416) 777-2198; Fax (416) 777-2197. It is the responsibility of the Contractor to be thoroughly familiar with these specifications and their implications for this project.

## B. PLANT MATERIAL

- i) All plants shall be installed true to specified names, sizes, grades, etc., and shall conform to the standards of the Canadian Nursery Trades Association.
- ii) All plants shall be nursery grown.
- iii) In the event of a discrepancy in plant quantity between the Planting Plan and the Plant List, the Planting Plan shall govern.
- iv) The Contractor shall make plants available for inspection by the Landscape Architect and/or the Town's representative prior to shipping to the site. This does not limit the right of the Landscape Architect and/or the Town's representative to later reject plant material that is of poor quality, damaged during shipping or installation, performing poorly while the guarantee period is still in effect, or otherwise does not conform to the specifications.
- v) Plant substitutions must be approved in writing by the Town and the Landscape Architect prior to delivery of the material to the site.
- vi) The Contractor shall use standard industry methods for planting trees and shrubs. Trees shall be turned to give the best appearance; they shall also be guyed or staked immediately after planting and as detailed on the drawings.

specifications continued on next panel . . .



THE CORPORATION  
OF THE  
TOWN OF CALEDON

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE:

SPECIFICATIONS FOR STREETSCAPES - PART I

DETAIL NO:

SPF-10

# SPECIFICATIONS

continued from previous panel

## C. BED PREPARATION

- i) The Contractor shall scarify the sides and bottom of excavated tree pits and shrub beds prior to backfilling. Due to the heavy clay soil in the Bolton area, tree and planting beds shall be backfilled to the specified depths with:
  - 2 Parts "triple mix," delivered to the site, to be well-mixed with . . .
  - 1 Part local topsoil (viz., subdivision topsoil that has been removed and stockpiled.) If topsoil is unavailable, topsoil with clay content shall be imported and mixed with triple mix.
- ii) Tree pits shall be constructed with saucers and mulch as detailed.

## D. PRELIMINARY ACCEPTANCE

- i) When landscaping is completed, the Landscape Architect shall submit a Certificate of Completion to the Town of Caledon certifying that all landscape works have been completed in accordance with the approved plans.
- ii) The Landscape Architect shall prepare a Summary Chart, indicating the plant species, quantity, location, planting date(s), and any other relevant information requested by the Municipality.
- iii) Upon receipt of the Certificate of Completion, the Planning Department will conduct a preliminary inspection of the site and, provided that the works are in satisfactory condition, will grant preliminary acceptance of the landscaping.

## E. GUARANTEE

- i) All streetscape landscaping shall carry a guarantee/maintenance of **TWO (2) years**, commencing from the date that written preliminary acceptance is granted by the Town of Caledon. In each of the next two years, the Landscape Architect shall conduct an inspection and prepare a report, recommending the replacements and/or works needed to achieve the intent of the approved landscape plan. All replacements shall be recorded in the inspection Summary Chart. The Landscape Architect shall file a copy of the report and/or Summary Chart with the Municipality.
- ii) Replacement plant material and repaired work shall be guaranteed for a minimum **TWO (2) years** from the date of replacement, and will not be granted final acceptance until the guarantee has expired or as otherwise determined by the Planning Department.

- iii) All other landscape work performed under this contract shall be fully guaranteed for **TWO (2) years**.

## F. MAINTENANCE

- i) The maintenance of all landscape installations throughout the guarantee period shall include:
  - 1) proper irrigation to ensure optimum growth of trees and shrubs,
  - 2) cultivation and weeding of tree pits and planting beds,
  - 3) insect and disease control, and
  - 4) pruning and fertilizing, as required or as directed by the Municipality or Landscape Architect.

specifications continue on next panel . . .



THE CORPORATION  
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TOWN OF CALEDON

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE:

**SPECIFICATIONS FOR STREETSCAPES - PART 2**

DETAIL NO:

**SPE-1b**

PREPARED BY:

# SPECIFICATIONS

continued from previous panel

## G. FINAL ACCEPTANCE

- i) At the end of the guarantee period, the Contractor shall remove all tree stakes, and bark wrap, and shall add extra mulch where necessary.
- ii) When these final tasks have been completed, the Landscape Architect will provide the Town with a Certificate of Completion. All landscape work will then be inspected by the Municipality and, if satisfied that all work has been completed in accordance with the approved landscape plans, will issue a Certificate of Final Acceptance and release any outstanding funds.

end of specifications



THE CORPORATION  
OF THE  
TOWN OF CAITHRON

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE: SPECIFICATIONS FOR STREETSCAPES - PART 3

DETAIL NO:

SPE-16

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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## **2.2 Major Roads (Columbia Way)**

Columbia Way is the only Major Road in SECONDARY PLAN AREA B. It delineates the northern limit of the new neighbourhood.

A new intersection will be constructed to the east of Mount Hope Road, where the collector road Forest Gate Avenue meets Columbia Way. The design of the entry gates to the residential neighbourhood of SECONDARY PLAN AREA B, a feature unique to only one development application, is not covered by these standards and guidelines. The design of the entry gates, however, will form part of the development application that includes the intersection giving access to the neighbourhood.

### **2.2.1 Columbia Way Landscaping**

The existing wooden fencing along the rear lot lines of homes backing onto Columbia Way to the west of SECONDARY PLAN AREA B is to be extended to the eastern boundary of SECONDARY PLAN AREA B. Landscape detail FEN-2 (p. 14) specifies the construction of the proposed fence extension along Columbia Way, and FEN-4 (p. 19) details the associated masonry pillars.

The existing windrow of coniferous trees along the south side of Columbia Way, east of the new collector road intersection, is to be preserved (see PRE-1, p. 20; refer to MAP NOs. 2 and 3 for orientation). West of the proposed intersection, a new boulevard planting scheme will be needed, since presently there are no trees or shrubs along that portion of Columbia Way. The proposed planting design should complement the existing windrow east of the intersection, as well as accommodate the fence extension. It should also avoid encroaching on Block U in order to allow for a possible widening of Columbia Way in the future.

### **2.2.2 List of Details Particular to Columbia Way**

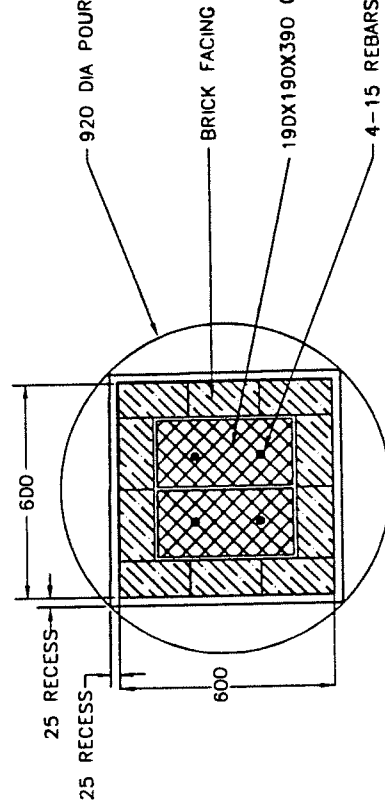
Page 19   Masonry Column for Columbia Way (FEN-4)

Page 20   Tree Preservation (PRE-1)

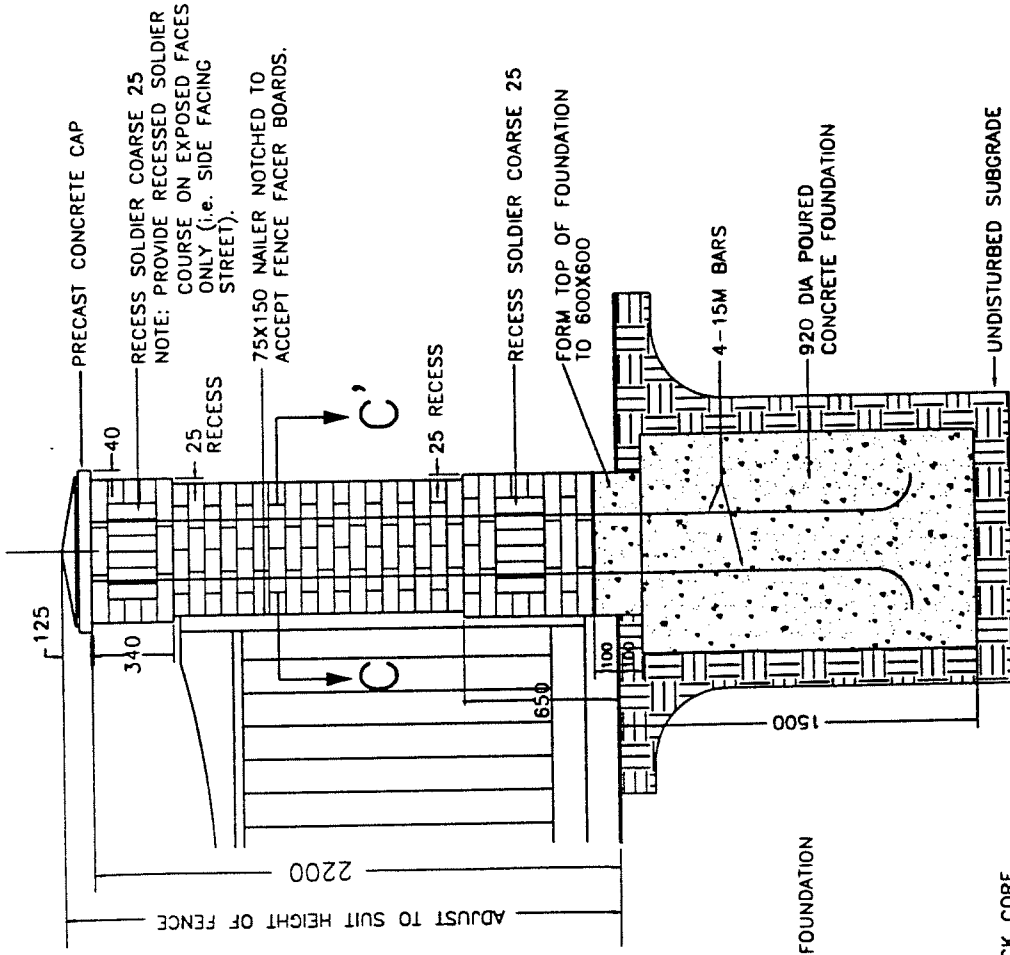
## MASONRY COLUMNS

- 1 CONCRETE FOUNDATIONS TO HAVE A MINIMUM COMPRESSION STRENGTH OF 25mpa @ 28 DAYS.
- 2 CONCRETE TO BE READY-MIX MATERIAL SUPPLIED AND PLACED IN ACCORDANCE WITH CAN/CSA-A23.1-M90.
- 3 REINFORCING STEEL TO BE DEFORMED BARS WITH YIELD STRENGTH OF 400mpa IN ACCORDANCE WITH CSAG 30.16-M1977.
- 4 SPLICES IN REINFORCING STEEL TO HAVE MINIMUM OVERLAP OF 500mm.
- 5 ULTIMATE COMPRESSIVE STRENGTH OF MASONRY MATERIALS SHALL BE IN EXCESS OF:
 

HOLLOW CONCRETE BLOCK	6.9 mpa
SOLID CONCRETE BLOCK	12.4 mpa
BRICK	31.0 mpa
MORTAR	12.4 mpa
- 6 MORTAR TO BE AS SPECIFIED IN CAN/CSA-A23-M90 TO ENSURE THAT WATER AND AGGREGATE USED IN MORTAR WILL NOT CAUSE EFFLORESCENCE.
- 7 MORTAR COLOUR TO BE NATURAL GREY.
- 8 METAL BRICK TIES TO BE AS SPECIFIED IN CAN/CSA-S304-M90.
- 9 BRICK SAMPLES TO SUPPLIED TO THE LANDSCAPE ARCHITECT FOR COLOUR SELECTION.
- 10 CONCRETE BLOCK CORE OF COLUMNS TO BE UNIT MASONRY IN ACCORDANCE WITH CAN/CSA-A23.1-M90.
- 11 PRECAST CONCRETE CAPS TO BE APPROVED BY LANDSCAPE ARCHITECT.



SECTION C-C'



ELEVATION

NTS

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DRAWING TITLE: MASONRY COLUMN FOR COLUMBIA WAY

DETAIL NO:

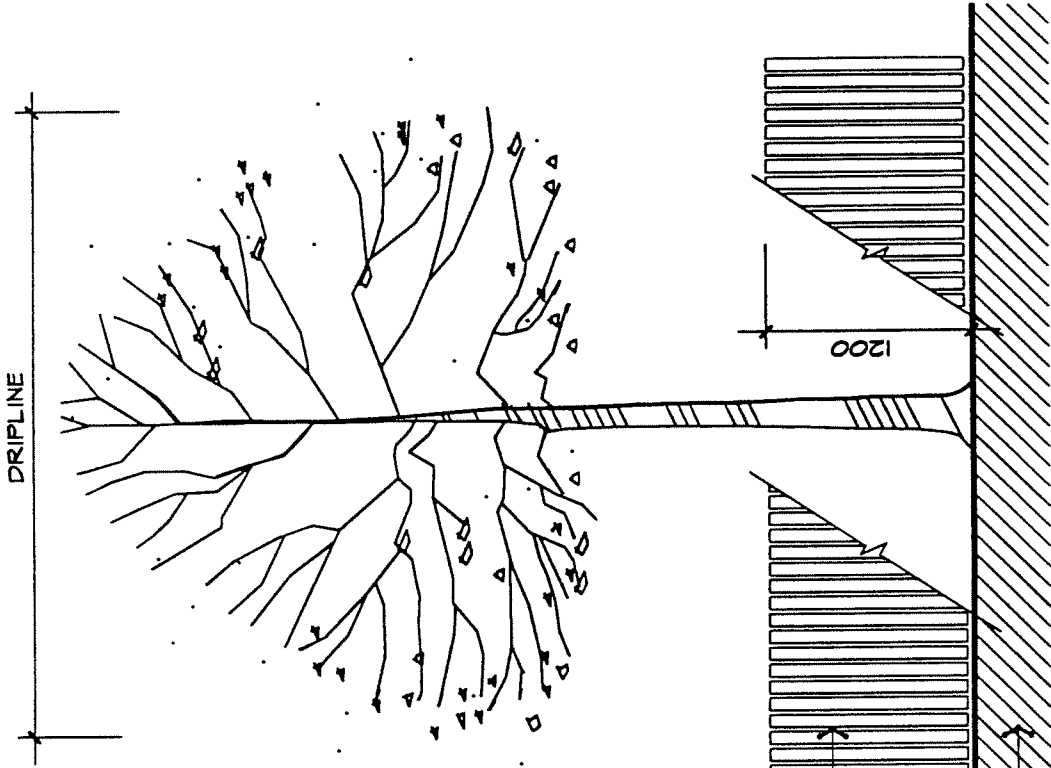
FEN-4



THE CORPORATION  
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TOWN OF CALDERON

**SPECIFICATIONS FOR THE PROTECTION AND PRESERVATION OF EXISTING VEGETATION**

1. PRIOR TO ISSUANCE OF THE BUILDING PERMIT, ALL EXISTING TREES THAT ARE TO BE PRESERVED SHALL BE FULLY PROTECTED WITH HOARDING (I.E. SNOW FENCING), ERECTED OUTSIDE THEIR 'DRIPLINES,' TO THE SATISFACTION OF THE TOWN.
2. GROUPS OF TREES AND OTHER EXISTING PLANTINGS TO BE PROTECTED SHALL BE TREATED IN A LIKE MANNER WITH HOARDING AROUND THE ENTIRE CLUMP(S). AREAS WITHIN THE PROTECTIVE FENCING SHALL REMAIN UNDISTURBED AND SHALL NOT BE USED FOR THE STORAGE OF BUILDING MATERIALS OR EQUIPMENT.
3. NO RIGGING CABLES SHALL BE WRAPPED AROUND OR INSTALLED IN TREES. SURPLUS SOIL, EQUIPMENT, DEBRIS OR MATERIALS SHALL NOT BE PLACED OVER THE ROOT SYSTEMS OF THE TREES WITHIN THE PROTECTIVE FENCING. NO CONTAMINANTS SHALL BE DUMPED OR FLUSHED WHERE FEEDER ROOTS OF TREES EXIST.
4. THE DEVELOPER OR HIS AGENTS SHALL TAKE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGE TO TREES OR SHRUBS TO BE RETAINED.
5. WHERE LIMBS OR PORTIONS OF TREES ARE REMOVED TO ACCOMMODATE CONSTRUCTION WORK, THEY SHALL BE REMOVED CAREFULLY IN ACCORDANCE WITH ACCEPTED ARBORICULTURE PRACTICE.
6. WHERE ROOT SYSTEMS OF PROTECTED TREES ARE EXPOSED TO OR DAMAGED BY CONSTRUCTION WORK, THEY SHALL BE TRIMMED NEATLY AND THE AREA BACK-FILLED WITH APPROPRIATE MATERIAL TO PREVENT DESICCATION.
7. WHERE NECESSARY, THE TREES SHALL BE GIVEN AN OVERALL PRUNING TO RESTORE THE BALANCE BETWEEN ROOTS AND TOP GROWTH OR TO RESTORE THE APPEARANCE OF THE TREES. DO NOT PRUNE LEADERS.
8. TREES THAT HAVE DIED, OR HAVE BEEN DAMAGED BEYOND REPAIR, SHALL BE REPLACED BY THE OWNER AT HIS OWN EXPENSE WITH TREES OF A SIZE AND SPECIES APPROVED BY THE TOWN.
9. IF GRADES AROUND THE TREES TO BE PROTECTED ARE LIKELY TO CHANGE, THE OWNER SHALL BE REQUIRED TO TAKE SUCH PRECAUTIONS AS DRY-WELLING AND ROOT-FEEDING TO THE SATISFACTION OF THE TOWN.



TREE PROTECTION FENCING TO BE ERECTED AS INDICATED ON LANDSCAPE PLAN AND SHALL REMAIN INTACT UNTIL FINAL GRADING PHASE OF PROJECT

STANDARD 1200mm HIGH SNOW FENCE SECURED TO T-BAR STAKES AT MIN. 2400mm O.C.

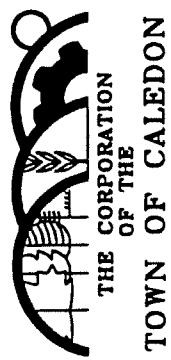
FINISHED GRADE

UNDISTURBED SOIL

**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS**

DETAIL NO: PRE-1

DRAWING TITLE: **TREE PRESERVATION**



**NORTH EAST BOLTON SECONDARY PLAN AREA**  
**RESIDENTIAL POLICY AREA B**  
**Landscape Standards and Design Guidelines**

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### **2.3 Minor Roads (Forest Gate Avenue and Mount Hope Road)**

Minor Roads, which have a 20-metre right-of-way, serve as collectors for the neighbourhood. Forest Gate Avenue and possibly all of Mount Hope Road are the Minor Road collectors for SECONDARY PLAN AREA B. From Columbia Way, Forest Gate Avenue will first run south and then west, connecting with Mount Hope Road. North of the intersection of Forest Gate Avenue and Mount Hope Road, Mount Hope Road will be classified as a Minor Road; south of the intersection, it will be designated either a Minor Road or an Internal Street, depending on future decisions by the Town Council. For the purposes of these Guidelines, it is assumed that the whole of Mount Hope Road will be a Minor Road.

#### **2.3.1 Minor Road Street Trees**

Forest Gate Avenue and Mount Hope Road should be planted with high-branching deciduous trees (80mm caliper). It is recommended that four species of trees be repeated in groups of four, five, six, seven, or eight trees. A design suggestion is to place Crimson King Maples in the boulevards where side streets intersect the Minor Roads. The dark red leaf colour of the Crimson King tends to “flag” intersections (see PLN-E, p. 23).

The urban subdivision road cross-section for a 20m R.O.W. (see SEC-2, p. 24) shows an approximate street tree layout. Trees are to be planted 1.5m from the curb, in line with the street lights. When this preferred location is impractical, due to utility or servicing conflicts, trees may be planted behind the sidewalk, in the “inside” boulevard.

#### **2.3.2 Mount Hope Road**

In lieu of a sidewalk along the west side of Mount Hope Road, a trail is to be built through the existing vegetation buffer, which is to be preserved. The detailed design for the trail is to be a part of the first subdivision application to include Mount Hope Road.

#### **2.3.3 Corner Lot Treatments**

Minor Roads will carry a volume of vehicular and pedestrian traffic that some homeowners of corner lots might find intrusive in the absence of special privacy measures for their backyards. There are two options for enhancing the privacy of backyards exposed to Minor Roads:

The first option (see PLN-F, p. 25) calls for a 1.8 metre high wooden screen fence along the property line, with deciduous street tree planting in the boulevard. Such fencing shall have a decorative scalloped top and be stained a soft, neutral, grey colour. Where an Internal Street sidewalk connects to the sidewalk of a Minor Road, it is recommended that a *low* deciduous hedge be planted as an extension to the fence

line along the Minor Road to discourage pedestrians from cutting across the corner of private property. The suggested shrub species for extension plantings are dwarf varieties that can tolerate clipping and will remain small.

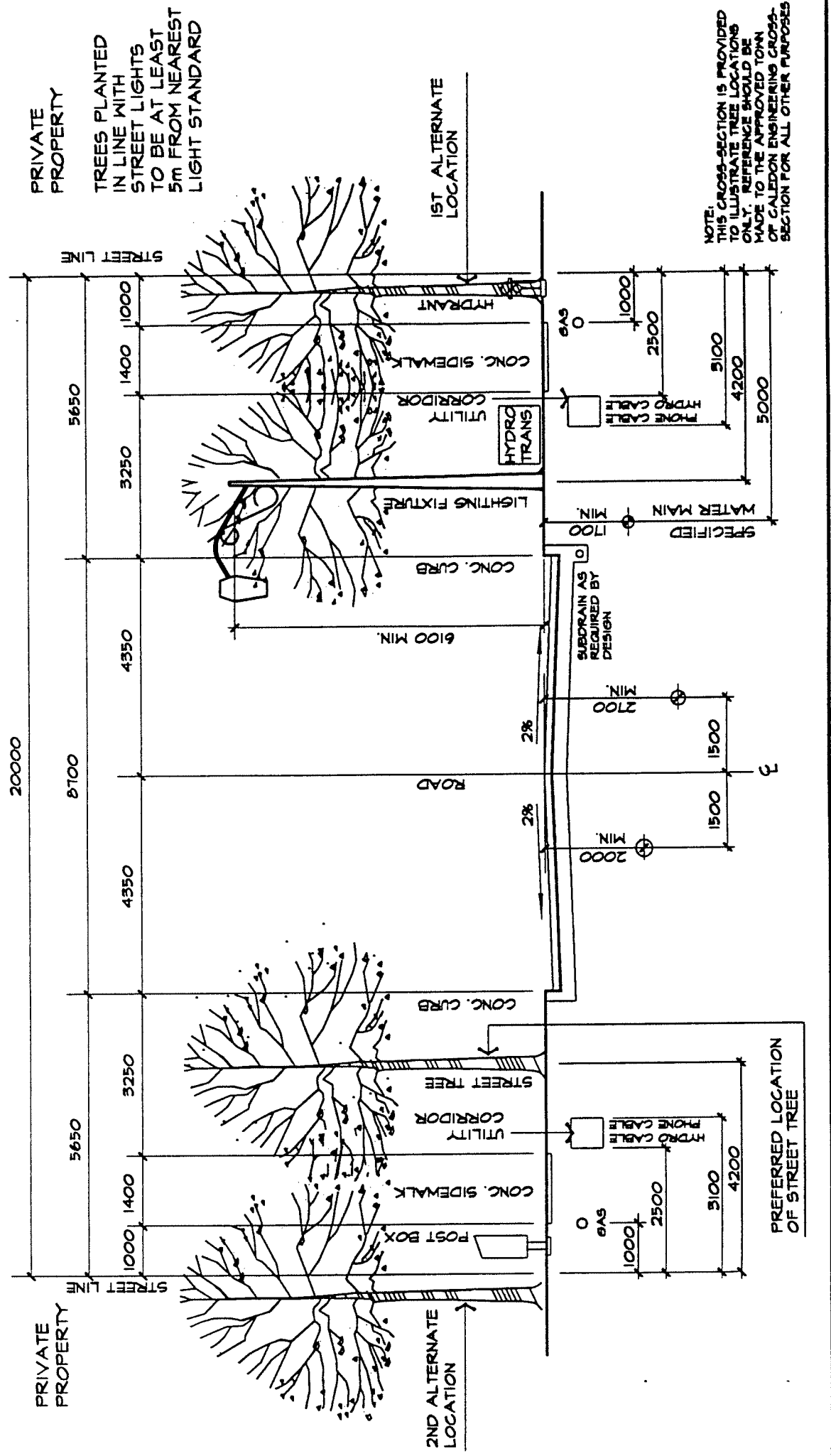
The second option (see PLN-G, p. 26) envisages a 1200mm high, black, vinyl-coated chain link fence with a cedar hedge planted in front to provide a "natural" privacy screen. As in the first option, a low-growing deciduous hedge should be planted to discourage pedestrians from cutting the corner where there are intersecting sidewalks. (This hedge option is not applicable to townhouse properties because the Town's policy is to use wooden screen fencing in such situations.)

#### 2.3.4 List of Design Guidelines for Planting Along Minor Streets

The guidelines for the streetscape of Minor Roads are as follows:

- Page 23 Typical Street Tree Layout and Species for Minor Roads (PLN-E)
- Page 24 Minor Road Cross-section for 20m R.O.W. – Typical Street Tree Locations (SEC-2)
- Page 25 Corner Lot Treatment for Minor Roads – Option 1 (PLN-F)
- Page 26 Corner Lot Treatment for Minor Roads – Option 2 (PLN-G)





PRIVATE PROPERTY

TREES PLANTED IN LINE WITH STREET LIGHTS TO BE AT LEAST 5m FROM NEAREST LIGHT STANDARD

NOTE: THIS CROSS-SECTION IS PROVIDED TO ILLUSTRATE TREE LOCATIONS ONLY. REFERENCE SHOULD BE MADE TO THE APPROVED TOWN OF CALEDON ENGINEERING CROSS-SECTION FOR ALL OTHER PURPOSES.

**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES**

DRAWING TITLE: **MINOR ROAD CROSS-SECTION FOR 20 M.R.O.W.**  
(TYPICAL STREET TREE LOCATIONS)

PLAN NO: **SEC-2**

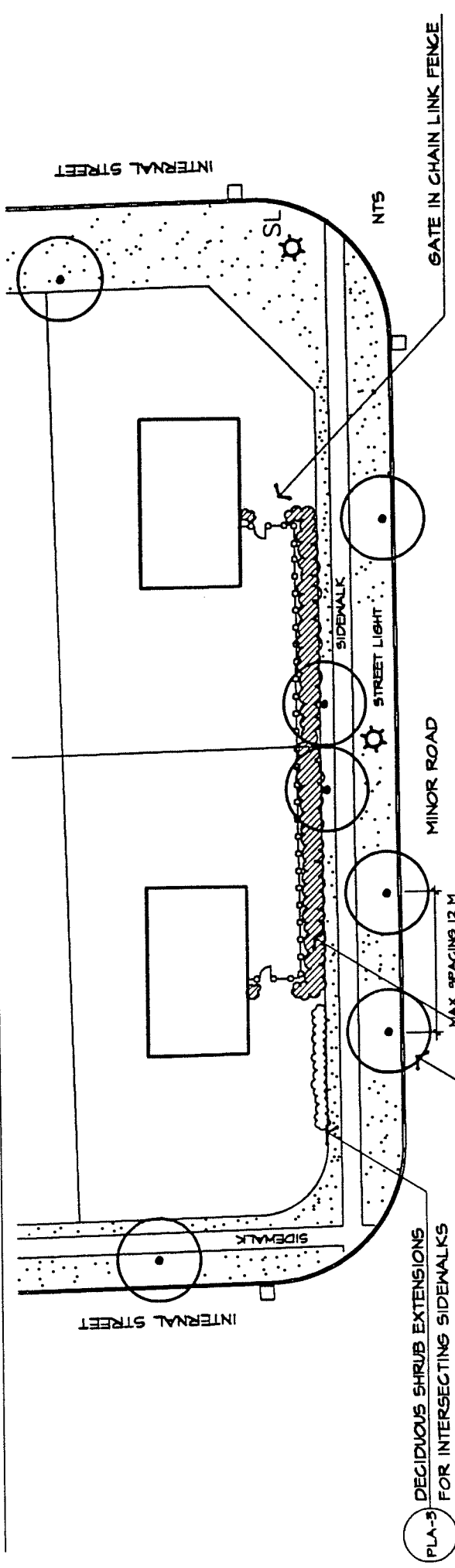
THE CORPORATION  
OF THE  
TOWN OF CALEDON

DESIGNED BY:



# SUGGESTED SHRUB SPECIES FOR PRIVACY EXTENSION

BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS	SPACING
<b>DECIDUOUS SHRUBS</b>							
EVONYMUS ALATA 'COMPACTUS'	DWARF BURNING BUSH	---	600 mm	---	POTTED	NURSERY GRAN	500 mm
LIGUSTRUM AMURENSE	AMUR PRIVET	---	600 mm	---	POTTED	NURSERY GRAN	500 mm
RIESES ALPINUM	ALPINE CURRANT	---	600 mm	---	POTTED	NURSERY GRAN	500 mm
RHUS AROMATICA	FRAGRANT SUMAC	---	600 mm	---	POTTED	NURSERY GRAN	500 mm
SYRINGA MEYERI 'PALIBIN	DWARF LILAC	---	600 mm	---	POTTED	NURSERY GRAN	500 mm
SPIREA X BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	---	600 mm	---	POTTED	NURSERY GRAN	500 mm



**NOTE:**  
 THE FENCE IS TO BE SET ENTIRELY ON PRIVATE PROPERTY.  
 THE FENCE RETURN IS TO BE AT A RIGHT ANGLE TO THE STREET LINE OR BUILDING FACE WHEREVER POSSIBLE. IN ALL CASES, THE INTERIOR ANGLE OF THE FENCE RETURN IS TO BE 90° OR GREATER.  
 THE ACTUAL LOCATION OF FENCE RETURNS AND ASSOCIATED PLANTINGS MAY BE ADJUSTED ON SITE, DEPENDING ON HOUSE ORIENTATION, DESIGN AND OTHER RELEVANT CONSIDERATIONS. FINAL FENCE RETURN LOCATIONS WILL BE DETERMINED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR TO INSTALLATION.

**NOTE:**  
 THIS OPTION IS NOT FOR TONNHOUSE DEVELOPMENTS.

- PLA-3 DECIDUOUS SHRUB EXTENSIONS FOR INTERSECTING SIDEWALKS
- PLA-1 DECIDUOUS STREET TREE
- PLA-4 CEDAR HEDGE PLANTINGS WITH 1200 mm CHAIN LINK FENCE

THE CORPORATION OF THE TOWN OF CALEDON

**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES**

DRAWING TITLE: **CORNER LOT TREATMENT FOR MINOR ROADS - OPTION 2**

PLAN NO: **PLN-G**

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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## **2.4 Internal Streets**

The majority of roads in Secondary Plan Area B will be Internal Streets, which have either a 17- or 18-metre right-of-way. Cross-sections of the preferred and alternate locations of trees within the rights-of-way of Internal Streets are shown on SEC-3 (p. 30).

### **2.4.1 General Planting Considerations for Internal Streets**

A typical streetscape (see PLN-H, p. 31) will involve the designer in a number of design issues. The following are just some of the considerations involved:

- a) The planting design must take into account the many variations in lot configurations. Most lots will have one street tree planted in the preferred location. Some, however, may have so much frontage as to require two trees (spaced 8 to 12 metres on centre). While still others, for example those at the end of a cul-de-sac or outside semi-detached homes, may not have enough room for even one tree (especially if a light standard or a transformer box is present).
- b) Because the presence of utilities, mail box clusters, and driveways in the boulevard strip between the sidewalk and the curb can interfere with the preferred placement of street trees, the street tree planting scheme must be flexible enough to accommodate on-site adjustments. Where an element of utility furniture (such as a streetlight standard or fire hydrant), a driveway, or a mail box cluster interferes with the preferred placement of a tree, and there is insufficient room (due to clearance requirements) to plant the tree between the interfering element and another element, the tree is to be planted in the alternate location—viz., on the boulevard between the property line and the sidewalk. Due to the proximity of the gas line in this part of the right-of-way, **trees planted between the property line and the sidewalk are to be dug by hand.**
- c) Arboreal accents can add interest to a streetscape. For example, smaller, flowering trees planted at the end of a cul-de-sac or where there is a bend or eyebrow in the street are welcome design features.
- d) A streetscape comprised exclusively of deciduous trees offers a very stark view in the winter. On the side of the street without a sidewalk, evergreen street trees should be introduced to provide variety and interest in winter. Evergreens should be planted in the boulevard and near the property line in such a way that (1) they do not interfere with underground utilities and (2) there is room enough for the natural base whorl of the species to develop without interfering with proposed fencing—or indeed *any* future fencing.

**NORTH EAST BOLTON SECONDARY PLAN AREA**  
**RESIDENTIAL POLICY AREA B**  
**Landscape Standards and Design Guidelines**

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- e) Many subdivisions have walkway easements that will bring pedestrian and bicycle traffic right beside the backyards of adjacent homeowners. These walkways will have concrete surfaces and concrete curbs. Black, vinyl-coated chain link fences will need to be mounted on the curbs to discourage trespassing. It is also recommended that, where sideyard setbacks permit (i.e., where there is more than 3 metres of sideyard), the flanks of walkways be planted with cedar hedges to enhance the privacy of adjacent homeowners, to soften the appearance of the chain like fences, and to add year-round greenery to the neighbourhood. When 3 metres of sideyard is not available, vines (such as virginia creeper or euonymus sarcoxe "wintergreen" may be planted on the private property side the chain link fence.

#### **2.4.2 Special Planting Considerations for Back-to-Back Corner Lots**

Offering privacy to the homeowners of corner lots poses a special design challenge. Corner lots usually have the whole of one flank exposed to a street. In some cases a sidewalk runs the length of the exposed flank; in other cases, there is no sidewalk. Additionally, homeowners with corner lots bordered by sidewalks, have the added problem of pedestrians cutting across the corner of their property.

There are two principal ways of enhancing the privacy of homeowners with exposed corner lot flanks. The first is to construct a high wooden fence along the property line. The second is to plant a row of evergreen trees or a cedar hedge along the property line.

A high wooden privacy fence is an effective way to screen a backyard and ward off unwanted intrusions. The type of fence proposed for this purpose is detailed in FEN-2 (p. 14). The appearance of the boulevard may be improved with the addition of evergreen or deciduous trees. When there is no sidewalk to contend with, either a few evergreen or deciduous trees may be planted in the boulevard (see PLN-J: **Option 1**, p. 32) to dress up the flank. However, when a sidewalk runs the length of the exposed flank, it is recommended that only deciduous trees be planted in the boulevard (see PLN-K: **Option 2**, page 33). This avoids the problem of low coniferous tree branches protruding into the sidewalk space as the tree matures.

Another way of helping shield homeowners from the effects of flanking onto a street is to plant closely spaced evergreens along the property line. This shall take the form of a row of hedge material, such as cedar (see PLN-M: **Option 4**, p. 34), coupled with a chain link fence to keep intruders out of the homeowner's backyard and to keep dogs and young children safely in. Hedges may be employed regardless of whether or not there is a sidewalk along the exposed flank.

To lessen the problem of pedestrians cutting the corner on lots having sidewalks on two sides, it is suggested that a low-growing hedge be planted along the flank from the

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

---

termination of the privacy fence or hedge out towards the intersection (see PLN-K & PLN-M, pp. 33 & 34). Several kinds of deciduous shrubs are well-suited to the purpose. A list of suggested species is included on both PLN-K and PLN-M.

### 2.4.3 Special Planting for Back-to-Side Corner Lots

The above options showing how to achieve privacy for the backyards of corner lots flanking onto Minor Roads and Internal Streets involve “back-to-back” corner lot configurations. Where a *rear* property line is shared with the *side* property line of a neighbouring lot (a “back-to-side” configuration), the privacy treatment on the flank should be carried on along the rear yard of the corner lot so the line of sight from down the street into the backyard of the corner lot is obscured.

The adjacent sketch shows such a “privacy screen.” It could be a wooden fence or a cedar hedge coupled with a chain link fence.

The other design feature that should be addressed when this corner lot configuration is encountered is the location of the driveway for Lot #2 if a sidewalk is present. The driveway of this lot should be located as far as possible from the privacy screen to allow the driver of a car backing out of the driveway to have an unobstructed view of pedestrians on the sidewalk beside Lot # 1, the corner lot.

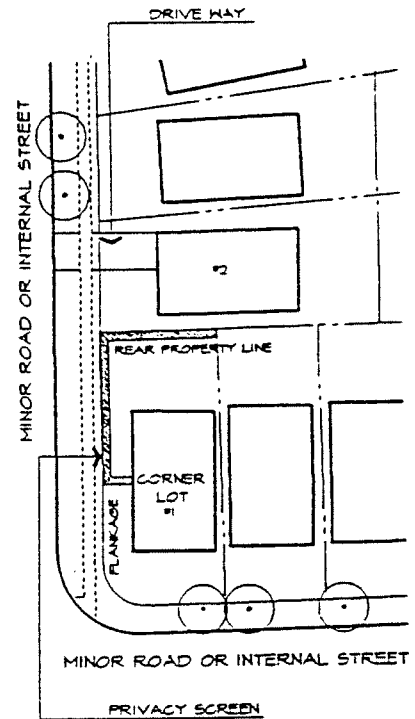


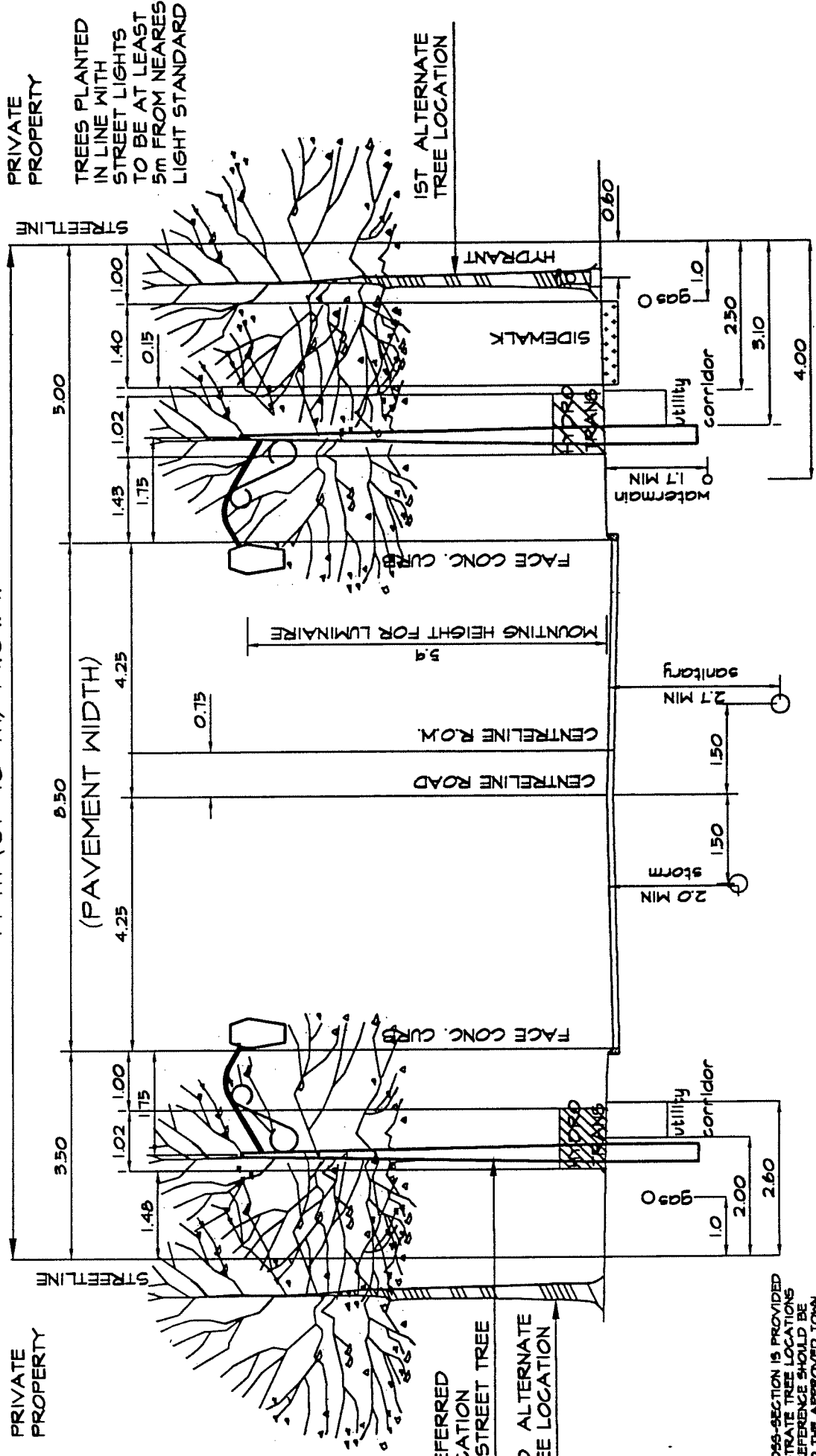
Figure 1: Special Planting for Back-to-Side Lots

### 2.4.4 List of Design Guidelines for Internal Street Planting

The design guidelines representing different design options for preparing the streetscape layouts for Internal Streets are found in the following cross-sections and plans:

- Page 30 Internal Street Cross-section for 17m (or 18m) R.O.W. — Typical Street Tree Locations (SEC-3)
- Page 31 Typical Street Tree Layout and Species for Internal Streets (PLN-H)
- Page 32 Corner Lot Fence for Internal Streets without Sidewalks — Option 1 (PLN-J)
- Page 33 Corner Lot Fence for Internal Streets with Sidewalks — Option 2 (PLN-K)
- Page 34 Corner Lot Hedge for Internal Streets with Sidewalks — Option 4 (PLN-M)

17 m (or 18 m) R.O.W.\*



NOTE:  
THIS CROSS-SECTION IS PROVIDED  
TO ILLUSTRATE TREE LOCATIONS  
ONLY. REFERENCE SHOULD BE  
MADE TO THE APPROVED TOWN  
OF CALEDON ENGINEERING CROSS-  
SECTION FOR ALL OTHER PURPOSES.

\* PLANTING LOCATIONS TYPICAL FOR 18 M, AS WELL AS 17 M, INTERNAL STREETS.

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES

DRAWING TITLE: INTERNAL STREET CROSS-SECTION FOR 17 M (OR 18 M) R.O.W.

PLAN NO:

(TYPICAL STREET TREE LOCATIONS)

SEC-3

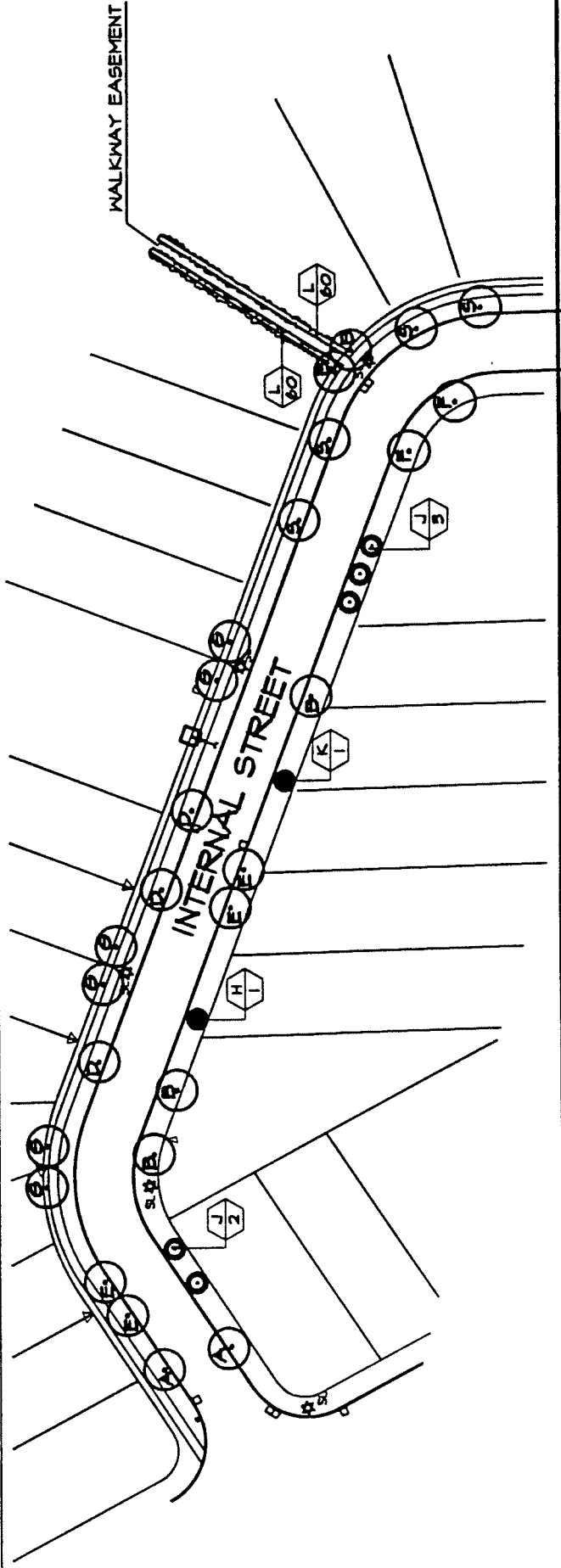


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DESIGNED BY:

# SUGGESTED PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS
<b>DECIDUOUS TREES</b>							
A	ACER PLATANOIDES 'CRIMSON KING'	CRIMSON KING MAPLE	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
B	ACER RUBRUM 'KARPICK'	KARPICK MAPLE	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
C	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN MAPLE	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
D	FRAXINUS PENNSYLVANICA	GREEN ASH	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
E	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
F	QUERCUS ROBUR	ENGLISH OAK	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
G	TILIA CORDATA 'GLENLEVEN'	GLENLEVEN LINDEN	80 mm	3000 mm	1500 mm	S.B.	EQUAL FORM
S	MALUS 'RADIANT'	RADIANT CRAB APPLE	60 mm	2000 mm	1300 mm	S.B.	EQUAL FORM
T	STRINGA RETICULATA 'IVORY SILK'	IVORY SILK LILAC	60 mm	2000 mm	1300 mm	S.B.	EQUAL FORM
<b>CONIFEROUS TREES</b>							
H	PICEA PUNGENS	COLORADO SPRUCE	----	2000 mm	1500 mm	S.B.	SPECIMEN
J	PINUS NIGRA	AUSTRIAN PINE	----	2400 mm	1500 mm	S.B.	SPECIMEN
K	PINUS STROBUS	WHITE PINE	----	2000 mm	1500 mm	S.B.	SPECIMEN
L	THUJA OCCIDENTALIS	WHITE CEDAR (HEDGE)	----	1500 mm	650 mm	POTTED	450 mm O.G.



NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES

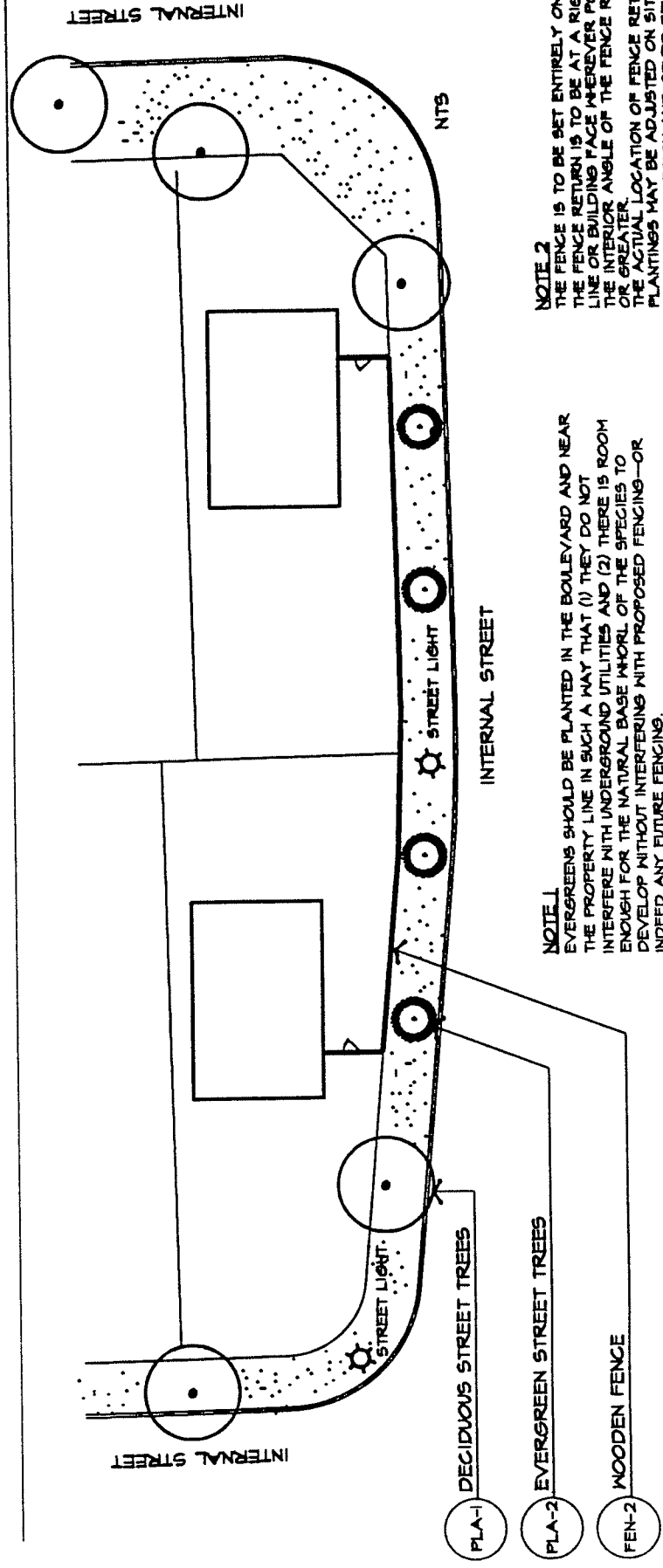
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DRAWING TITLE: **TYPICAL STREET TREE LAYOUT AND SPECIES FOR INTERNAL STREETS**

PLAN NO: **PLN-H**

# SUGGESTED CONIFERIOUS TREE SPECIES

BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS	SPACING
<b>CONIFERIOUS TREES</b>							
PICEA GLAUCA	WHITE SPRUCE	---	2400 mm	---	S.B.	NURSERY GRWN	3000 mm
PICEA FUNGENS	COLORADO SPRUCE	---	2400 mm	---	S.B.	NURSERY GRWN	3000 mm
PICEA FUNGENS 'GLAUCA'	COLORADO BLUE SPRUCE	---	2400 mm	---	S.B.	NURSERY GRWN	3000 mm
PINUS NIGRA	AUSTRIAN PINE	---	2400 mm	---	S.B.	NURSERY GRWN	3000 mm



**NOTE 1**  
 EVERGREENS SHOULD BE PLANTED IN THE BOULEVARD AND NEAR THE PROPERTY LINE IN SUCH A WAY THAT (1) THEY DO NOT INTERFERE WITH UNDERGROUND UTILITIES AND (2) THERE IS ROOM ENOUGH FOR THE NATURAL BASE MORPH OF THE SPECIES TO DEVELOP WITHOUT INTERFERING WITH PROPOSED FENCING—OR INDEED ANY FUTURE FENCING.

**NOTE 2**  
 THE FENCE IS TO BE SET ENTIRELY ON PRIVATE PROPERTY. THE FENCE RETURN IS TO BE AT A RIGHT ANGLE TO THE STREET LINE OR BUILDING FACE WHEREVER POSSIBLE. IN ALL CASES THE INTERIOR ANGLE OF THE FENCE RETURN IS TO BE 40° OR GREATER. THE ACTUAL LOCATION OF FENCE RETURNS AND ASSOCIATED PLANTINGS MAY BE ADJUSTED ON SITE DEPENDING ON HOUSE ORIENTATION DESIGN AND OTHER RELEVANT CONSIDERATIONS. FINAL FENCE RETURN LOCATIONS WILL BE DETERMINED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR TO INSTALLATION.

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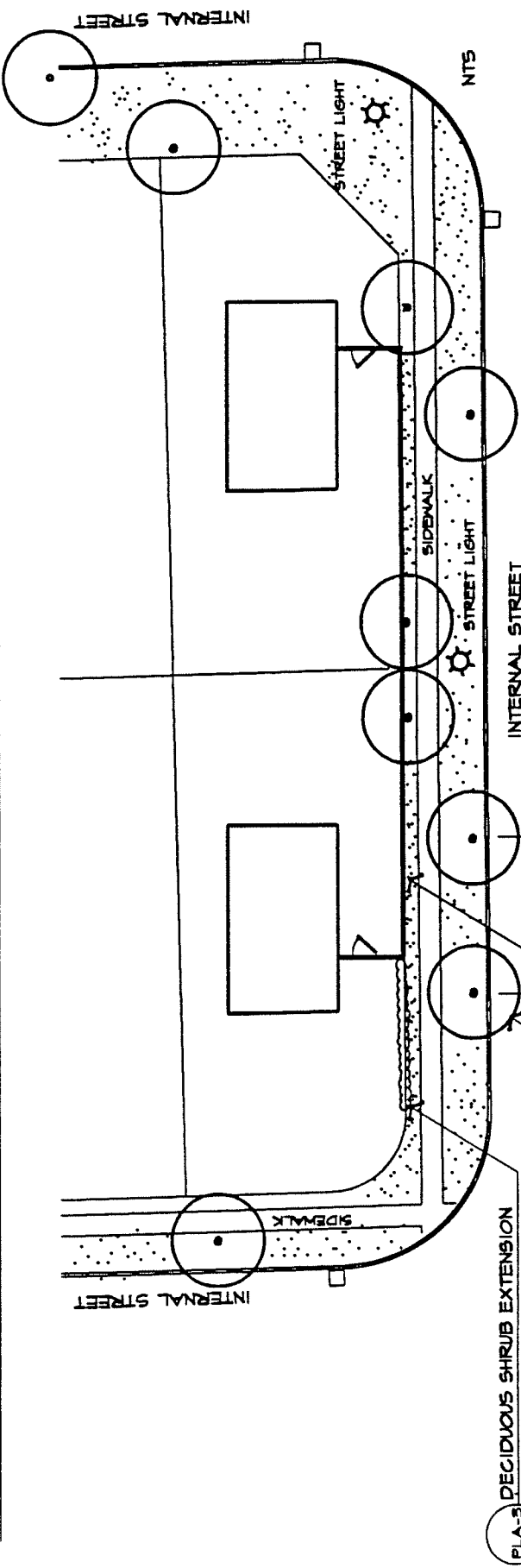
**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES**

DRAWING TITLE: **CORNER LOT FENCE FOR INTERNAL STREETS WITHOUT SIDEWALKS - OPTION 1**

PLAN NO: **PLN-J**

# SUGGESTED SHRUB SPECIES FOR PRIVACY EXTENSION

BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS	SPACING
<b>DECIDUOUS SHRUBS</b>							
EUNYMIUS ALATA 'COMPACTUS'	DWARF BURNING BUSH	---	600 mm	---	POTTED	NURSERY GRWN	500 mm
LIGUSTRUM AMURENSE	AMUR PRIVET	---	600 mm	---	POTTED	NURSERY GRWN	500 mm
RIBES ALPINUM	ALPINE CURRANT	---	600 mm	---	POTTED	NURSERY GRWN	500 mm
RHUS AROMATICA	FRAGRANT SUMAC	---	600 mm	---	POTTED	NURSERY GRWN	500 mm
SYRINGA MEYERI 'PALIBIN	DWARF LILAC	---	600 mm	---	POTTED	NURSERY GRWN	500 mm
SPIREA X BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	---	600 mm	---	POTTED	NURSERY GRWN	500 mm



**NOTE:**  
 THE FENCE IS TO BE SET ENTIRELY ON PRIVATE PROPERTY.  
 THE FENCE RETURN IS TO BE AT A RIGHT ANGLE TO THE STREET  
 LINE OR BUILDING FACE WHEREVER POSSIBLE. IN ALL CASES  
 THE INTERIOR ANGLE OF THE FENCE RETURN IS TO BE 90°  
 OR GREATER.  
 THE ACTUAL LOCATION OF FENCE RETURNS AND ASSOCIATED  
 PLANTINGS MAY BE ADJUSTED ON SITE, DEPENDING ON HOUSE  
 ORIENTATION, DESIGN AND OTHER RELEVANT CONSIDERATION.  
 FINAL FENCE RETURN LOCATIONS WILL BE DETERMINED BY THE  
 LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR  
 TO INSTALLATION.

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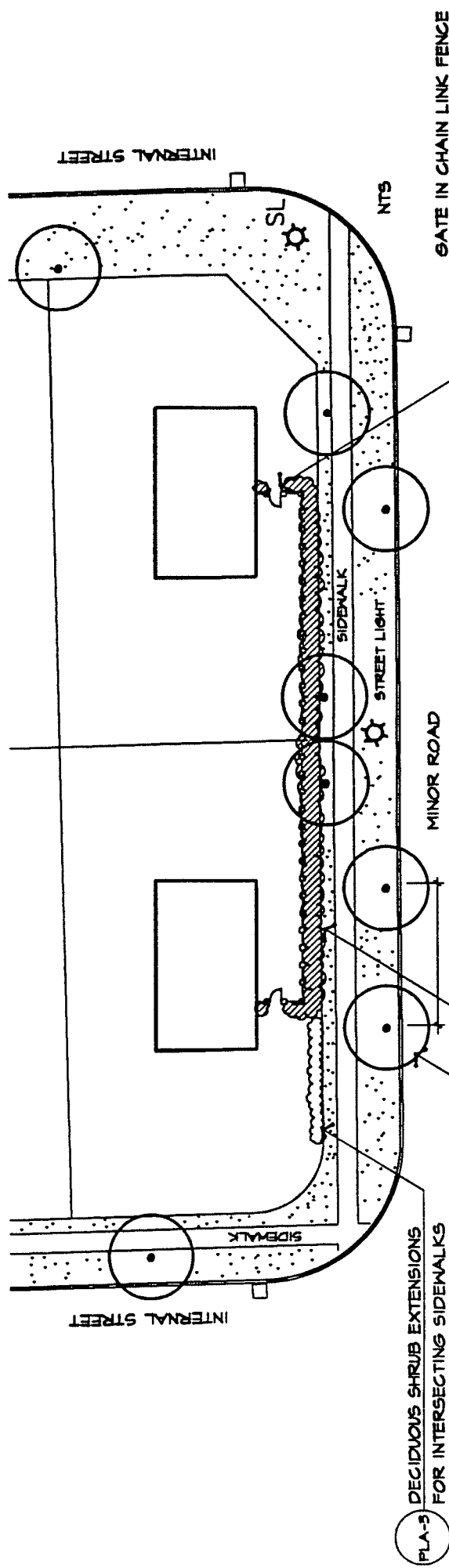
**NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES**

DRAWING TITLE: **CORNER LOT FENCE FOR INTERNAL STREETS  
WITH SIDEWALKS - OPTION 2**

PLAN NO: **PLN-K**

# SUGGESTED SHRUB SPECIES FOR PRIVACY EXTENSION

BOTANICAL NAME	COMMON NAME	CALIPER	HEIGHT	SPREAD	ROOT	REMARKS	SPACING
DECIDUOUS SHRUBS							
EUONYMUS ALATA 'COMPACTUS'	DWARF BURNING BUSH	----	600 mm	----	POTTED	NURSERY GRAN	500 mm
LIGUSTRUM AMURENSE	AMUR PRIVET	----	600 mm	----	POTTED	NURSERY GRAN	500 mm
RIBES ALPINUM	ALPINE CURRANT	----	600 mm	----	POTTED	NURSERY GRAN	500 mm
RHUS AROMATICA	FRAGRANT SUMAC	----	600 mm	----	POTTED	NURSERY GRAN	500 mm
SYRINGA MEYERI 'PALIBIN'	DWARF LILAC	----	600 mm	----	POTTED	NURSERY GRAN	500 mm
SPIREA X BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	----	600 mm	----	POTTED	NURSERY GRAN	500 mm



**NOTE 1**

THIS OPTION IS NOT TO BE SELECTED FOR TOWNHOUSE DEVELOPMENTS, DUE TO SMALLER REAR YARDS.

**NOTE 2**

THE FENCE IS TO BE SET ENTIRELY ON PRIVATE PROPERTY. THE FENCE RETURN IS TO BE AT A RIGHT ANGLE TO THE STREET LINE OR BUILDING FACE WHEREVER POSSIBLE. IN ALL CASES, THE INTERIOR ANGLE OF THE FENCE RETURN IS TO BE 90° OR GREATER. THE ACTUAL LOCATION OF FENCE RETURNS AND ASSOCIATED PLANTINGS MAY BE ADJUSTED ON SITE, DEPENDING ON HOUSE ORIENTATION, DESIGN AND OTHER RELEVANT CONSIDERATIONS. FINAL FENCE RETURN LOCATIONS WILL BE DETERMINED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE TOWN PRIOR TO INSTALLATION.

## NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE GUIDELINES

DRAWING TITLE: **CORNER LOT HEDGE FOR INTERNAL STREETS WITH SIDEWALKS - OPTION 4**

PLAN NO:

PLN-M



THE CORPORATION OF THE TOWN OF CALEDON

## **3.0 Standards and Guidelines for Naturalization Areas**

### **3.1 General Naturalization Standards**

Open-space blocks, areas in the rear of lots backing onto conservation lands, as well as the land surrounding the stormwater management pond are to be naturalized. This entails planting native grasses, shrubs, and trees so that there is a blending with existing natural areas. A detailed listing of native flora is available in a document entitled the *Distribution and Status of the Vascular Plants of Central Region* [sic], Ontario Ministry of Natural Resources, by J.L. Riley (December, 1989). This publication is available from the Ontario Ministry of Natural Resources, Parks and Recreational Areas Section, Central Region, in Richmond Hill.

The majority of naturalization planting may be installed at a small size and, where applicable, as bare-root stock. It is expected, however, that planting be somewhat dense—similar to a reforestation program—both to get good coverage per dollar invested and to allow for 10 percent of plant loss over the first few winters.

#### **3.1.1 Notes for Naturalization Submission Drawings**

The following layout note is to be included on the submission drawings for all areas to be naturalized:

##### **NOTE 1**

All plantings and hard landscape features are to be laid out on site by the Landscape Architect to the satisfaction of the Town of Caledon prior to installation. Any deviations from the approved landscape plans require prior Town approval.

#### **3.1.2 List of Details and Specifications for Naturalization Areas**

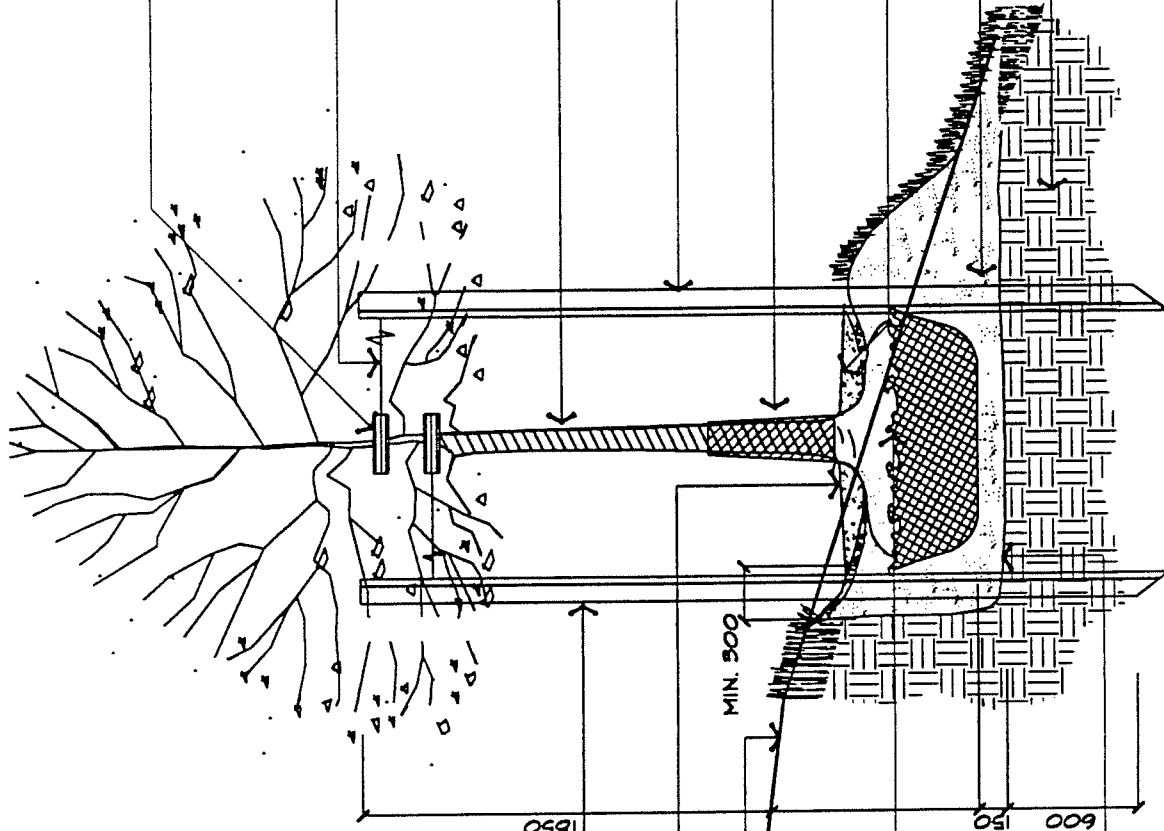
The standard details and specifications for planting areas to be naturalized are as follows:

- Page 9     Deciduous Tree Planting (PLA-1) (repeated from Streetscapes Section 2.1.2)
- Page 10    Coniferous Tree Planting (PLA-2) (repeated from Streetscapes Section 2.1.2)
- Page 11    Shrub Planting (PLA-3) (repeated from Streetscapes Section 2.1.2)
- Page 12    Cedar Hedge Planting with Chain Link Fence (PLA-4) (repeated from Streetscapes Section 2.1.2)

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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- Page 13 Chain Link Fence (FEN-1) (repeated from Streetscapes Section 2.1.2)
- Page 20 Tree Preservation (PRE-1) (repeated from Streetscapes Section 2.2.2)
- Page 37 Deciduous Tree on Slope Planting (PLA-6)
- Page 38 Coniferous Tree on Slope Planting (PLA-7)
- Page 39 Shrub or Coniferous Seedling (Potted or Bare-root) on Slope Planting (PLA-8)
- Page 40 Specifications for Naturalization – Part 1 (SPE-2a)
- Page 41 Specifications for Naturalization – Part 2 (SPE-2b)
- Page 42 Specifications for Naturalization – Part 3 (SPE-2c)



MILITPROOF IN NURSERY PRIOR TO DELIVERY

PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF TREE. DO NOT TRIM LEADER BRANCH.

SET TREE STAKES JUST INSIDE TREE PIT AS SHOWN

MAINTAIN ORIGINAL GRADE OF TREE BASE AFTER PLANTING OR SLIGHTLY HIGHER TO SUIT SOIL CONDITIONS

FINISHED GRADE

CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL, INCLUDING ALL TIE ROPE AND WIRE

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE TREE PIT PRIOR TO PLANTING

12mm DIAMETER BLACK RUBBER HOSE LOOPED ABOVE FIRST STRONG BRANCH

12-GAUGE GALVANIZED WIRE ENCLOSED IN 12mm DIAMETER RUBBER HOSE SECURED AROUND TREE TRUNK. PROVIDE WIRE TURNBUCKLE FOR TENSION ADJUSTMENT.

IF CONTRACTOR ELECTS TO WRAP TREE TRUNK, TREE TO BE WRAPPED WITH APPROVED TREE WRAP AFTER VISUAL INSPECTION BY LANDSCAPE ARCHITECT. WRAP TO EXTEND FROM TOP OF ROOTBALL TO ABOVE GUTMIRE HOSE LOCATION. PROVIDE MIN. 10mm OVERLAP. WRAP TO BE REMOVED PRIOR TO FINAL INSPECTION.

TWO 2400mm LONG 50mm SQUARE PRESSURE TREATED WOOD STAKES SECURED INTO GROUND AS SHOWN

RODENT GUARD MANDATORY DURING 3-YEAR MAINTENANCE PERIOD

CONSTRUCT SOIL SAUCER 100mm DEEP, 600mm DIA. AROUND TREE BASE AND COVER WITH 75mm APPROVED SHREDED WOOD MULCH

SPECIFIED SOIL MIXTURE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT

COMPACTED SUBGRADE

NTS.

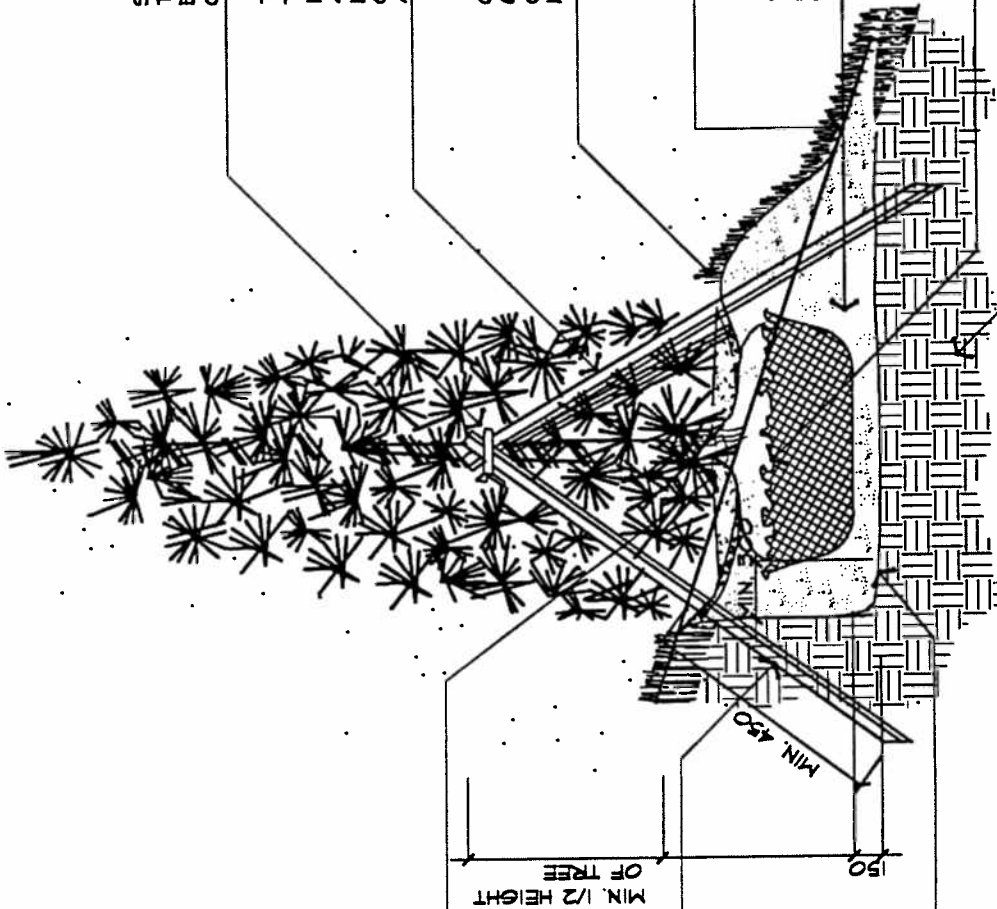
NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DRAWING TITLE: DECIDUOUS TREE ON SLOPE PLANTING (80mm & LESS)

PLAN NO:

PLA-6





SECURE STAKES TO MAIN TREE TRUNK WITH BURLAP ROPE. ENSURE THAT THE STAKES DO NOT CONTACT EXPOSED TREE BARK

THREE 50mm SQUARE PRESSURE TREATED WOOD STAKES SECURED INTO GROUND A MINIMUM OF 450mm AS SHOWN. LENGTH OF STAKES AND HEIGHT OF CROSSINGS TO BE ADJUSTED TO ACCOMMODATE TREE SIZE

CONSTRUCT SOIL SAUCER 100mm DEEP, 600mm DIA. AROUND TREE BASE AND COVER WITH 75mm APPROVED SHREDDED WOOD MULCH

FINISHED GRADE

SPECIFIED SOIL MIXTURE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT

CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL, INCLUDING ALL TIE ROPE AND WIRE

COMPACTED SUBGRADE

TREE SHALL BE MEASURED TO HEIGHT OF LAST YEARS GROWTH


PRUNING SHALL BE LIMITED TO DEAD OR BROKEN BRANCHES AFTER PLANTING. MAINTAIN ORIGINAL SHAPE OF TREE. DO NOT TRIM LEADER BRANCH.

MAINTAIN ORIGINAL GRADE OF TREE BASE AFTER PLANTING OR SLIGHTLY HIGHER TO SUIT SITE SOIL CONDITIONS

SET TREE STAKES JUST INSIDE TREE PIT, AS SHOWN. TREE PIT TO EXTEND BEYOND THE MAXIMUM REACH OF TREE BRANCHES.

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE TREE PIT PRIOR TO PLANTING

NTS

 <p>THE CORPORATION OF THE TOWN OF CALEDON</p>	<p>NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS</p>	
	<p>DRAWING TITLE: CONIFEROUS TREE ON SLOPE PLANTING</p>	<p>PLAN NO: PLA-7</p>

HEIGHT SHALL BE MEASURED FROM FINISHED GRADE TO UPPER MAIN MASS OF SHRUB BRANCHES

SHRUBS PLANTED IN GROUPS SHALL BE SET IN CONTIGUOUS BEDS AS SHOWN ON PLAN

MATCH TO EXISTING GRADE

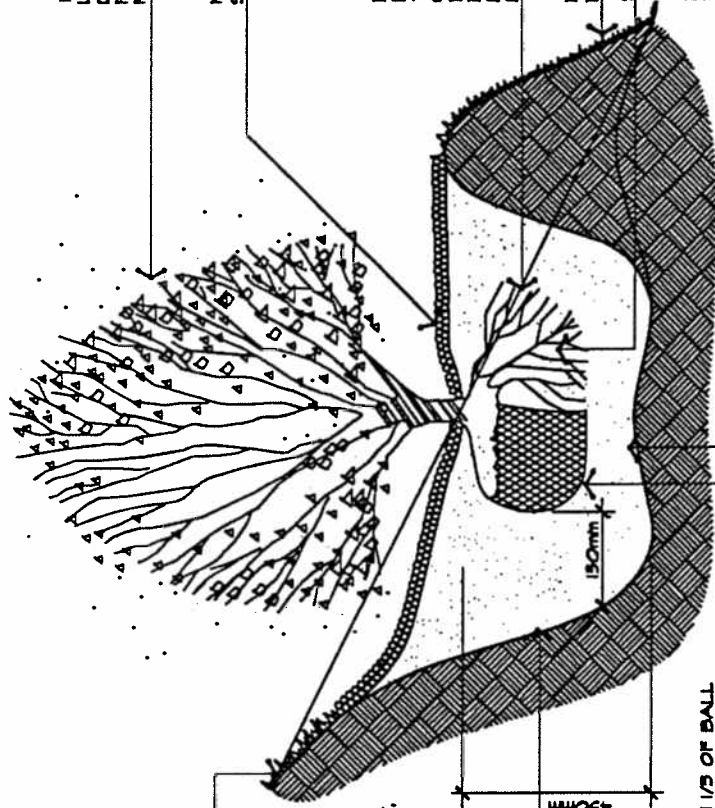
SET PLANT 30mm HIGHER THAN ADJACENT FINISHED GRADE TO ALLOW FOR SETTLEMENT

PLANTING METHOD ILLUSTRATED APPLIES EQUALLY TO BARE ROOT, POTTED OR B&B NURSERY STOCK

SCARIFY, LOOSEN, IRRIGATE AND FERTILIZE THE INSIDE OF THE SHRUB BED PRIOR TO PLANTING

CUT AND REMOVE 1 BURLAP FROM 1/3 OF BALL AS SHOWN. IF ROOT BALL IS POTTED, REMOVE POT COMPLETELY BEFORE PLANTING

SPECIFIED SOIL MIXTURE IS TO BE FIRMLY COMPACTED TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT



PRUNING, FOR DECIDUOUS SHRUBS, PRUNE LARGE BRANCHES BY 1/3 TO REMOVE DAMAGED OR OBJECTIONABLE BRANCHES FOLLOWING PROPER HORTICULTURAL PRACTICE. DO NOT PRUNE LEADERS.

MULCHING, 30mm OF APPROVED SHREDDED WOOD MULCH

BARE ROOT, (B.R. IN PLANT LIST) SET PLANT SLIGHTLY HIGHER THAN ORIGINAL DEPTH AND SPREAD CUT ROOTS OVER A COMPACTED MOUND OF SITE TOPSOIL. GENTLY BACKFILL WITH SOIL MIX IN LAYERS, WORKING SITE SOIL BETWEEN ROOTS. WATER WELL UPON COMPLETION.

EARTH SAUCER TO RETAIN MOISTURE. EARTH SAUCER TO BE COMPACTED. SHRUB BASE TO BE SET LEVEL.

EXCAVATE SHRUB BED TO ACCOMMODATE NUMBER OF SHRUBS INDICATED ON DRAWING. REMOVE ANY SUB SOIL OR RUBBISH OFF SITE UNLESS OTHERWISE DIRECTED. SPACE SHRUBS AS INDICATED IN PLANT LIST.

FOR RODENT PROTECTION SPRAY DECIDUOUS SHRUBS WITH SKOOT, OR EQUIVALENT, EACH FALL DURING 3-YEAR MAINTENANCE PERIOD.

NTS



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# NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE DETAILS

DRAWING TITLE: SHRUB AND CONIFEROUS SEEDLING (POTTED OR BARE-ROOT) ON SLOPE PLANTING

DETAIL NO:

PLA-8

ISSUED BY:

# SPECIFICATIONS

## A. GENERAL

- i) These Specifications are to be read in conjunction with the General Conditions of the contract, as prepared by and available at the offices of Alexander Budrevics and Associates Ltd.
- ii) Prior to commencing work, the Contractor shall:
  1. Become familiar with the plans, details, and specifications of this project,
  2. Visit the site to ascertain and take account of existing conditions and any deviations from the plans in work by others, and
  3. Finalize all design alternatives in consultation with the Landscape Architect.
- iii) Prior to excavating, the Contractor shall verify the location of all underground utilities. In the event of a conflict between a proposed tree location and an underground service, the exact location of the tree shall be determined on site by the Landscape Architect and/or the Town's representative.
- iv) The Contractor shall, at his or her own expense, repair any damage to existing utilities, structures, facilities, etc. done in the performance of his work.
- v) All site work shall conform to the *Canadian National Master Construction Specifications*, a copy of which can be obtained from Construction Specifications Canada, 100 Lombard St., Suite 200, Toronto, Ontario M5C 1M3; Tel. (416) 777-2198; Fax (416) 777-2197. It is the responsibility of the Contractor to be thoroughly familiar with these specifications and their implications for this project.

## B. PLANT MATERIAL

- i) All plants shall be installed true to specified names, sizes, grades, etc., and shall conform to the standards of the Canadian Nursery Trades Association.
- ii) All plants shall be nursery grown.
- iii) In the event of a discrepancy in plant quantity between the Planting Plan and the Plant List, the Planting Plan shall govern.
- iv) The Contractor shall make plants available for inspection by the Landscape Architect and/or the Town's representative prior to shipping to the site. This does not limit the right of the Landscape Architect and/or the Town's representative to later reject plant material that is of poor quality, damaged during shipping or installation, performing poorly while the guarantee period is still in effect, or otherwise does not conform to the specifications.
- v) Plant substitutions must be approved in writing by the Town and the Landscape Architect prior to delivery of the material to the site.
- vi) The Contractor shall use standard industry methods for planting trees and shrubs. Trees shall be turned to give the best appearance; they shall also be guyed or staked immediately after planting and as detailed on the drawings.

specifications continued on next panel . . .



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NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE:

SPECIFICATIONS FOR NATURALIZATION - PART I

DETAIL NO.:

SPE-2c

# SPECIFICATIONS

continued from previous panel

## C. BED PREPARATION

- i) The Contractor shall scarify the sides and bottom of excavated tree pits and shrub beds prior to backfilling. Due to the heavy clay soil in the Bolton area, tree and planting beds shall be backfilled to the specified depths with:
  - 2 Parts "triple mix," delivered to the site, to be well-mixed with . . .
  - 1 Part local topsoil (viz., subdivision topsoil that has been removed and stockpiled.) If topsoil is unavailable, topsoil with clay content shall be imported and mixed with triple mix.
- ii) Tree pits shall be constructed with saucers and mulch as detailed.

## D. TOPSOIL AND FINE GRADING

- i) The Contractor shall place 100mm of rich topsoil on approved subgrades. Topsoil shall be imported when insufficient amounts are available on site.
- ii) Minor grade deficiencies and irregularities shall be eliminated prior to seeding.

## E. HYDROSEEDING

- i) The Contractor shall apply 2280 kg/ha fibre mulch over the newly seeded area to form a uniform, blotter-like ground cover that allows the absorption and percolation of water.
- ii) The area seeded in a single day shall not exceed the area that can be mulched that same day.
- iii) The Contractor shall apply the specified seed mixture using accepted industry methods for hydroseeding and at rates recommended by the seed supplier. The type and rate of fertilizer application shall be as recommended in the topsoil test report for the particular area being seeded.

## F. PRELIMINARY ACCEPTANCE

- i) When landscaping is completed, the Landscape Architect shall submit a Certificate of Completion to the Town of Caledon certifying that all landscape works have been completed in accordance with the approved plans.
- ii) Upon receipt of the Certificate of Completion, the Planning Department will conduct a preliminary inspection of the site and, provided that the works are in satisfactory condition, will grant preliminary acceptance of the landscaping.

specifications continued on next panel . . .



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NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE:

SPECIFICATIONS FOR NATURALIZATION - PART 2

DETAIL NO.:

SPE-21

# SPECIFICATIONS

continued from previous panel

## G. GUARANTEE

i) All naturalized landscaping shall carry a guarantee/maintenance of **THREE (3) years**, commencing from the date that preliminary acceptance is granted by the Municipality. The Owner shall provide the Municipality with a copy of the maintenance agreement between the Owner and the Contractor. In each of the next three summers, the Landscape Architect shall conduct an inspection and prepare a report, recommending the replacements and/or works needed to achieve the intent of the approved landscape plan. The Landscape Architect shall file a copy of the report with the Municipality. Replacement plant material shall be guaranteed for a period of time determined by the Municipality.

ii) All other landscape work performed under this contract shall be fully guaranteed for **TWO (2) years**.

## H. MAINTENANCE

i) The maintenance of all landscape installations throughout the guarantee period shall include:

- 1) applying appropriate fertilizer to promote growth,
- 2) pruning dead or diseased tissue,
- 3) removing dead plant material,
- 4) replacing dead coniferous naturalization species to maintain a minimum live-stocking standard of 90%,
- 5) replacing dead deciduous and shrub naturalization species to maintain a minimum live-stocking standard of 90%, and
- 6) suppressing weed growth around newly planted trees and shrubs by adding more mulch and/or removing weeds by hand, *not* by cutting the weeds down with power trimmers.

## I. FINAL ACCEPTANCE

- i) At the end of the guarantee period, the Contractor shall remove all tree stakes, rodent guards, and bark wrap, and shall add extra mulch where necessary.
- ii) When these final tasks have been completed, all landscape work will be inspected by the Municipality and, if satisfied that all work has been completed in accordance with the approved landscape plans, will issue a Certificate of Final Acceptance and release any outstanding funds.

end of specifications



THE CORPORATION  
OF THE  
TOWN OF CALEDON

NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE:

**SPECIFICATIONS FOR NATURALIZATION - PART 3**

DETAIL NO:

**SPE-2**

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

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### **3.2 Open Space Blocks, Edge Treatments, and Park Fencing**

To the south and the east, SECONDARY PLAN AREA B is bounded by the valley lands of Cold Creek, a tributary of the Humber River. Edge treatments in the development are to blend into the existing natural vegetation. Reference to the existing vegetation inventory and analysis will assist the developer and the developer's landscape architect in determining the particular native species to be used in the new planting.

#### **3.2.1 The Northeast Slope**

The open space block along the northeast slope should be designed to reflect the sparse vegetation of the adjacent land. The existing species of trees, shrubs, and grasses should be repeated in the new naturalization planting.

#### **3.2.2 The Southeast Edge Treatment**

The lots backing onto the southeast edge of SECONDARY PLAN AREA B run into an existing stand of pine tree reforestation. It is recommended that chain link fencing be installed along the rear property line of these lots. This will place the fencing just *inside* the forest. At least one row of trees should be allowed to remain standing on the homeowner's side of the chain link fence.

#### **3.2.3 Bolton Camp Edge Treatment**

Along the boundary where residential lots back onto Bolton Camp, a restorative buffer strip will be required. This strip, ranging in width from 3m to 5m, is to be densely planted with trees and understory vegetation (woodland perennials, shrubs, seedlings, etc.), approximating the habitat that was removed during construction.

Where the width of the side yard does not permit the creation of a 3m to 5m buffer strip (as is the case with Lots 82 and 83 at the south end of Crestridge Drive), the developer shall install a five-foot chain link fence, with black, vinyl-coated mesh (see FEN-1, p. 13) and shall plant a cedar hedge the length of the side yards (see PLA-4, p. 12).

#### **3.2.4 Park Fencing**

Developers are required to install fencing between parkland and private lots, and to do so prior to, or at least no later than, the time of occupancy. Park fencing shall meet either (1) the Town standard for park fencing, which is a five-foot chain link fence, with black, vinyl-coated mesh (see FEN-1, p. 13) or, if the developer wishes to upgrade to a wooden fence, (2) the Town's standard street fence (see FEN-2, p. 14).

Since the provision of park fencing is part of the park development budget, chain link

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fencing is a Development Charge item. Developers installing a standard wooden privacy fence, however, will be reimbursed by the Town only for the value of an equivalent length of chain link fencing; any extra costs in upgrading to a wooden fence must be absorbed by the developer.

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### **3.3 The Wet Stormwater Management Pond**

In the southeast corner of SECONDARY PLAN AREA B, a “wet” stormwater management pond will need to be constructed (see Map No. 2, p. 5). At the design stage, the developer’s the engineers should work with the landscape architect in determining the shape of the pond in order to ensure a “natural” configuration suited to the site.

#### **3.3.1 Planting Strategy\***

A planting strategy is required for any wet facility to provide shade, a pleasing appearance, a safe environment, and enhanced pollutant removal. Native species should be used in all planting strategies. The planting strategy can be divided into five zones based on the normal depth of water and soil moisture regime (frequency of wetting/inundation):

1. deep water areas (submerged vegetation)
2. shallow water areas (emergent vegetation)
3. extended detention or shoreline fringe areas
4. flood fringe areas (if the facility is a combined quality/quantity facility)
5. upland areas

#### **3.3.2 Deep Areas**

Wet ponds are comprised of mostly deep-water areas. Plants in these areas are restricted to submerged vegetation. This type of vegetation is difficult to establish from seeds or rhizomes. Pondweeds, however, can be planted in water depths of 2m to 3m. Other submerged species (listed in Appendix A) can be planted in water 1m to 2m deep. There should be some amount of species mixing in plantings where the water is 1m to 3m deep. Plants in both deep and shallow water are able to establish themselves in accordance with water level fluctuations and critical depths for the penetration of light.

#### **3.3.3 Shallow Areas**

Shallow-water areas are defined as portions of the permanent pool where the water is less than 0.5m deep. In wet ponds, shallow areas are usually restricted to the perimeter of the pond. The selection of vegetation for these areas should be based on the following considerations:

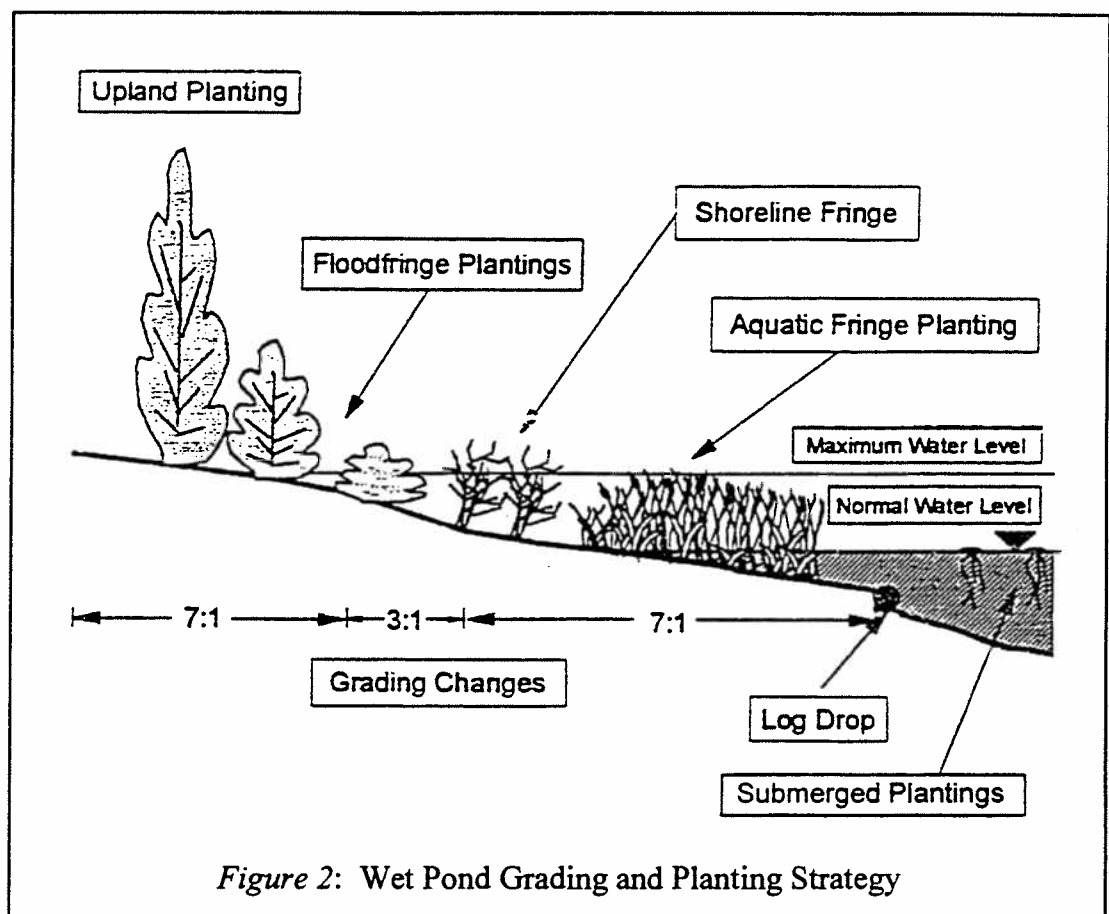
- nutrient uptake
- stormwater filtration
- safety
- aesthetics

\* The remainder of Section 3.0 is an adaptation of information found in *Stormwater Management Practices: Planning and Design Manual*, Ontario Ministry of Environment and Energy (June, 1994), pp. 77–80, and has been used with permission from the Ministry.

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Plantings in this zone provide ancillary benefits, such as promoting sedimentation by reducing flow velocities and securing bottom sediments by preventing their re-suspension.

This zone includes both submerged and emergent vegetation. Typical species are listed in Appendix A. The planting of submerged species should start near the shoreline at a water depth of 0.5m. The majority of submerged species should be planted where the depth of water is usually between 0.3m and 0.5m. Emergents should be planted where the water is less than 0.3m deep. Species such as sedges, reed grass, and arrowhead should be planted at the water's edge. The slope of the bottom of the pond in shallow areas should be gentle in order to maximize the surface available for plantings.



From *Stormwater Management Practices Planning and Design Manual*, Ontario Ministry of Environment and Energy (June, 1994) p. 79.

### 3.3.4 Shoreline Fringe Areas

Shoreline fringe areas are those portions of the pond subject to frequent wetting from the addition of fresh stormwater. These areas can be delineated by the land between the

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permanent pool and the high water mark (extended detention storage) used for water quality and erosion control. Shoreline fringe areas have higher soil moisture because of the wetting that occurs after storms and because of the influence of the pool itself in dry weather.

The planting strategy for the shoreline fringe area of the pond is similar to that for the shallow, marshy areas. The growing conditions, however, are harsher due to the wetting/drying cycle the plants experience. Consequently, the shoreline fringe area might need special attention during both the design and construction phases to ensure the viability of new plants.

Practical plant material to install in the shoreline fringe area includes hard hydric grasses and shrubs. A list of common species is found in Appendix A. A grass mixture should be sown from the water's edge of the permanent pool to the limit of extended detention. The best time of year to do this is in the spring, although it can also be done in the fall. Shrubs in the extended detention zone should only have their lower branches inundated from storms of a magnitude for which the fringe area is designed. At least two shrub species should be planted to spread the risk of shrubs as a whole failing to thrive in the fringe area.

Given the harsh growing conditions in this zone, it could take a considerable time to establish fringe area vegetation, and periodic replanting might be necessary.

### **3.3.5 Flood Fringe Areas**

If the wet pond is used to control peak flow rates during storms of infrequent magnitude (2-year to 100-year storms), a zone of infrequent inundation will be created. This is the flood fringe area. The influence of the permanent pool and frequent storms is less pronounced for this area. Planting in the flood fringe can include a range of grass, herb, shrub, and tree species. A commercially available grass-and-herb seed mixture suitable for slope stabilization is recommended. Suggested shrub and tree species are noted in Appendix A. The grass-and-herb seed mixture can be sown in the spring or fall, but the spring is preferable. At least three species of shrubs and three species of trees should be planted. An attempt should be made to blend planting near the upland zone into the upland zone planting. In addition, tall-growing shrubs and shade trees should be added to the margins of the south and west sides of the pond to provide pockets of cool, aquatic habitat once the plant material has matured.

### **3.3.6 Upland Areas**

Upland areas are the landscaped regions provided as aesthetic amenities around the pond. Upland planting should also be designed to restrict access to steep areas or inlet/outlet locations. A mixture of five plant species should be planted in a random pattern to

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prevent the establishment of patches of monoculture. A list of viable species is shown in Appendix A. The planting design should call for a large number of young plant stocks, tree whips, and seedlings. Some larger trees and shrubs should also be planted, to provide immediate wind protection, shade, and safety. The selection of plant material should take into account:

- the topography and surface drainage
- soil conditions
- adjacent plant communities
- the potential for on-site transplanting
- the availability of nursery stock

A naturalized landscape approach should be used, one that requires no maintenance and is sustainable over the long term. Upland planting should have a minimum 3m buffer strip between it and the design's high-water level. The massing of trees and shrubs should be augmented by designated regeneration areas provided for long-term success.

As in the case of flood fringe areas, a commercially available grass-and-herb mixture should be specified for upland areas.

### **3.1.7 List of Specifications Particular to the Wet Stormwater Pond**

The specifications particular to stormwater planting are as follows:

Page 49    Specifications for Wet Stormwater Management Pond Planting (SPE-3)

# SPECIFICATIONS\*

## A. GENERAL

- i) Upland and flood fringe plantings are generally stable and should not need much maintenance or re-establishment. Shoreline fringe areas are harder to establish because of frequent wetting and drying. It is expected that this vegetation might require some re-establishment during the Contractor's three-year maintenance period. Therefore, the Contractor should include a contingency for the re-establishment of aquatic plantings and some shoreline fringe plantings during the maintenance period.
- ii) Planting methods can be separated into three main categories, based on three principal habitat zones in the pond system: (1) uplands and flood fringe, (2) shoreline fringe, and (3) shallow and deep water.

## B. UPLAND / FLOOD FRINGE

- i) Planting shall include ground cover (grasses and herbs) and woody shrubs and trees.
- ii) If possible, planting shall be done in the spring, after water levels have stabilized.
- iii) **Ground cover** shall be installed either by hydroseeding or by using a custom seed mix in a nutrient-rich medium impregnated in a geojute, biodegradable blanket.
- iv) **Shrubs and trees** shall be planted manually, as per the applicable details. If geojute is used, openings in the material shall be made for each plant.

\* These specifications are an adaptation of recommendations found in *Stormwater Management Practices: Planning and Design Manual*, published by the Ontario Ministry of Environment and Energy (June, 1994).

## C. SHORELINE FRINGE

- i) Shoreline fringe plantings shall be carried out in mid-May to early June, after water levels have stabilized. Geojute mat shall be used for seed mixture protection (and the protection of a soil nutrient medium, if required) in this zone of water level fluctuation. Shrubs and trees shall be planted through openings cut in the mat.

## D. SHALLOW WATER (<0.5m) & DEEP WATER (>0.5m)

- i) **Shallow water (<0.5m)** shall be planted with emergent plants where the water is less than 0.3m deep, and with a mix of emergent and submergent vegetation in depths between 0.3m and 0.5m. The Contractor should note that the establishment of plantings in this zone will likely require special work and monitoring, both in the short and long term. **Deep water (>0.5m)** shall be planted solely with submergent vegetation.
- ii) **Emergent vegetation** shall be planted by hand. Plants shall consist of young shoots (sprigs and/or plugs), and shall be at least 10cm tall. Planting shall be done in late May to early June.
- iii) **Submerged, rooted plants** (including pondweeds) shall, if planted in late spring to early summer, be planted as mature vegetation. Plantings in early spring (or fall) shall be vegetative propagules (such as turions or rhizome plugs), which can germinate in the spring or overwinter and begin growing the following spring.
- iv) **Water lilies** shall be planted either directly into the substrate or pre-planted in biodegradable pots and then installed in the substrate.
- v) **Coontail** is a floating macrophyte that can be put in the pond at any time in the growing season.



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NORTH EAST BOLTON SECONDARY PLAN AREA B: LANDSCAPE SPECS

DRAWING TITLE: SPECIFICATIONS FOR WET STORMWATER MANAGEMENT  
POND PLANTING

DETAIL NO:

SPE-3

## **4.0 Approvals and Implementation Procedures**

Developers of SECONDARY PLAN AREA B will need approval of their streetscape and naturalization plans from the Town of Caledon. The Town requires that developers submit drawings and cost estimates for landscape components requiring municipal approvals. This normally means the developer needs to engage a landscape architect.

### **4.1 Approvals**

The streetscape and naturalization plans of SECONDARY PLAN AREA B must conform to terms of these *Landscape Standards and Design Guidelines*. All parks, however, as well as unique development features (such as the neighbourhood entry focus at Columbia Way and Forest Gate Avenue), are not covered by this document. They will be reviewed and approved on a case-by-case basis by the Parks Department.

The developer's submission to the Parks Department for review and approval should consist of (1) streetscape and naturalization construction drawings (minimum scale of 1:500), (2) complete plant lists, (3) applicable details, notes, and specifications, and (4) a completed cost estimate.

Note that before the landscape architect can prepare construction drawings for the streetscape and naturalization areas for the parcel of land owned by the developer, the developer's consulting engineers first must prepare a composite utility plan and a grading plan. The landscape architect will add the streetscape components to the composite utility plan, and the naturalization elements to the grading plan.

Developers are required to display approved plans and/or excerpts from the *Landscape Standards and Design Guidelines* at the sales pavilions of the home builders in the new subdivision.

## **4.2 Implementation Procedures**

Once the infrastructure of the subdivision is in place and a number of houses have been completed, the developer will need to hire both a **landscape contractor** to install the approved landscape components and a **landscape architect** to supervise the installation and perform some ancillary duties.

### **4.2.1 Streetscape Works**

Flow Chart No. 1, Implementation of Streetscapes Designs, summarizes the steps that need to be taken in completing **streetscape** work, while outlining the respective responsibilities of the parties involved (see p. 52).

The process begins with the developer hiring a contractor to install the landscape elements called for in the approved landscape plans. The developer's landscape architect will supervise the work, handle homeowner notification and enquiries, report on progress to the Municipality, and provide the Municipality with as-built drawings. An important part of the landscape architect's duties will be to maintain a Summary Chart documenting the history of each new tree planted in the parcel of land being developed (see p. 54). At the appropriate times, the Municipality will conduct its own inspections for the purposes of issuing a Certificate of Preliminary Acceptance, as well as issuing a Certificate of Final Acceptance and reducing the Letter of Credit at the end of the guarantee period. All streetscape works are to be guaranteed for 2 years.

### **4.2.2 The Landscape Architect and the Homeowner**

In addition to fulfilling a supervisory role for construction, the landscape architect will serve as a liaison between the developer and the contractor, as well as between the developer and the Municipality, to ensure the approved design intent is implemented, to expedite design decisions on site, and to deal with homeowner enquiries and concerns.

The landscape architect will liaise with homeowners when it is time to begin planting and installing fences. This entails notifying homeowners that work is about to commence, answering homeowner enquiries, and resolving homeowner concerns. Modifications to the approved plans may be considered as long as they are acceptable to both the developer and the Town, and provided they satisfy the intent of the *Landscape Standards and Design Guidelines*.

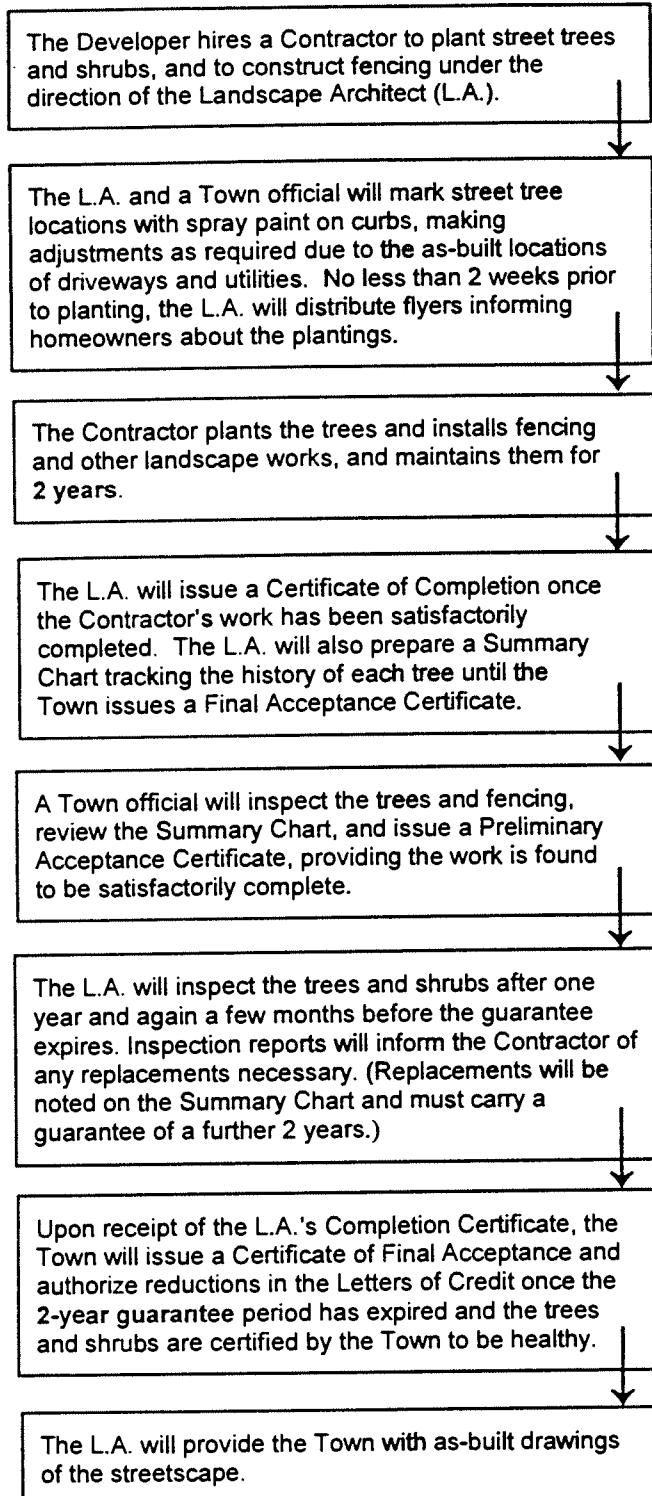
An example of a *Homeowner Notification Flyer* is shown on page 53. The flyer can be adapted for notifying residents of upcoming fence construction. The flyer informs homeowners about the planting (or fencing) program. It also offers the name and telephone number of the landscape architect, who will be able to answer questions and coordinate planting activity.

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**FLOW CHART NO. 1**

**IMPLEMENTATION OF STREETScape DESIGNS**



At the time streetscape designs are approved, the final locations of driveways might not be known. Moreover, the expected locations of some streetlights and above-ground utility boxes could change during construction. Therefore, the number and species of trees might need to be adjusted accordingly, within the approved design intent.

See the example of a *Homeowner Notification Flyer* on page 53.

See the example of a *Summary Chart* on page 54.

The Town conducts preliminary and interim inspections between April 1 and November 30 (weather permitting).

The Landscape Architect's final inspection report will remind the Contractor to (1) remove all stakes, wires, and tree wrap, (2) prune trees, and (3) add mulch and fertilizer in order to obtain final acceptance by the Town.

The Town conducts final inspections while the leaves are still on the trees, between May 15 and October 15 (weather permitting).

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**EXAMPLE OF A HOMEOWNER NOTIFICATION FLYER**

*Date*

**BOULEVARD PLANTING**

Within the next few weeks, **weather permitting**, the Developer of your subdivision will be having street trees and shrubs planted. This is one of the obligations the Developer has to the Town under the subdivision agreement.

These trees and shrubs will be planted in accordance with a municipally approved street tree planting plan. This plan specifies the species and location of the trees. Street lights, "sight triangles" at intersections, the proximity to stop signs, as well as setback requirements from utility boxes and driveways may require on-site adjustments for tree locations.

The Developer has hired a Contractor to plant these trees. All street trees carry a two (2) year guarantee. If the tree dies or becomes sickly during the guarantee period, the Contractor will replace the tree. The Town will inspect all trees before the end of the guarantee period so that unhealthy trees can be identified and replaced prior to the Town granting final acceptance for the trees.

The following is a list of dos and don'ts to help us create a healthy urban forest:

**DO**

- Appreciate the trees.
- Remove grass or weeds from the base of the tree.
- Water the tree thoroughly during summer dry spells.
- Take care not to damage the bark of the tree when trimming around the tree. Cutting the bark can allow insects to adversely affect the tree's health.
- Call the contact person noted below if the tree is sickly or dead.

**DON'T**

- Mound soil around the base of the tree. Piling soil around the tree trunk may stunt its growth.
- Over-water or water when there has been plenty of rain.
- Prune, spray or fertilize the trees.
- Remove dead trees. This will void the guarantee.
- Cut surface roots, dig or tie anything to the tree that can restrict its growth.
- Plant flowers, etc. around the base of the tree as they compete with the developing tree roots for space and nutrients.

Thank you very much for your co-operation.

**The red/orange mark(s) on the curb outside your home indicate(s) the approved location of the tree(s) in the boulevard.**

If you have any questions, or wish to report a dead or dying tree, please call *CONTACT NAME, TITLE*, of *NAME OF LANDSCAPE ARCHITECTURE FIRM*, who is coordinating the planting operations, *PHONE NO.* (After hours or on weekends, you may leave a message at this number.)

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**SOUTHRIDGE SUBDIVISION (PHASE 3, STAGE 1) -- SUMMARY CHART**

Chart revised September 18, 1997

Civic Address	Street	Lot No.	Type(s) of Tree(s)	Date Planted	Notes	Date Replaced	Interim		Final Acceptance
							Preliminary Acceptance	Inspection	
1	Old Hickory Cr.	28	White Ash (Fr) Basswood (Fr)	Fall 1995 July 1996			Dec 7, 1995 Oct 28, 1996		Sept. 16, 1997
			Basswood (Fr)	July 1996			Oct 28, 1996		
			Basswood (Fr)	July 1996			Oct 28, 1996		
			Austrian Pine (Fr)	July 1996			Oct 28, 1996		
			Austrian Pine (Fr)	July 1996			Oct 28, 1996		
			Austrian Pine (Fr)	July 1996			Oct 28, 1996		
2	Old Hickory Cr.	12	Crimson King Maple (Fr) Crimson King Maple (Fr)	Fall 1995 Fall 1995			Dec 7, 1995 Dec 7, 1995		Sept. 16, 1997 Sept. 16, 1997
			Crimson King Maple (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997
			Crimson King Maple (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997
			Crimson King Maple (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997
3	Old Hickory Cr.	27	White Ash (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997
4	Old Hickory Cr.	13	Glenleven Linden (Fr)	Fall 1995			Dec 7, 1995	Prune, fertilize & warranty to '98	
5	Old Hickory Cr.	26	White Ash (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997
6	Old Hickory Cr.	14	Glenleven Linden (Fr)	Fall 1995		July 1996	Oct 28, 1996		
7	Old Hickory Cr.	25	English Oak (Fr) Colorado Spruce (Fr)	Fall 1995 Fall 1995		July 1996	Oct 28, 1996 Dec 7, 1995		Sept. 16, 1997
8	Old Hickory Cr.	15	Glenleven Linden (Fr)	Fall 1995			Dec 7, 1995	Prune, fertilize & warranty to '98	
9	Old Hickory Cr.	24	English Oak (Fr)	Fall 1995		July 1996	Oct 28, 1996		
10	Old Hickory Cr.	16	Glenleven Linden (Fr)	Fall 1995			Dec 7, 1995	Prune, fertilize & warranty to '98	
11	Old Hickory Cr.	23	English Oak (Fr)	Fall 1995		July 1996	Oct 28, 1996		
12	Old Hickory Cr.	17	English Oak (Fr)	Fall 1995		July 1996	Oct 28, 1996		
13	Old Hickory Cr.	22	Crimson King Maple (Fr)	Fall 1995			Dec 7, 1995	Remove stake & wrap	Sept. 16, 1997
14	Old Hickory Cr.	18	English Oak (Fr)	Fall 1995		July 1996	Oct 28, 1996		
15	Old Hickory Cr.	21			no room for tree				Oct 28, 1996
16	Old Hickory Cr.	19	English Oak (Fr)	Fall 1995		July 1996	Oct 28, 1996		
17	Old Hickory Cr.	20	Crimson King Maple (Fr)	Fall 1995			Dec 7, 1995		Sept. 16, 1997

**EXAMPLE OF A  
SUMMARY CHART  
OF STREET TREE HISTORY**

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#### **4.2.3 Naturalization Works**

Flow Chart No. 2, **Implementation of Naturalization Designs**, illustrates the process and describes the responsibilities entailed in completing the **naturalization** of open-space blocks and the stormwater pond. (See p. 57.)

As with streetscape works, the process begins with the developer hiring a contractor to install the landscape elements called for in the approved landscape plans. The developer's landscape architect will supervise the work and report on progress to the Municipality. At the appropriate times, the Municipality will conduct its own inspections for the purposes of issuing a Certificate of Preliminary Acceptance, as well as a Certificate of Final Acceptance and reducing the Letter of Credit at the end of the guarantee period. All naturalization works are to be guaranteed for **3 years**. Wherever naturalization areas adjoin lands administered by the Toronto Region Conservation authority, a representative of the Authority may periodically inspect the landscape works and make recommendations to the landscape architect and/or the Municipality.

#### **4.2.4 Maintenance Agreement For Naturalization Areas**

Carrying out a maintenance program for the first three years after planting the naturalization areas will significantly reduce the mortality rate of the trees, shrubs, grasses etc. and help to establish healthy vegetative cover.

**At the time of planting**, the planting details and specifications should be followed faithfully. This means, among other things, the proper transportation and handling of plant material, the use of fertile planting soil, the proper staking of trees, and the proper installation of rodent protection.

**Maintenance** shall be governed by the three-year maintenance contract for naturalization areas the developer has with the contractor, requiring the contractor to:

- 1) apply appropriate fertilizer to promote growth,
- 2) prune dead or diseased tissue,
- 3) remove dead plant material,
- 4) replace dead coniferous naturalization species to maintain a minimum live-stocking standard of 90%,
- 5) replace dead deciduous and shrub naturalization species to maintain a minimum live-stocking standard of 90%, and
- 6) suppress weed growth around new trees and shrubs by adding mulch and/or removing weeds by hand. (Weeds *shall not* be cut down with power a trimmer.)

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An **assessment of plant material** is to be carried out annually by the Landscape Architect between mid-July and early September and reported to the developer, the contractor, and the Municipality in the form of a *Naturalization Assessment Report* (see pp. 58–61). Plant vigour can be determined by a visual inspection of the current year's foliage.

The *initial* inspection and assessment will be conducted in the summer following the planting. It will take account of the survival rate and the condition of the plants. It will also include a summary of the maintenance operations performed. Finally, the assessment will propose any additional maintenance measures thought necessary, and recommend where, the following spring, plants need to be replaced or new plants added.

The *second* assessment will be conducted the following year, and will provide similar information to the first.

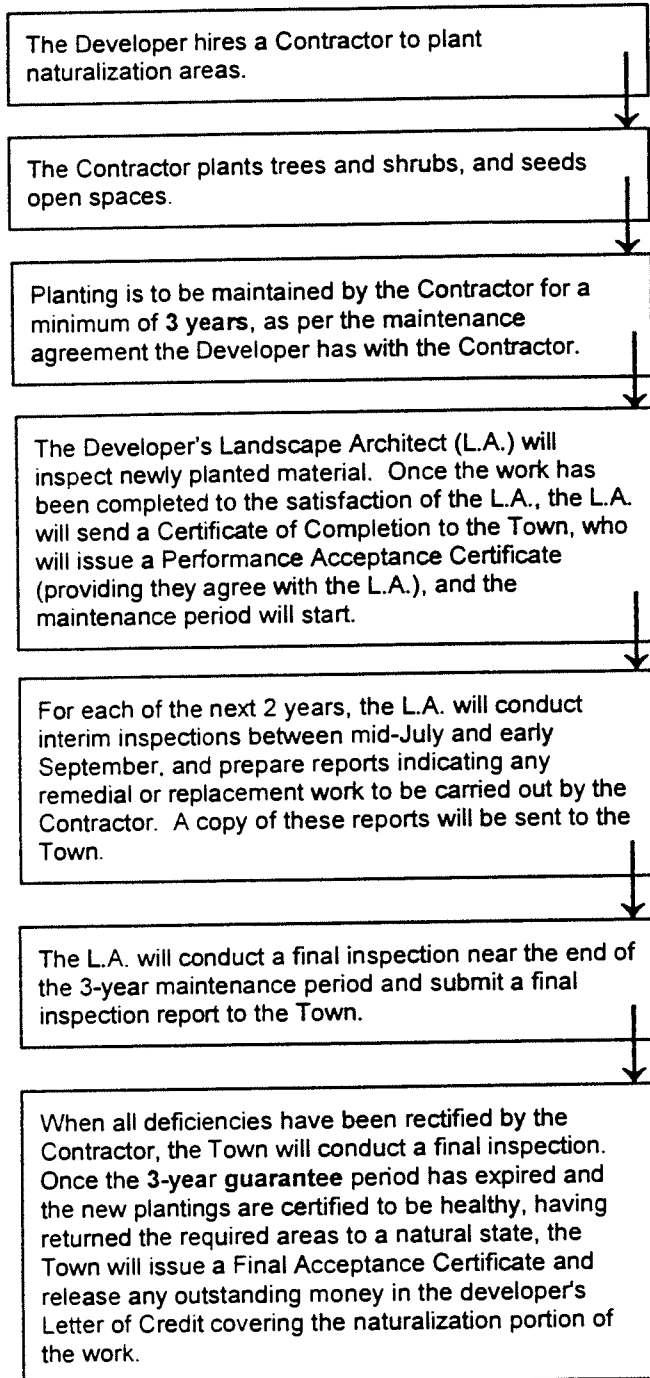
The *third and final* assessment will take place just prior to the expiration of the three-year planting and maintenance agreement. The final report will provide a complete summary of the initial plantings, as well as a record of the replacements and maintenance services carried out during the guarantee period. The report will also make note of any additional work that should be performed prior to the Municipality conducting their own final inspection.

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FLOW CHART NO. 2

**IMPLEMENTATION OF NATURALIZATION DESIGNS**



A copy of the maintenance agreement between the Developer and the Contractor is to be filed with the Town.

The Town conducts performance acceptance inspections between April 1 and November 30 (weather permitting).

See pages 58-61 for an example of an inspection report for a naturalization area.

The Landscape Architect's final inspection report will remind the Contractor to (1) remove all stakes, wires, rodent guards, and tree wrap, (2) prune trees, and (3) add mulch and fertilizer in order to obtain final acceptance by the Town.

The Town conducts final inspections while the leaves are still on the trees, between May 15 and October 15 (weather permitting).

## EXAMPLE OF A NATURALIZATION ASSESSMENT REPORT

**Project Name:**

**Project Location:**

**Date of Assessment:**

**Assessment by:**

**Schedule of Works:** Phase 1 - Spring 1994

April 22-25, 1994 - Deciduous trees and shrubs, staking/mulching and rodent guards

May 2-9, 1994 - Coniferous plantings

Phase 2 - Spring 1995

April 20-24, 1995 - Replacement plantings

**Summary of Plantings:**

The initial program consisted of \_\_\_\_\_ (insert details) \_\_\_\_\_

The replacement planting program consisted of 85 bare-root whips and 815 shrubs planted as proposed in Year - 1 Assessment Report for 1994. Plant material was replaced in areas of high mortality/low density to increase stocking to Town standards. Plantings were infilled in 9 of the 12 naturalization sites because of mortality resulting from: seedling quality; environmental factors; and site conditions during the previous planting season. 15 shrubs were planted to replace construction damage with the balance of shrubs, 800 planted in area 7 to replace failed material and 85 bare-root whips were planted to replace 100% of the previous years' mortality.

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Example of a Naturalization Assessment Report (cont'd)

**Inspection Techniques:**

Naturalization Plantings:

All tree and shrub material was visually inspected and counted. Relative health, growth rates and vigour were noted and survival rates were calculated per the quantities specified on the approved plan. This information is summarized in Table 2. The minimum acceptable live stocking level for each naturalization unit is 90%.

Focal Plantings:

All tree and shrubs material in the 'Focal Areas' was also visually inspected and counted. Recommendations are provided to ensure a 100% survival level.

**Analysis and Discussion:**

Naturalization Plantings:

The overall survival rate for the naturalization planting was 85%. The survival rates being 82% for the shrub component and 88% for the trees. An increase in mortality was noted; down from 95% to 82% survival among the shrub component. This was attributed to stock quality and weather conditions over the 1994-5 winter. The highest rates of mortality being among ~~species~~ (48% of all shrub mortality): serviceberry, American cranberry and red-osier dogwood. The survival rate of the tree component was increased from 63% to 88% with the replacement planting of spring 1995. All dead trees were replaced spring 1995, but a 12% mortality rate was still experienced over the summer of 1995. Bur oak (1994 planting) and trembling aspen (1995 replacement planting) contributed 63% of all tree mortality experienced over the entire naturalization planting.

The majority of mortality was located in the 10 and 11 sections of the naturalization plantings as located in Figure 1. Survival rates were the lowest for both trees and shrubs along this section, 82% and 62% respectively. Mortality along this section can be attributed to the quality of nursery stock, poor species selection and difficult site conditions. Although survival rates are considered adequate, replacements will be considered along sections 10 and 11 to fill gaps and maintain the continuity of the naturalization planting. Area 7 was replanted with 800 shrubs to replace failed seedlings and survival was excellent at 98%.

Focal Plantings:

Survival rates in focal planting areas A, B, C & D was 100% with good growth noted. No replacement plantings are recommended.

**NORTH EAST BOLTON SECONDARY FLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

Example of a Naturalization Assessment Report (cont'd)

Table 1. Summary of Naturalization Planting Assessment - Spring 1995.

Area	% Stocking	% Survival	Condition of live seedlings		
			Good	Fair	Poor
1	76	100		X	
2	92	100	X		
3	100	97	X		
4	78	91			
5	84	100	X		
6	88	87	X		
8	57	40		X	
9	35	95	X		
10	20	37			X
11	72	70		X	
12	100	96	X		

Summary:

The following recommended actions are proposed to be implemented as part of the Spring 1996 planting programs.

- 1) Carry out an infill planting of coniferous seedling stock to increase stocking in areas 8, 10, and 11, according to quantities and species prescribed in Table 2. All seedlings are to be hand planted at the earliest opportunity in April 1996, subject to the availability of seedling stock.

Table 2 Recommended Coniferous Seedling Replacement Plantings - Spring 1996

Area	Species		Total
	Ph	Lb	
8	400	400	800
10	200	300	500
11	200	300	500
<b>Total</b>			<b>1.800</b>

**NORTH EAST BOLTON SECONDARY PLAN AREA  
RESIDENTIAL POLICY AREA B  
Landscape Standards and Design Guidelines**

Example of a Naturalization Assessment Report (cont'd)

- 2) Replace bare-root tree (25) and shrub (175) stock with the quantities and species prescribed in Table 3. All replacement trees are to be staked, mulched and rodent protectors applied at the time of planting.

Table 3 Recommended Tree and Shrub Replacement Planting - Spring 1996

Species	Area							Total	
	2	4	6	7	8	9	10		11
Trees: Red Oak				4	1				5
Silver Maple		3	2						5
Carolina Poplar						2	3		5
Hackberry	1	2	2					5	10
<b>Totals</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>25</b>
Shrubs: Serviceberry					15		25		35
Honeysuckle							25		25
Red-osier dogwd			20		1				35
Nannyberry								25	25
Silverberry						25			25
Autumn Olive							25		25
<b>Totals</b>			<b>20</b>		<b>30</b>		<b>100</b>	<b>25</b>	<b>175</b>

- 3) Implement a naturalization planting maintenance program in the spring including corrective pruning, fertilization and mulching to inhibit competition from annual and perennial weeds. Fertilization with a balanced slow-release nitrogen fertilizer should be completed prior to June 1996.

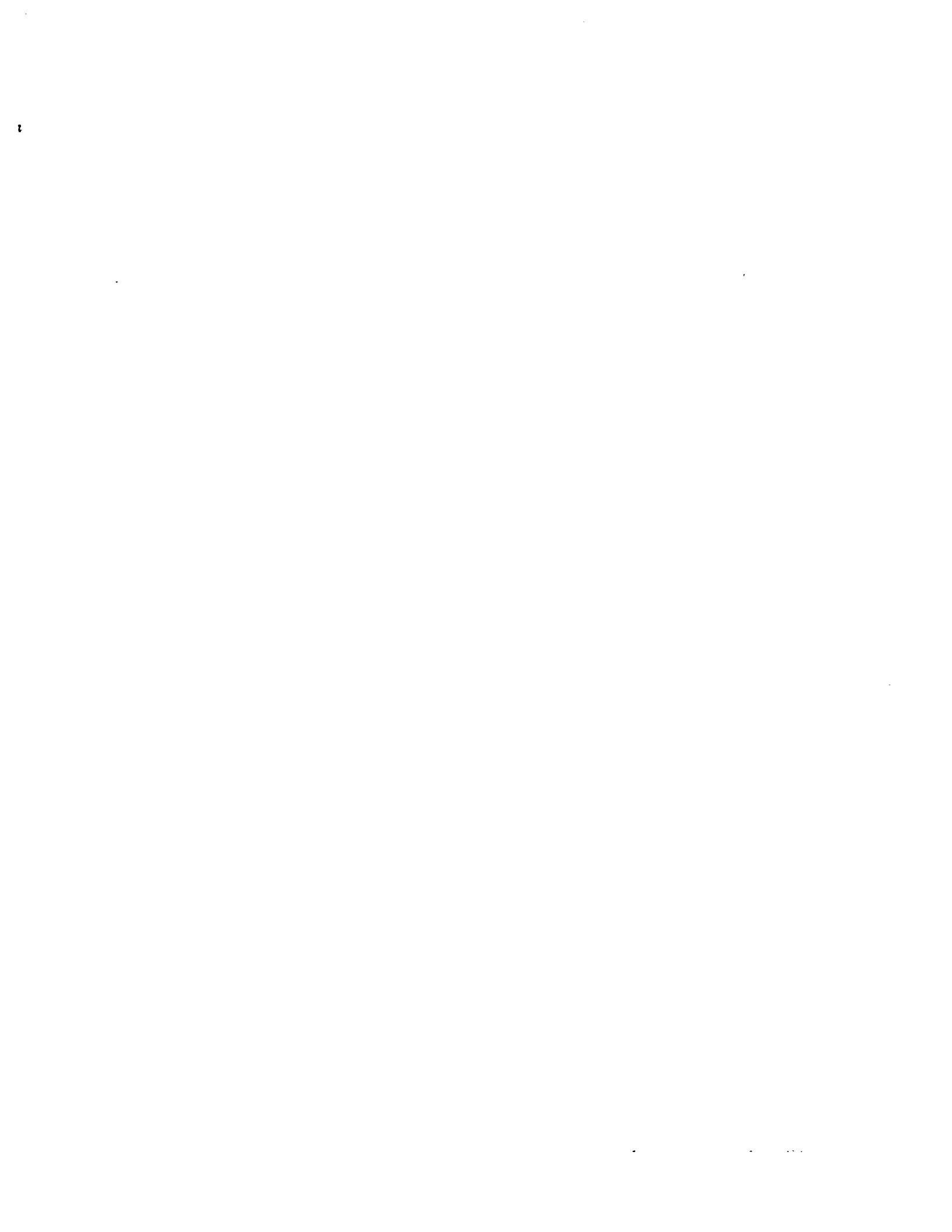
Attach Figure 1 to report identifying planting areas noted in the Report.

**APPENDIX A**

**SPECIES LIST**

**FOR**

**STORMWATER MANAGEMENT POND PLANTING**



**SPECIES LIST**  
**FOR**  
**STORMWATER MANAGEMENT POND PLANTING\***

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**DEEP WATER AREAS**

(1m ≤ depth ≤ 3m)

Pondweeds

Sago Pondweed (*Potamogeton pectinatus*)  
Floating Pondweed (*Potamogeton natans*)  
Large-leaved Pondweed (*Potamogeton amplifolius*)

Others

Water Stargrass (*Heteranthera dubia*)  
Canada Waterweed (*Elodea canadensis*)  
Coontail (*Ceratophyllum demersum*)  
Tapegrass (*Vallisneria americana*)

**SHALLOW WATER AREAS**

(depth ≤ 0.5m)

Submerged Species

Pondweeds

Floating Pondweed (*Potamogeton natans*)  
Sago Pondweed (*Potamogeton pectinatus*)

Others

Canada Waterweed (*Elodea canadensis*)  
Coontail (*Ceratophyllum demersum*)  
Fragrant Waterlily (*Nymphaea odorata*)  
Water Stargrass (*Heteranthera dubia*)

Emergent Species

American Bulrush (*Scirpus pungens*)  
Common Arrowhead (*Sagittaria latifolia*)  
Pickerelweed (*Pontederia cordata*)  
Reed Grass (*Phragmites communis*)  
Softstem Bulrush (*Scirpus validus*)

### Sedges

*Carex lacustris*  
*Carex pseudocyperus*  
*Carex retrorsa*  
*Carex utriculata*

## SHORELINE FRINGE AREAS (Extended Detention Areas)

### Shrub Species

Bebb's Willow (*Salix bebbiana*)  
Meadowsweet (*Spiraea alba*)  
Pussy Willow (*Salix discolor*)  
Red-osier Dogwood (*Cornus sericea*)  
Sweet Gale (*Myrica gale*)

### Hydric Grasses

Bluejoint (*Calamagrostis canadensis*)  
Cut Grass (*Leersia oryzoides*)  
Red Fesue (*Festuca rubra*)  
Reed Canary Grass (*Phalaris arundinacea*)

## FLOOD FRINGE AREAS

### Tree Species

Balsam Poplar (*Populus tremuloides*)  
Black Willow (*Salix nigra*)  
Eastern White Cedar (*Thuja occidentalis*)  
Red Ash (*Fraxinus pennsylvanica*)  
Silver Maple (*Acer saccharinum*)

### Shrub Species

Common Elder (*Sambucus canadensis*)  
Red-berried Elder (*Sambucus pubens*)  
Red-osier Dogwood (*Cornus sericea*)  
Round-leaved Dogwood (*Cornus rugosa*)  
Wild Black Currant (*Ribes americanum*)

## UPLAND AREAS\*

### Tree Species

White Pine (*Pinus strobus*)  
Red Pine (*Pinus resinosa*)  
White Spruce (*Picea glauca*)  
Eastern White Cedar (*Thuja occidentalis*)  
Sugar Maple (*Acer saccharum*)  
Red Maple (*Acer rubrum*)  
Silver Maple (*Acer saccharinum*)  
Ash sp. (*Fraxinus sp.*)  
Red Oak (*Quercus rubra*)  
Bur Oak (*Quercus macrocarpa*)  
Swamp White Oak (*Quercus bicolor*)  
Common Alder (*Alnus rugosa*)  
Ironwood (*Ostrya virginiana*)  
Black Cherry (*Prunus serotina*)  
Choke Cherry (*Prunus virginiana*)  
Black Willow (*Salix nigra*)  
Aspen sp. (*Populus sp.*)

### Shrub Species

Common Juniper (*Juniperus communis*)  
Viburnum sp. (*Viburnum sp.*)  
Grey Dogwood (*Cornus racemosa*)  
Red-osier Dogwood (*Cornus sericea*)  
Meadowsweet (*Spiraea alba*)  
Amelanchier sp. (*Amelanchier sp.*)  
Sumac sp. (*Rhus sp.*)  
Willow sp. (*Salix sp.*)

### Herbaceous Species

Red Fescue (*Festuca rubra*)  
Reed Canary Grass (*Phalaris arundinacea*)  
Common Strawberry (*Fragaria virginiana*)  
Jewel Weed (*Impatiens pallida*)  
Clover sp. (*Trifolium sp.*)

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\* Latin names added by Alexander Budrevics and Associates Ltd.