Town of Orangeville

Urban Forestry Policy

June 2012

Adopted by Council, June 25, 2012

Urban Forestry Policy Statement

This policy establishes guidelines for the planting and maintenance of trees in the Town of Orangeville. It supports the basic principles of accessibility, equity, health and well-being, environmental sustainability and community cohesion and vitality; principles the urban forest fosters. A comprehensive urban forestry policy will ensure that the quality of life of current and future Orangeville residents is improved.

Orangeville has over 28 hectares (70 acres) of treed parkland, and approximately 5,558 trees planted on its 185 streets.[1] There are approximately 3,992 parcels of land planted with at least one tree.[2] In Orangeville's parks, and Greenwood Cemetery (non-woodlot portion), there are approximately 1,391 trees.[3] The approximate 6,949 boulevard trees and park and open space trees throughout Orangeville are a community asset valued at more than $5,000,000[4].

The urban forest exists primarily as thousands of individual trees planted along town streets and scattered throughout private yards, parkland and open spaces. One of the unique features which gives the Town its distinct character is its treed boulevards, particularly in the older areas of town where mature sugar maples tower above the streets and where stumps of deceased trees are often carved into decorative statues. These trees enhance the community's sense of maturity and cultural history while effectively beautifying, sheltering and cooling the respective neighbourhoods.[5] Trees throughout town help facilitate family recreation and relaxation, and help create an inviting appearance.

This policy has been established through a collaborative effort of the Town of Orangeville's Planning, Public Works and Parks and Recreation Departments, with invaluable assistance from Credit Valley Conservation (CVC). These stakeholders have worked together to establish a standard approach to locating, planting and maintaining trees in order to continue and enhance the tradition of urban forestry in Orangeville.

History of Orangeville's Urban Forest

Orangeville has long supported its urban forest in many direct and indirect ways. Over time Orangeville has been successful in enhancing and nurturing its urban forest. The Town boasts one tree that is over 200 years old, it is a red oak in the east end of town.

Since 1999, the Town has promoted the development of a healthy community of boulevard and park trees which maintain and enhance the quality of life of Orangeville

[1] Silv-Econ Ltd. (2006) *Urban Forest Analysis Report and Plan*. Town of Orangeville, Orangeville Ontario.
[2] Ibid.
[3] Ibid.
[4] Based on an approximate replacement value of $1000 (in 2006 dollars) per tree. Value and number of trees should be updated to reflect new Urban Forest Analysis Report and Plan to be complete in 2012/2013.
[5] Without boulevard trees, the average summertime temperature within the road allowance could be about 0.6^{o}C higher.

residents. The Town, through the Orangeville Sustainability Action Team (OSAT), and the Parks and Public Works Departments, continues to work closely with CVC to plant trees in a manner that enhances the environment, especially in natural and sensitive areas such as creeks and streams. Since 2008, OSAT alone has held many successful tree planting events and introduced over 5,000 trees and shrubs to Orangeville's urban forest.

As the Town grows and matures it is important that this history of urban forestry is written into policy to ensure that all stakeholders understand the importance of, and take appropriate actions to maintain, enhance and replace Orangeville's trees.

Current Policy Context

The Official Plan (OP) provides direction to Council to continue its work in enhancing and preserving the urban forest. Policies of the OP direct Council to *"recognize and maintain the pleasant residential atmosphere, small town charm and quality of life in Orangeville, while providing a framework to guide future development to meet the long term needs of the Community"* and *"to support decisions that are sustainable to ensure that the quality of life of future generations is not compromised"* (Section B2.1). A healthy and full urban forest both maintains the small town charm of Orangeville and ensures that the quality of life of future generations is not compromised.

The OP also outlines that it is a goal of the Town of Orangeville to:

> *"…provide for recreation needs by maximizing recreation opportunities on existing open space areas and facilities, while planning for an integrated parkland system to meet the future need of Orangeville's residents"* (Section B2.6).

There are further policies which specifically provide guidance in relation to urban forestry. Specifically Sections E5.3.29 and E5.3.30 state that as it is a priority for Council to:

> *"…maintain and enhance the forest cover in the Town, Council will maintain an inventory of the species, size and condition of trees within road allowances and other publicly owned lands, and will allocate funds annually for the care and planting of trees"*
>
> and that *"Council will seek to increase forest cover by requiring the planting of native species of trees on private lands through development approval processes, appropriate to the specific conditions of the site".*

As per Section E5.3.29 of the Official Plan, Council will continue to allocate funds annually for the care and planting of trees. As the need arises, Council will update this policy based on the findings of any updated Urban Forest Analysis Reports.

The Town will also utilize this policy in consultation with CVC to develop Low Impact Development strategies, on public and private lands, in an effort to decrease future

stormwater facility use and maintenance costs and increase rainwater infiltration into the ground.

The Official Plan has set the stage for a strong urban forestry program set out in policy to ensure everyone recognizes the importance and value of tree cover in the community.

Benefits and Importance of an Urban Forest

It is important to establish a long term management strategy for the urban forest to ensure that the benefits and resource values are sustained for future generations. These benefits should not be understated. Recent research in urban forestry has led to the ability to estimate the environmental and economic (monetary) benefits provided by urban trees. Although these mathematical models would likely require refinement for trees in Orangeville, it is worth presenting the analysis results of the Town's boulevard trees to demonstrate its potential economic value.[6]

It is estimated that the average boulevard tree provides an annual return of $29.50 to taxpayers (in 2006 dollars).[7] Much of this gain (63%) is seen as an increase in property values. The balance could be seen as money saved through reduced energy consumption through shading in the summer (12%) and sheltering in the winter (2%), and reduced maintenance expenditures on the Town's storm water management system (11%)[8]; in terms of the last example, trees store rainwater in their canopies and absorb it through their roots, and in so doing reduce the demands on municipal stormwater infrastructure such as storm sewer pipes and water retention ponds. There are also recognized benefits such as improved tourism, aesthetics, and the provision of wildlife habitat.[9]

Trees help to reduce smog and air pollution by filtering out many airborne pollutants that can have negative impacts on our health, such as carbon dioxide, carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide and particulates.[10] These pollutants, among others, have been linked to increased incidents of heart disease, respiratory illnesses, diabetes and cancer.[11] Trees act as biological buffers – they filter harmful particles that contribute to air pollution and protect us from solar radiation.[12] They help in the movement of precipitation into the soil; getting precipitation back into the soil is extremely important for a community that relies solely on ground water wells.

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[6] Silv-Econ Ltd. (2006) *Urban Forest Analysis Report and Plan*. Town of Orangeville, Orangeville Ontario.
[7] Ibid.
[8] Ibid.
[9] Ibid.
[10] Trees Ontario report *A Healthy Dose of Green: A prescription for a healthy population.* Toronto Ontario
[11] Ibid
[12] Ibid

Forests and green spaces have also been linked to a significant decline in human mental stress, improved rehabilitation, faster hospital recovery rates, and a decrease in the severity of symptoms in attention deficit disorders.[13]

Efforts to enrich the urban forest will contribute to the stability and resiliency of the ecosystems we inhabit. To enhance the health of our ecosystems and to better prepare Orangeville to adapt to climate change, we need to increase tree cover and preserve and enhance the community's existing trees through proper maintenance.

How to Read and Use this Policy

This document will provide guidance and direction to many Orangeville stakeholders, including Town staff, private land developers, and residents. It is broken down into four main urban forestry categories:

- Boulevard Trees
- Natural Areas
- Parks and Open Spaces
- Site Plans and Subdivisions

These sections will provide guidance to Town staff in maintaining and enhancing Orangeville's urban forest. They set clear policy direction for which species are acceptable and appropriate. They also set how and where to plant the trees that make up the urban forest.

The site plan and subdivision section specifically provides guidance to developers and land owners about how the future urban forest will be incorporated into developments and redevelopments on private properties as appropriate.

CVC generally requires the use of non-invasive, common (i.e. not rare) species that are native to the watershed in their defined Regulated Area. Since CVC's Regulated Area may encompass all or parts of the various areas of this document, a map is attached as Appendix "C" for reference.

From this document will come the following information brochures:

- New Home Owners' Guide: Backing onto a Natural Area
- New Home Owners' Guide: Boulevard Trees and You
- Boulevard Trees and You (how to care for a boulevard tree that has just been replaced)

[13] Trees Ontario report *A Healthy Dose of Green: A prescription for a healthy population.* Toronto Ontario

SECTION 1 – BOULEVARD TREES

Goals and Objectives

Generally, it is Council's intention to plant a minimum of one boulevard tree in front of every residential lot, where possible and appropriate.

It is recognized that trees planted on boulevards are planted in an environment with considerable stresses from compaction, vandalism, competition with overhead and underground utilities, and proximity to built features. They will all require some maintenance to ensure they reach their full potential and to maximize their lifespan in order to provide the benefits of a mature urban forest over the long term.

Planting guides and sizes

Boulevard trees shall be planted as shown in Figures 1 and 2 in Appendix A.

For the purposes of this policy: large-stature trees are greater than 15 metres in height when mature; medium-stature trees are between 7.5 and 15 metres in height; and, small-stature trees are less than 7.5 metres in height. Small-stature trees shall be selected for planting under utility wires, in proximity to light standards and in small planting spaces.

Approved Species List

The following species of trees have been chosen for their drought and salt tolerance and overall hardiness in terms of use as boulevard trees:

Common Name	Botanical Name	Min.Size
Red Maple	*Acer Rubrum* (species may vary)	60mm
Shademaster Locust	*Gleditsia triaconathos var. Inermis* (species may vary)	60mm
Red Oak	*Quercus rubra*	60mm
Pin Oak	*Quercus palustris*	60mm
Common Hackberry	*Celtis occidentalis*	60mm
White Oak	*Quercus alba*	60mm
Basswood	*Tilia americana* (species may vary)	60mm
Sugar Maple	*Acer saccharum*	60mm

Other species may be considered on a case-by-case basis as appropriate, and to address area-specific issues. Deciduous trees shall have the minimum caliper size specified.

Trees should be sourced from nurseries within a 500 kilometre radius of the property and/or grown in a location in Hardiness Zones 5a or 4b in accordance with Plant Hardiness Zones of Canada (2000).

Trees are typically to be planted as shown in Figures 1 and 2 in Appendix A.

Tree Planting Locations

Trees shall be planted as close as possible to the centre line of the boulevard while respecting the setbacks identified below. They should be located at least 1.7 metres from the back of curb, whenever possible, unless otherwise specified.

In general, boulevard trees shall be planted at equal intervals, which may vary depending on their ultimate size, in accordance with the following schedule:

- Large-stature trees 13-16 m apart
- Medium-stature trees 10-13 m apart
- Small-stature trees 7-10 m apart

Boulevard trees shall be generally planted at minimum distances from above ground structures as indicated below:

- Minimum distance from street intersections 9 m
- Minimum distance from light standards 3 m
- Minimum distance from private approaches 2 m
- Minimum distance from hydrants 2 m
- Minimum distance from sidewalks 1 m
- Minimum distance from hydro poles 3 m
- Minimum distance from maintenance holes 3 m
- Minimum distance from water valves 3 m
- Minimum distance from stop or yield sign 15m
- Minimum distance from traffic signals 30m

Boulevard trees shall be generally planted at minimum distances from below ground structures as indicated below:

- Minimum distance from sewer and water 3 m
- Minimum distance from fibre optic 2 m
- Minimum distance from natural gas 1 m
- Minimum distance from hydroelectric 1 m

Maintenance and Replacement

Where feasible and when possible the Town will endeavour to replace trees that are removed or place additional boulevard trees, with a target of 1 per residential property, from the approved species list when reconstructing roads.

Public Education

The Town will endeavor to educate home owners on the proper care and maintenance of street trees. This public awareness effort will aim to reduce the number of trees that need to be replaced due to improper care for the tree (e.g. damaging the tree with lawn mowers or trimmers). This should result in a cost saving on tree replacement and a healthier urban forest.

A guide will be developed for home owners in new subdivisions and a brochure will be created to be given to existing home owners that have received new or replacement boulevard trees.

Prohibited/Undesirable Trees

The Ontario Ministry of Natural Resources and CVC recommend that certain trees, classified as invasive or undesirable species, should not be planted in our area. These trees are listed in Appendix B. The Town and CVC discourage the planting of any of these species.

SECTION 2 - OPEN SPACES/NATURAL AREAS

Definition

These are the natural areas of Town where passive recreation and limited public access is permitted. They are intended to mostly be left undisturbed and typically, but not always, owned by the Town and zoned Open Space Conservation (OS2) by Zoning By-law 22-90, as amended.

Goals and Objectives

Council endeavours to work with CVC to preserve, enhance and restore natural open space areas with the goal of providing natural animal habitat, especially along urban streams and creeks. These areas typically will be left to naturalize and will not require regular maintenance from Town staff.

Staff will endeavour to work with various community agencies and groups (e.g. Scouts Canada, Izaak Walton Fly Fishing Club, Trout Unlimited, local service clubs, etc.) who are interested in undertaking tree planting activities in these areas.

On occasion, it may be desirable to dissuade people from entering certain open spaces or natural areas. In those instances, the planting of inhospitable plants (e.g. wild raspberries, hawthorn bushes) to act as natural barriers and fences will be considered.

Council recognizes that the general practice is to not maintain open space/natural areas in order to allow them to naturalize (i.e. to create natural ecological communities). Restoration-type planting plans, as opposed to traditional horticultural or ornamental planting plans with defined planting beds etc., are more appropriate in these areas with an aim to incorporate a diversity of plant material and structure (i.e. trees, shrubs, groundcover), as appropriate, for the site conditions and intended goals. It is recognized that woody cover may not be an appropriate restoration goal in all areas (i.e. the provision of meadow habitat may be more appropriate in certain areas). It is also appropriate for management plans to be prepared in order to provide for the long-term success of planting projects in open space/natural areas.

Approved Species List

The following species of trees have been chosen as they are native to the area, common, non-invasive and low maintenance, and non-cultivars:

Common Name	Botanical Name	Notes
Red Maple	*Acer rubrum*	
Silver Maple	*Acer saccharinum*	
Sugar Maple	*Acer saccharum* ssp. *saccharum*	
Black Cherry	*Prunus serotina*	
White Pine	*Pinus strobus*	
Red Oak	*Quercus rubra*	
Bur Oak	*Quercus macrocarpa*	
Trembling Aspen	*Populus tremuloides*	Fast growing
Large-toothed Aspen	*Populus grandidentata*	Fast growing
Balsam Poplar	*Populus balsamifera* ssp. *balsamifera*	Fast growing
Paper Birch	*Betula papyrifera*	
White Cedar	*Thuja occidentalis*	
Eastern Hemlock	*Tsuga canadensis*	
Balsam Fir	*Abies balsamea*	
American Beech	*Fagus grandifolia*	
American Basswood	*Tilia americana*	
Black Walnut	*Juglans nigra*	Produces juglone which can limit growth of susceptible species in proximity
White Spruce	*Picea glauca*	
Staghorn Sumac	*Rhus hirta (Rhus typhina)*	Deterrents for use in living fences
Wild Black Currant	*Ribes americanum*	Deterrents for use in living fences
Prickly Gooseberry	*Ribes cynosbati*	Deterrents for use in living fences
Allegheny Blackberry	*Rubus allegheniensis*	Deterrents for use in living fences
Common Red Raspberry	*Rubus idaeus* ssp. *strigosus*	Deterrents for use in living fences
Purple Flowering Raspberry	*Rubus odoratus*	Deterrents for use in living fences
Black Raspberry	*Rubus occidentalis*	Deterrents for use in living fences
Dotted Hawthorn	*Crataegus punctata*	Deterrents for use in living fences

When selecting trees from the approved list, the intent of any planting design should be to select plants appropriate for restoration and the improvement of natural areas and features. Effort should be made to source the selected trees from parent stock that is collected from, and where possible, grown in the local seed zones. According to the Ontario Ministry of Natural Resources' Seed Zone Atlas, Orangeville is within Seed Zone 33, but on the border of Seed Zones 34 and 32. Seeds and plant stock sourced and grown in these zones are adapted to the local climatic conditions and should result in maximum growth.

Trees should be sourced from nurseries within a 500 kilometre radius of the property and/or grown in a location in Hardiness Zones 5a or 4b in accordance with Plant Hardiness Zones of Canada (2000).

Species other than those on the list may be considered on a case-by-case basis as appropriate, and to address area-specific issues.

Planting guides and sizes

Trees planted in natural areas will typically be a variety of sizes with a minimum caliper of appropriate sizes vary depending on the specific application (conditions, areal coverage, planting numbers, manpower, etc.) and intent (reforestation, naturalization, buffer, etc.). Depending on these variables, restoration and naturalization plantings can be implemented using stock that range in size from bare-root to around 60mm caliper. For a typical project that is small to medium in scope, container grown stock is often utilized. Planting techniques in open space/natural areas will similarly be adjusted depending on the specific application.

Prohibited/Undesirable Trees

The Ontario Ministry of Natural Resources and CVC recommend that certain trees, classified as invasive or undesirable species, should not be planted in our area. These trees are listed in Appendix B. The Town and CVC discourage the planting of any of these species.

SECTION 3 – TOWN PARKS

Promotion of physical activity is important to combat obesity in children and to establish an early habit of incorporating physical activities in to daily life. By establishing active natural spaces and enhancing forest cover through restoration activities, the Town can provide children with more natural playgrounds, encouraging them to lead more physically active and healthy lives. It is reported in the Trees Ontario report that for every additional 343 trees per square kilometre, asthma rates drop by 25% in young children.[14]

Goals and Objectives

It is the Town's intention to preserve active park spaces and balance it with no-to-low maintenance areas for passive park activities. A diversity of tree species is recommended to protect against blights, pests and adverse weather conditions.

Where naturalized (no-to-low maintenance) areas are established in Town parks, a minimum 3 metre strip will be mowed/groomed along private property boundaries to reduce the encroachment of plants onto private property and to reduce the encroachment of neighbouring lawns/gardens into naturalized areas.

Tree planting in parks will be focused to these naturalized areas and in creating shade areas for park users. Trees for shade areas are to be planted in groups to create canopied areas near sports fields, where appropriate.

Random private plantings in parks will not be permitted. Property owners who abut a Town park will be required to adhere to this policy should they wish to plant trees or shrubs on the boundary between their property and the respective park. Town staff will provide the property owner with the approved list and appropriate locations should such a request be made.

A private gift or donation of trees is to also adhere to the guidelines of this policy for species, size, location, etc.

Approved Species List

The following species of trees have been chosen as they are native to the area, non-invasive and low maintenance:

[14] Trees Ontario report *A Healthy Dose of Green: A prescription for a healthy population*

DECIDUOUS

Common Name	Botanical Name	Min.Size
American beech	*Fagus grandifolia*	n/a
Basswood	*Tilia Americana*	n/a
American White Elm	*Ulmus americana*	n/a
Bigtooth Aspen	*Populus grandidentata*	n/a
Bitternut Hickory	*Carya cordiformis*	n/a
Black Cherry	*Prunus serotina*	n/a
Black Willow	*Salix nigra*	n/a
Bur Oak	*Quercus macrocarpa*	n/a
Butternut	*Juglans cinerea*	n/a
Ironwood	*Ostrya virginiana*	n/a
Pin Cherry	*Prunus pensylvanica*	n/a
Pussy Willow	*Salix discolor*	n/a
Red Maple	*Acer rubrum*	n/a
Red Oak	*Quercus rubra*	n/a
Rock Elm	*Ulmus thomasii*	n/a
Shagbark Hickory	*Carya ovata*	n/a
Silver Maple	*Acer saccharinum*	n/a
Sugar Maple	*Acer saccharum*	n/a
Trembling Aspen	*Populus tremuloides*	n/a
White Birch	*Betula papyrifera*	n/a
White Oak	*Quercus alba*	n/a
Yellow Birch	*Betula alleghaniensis*	n/a

CONIFEROUS

Common Name	Botanical Name	Min.Size
Balsam Fir	*Abies balsamea*	n/a
Black Spruce	*Picea mariana*	n/a
White Spruce	*Picea glauca*	n/a
Eastern Hemlock	*Tsuga canadensis*	n/a
Eastern White Cedar	*Thuja occidentalis*	n/a
Eastern White Pine	*Pinus strobus*	n/a
Jack Pine	*Pinus banksiana*	n/a
Red Pine	*Pinus resinosa*	n/a
Tamarack	*Larix laricina*	n/a
White Pine	*Picea glauca*	n/a

Other species may be considered on a case-by-case basis as appropriate, and to address area-specific issues.

Trees should be sourced from nurseries within a 500 kilometre radius of the property and/or grown in a location in Hardiness Zones 5a or 4b in accordance with Plant Hardiness Zones of Canada (2000).

Planting guides and sizes

Trees planted in park areas are to be a variety of sizes without a minimum caliper size. Appropriateness will be judged on a case-by-case basis. Trees are to be planted as shown in Figures 1 and 2 in Appendix A.

Park trees shall be generally planted at minimum distances from above ground structures as indicated below:

- Minimum distance from street intersections 9 m
- Minimum distance from light standards 3 m
- Minimum distance from private approaches 2 m
- Minimum distance from hydrants 2 m
- Minimum distance from sidewalks 1 m
- Minimum distance from hydro poles 3 m
- Minimum distance from maintenance holes 3 m
- Minimum distance from water valves 3 m
- Minimum distance from stop or yield sign 15m
- Minimum distance from traffic signals 30m

Park trees shall be generally planted at minimum distances from below ground structures as indicated below:

- Minimum distance from sewer and water 3 m
- Minimum distance from fibre optic 2 m
- Minimum distance from natural gas 1 m
- Minimum distance from hydroelectric 1 m

Prohibited/Undesirable Trees

The Ontario Ministry of Natural Resources and CVC recommend that certain trees, classified as invasive or undesirable species, should not be planted in our area. These trees are listed in Appendix B. The Town and CVC discourage the planting of any of these species.

SECTION 4 – SITE PLANS AND SUBDIVISIONS

Goals and Objectives

To ensure new development and redevelopments enhance and maintain the Town's urban forest, clauses will be included in site plan and subdivision agreements regarding the proper planting of appropriate species and maintenance of trees, as appropriate.

It is Council's intention to have a diversity and variety of boulevard trees at the neighbourhood and town-wide scale to protect the urban forest from blight, disease and pests. In new subdivisions, generally only one deciduous tree species will be planted on any one residential street block, although a species change may be required according to site specific conditions. It is recommended that a variety of tree species be planted on boulevards throughout a subdivision to encourage biodiversity in neighbourhoods (refer to Section 1 – Boulevard Trees of this Policy with respect to the placement and species appropriate for those areas). Depending on the width of the existing or proposed boulevard, an appropriate species shall be chosen by selecting a small- to medium sized species for narrow boulevards (generally less than 2 metres in width) and a larger species for wider boulevards (generally greater than 2 metres).

Primarily native and non-invasive species, which are no-to-low maintenance, will be chosen for plantings in new subdivisions and commercial or industrial properties. CVC requires the use of non-invasive, common (i.e. not rare) species that are native to the watershed in their defined Regulated Area. Since CVC's Regulated Area may encompass all or parts of private properties that are subject to site plan or subdivision applications, a map is attached as Schedule "C" for reference.

Staff will encourage developers to design parking lots such that parking lot islands are large enough to appropriately accommodate landscaping (a minimum of 2 to 2.5 metres wide).

Planting guides and sizes

Trees planted on private properties subject to site plan or subdivision applications will be a variety of sizes, with a minimum caliper of 60mm. They are to be planted as shown in Figures 1 and 2 in Appendix A.

In new subdivisions, generally only one deciduous tree species will be planted on any one residential street block, although a species change may be required according to site specific conditions. It is recommended that a variety of tree species be planted on boulevards throughout a subdivision to encourage biodiversity in neighbourhoods. Depending on the width of the existing or proposed boulevard, an appropriate species shall be chosen by selecting a smaller- to medium-sized species for narrow boulevards and a larger species for wider boulevards (refer to Section 1 – Boulevard Trees).

Suggested Species List

The following species of trees have been chosen as they may be native to the area, non-invasive, hardy, and/or low maintenance:

Common Name	Botanical Name	Min.Size
Red Maple	*Acer Rubrum* (species may vary)	60mm
Sugar Maple	*Acer saccharum*	60mm
Shademaster Locust	*Gleditsia triaconathos var. Inermis* (species may vary)	60mm
Red Oak	*Quercus rubra*	60mm
Pin Oak	*Quercus palustris*	60mm
Common Hackberry	*Celtis occidentalis*	60mm
White Oak	*Quercus alba*	60mm
Basswood	*Tilia americana* (species may vary)	60mm
Pin Cherry[15]	*Prunus pensylvanica*	60mm
Shagbark Hickory[16]	*Carya ovate*	60mm
Trembling Aspen[17]	*Populus tremuloides*	60mm
White or Red Pine	*Pinus strobus, Pinus resinosa*	60mm
White Cedar	*Thuja occidentalis*	60mm
White Spruce	*Picea glauca*	60mm

Generally, any tree from the approved list for boulevard trees, parks and open spaces and natural areas can also be used. Other species may be considered on a case-by-case basis as appropriate, and to address area-specific issues.

Trees should be sourced from nurseries within a 500 kilometre radius of the property and/or grown in a location in Hardiness Zones 5a or 4b in accordance with Plant Hardiness Zones of Canada (2000).

Agreements and Guidelines

Site Plan and Subdivision Agreements between the Town and property developers will include wording to ensure trees are planted and maintained appropriately such as the following:

- The Owner agrees to maintain the trees on the property in accordance with the Town's Urban Forestry Policy 2012, as amended from time to time.

- The Owner agrees maintain the trees for 3 to 5 years after planting, thereby increasing the health of the tree over the long term and reducing the likelihood of replacement.

[15] http://www.mnr.gov.on.ca/en/Business/ClimateChange/2ColumnSubPage/267251.html
[16] Ibid
[17] Ibid

The Town's Site Plan Approval Procedures and Design Guidelines will reference the list of appropriate plant/tree species, sizes and planting guides of the Town's Urban Forestry Policy.

Review and approval of Landscape Plans and Master Landscape Plans by Town and CVC staff during the Site Plan and Subdivision approval processes, will ensure that the goals of the Town's Urban Forestry Policy are met, as appropriate.

Public Education

The Town will develop and provide brochures to developers to provide to new home purchasers outlining the proper care and maintenance of street trees. This public awareness campaign will aim to reduce the number of trees that need to be replaced due to improper care for the tree (i.e. damaging the tree with lawn mowers, trimmers, etc.). This should result in cost saving on tree replacement and a healthier urban forest.

Prohibited/Undesirable Trees

The Ontario Ministry of Natural Resources and CVC recommend that certain trees, classified as invasive or undesirable species, should not be planted in our area. These trees are listed in Appendix B. The Town and CVC discourage the planting of any of these species.

APPENDIX A – PLANTING DETAILS

Figure 1 – Typical Coniferous planting detail

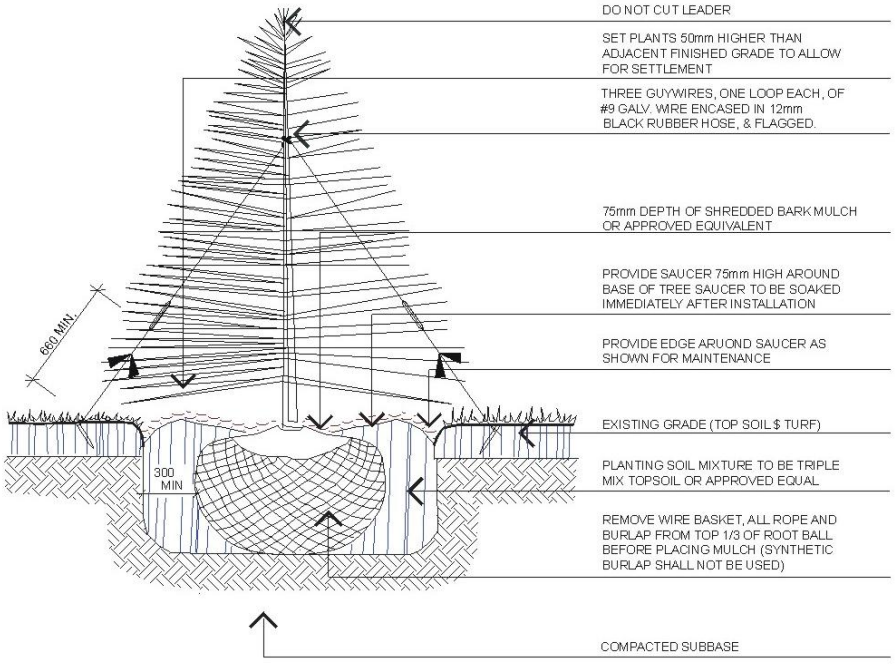
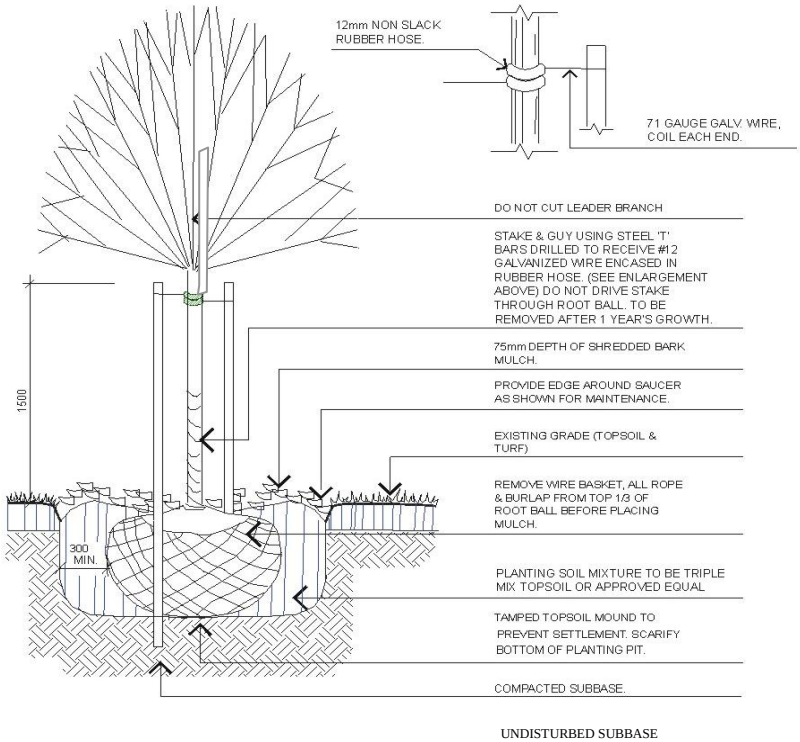


Figure 2 – Typical Deciduous planting detail



APPENDIX B – PROHIBITED OR UNDESIRABLE TREES

- Northern Catalpa (*Catalpa speciosa*)
- Horsechestnut (*Aesculus hippocastanum*)
- English Oak (*Quercus robur*)
- Norway Maple (*Acer platanoides*)
- Manitoba Maple (*Acer negundo*)
- Sycamore Maple (*Acer pseudoplatanus*)
- White Elm (*Ulmus Americana*) *
- Scotch Elm (*Ulmus glabra*) *
- Siberian Elm (*Ulmus pumila*) *
- Black Locust (*Robina psudoacacia*)
- White Mulberry (*Morus alba*)
- Tree of Heaven (*Ailanthus altissima*)
- European Birch (*Betula pendula*)
- Scots Pine (*Pinus sylvestris*)
- White Poplar (*Populus alba*)
- Carolina Poplar (*Populus X canadensis*)
- Spindle-tree (*Euonymus europaeus*)
- White Willow (*Salix alba*)
- Crack Willow (*Salix fragilis*)
- Hybrid Willow (*Salix X rubens*)
- Goat Willow (*Salix caprea*)
- European Mountain Ash (*Sorbus aucuparia*) ♦
- European Ash (*Fraxinus excelsior*) ♦
- Showy mountain-ash *(Sorbus decora)* ♦
- American Mountain Ash (*Sorbus Americana)* ♦
- European Aspen (*Populus tremula*)
- Bird Cherry (*Prunus avium*)
- Perfumed Cherry (*Prunus mahaleb*)

* n.b. is susceptible to Dutch-elm disease and will not likely last to maturity

♦ n.b. the Emerald Ash Borer has spread throughout southwestern Ontario. Ash trees are not permitted to minimize the risk of infestation.

APPENDIX C – CREDIT VALLEY CONSERVATION'S REGULATED AREA