

PUBLIC FOREST POLICY



CREDIT: NEIGHBOURWOODS

The Township of Centre Wellington is dedicated to enhancing the condition and the quantity of public trees.

January 30, 2018



Centre
Wellington

Table of Contents

- A. Introduction..... 1**
 - A.1 Context 1
 - A.2 Challenges Faced by the Public Forest.....2
 - A.3 Benefits of the Public Forest2
 - A.4 Goal.....3
 - A.5 Objectives.....3
 - A.6 Summary of Guidelines.....3
- B. Municipal Standards..... 5**
 - B.1 Level of Service5
 - B.2 Planting Additional Trees on Municipal Property5
 - B.3 Significant Trees5
 - B.4 New Developments.....6
 - B.5 Infrastructure Repairs and Improvements6
- C. Tree Planting..... 7**
 - C.1 Approved Tree Species for Centre Wellington7
 - C.2 Replacement of Removed Trees8
 - C.3 Invasive Tree Species.....8
 - C.4 Tree Species Diversity.....8
 - C.5 Tree Details and Specifications.....9
- D. Tree Maintenance 10**
 - D.1 Tree Inventory10
 - D.2 Boundary Trees11
 - D.3 Tree Risk Assessment.....11
 - D.4 Tree Removal.....13
 - D.5 Tree Pruning.....14
 - D.6 Canopy Cover.....17
- E. Glossary 18**
- F. Appendices..... 20**

A. Introduction

The Township of Centre Wellington recognizes the important contributions and benefits made by trees to its present and future communities and citizens. The public forest is part of the Township's green infrastructure and is a resource to be managed and protected. Although green infrastructure includes trees on both public and private property, unless stated otherwise the Public Forest Policy applies to Municipal trees only. Trees germinated naturally from seed are a valued asset to the overall community.

Ongoing planning and management are needed to preserve a healthy, diverse and multi-aged tree population, to maintain rural and urban tree populations, and to assist in the always delicate financial budget process. The streetscapes and public spaces of the urban and rural portions of the Township are the property of the Municipality. They are for the use, benefit and enjoyment of the residents and visitors of the Township of Centre Wellington.

The public will be given every opportunity to become involved in matters regarding municipal trees. When opinions differ from those of the Township and disagreements arise, the Public Forest Policy outlines the public's right of appeal.

The Public Forest Policy is a dynamic and ever evolving document that is designed to capture forestry operation and management practices, procedures, policies, by-laws, and standards. Therefore, the document will be updated to reflect changes that occur within the public forest, forestry operations, and arboriculture best practices.

A.1 Context

The Township of Centre Wellington is the third largest (area) municipality in Wellington County and has the largest population. Centre Wellington has approximately 6198.2ha of woodlot which accounts for 14.9% of land use in the Township of Centre Wellington. The total agricultural land area is approximately 29,114ha, while the urban centres of Fergus and Elora have a combined area of approximately 2,084ha. As a major goal, The Municipal Official Plan identifies the protection of the unique natural resources of the community which include the Grand River corridor and existing trees and woodlots. Likewise, the Official Plan seeks to preserve and enhance the unique and very high quality of life in Centre Wellington as well as providing for the future needs the community.

An understanding of the current state of the Townships public forest is needed in order to ensure that it is managed so that the benefits it provides residents is maintained and wherever possible improved for future generations. This can be achieved by developing an inventory of all municipal trees, and by measuring canopy cover expressed as a percentage of total ground area. Although a detailed municipal tree inventory is the most accurate option it is difficult to achieve given the distribution and density of trees within the Township.

An estimate of tree canopy cover can be derived from the Ministry of Natural Resources "wooded area" GIS layer. This maps wooded areas to a minimum of 0.25 hectare with a 60% canopy coverage. This data indicates there is between 14-17% tree canopy cover within the Township of Centre Wellington. Canopy cover was estimated using GIS analysis and satellite imagery of wooded areas. However, individual trees growing along roadsides, as well as smaller clumps of trees and the isolated trees in the more urbanized parts of the City (i.e.: in residential yards, in schoolyards, and on commercial, industrial and institutional lands) were not captured by this analysis.

Therefore, an accurate representation of the tree canopy cover in Centre Wellington is not currently available. The importance of having an accurate estimate of tree canopy cover can be emphasized by discussing the challenges faced by the Townships public forest.

A.2 Challenges Faced by the Public Forest

Resources available for the management of the public trees have historically been limited, and municipal staff have largely been occupied with responding to emergency situations and service requests rather than having the opportunity to pursue more proactive management practices. As a result many of the mature trees in the Townships urban areas are older and are in need of pruning or removal. Since natural regeneration in areas where trees have been removed and systematic planting programs have been limited in scope, there is space within the urban and rural fabric for additional tree planting.

In addition, the Township is expected to experience significant growth which will lead to intensification within urban areas. According to the County of Wellington Growth Management Plan, the population in the Township of Centre Wellington is anticipated to increase 61% by 2036, and increase overall by 75% within the next 25 years.

Tree loss is expected due to the presence of Emerald Ash Borer (EAB) in the Township. EAB is a highly-destructive, non-native insect tree pest. It is anticipated that nearly all the ash trees within the Township will be lost over the course of a 10-15 year infestation horizon. Ash tree distribution in the Township is estimated to be 20-30% in both the rural and urban forest. As ash trees decline the character of the public forest will be changed dramatically and its benefits significantly reduced.

Another challenge for the management of the public forest is climate change. The GRCA Watershed Forest Plan for the Grand River points out that this will increasingly pose a strategic problem when selecting trees that must survive in both current and future climate conditions. In light of the challenges faced, managing the Townships trees and forests in a sustainable manner will require careful planning that takes into account species diversity and size distribution in order to maintain the continuity of benefits that they provide.

A.3 Benefits of the Public Forest

Well managed public spaces and forests provide valuable services such as improving air quality, providing wildlife habitat, providing shade, and contributing to storm water management. They are an essential part of the Townships infrastructure. They also provide important health and social benefits as well as increasing the overall livability of the municipality.

A summary of key values and benefits of trees in the landscape include:

1. Reducing the physical and mental symptoms of stress and increasing overall mental wellbeing;
2. Moderating the heating effect of pavement and buildings by providing shade, evaporative cooling, and windbreaks, thereby reducing power consumption and energy costs and making public spaces more comfortable;
3. Improving air quality by capturing airborne pollutants, producing oxygen, and sequestering carbon;
4. Improving water quality by stabilizing soil, reducing erosion, intercepting run-off and attenuating peak stormwater flow;

5. Providing habitat and food sources for wildlife such as birds, insects, and small mammals;
6. Creating an appealing environment for consumers in commercial areas;
7. Increasing property value, and
8. Increasing the overall aesthetics of streetscapes and the public realm in general.

A.4 Goal

The goal of the Public Forest Policy is:

To enhance the condition of public trees and the quantity of public tree canopy cover in the Township of Centre Wellington.

A.5 Objectives

The objectives of the Public Forest Policy are:

1. To promote the retention and enhancement of publicly-owned trees in the urban and rural areas of the Township of Centre Wellington;
2. To employ management practices best suited for the establishment and long-term culture of trees across a range of growing conditions, including tree planting in new developments;
3. To establish and continue an annual tree-planting program with specific planting standards, specifications and recommendations;
4. To build a dynamic inventory of Township trees;
5. To develop an accurate and replicable measure of tree canopy cover within the Township of Centre Wellington;
6. To develop a program to achieve zero net tree or canopy loss as a result of development;
7. To develop a program to identify and manage risks associated with trees;
8. To recognize and promote the important role and contributions that trees and wooded areas perform throughout the Township of Centre Wellington;
9. To identify and explain the current operations of the Township as they pertain to trees on public property;
10. To promote diversity of tree species with a preference of native species through the development and use of preferred tree selection lists, and
11. To assist in guiding and developing tree management practices now and in the future.

A.6 Summary of Guidelines

1. Minimum caliper size of planted trees are outlined in Appendix 4;
2. Trees shall be replaced at a ratio of 2:1. (See *section C.2.2*);
3. No more than 10 percent of any one species of tree shall be planted at any one planting site, no more than 6 trees of any one species shall be planted in a row on either side of the street (See *section C.4*);

4. Approved tree species are outlined in Appendix 1, and
5. Tree planting setbacks are outlined in Appendix 5.

B. Municipal Standards

B.1 Level of Service

Council shall approve the level of service to trees and tree related projects provided by the Township on an annual basis and as part of the annual operating and capital budget. Budgets shall give consideration to such items as planting trees on municipal property, maintenance of trees (e.g. watering, mulching and pruning), and removal of trees when necessary.

Special projects related to trees such as major plantings for reforestation and stream stabilization will be encouraged subject to available resources. Local volunteer organizations will be encouraged to participate in major planting projects.

The Public Forest Policy shall be reviewed by Township staff and updated as necessary to mitigate factors that negatively affect the public forest. Updates and reviews of the Public Forest Policy will be presented to Council.

B.2 Planting Additional Trees on Municipal Property

New trees will be planted to replace removed municipal trees or when a resident requests a tree at a new location. For resident requests of new trees, staff shall record the request on a list. Requests shall be considered and prioritized in the order received and subject to available budget resources for planting new trees, and provisions for green space in the Official Plan. Trees will be planted in accordance with municipal standards (i.e. *Public Forest Policy, Urban Design Guidelines, and Development Manual*).

Residents may request public trees larger than the standard size provided by the Township (see *Appendix 4. Tree Planting Specifications*). The additional cost of larger tree stock will be at the expense of the resident. Site conditions must be appropriate for larger tree stock. For information about the procedure to request larger caliper trees, contact Park and Recreation - telephone 519-846-9691.

Prior to planting a tree, the Infrastructure Services or Community Services shall be responsible to obtain utility locates, ensure that minimum setbacks from all utilities are adhered to (see *Appendix 5, Tree Planting Setbacks*), and that the tree will not interfere with overhead wires, traffic control or other safety devices or information signs. If the requested tree planting location is not suitable for planting, an alternate location may be selected and approved by staff within the Township boulevards, Storm Water Management Pond landscaped areas or other areas zoned "Environmental Protection".

If no other suitable location is found, new trees may be planted on private property subject to approval by staff. Maintenance of trees planted on private property will be the responsibility of the property owner.

B.3 Significant Trees

Trees with significant cultural or ecological value will be informally identified. These trees add significant value to the community. Once recognized, these trees can be properly protected and cared for to ensure their longevity.

B.4 New Developments

The Development Standards Manual addresses the requirements of the Township of Centre Wellington development process as it relates to public trees. For all development applications, the Township will prioritize achieving a zero net loss of trees or canopy.

Trees shall be planted on the municipal right-of-way between the curb and sidewalk if present (*see Appendix 5. Tree Planting Setbacks*).

On corner lots a tree shall be planted 15m from the road intersection and every 10m adjacent the side yard on the flanking street.

Trees are to be planted so as not to interfere with other street functions or services when the tree matures. Where it is not possible to conform to the foregoing, the trees shall be planted at locations approved by the municipality.

For woodlots of **one hectare (2.47 acres)** or more in area refer to the Wellington County Forest Conservation By-law #5115-09.

B.5 Infrastructure Repairs and Improvements

1. Street and sidewalk reconstruction shall be done in such a manner as to minimize the impact on existing trees. Excavation within root zones should be done to minimize damage to roots. Air spade technology may be used for this purpose. Use of engineered soils (e.g. Silva Cell®, CU-Structural Soil®) beneath sidewalks and other load bearing surfaces to allow for existing tree roots to grow, should be considered.
2. Tree protection and preservation requirements must be followed (see Appendix 3).

C. Tree Planting

C.1 Approved Tree Species for Centre Wellington

There are many types of planting locations on municipal property throughout the jurisdiction of the Township. These are urban streets, rural roads, downtown, parks, natural areas, and ornamental areas. A description is provided below. The list of approved tree species for each category is provided in Appendix 1. A preference will be given to planting native trees of local seed source in locations that are appropriate for the species (see Appendix 1).

1. **Urban Streets:** Streets within urban areas of Fergus, Elora and Salem, and the hamlets of Belwood, Inverhaugh and Ennotville. Within the road allowance planting areas are generally between sidewalks and curbs, behind curbs, and behind sidewalks, e.g. St. Patrick Street, Fergus. See *Downtown* for exceptions.

Tree species should be indigenous to south central Ontario. Where cultural conditions are unsuitable or specific outcomes are required, non-native, non-invasive tree species may be used.

2. **Rural Roads:** Roads within rural areas of the Township, outside of urban areas. Within the road allowance planting areas are beyond the shoulder of the roads, e.g. Sideroad 30, Eramosa.

Tree species should be indigenous to south central Ontario.

3. **Downtown:** Streets within downtown core areas of towns and villages. Tree planting pits are surrounded by hard surfaces e.g. concrete/paving stone sidewalks, islands in parking areas). Where load bearing surfaces (e.g. sidewalk) surrounding planting areas exist, use of engineered soils (e.g. Silva Cell®, CU-Structural Soil®) should be considered. Candidate locations are the east side of Geddes Street in downtown Elora and the parking lot at the Township Sportsplex on Belsyde Avenue, Fergus.

Tree species should be indigenous to south central Ontario. Where cultural conditions are unsuitable or specific outcomes are required, non-native tree species may be used.

4. **Parks:** Public parks in urban and rural areas. Typically these are areas with minimal constraints to culture of trees. Where trees may be planted within hard surfaces (e.g. small parkette) see *Downtown*.

Tree species should be indigenous to south central Ontario. Where cultural conditions are unsuitable or specific outcomes are required, non-native tree species may be used.

5. **Natural Areas:** Plantations, woodlots, riparian zones, natural regeneration areas. Natural areas typically are areas of undisturbed soils and with existing vegetation, including trees.

Tree species should be indigenous to south central Ontario.

6. **Ornamental Areas:** For sites (e.g. entrances and garden areas of public parks or public buildings) where ornamental showiness is desirable. For this purpose, trees may be selected for special characteristics, e.g. unusual form, size, showy or fragrant flowers, showy fruit, fall leaf colour, bark characteristics.

Tree species may be indigenous to south central Ontario, or non-native to provide for the desired outcome.

Selection of tree planting locations and tree species should consider and have regard for constraints of the site.

Site Constraints to Tree Species Selection:

- Suitability of growing conditions (e.g. structure, texture and volume of soil; amount of light; amount of moisture, amount of wind exposure, amount of urban pollution exposure, urban heating);
- Utilities; underground and overhead;
- Site maintenance; e.g. snow clearing, soil salinity, road salt spray, and
- Sight lines at intersections, vehicle entry areas onto public roads.

C.2 Replacement of Removed Trees

The Township has the following procedures for replacement of removed trees:

1. Any municipal trees removed will be replaced the next available season, and
2. For every tree removed equal to or larger than 10cm DBH, 2 trees will be planted. Replacement trees may be planted in different locations depending on available space and whether the original location will allow them to thrive.
3. Staff must approve all proposed tree planting locations, which could include Township boulevards, Storm Water Management Pond landscaped areas or other areas zoned "Environmental Protection".

C.3 Invasive Tree Species

Tree species known or suspected of being invasive to natural areas should not be planted on public property within the Township of Centre Wellington. Invasive plants are those that have been planted outside their native habitat and are known to easily become introduced in an area, reproduce quickly, and crowd out native species.

Since all species of Ash (*Fraxinus spp.*) have been shown to be susceptible to infestation by Emerald Ash Borer (EAB) which leads to tree mortality, no Ash trees shall be planted on public land.

The Township's website provides information about EAB, and management and identification of ash trees:

www.centrewellington.ca/EAB

C.4 Tree Species Diversity

In order to create an ecologically stable and resilient public forest care must be taken to insure that a diverse pallet of tree species are given the opportunity to grow along our streets, in our parks, and on our public lands. This is because, like a natural ecosystem, a forest with a diversity of tree species and tree ages is likely to be more stable than a simple one.

Monocultures which have historically been common in subdivision developments in southern Ontario provide less habitat value for wildlife, are less resilient to the stress caused by climate change, and are much more susceptible to pests and decease. Diversification on the other hand

provides insurance against the kind of wholesale defoliation of the forest cover that is currently taking place in Centre Wellington as a result of EAB and previously occurred with Dutch Elm disease, and chestnut blight before it.

In order to promote diversity the Township will follow a guideline that states that no more than 10 percent of any one species of tree shall be planted at any one planting site. In addition, no more than 6 trees of any one species shall be planted in a row on either side of the street.

C.5 Tree Details and Specifications

Tree Planting Details are provided in Appendix 2.

Tree Planting Specifications are provided in Appendix 3

D. Tree Maintenance

D.1 Tree Inventory

An inventory of the location, morphology, condition, and management history of the Township's trees is an important and invaluable tool. With it, strategies for managing the Public Forest can be developed, tracked and implemented. This information is linked to the Township's GIS system to facilitate data collection, tracking, analyses and to refine management approaches over time.

D.1.1 The Importance of the Tree Inventory

A comprehensive tree inventory will allow staff to better understanding the Township's green infrastructure, maximize the benefits of the public forest, and better manage the hazards presented by aging trees. It will also identify details related to the structure of the urban forest and provide the basis for planning and decision-making.

It is a critical planning tool in determining what species and locations should be planted in the future and in prioritizing resources and annual budget needs.

Since the inventory is a dynamic GIS based database, management activities such as removal, pruning, pest management and mulching can be assigned to staff and tracked through the database.

D.1.2 Status of the Tree Inventory

All trees within the Township boulevards, parks, cemeteries, and other Township-owned properties will be inventoried. Trees that are found in Township woodlots will not be inventoried unless they are part of a service request call but instead be captured as part of the Township canopy cover study (see *Section D.6*).

Information is collected during service request calls, as part of the EAB Work Plan, and by volunteers. Trees will be inventoried on a minimum 7 year cycle in order to facilitate community maintenance pruning (see *Section D.5.1*). Many of the Townships urban trees have been inventoried by volunteers working with Neighbourwoods a local nonprofit organization.

Any trees planted or removed as part of a new development, whether through Planning Application or municipal infrastructure project are to be identified in an AutoCAD DWG format drawing file. This drawing must be georeferenced to the UTM Zone 17, NAD 83 projection and datum with an accuracy in accordance with Ontario Regulation 216/10 Section 14(2). The drawing must indicate removed trees and new trees to be planted. A schedule indicating the species of tree to be planted and its caliper/diameter at breast height shall be provided in an excel spreadsheet format.

D.1.3 Species Composition

Analysis of the distribution of different tree species throughout the Township has begun but has not been completed. Accurate knowledge of the over-all species composition will enable the Township to pro-actively manage the tree population to achieve acceptable species diversity.

D.2 Boundary Trees

The following guidelines will be followed:

1. All tree related activities occurring along boundary lines will comply with the regulations set out in the Ontario Trees Act, R.S.O. 1990, c. T.20;
2. Ownership and maintenance of trees which have 50% or more of their main stem situated on a Township property will be the responsibility of the Township;
3. Ownership and maintenance of trees which have greater than 50% of their main stem situated on private property will be the responsibility of the property owner;
4. Where ownership of boundary trees is in dispute, staff will refer to ownership listed in the Tree Inventory (section D.1), subdivision plans, or official property surveys in that order;
5. When verifying tree ownership, measurement is taken at ground level, just above the trunk flare from the midpoint of the tree, perpendicular to the curb. For multi-stem trees, ownership is determined by where the majority of the tree stems lie, using the same technique. Burls and other growths and/or anomalies are not included in the measurement;
6. Any tree, all or part of which is located on, above, or below a Township street may be subject to pruning as part of the Township Tree Pruning program for the purposes of providing minimum clearance (section D.5.2) or as part of street maintenance or reconstruction. Private tree owners will be notified of this work with a "Letter to Residents" provided by staff or as outlined in section D.5.1.

D.3 Tree Risk Assessment

Assessment of risk from tree failure is required to minimize or prevent injury to persons and damage to property. The Township will use the guidelines of tree risk assessment (Table 2) for the inspection of trees. When trees are determined to pose an unacceptable level of risk, the Township will take appropriate action (e.g. pruning, removal). Conditions and situations may occur (e.g. after severe storms) that require immediate attention to abate risk from tree failure. Tree risk assessment should be conducted by an individual who has a tree risk assessment qualification.

Table 1. Tree Risk Assessment Guidelines

Inspection Level	Site Examples	Assessment Interval	Assessment Method
Low: Areas with little to no public use or access OR area of newly planted trees	-secondary or tertiary rural roads, woodlots, plantations -new subdivisions and new parks	7 years	Drive by slowly. Make note of individual trees requiring more detailed assessment if in doubt.

<p>Moderate: Areas with moderate public use or public access or some buildings within vicinity of trees AND with immature to mature trees</p>	<p>-primary rural roads, secondary urban roads, low use parks and parking areas, moderate to high use trails -subdivisions, schools and parks established within 10-20 years</p>	<p>2-5 years</p>	<p>Walk or drive by to assess individual trees as required.</p>
<p>High: Areas with high public use or public access or buildings immediately adjacent trees AND with immature to mature trees Construction within root zones of trees</p>	<p>-primary highways, primary urban roads and intersections, high use parks and parking areas -inner urban areas, downtown areas; older residential, public, schools and commercial areas established more than 20 years</p>	<p>1-2 years</p>	<p>Walk by and assess all trees within 1.5 times the tree height of actively used sites or property.</p>

D.4 Tree Removal

The Township shall remove or cause to be removed a tree on public property when it represents a hazard to life or property which will be defined as one or more of the following:

1. The tree is decayed in whole or in part;
2. The tree has failed, or in its current physiological condition has the potential to fail, and by its failure, or potential failure, poses a direct and immediate threat to public property or to individuals using public property;
3. The tree is a source, host, or infested with any pest which directly or indirectly causes irreversible damage to the long-term health, vitality, longevity, and integrity of another tree;
4. The tree whose structural value, or integrity, as determined by the Director, has been seriously compromised by construction, weather related events, or by pruning;
5. The tree is located along a highway and obstructs or impedes the safe use of the highway;
6. The trees root system has been proven to compromise the structural integrity or the foundation of a building, and
7. The tree is of poor quality, is invasive, or is an undesirable species whose removal will allow new tree planting.

On a case by case basis and where the Township determines appropriate (i.e.: naturalized parks, hedgerows, recreational trails), consideration shall be given to preserving logs, stumps, and snags to create wildlife habitat opportunities and support a healthy soil ecosystems.

Tree Removal Process:

- Township staff will inspect and identify public tree that are to be removed due to a represented hazard;
- If the tree has a DBH of 15cm or larger, a Tree Removal Notice (*see appendix 6*) will be posted on the tree at least 14 days prior to its removal;
- Any disagreements in regards to the health of public trees planned for removal will be resolved on a case by case basis and may involve independent review by a consulting arborist (or equivalent) or approval by Council;
- Notwithstanding the above, if staff are aware of an imminent hazardous condition, immediate and appropriate action will be taken;
- Trees that are less than 30cm DBH and are free of potential conflicts with structures or utilities (i.e.: power lines, electrical pedestals, light standard etc.) will be removed by Township staff or a qualified contractor based on available resources, and
- Trees that are greater than 30cm or have potential conflicts with structures or utilities (i.e.: power lines, electrical pedestals, light standard etc.) will be removed by a qualified contractor.

D.5 Tree Pruning

Timely and appropriate tree pruning is the key to a healthy and well managed public forest. Trees are pruned primarily to prevent injury to people and damage to property, and to maintain or improve the health of trees to be preserved. An effective tree maintenance program must have the capacity to prune all public street trees on a rotational cycle and be able to respond to emergency and potential safety hazards in a timely manner.

Contractors that are hired to prune public trees must be or have on staff a Certified Arborist (or equivalent) that are responsible for supervising the work. Likewise, we encourage residents to hire a Certified Arborist (or equivalent) for private tree care or maintenance.

D.5.1 Community Maintenance Pruning

Community maintenance pruning is the practice of systematic pruning of the public forest based on defined management units and pruning cycles. The Township of Centre Wellington will define community maintenance pruning units at the block and street level. Notice of planned community maintenance pruning will be given to residents via the ConnectCW website. There is currently a significant backlog of Township trees that require pruning, however the implementation of the following pruning cycles will occur in stages as staff capacity and funding are increase:

- **Juvenile trees (<5m tall)** will be pruned on a 3 year cycle. In a new subdivision trees will be pruned on a 3 year cycle until they are over 3m tall, however in older neighbourhoods newly planted trees will be pruned once 3 years after planting, and then be added to the standard 7 year cycle for each associated pruning unit. Small trees can be pruned from the ground by a qualified contractor or Township staff (staff who are not a Certified Arborist must receive training from a Certified Arborist a minimum of once per year). Where small trees are found in parks or other public open space, volunteers may be permitted to prune small trees (volunteers are to receive training from and be accompanied by a Certified Arborist).
- **Intermediate trees between (5-15m tall)** will be pruned on a 7 year cycle. These trees will be pruned with an aerial lift by a qualified contractor.
- **Mature tree (>15m tall)** will be pruned as required based on information collected by the Tree Inventory and inspections (see *section D.1.2 and Table 1.*), defects observed and reported by residents, and as a result of weather related events.

With continued residential growth in the municipality and a growing tree inventory staffing levels will not be able to respond to the pruning needs of the public forest. Employing arboricultural contractors supplemented by Township staff is the most efficient manner in which to achieve the desired results in meeting the Townships operational needs, standards of professional care, level of service.

The following are the benefits of community maintenance pruning:

1. Cost Savings

Community maintenance pruning enables trees to be pruned in a planned systematic fashion. Crew efficiency and productivity are significantly increased because work operations can be performed more effectively and less time spend for travel and set-up.

The cost savings and overall health condition of the public forest that result from a systematic pruning program can also be considerable over the long term. Corrective pruning of small diameter tree branches before they become a structural or safety concern is cheaper than removing large diameter branches, and also results in smaller pruning wounds which reduces the occurrence of disease and tree mortality and the associated costs of removal and replacement.

Additional cost savings are also realized since systematic pruning reduces the number of reactive emergency evening and week-end call outs and related overtime.

2. Reduced Requests for Service

Systematic pruning reduces the number of service requests from the public because the trees have fewer dead, broken and other types of hazardous limbs.

3. Improved Safety and Decreased Liability

Citizen safety is a prime consideration for systematic pruning. Pruning on a 3 to 7 year cycle reduces the possibility of dead or hazardous wood developing in trees. Systematically pruning for sightlines, traffic signs, pedestrians and vehicles result in lower risks, fewer accidents and damages. Systematic pruning including crown reduction may also reduce the risk associated with unexpected tree failure or failure due to extreme weather events and extend the life of mature trees in order to maximize the benefits which come from their size.

4. Reduced Insect and Disease Problems

Systematic pruning is also important in Integrated Pest Management Program. Removal of broken, dead or diseased branches can prevent pathogenic organisms penetrating into adjacent parts of the tree and will reduce the threat of spread to other trees.

5. Increased Property Values

Property values are increased by healthy, well-cared for trees. Trees on the property to be sold, as well as adjacent street and neighbourhood trees are considered a major selling point and add value to the property.

6. Enhanced Public Image

The public image of Centre Wellington is enhanced by a well-cared for public forest.

Employee pride and staff morale is affected by the Township's overall approach to tree care. Employees respond favourably to an organized, systematic approach that produces positive results. Systematic pruning also allows attainable production objectives to be set and crew performance to be evaluated and recognized.

7. Communication

Finally, systematic pruning as opposed to pruning in the event of an emergency will allow residents to be advised in advance which streets will be targeted for tree pruning.

D.5.2 Pruning Guidelines and Standards

Trees shall be pruned according to the International Society of Arboriculture “Tree Pruning Guidelines”, the National Arborist Pruning Standards, as well as the following:

- All trees shall be pruned to maintain a minimum 2.5 meter of clearance from grade level to any branch extending over the pedestrian sidewalk. When pruning trees with foliage ‘off’ consideration must be given for additional pruning height to accommodate for foliage ‘on’ conditions;
- All trees adjacent to travelled road shall be pruned to maintain a minimum of 4 meters of clearance above the curb to the lowest branch reaching over the roadway;
- “Topping” is not permitted.
- Trees will be pruned using the collar cut method of pruning. Flush cuts are not permitted.

D.5.3 Pruning Priority and Schedule

Maintenance needs shall be categorized and prioritized as follows:

1. Emergency Pruning

Trees that pose a safety hazard that could result in bodily injury or property damage. This includes downed, dead, split, dangerous and broken stems, branches and trunks. Stems and branches are potentially at risk of failing when they are decayed, hollow, split and leaning

Schedule – This work will occur on an as-needed basis. The work will be completed as quickly as possible. However, in some cases where specialized equipment is needed, or the request for service occurs after hours or on weekends, additional time will be needed.

2. Priority Pruning

Trees that have the potential of becoming safety hazards if not corrected in the near future and the maintenance of these trees cannot be postponed until the following community maintenance pruning cycle. This includes trees that obstruct a traffic sign (stop, yield, no parking, etc.), man-made damage, broken or hanging branches, obstructing sightlines (both roads and sidewalks), interference with overhead wires, disease or insect infestation, or trees with over 50 per cent deadwood.

Schedule – This work will typically be scheduled between July 1st and December 1st. The work will be completed within one month of the request for service.

3. Regular Pruning

Trees with minor deadwood or damage that does not pose an imminent risk to public safety and/or trees that require pruning to maintain or improve their structural condition (e.g.: to repair defects of co-dominant stems, unbalanced crowns, included bark from acute branch angles, and reduce forces of wind loading to crowns). This also includes

pruning to promote a safe environments in accordance with CPTED (Crime Prevention Through Environmental Design).

Schedule – This work will typically be scheduled between February 1st and March 31st for Intermediate trees and Mature trees and between July 1st and December 1st for Juvenile trees. The work will be completed during the next regular pruning cycle.

D.6 Canopy Cover

Canopy cover is a measure of forest health that can and should be used to help inform the management of the Townships public forest.

An estimate of tree canopy cover can be derived from the Ministry of Natural Resources “wooded area” GIS layer. This maps wooded areas to a minimum of 0.25 hectare with a 60% canopy coverage. This data indicates there is between 14-17% tree canopy cover within the Township of Centre Wellington. In his 2009/2010 Annual Report, Environmental Commissioner of Ontario, Gordon Miller, stated that a minimum 30 per cent local forest cover is required to maintain a healthy, sustainable environment.

The current canopy cover estimates for the Township of Centre Wellington appear to be low compared with provincial canopy cover targets. However, the canopy cover for Centre Wellington was estimated using GIS analysis and satellite imagery of wooded areas only, and did not take into account individual trees growing along roadsides, as well as smaller clumps of trees and the isolated trees in the more urbanized parts of the City (i.e.: in residential yards, in schoolyards, and on commercial, industrial and institutional lands).

In order for the Township to take an active role in advocating for an increase in canopy cover, an accurate, and replicable measure of canopy cover is needed. Establishing a protocol for measuring and recording canopy cover will most likely involve a combination of the following:

- Sampling of tree cover using aerial photographs;
- Sampling of tree cover using satellite imagery;
- Analysis of the Township-wide GIS tree database, and
- Collection of ground truth data.

Township staff will pursue opportunities to partner with GIS software specialist, consultants, and researchers (i.e.: Faculty and students from the University of Guelph School of Environmental Design and Rural Development, and the University of Toronto Faculty of Forestry) to create a canopy cover measure. This information will be used to set achievable canopy cover targets.

E. Glossary

boundary tree	trees with some part of the main stem straddling a property boundary (AKA boundary line)
caliper	measurement of the stem diameter near the base of the stem; measured at 150mm above ground level for caliper sizes of 40mm to 100mm; measured at 300mm above ground level for caliper sizes greater than 100mm
DBH	diameter at breast height of the stem of the tree measured 1.4m above ground level
Director	Director or designate of Community Services/Infrastructure Services.
EAB	Emerald Ash Borer
ESA 2007	Endangered Species Act, 2007. Bill 184. As Passed May 17, 2007 (Ontario, 38 th Legislature, 2 nd Session)
CPTED	Crime Prevention Through Environmental Design, is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts
cultivar	cultivated variety, e.g. (<i>Acer x freemanii</i> 'Jeffersred' [Autumn Blaze Maple] is a cultivar of <i>Acer x freemanii</i>)
ground truth	a term used in various fields to refer to information provided by direct observation (i.e. empirical evidence) as opposed to information provided by inference
included bark	included bark or "ingrown" bark tissues often develop where two or more stems grow closely together by growing around the branching stem attachment and into the union between the two stems
mature tree	trees that have reached at least 75 percent of their typical final height and spread
pruning	removing branches (or occasionally roots) from a tree using approved practices, to achieve a specified objective; structural pruning: pruning to establish a strong arrangement or system of scaffold limbs or primary branches
scaffold limb	a limb or branch that is among the largest diameter on the tree and will remain on the tree perhaps to maturity
snag	a standing, dead or dying tree, often missing a top or most of the canopy
tree	a perennial woody plant with a single main stem reaching a minimum height at maturity of 3m, with branching along the main stem, and typically long-lived (i.e. > 30 years) under suitable growing conditions
Certified Arborist	an individual with an active certifications from the International Society of Arboriculture or one of the following active certifications if deemed acceptable by the Township: <ul style="list-style-type: none"> ▪ Registered Consulting Arborist, American Society of Consulting Arborists;

- Tree Risk Assessment Qualification, International Society of Arboriculture;
 - Registered Professional Forester, Ontario Professional Foresters Association, or
 - Landscape Architect, Ontario Association of Landscape Architects.
- tree risk
assessor
- an individual with the following active certification:
- Tree Risk Assessment Qualification, International Society of Arboriculture
- trunk
- stem of a tree

F. Appendices

- Appendix 1. Approved Tree Species for Centre Wellington
- Appendix 2. Tree Planting Details
- Appendix 3. Tree Preservation Details
- Appendix 4. Tree Planting Specifications
- Appendix 5. Tree Planting Setbacks
- Appendix 6. Tree Removal Notice
- Appendix 7. Tree Planting Door Hanger

Appendix 1. Approved Tree Species for Centre Wellington

Botanical Name	Common Name	Types of Planting Locations ⁶						
		Urban Streets <7m ³	Urban Streets =>7m ⁴	Rural Roads	Downtown	Parks	Natural Areas ⁵	Ornamental Areas
Native Tree Species ¹								
Acer rubrum	Red Maple		•	•		•	•	
Acer saccharinum	Silver Maple			•		•	•	
Acer saccharum	Sugar Maple			•		•	•	
Aesculus glabra	Ohio Buckeye		•			•		•
Amelanchier arborea	Downy Serviceberry	•				•	•	•
Amelanchier canadensis	Shadblow Serviceberry	•				•	•	•
Amelanchier laevis	Smooth Serviceberry	•				•	•	•
Betula papyrifera	Paper Birch					•	•	•
Carya cordiformis	Bitternut Hickory					•	•	
Celtis occidentalis	Hackberry		•	•	•	•		
Cercis canadensis	Eastern Redbud	•			•			•
Fagus grandifolia	American Beech			•			•	•
Gymnocladus dioicus	Kentucky Coffee-Tree		•	•	•	•		
Juniperus virginiana	Red Cedar					•	•	•
Liriodendron tulipifera	Tuliptree		•			•		
Magnolia acuminata	Cucumber Tree		•	•		•	•	•
Ostrya virginiana	Ironwood	•	•		•	•	•	•
Picea glauca	White Spruce					•	•	•
Pinus strobus	Eastern White Pine					•	•	
Populus balsamifera	Balsam Poplar					•	•	
Populus grandidentata	Large-Toothed Aspen					•	•	
Populus tremuloides	Trembling Aspen					•	•	
Prunus serotina	Black Cherry			•		•	•	
Nyssa sylvatica	Blackgum		•		•	•		
Quercus alba	White Oak		•	•		•	•	
Quercus macrocarpa	Bur Oak		•	•	•	•	•	
Quercus muehlenbergii	Chinquapin Oak		•	•		•	•	
Quercus rubra	Red Oak		•	•		•	•	
Thuja occidentalis	Eastern White Cedar					•	•	
Tilia americana	Basswood			•		•	•	
Tsuga canadensis	Eastern Hemlock					•	•	
Ulmus americana 'Princeton'	Princeton Elm		•	•	•	•		
Subtotal (Native Only)		5	13	14	7	30	25	11
Total Native Tree Species 32								

¹ Native Trees - tree species native to south central Ontario

² Non-native Trees - tree species not native to south central Ontario

³ Urban streets with overhead clearance of less than 7m

⁴ Urban streets with overhead clearance of 7m and greater

⁵ Natural areas may generally use any tree species native to south central Ontario, appropriate for site conditions

⁶ See Section C.1 for description of types of planting areas

Botanical Name	Common Name	Types of Planting Locations ⁶						
		Urban Streets <7m ³	Urban Streets =>7m ⁴	Rural Roads	Downtown	Parks	Natural Areas ⁵	Ornamental Areas
Non-native Species ²								
Acer campestre	Hedge Maple				•	•		
Acer x freemanii 'Jeffersred'	Autumn Blaze Maple		•		•	•		
Acer x freemanii 'Armstrong'	Armstrong Maple		•		•			
Acer griseum	Paperbark Maple					•		•
Acer nigrum 'Greencolumn'	Greencolumn Maple		•			•		
Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple		•		•	•		
Abies concolor	White Fir					•		•
Betula nigra	River Birch					•		•
Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam		•					•
Catalpa speciosa	Northern Catalpa		•			•		
Cercidiphyllum japonicum	Katsura Tree		•		•			•
Corylus colurna	Turkish Hazel		•		•			•
Crataegus phaenopyrum	Washington Hawthorn	•			•			•
Fagus sylvatica	European Beech					•		•
Ginkgo biloba	Maidenhair Tree		•		•			•
Gleditsia triacanthos var. inermis 'Skycole'	'Skyline' Honey Locust		•		•			
Malus 'Hargozam'	Harvest Gold Crab Apple	•			•	•		•
Malus 'Prairifire'	Prairie Fire Crab Apple				•	•		•
Malus 'Robinson'	Robinson Crab Apple				•	•		•
Malus 'Sutyzam'	Sugartyme Crab Apple	•			•	•		•
Malus 'Thunderchild'	Thunderchild Crab Apple	•			•	•		•
Picea abies	Norway Spruce					•		
Picea omorika	Serbian Spruce					•		•
Picea pungens 'Glauca'	Blue Colorado Spruce							•
Platanus x acerifolia 'Exclamation!'	Morton Circle London Planetree		•			•		•
Pyrus calleryana 'Glen's Form'	Chanticleer Pear		•		•			•
Pyrus calleryana 'Redspire'	Redspire Pear		•		•			•
Quercus robur 'Fastigiata'	Pyramidal English Oak				•			•
Sophora japonica	Japanese Pagoda Tree				•	•		
Sorbus thuringiana	Oakleaf Mountain-Ash	•						
Syringa reticulata	Japanese Tree Lilac	•			•			•
Tilia americana 'Redmond'	Redmond Basswood		•		•	•		
Tilia cordata 'Ronald'	Norlin Linden		•		•			•
Ulmus x 'Homestead'	Princeton Elm		•		•	•		
Zelkova serrata	Japanese Zelkova		•		•			
Subtotal (Non-native Only)		6	16	0	23	20	0	22
Total (Native and Non-native)		11	29	14	30	50	25	33
Total Non-native Tree Species 35								

Appendix 2. Tree Planting Details

ROOTBALL WIDTH

The minimum acceptable root ball width (wire basket)

- 70cm for 50mm caliper tree
- 70cm for 60mm caliper tree
- 80cm for 70mm caliper tree

The minimum acceptable root ball width (potted)

- 40cm for 25mm caliper tree
- 40cm for 35mm caliper tree
- 50cm for 40mm caliper tree

SOIL QUALITY

If required, soil analysis and testing will identify level of nutrients, soil textural class, pH, salinity, and presences of contaminants including heavy metals and pesticides. The recommendations outlined by the soil testing laboratory will be followed in order to provide a good quality soil.

PLANTING

1. Cover stock while in transit or temporary storage.
2. Remove all trunk wrap prior to planting but tree ID tag to remain.
3. Install support stakes identified with:
 - 3.1. 1 stake per tree <40mm caliper.
 - 3.2. 2 stakes per tree => 40mm caliper.
4. Water tree immediately following planting, and twice weekly for two growing seasons with:
 - 4.1. 15L of water per application for trees < 50mm caliper.
 - 4.2. 20L of water per application for trees => 50mm caliper.
5. Prune dead or broken branches and subordinate any branches 70% the diameter of the parent stem.
6. Remove stakes and ties at end of warranty period.

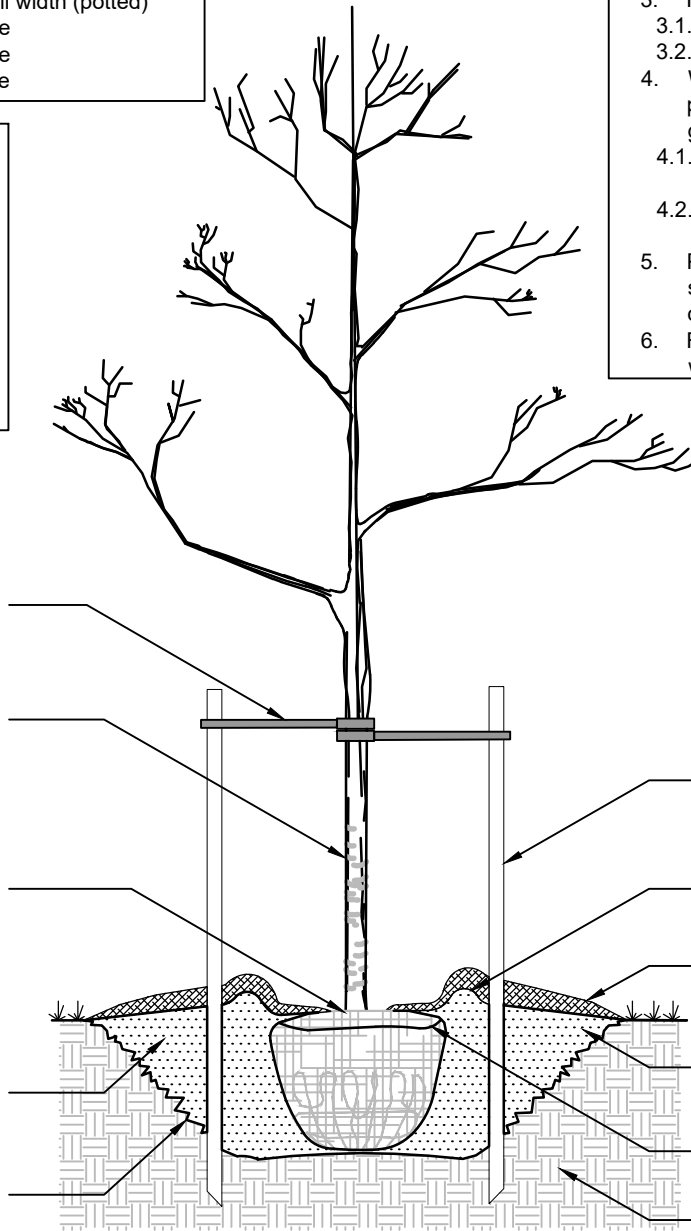
APPROVED PLIABLE MATERIAL TIED IN FIXED FIGURE EIGHT LOOP AS PER MANUFACTURER'S INSTRUCTIONS

TRUNK MUST BE FREE OF WOUNDS AND SCARS AND STAND UPRIGHT PRIOR TO STAKING

EXCAVATE THE ROOTBALL TO UNCOVER THE ROOT FLARE AND STRUCTURAL ROOTS. REMOVE ALL DEFLECTED OR GIRDLING ROOTS. PLACE ROOT BALL SO THAT ROOT FLARE IS AT FINISHED GRADE AFTER SETTLING. PLANT UP TO 50mm ABOVE GRADE IN HEAVY (CLAY) SOILS.

THE PLANTING PIT MUST BE A MINIMUM OF 300mm WIDER THAN THE ROOTBALL OR 2x THE DIAMETER OF THE ROOTBALL (WHICHEVER IS GREATER).

SCARIFY BOTTOM & SIDES OF PLANTING PIT TO A DEPTH OF 50mm.



38mm x 38mm x 2300mm WOODEN STAKE OR 40mm x 40mm X 5mm x 2440mm STEEL T-BAR.

300mm WIDE x 100mm DEPTH SOIL SAUCER LOCATED AT EDGE OF ROOTBALL.

100mm SHREDDED WOOD MULCH KEPT 50mm (MIN.) FROM BASE OF TRUNK.

500mm (MIN.) DEPTH OF AMENDED NATIVE BACKFILL TAMPED IN 150mm LIFTS.

CUT OR REMOVE AND FOLD TWINE, WIRE AND BURLAP FROM TOP 1/2 OF BASKET.

UNDISTURBED SUBSOIL OR COMPACTED FILL.

TYPICAL DECIDUOUS WIRE BASKET/CONTAINER TREE PLANTING DETAIL



Centre Wellington

1 MacDonald Square
Elora, Ontario, N0B 1S0
Phone (519) 846- 9691

DATE: December 2017

SCALE: NTS

DWG NO.

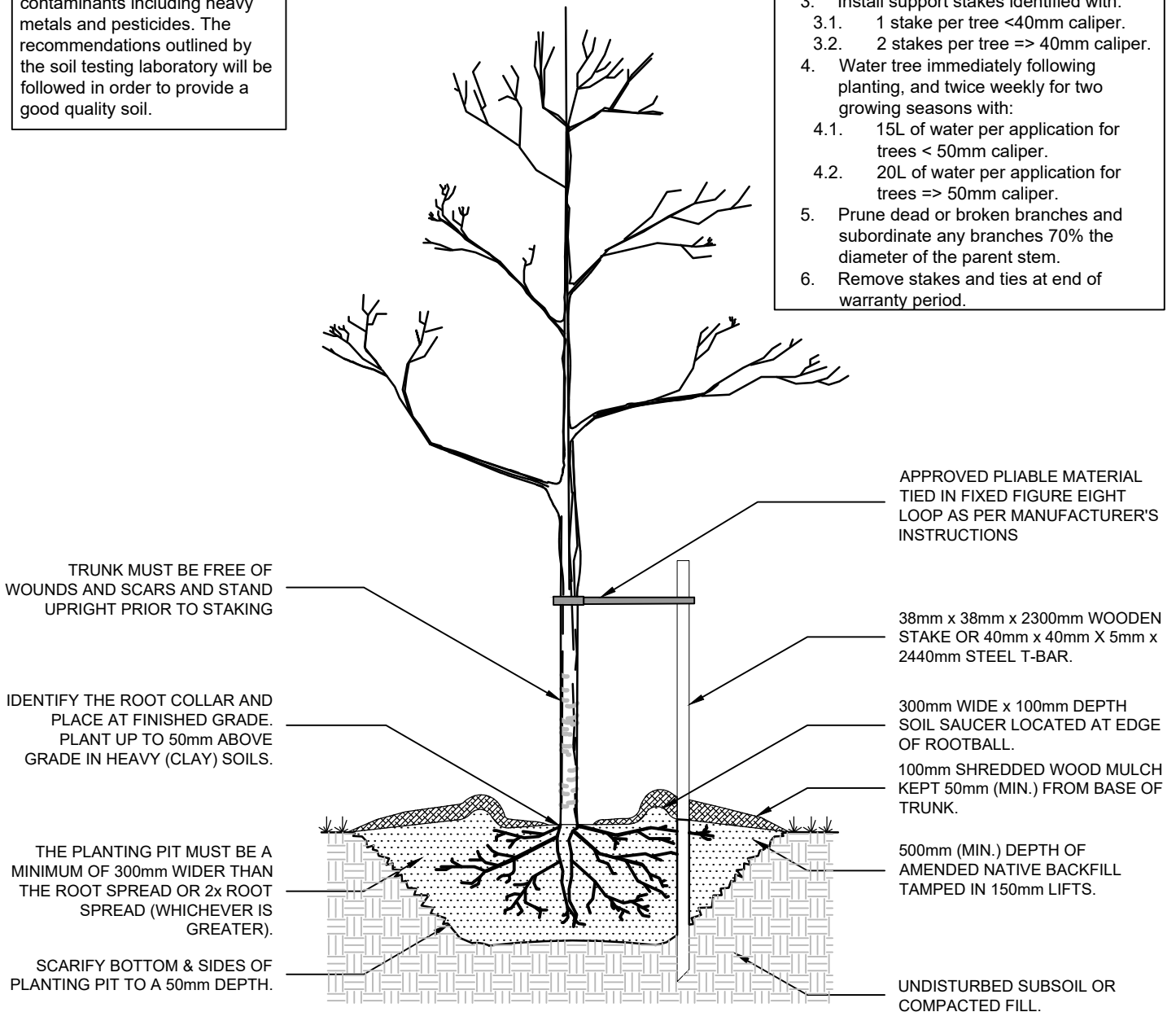
F1

SOIL QUALITY

If required, soil analysis and testing will identify level of nutrients, soil textural class, pH, salinity, and presences of contaminants including heavy metals and pesticides. The recommendations outlined by the soil testing laboratory will be followed in order to provide a good quality soil.

PLANTING

1. Cover stock while in transit or temporary storage.
2. Remove all trunk wrap prior to planting but tree ID tag to remain.
3. Install support stakes identified with:
 - 3.1. 1 stake per tree <40mm caliper.
 - 3.2. 2 stakes per tree => 40mm caliper.
4. Water tree immediately following planting, and twice weekly for two growing seasons with:
 - 4.1. 15L of water per application for trees < 50mm caliper.
 - 4.2. 20L of water per application for trees => 50mm caliper.
5. Prune dead or broken branches and subordinate any branches 70% the diameter of the parent stem.
6. Remove stakes and ties at end of warranty period.



TYPICAL DECIDUOUS BARE ROOT TREE PLANTING DETAIL



Centre Wellington

1 MacDonald Square
Elora, Ontario, N0B 1S0
Phone (519) 846- 9691

DATE: December 2017

SCALE: NTS

DWG NO.

F2

ROOTBALL WIDTH

The minimum acceptable root ball width (wire basket)

- 70cm for 50mm caliper tree
- 70cm for 60mm caliper tree
- 80cm for 70mm caliper tree

The minimum acceptable root ball width (potted)

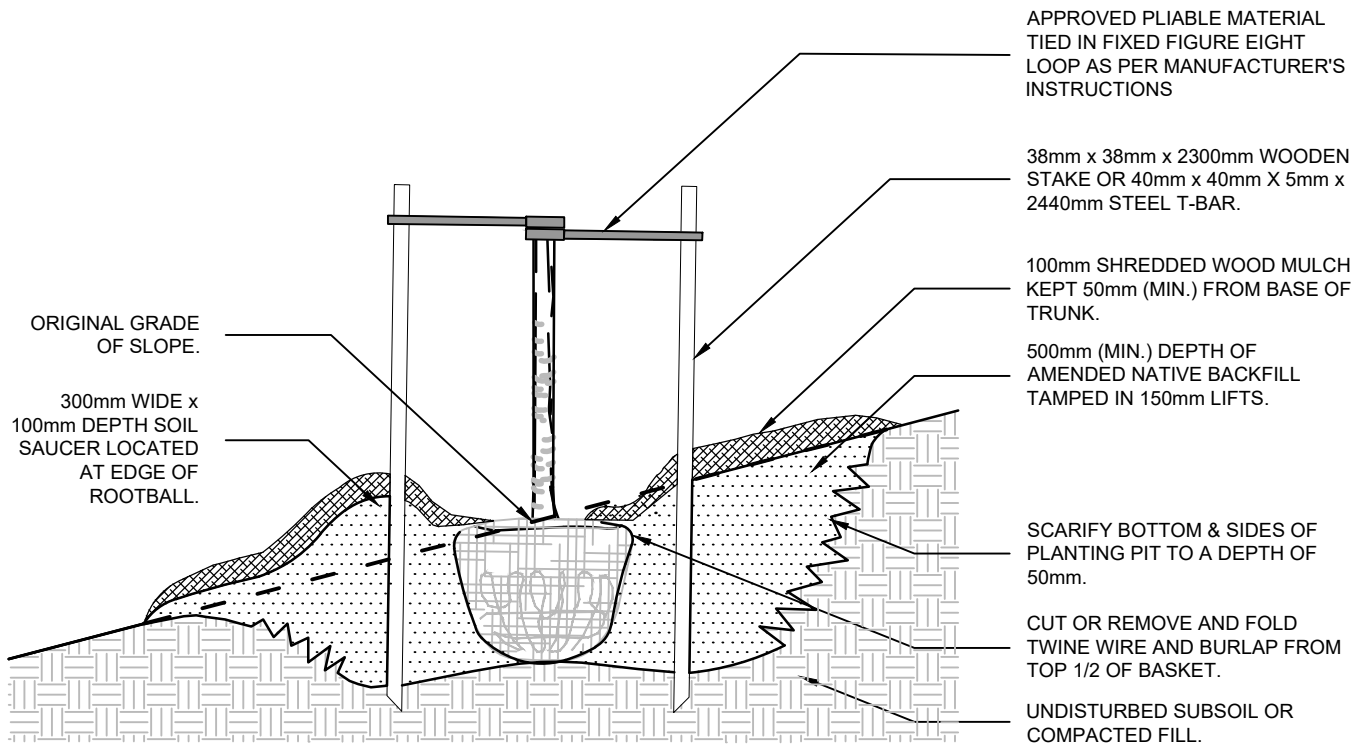
- 40cm for 25mm caliper tree
- 40cm for 35mm caliper tree
- 50cm for 40mm caliper tree

SOIL QUALITY

If required, soil analysis and testing will identify level of nutrients, soil textural class, pH, salinity, and presences of contaminants including heavy metals and pesticides. The recommendations outlined by the soil testing laboratory will be followed in order to provide a good quality soil.

PLANTING

1. Cover stock while in transit or temporary storage.
2. Remove all trunk wrap prior to planting but tree ID tag to remain.
3. Install support stakes identified with:
 - 3.1. 1 stake per tree <40mm caliper.
 - 3.2. 2 stakes per tree => 40mm caliper.
4. Water tree immediately following planting, and twice weekly for two growing seasons with:
 - 4.1. 15L of water per application for trees < 50mm caliper.
 - 4.2. 20L of water per application for trees => 50mm caliper.
5. Prune dead or broken branches and subordinate any branches 70% the diameter of the parent stem.
6. Remove stakes and ties at end of warranty period.
7. Excavate the rootball to uncover the root flare and structural roots. Remove all deflected or girdling roots. Place root ball so that root flare is at the original grade.
8. The planting pit must be a minimum of 300mm wider than the rootball or 2x the diameter of the rootball (whichever is greater).



TYPICAL TREE PLANTING ON A SLOPE DETAIL



Centre Wellington

1 MacDonald Square
Elora, Ontario, N0B 1S0
Phone (519) 846- 9691

DATE: December 2017

SCALE: NTS

DWG NO.

F3

ROOTBALL WIDTH

The minimum acceptable root ball width (wire basket)

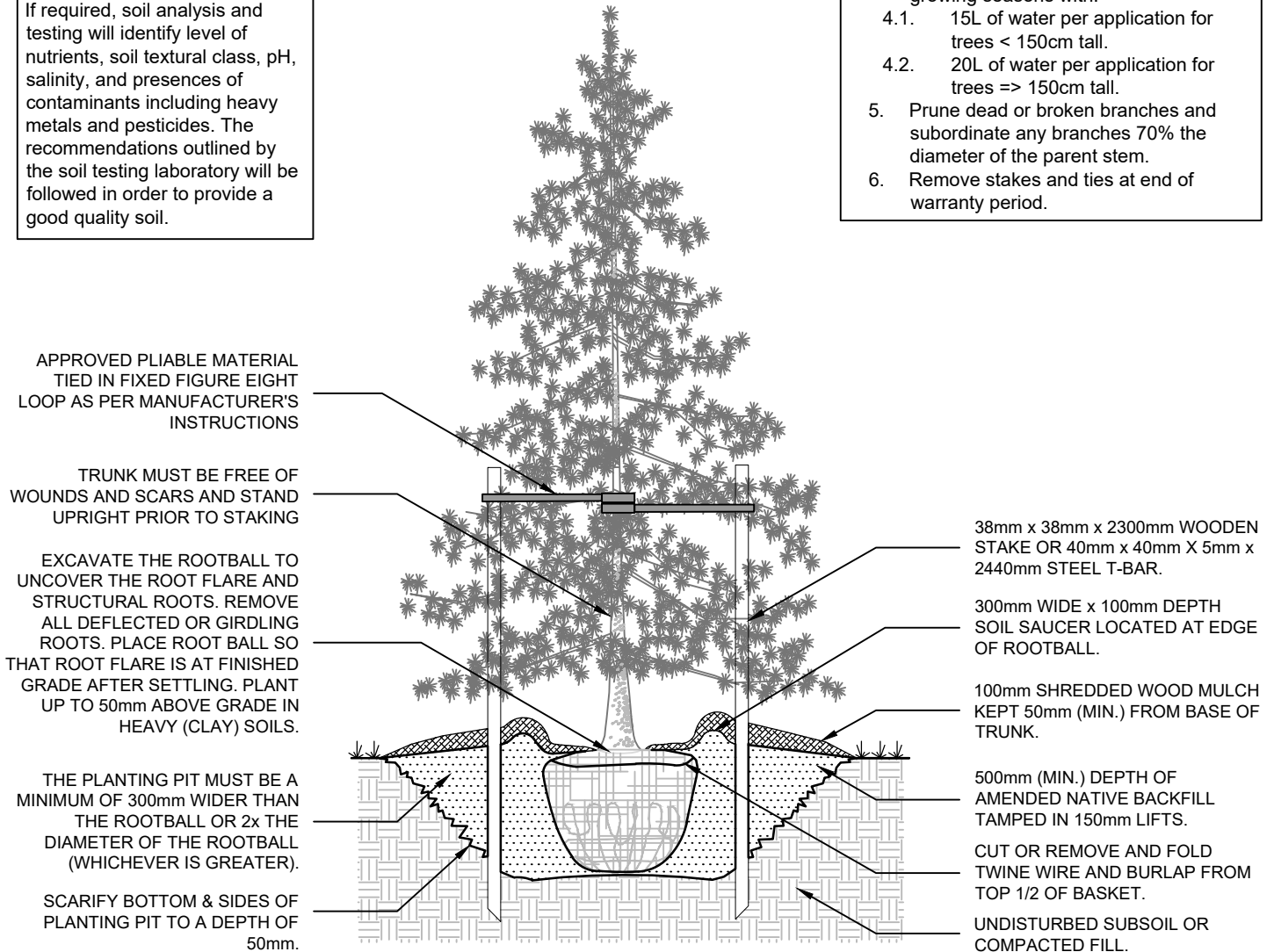
- 50cm for 125cm tall tree
- 60cm for 150cm tall tree
- 70cm for 175cm tall tree
- 80cm for 200cm tall tree
- 90cm for 250cm tall tree

SOIL QUALITY

If required, soil analysis and testing will identify level of nutrients, soil textural class, pH, salinity, and presences of contaminants including heavy metals and pesticides. The recommendations outlined by the soil testing laboratory will be followed in order to provide a good quality soil.

PLANTING

1. Cover stock while in transit or temporary storage.
2. Remove all trunk wrap prior to planting but tree ID tag to remain.
3. Install support stakes identified with:
 - 3.1. 1 stake per tree <175cm tall.
 - 3.2. 2 stakes per tree => 175cm tall.
4. Water tree immediately following planting, and twice weekly for two growing seasons with:
 - 4.1. 15L of water per application for trees < 150cm tall.
 - 4.2. 20L of water per application for trees => 150cm tall.
5. Prune dead or broken branches and subordinate any branches 70% the diameter of the parent stem.
6. Remove stakes and ties at end of warranty period.



TYPICAL CONIFEROUS WIRE BASKET/POTTED TREE PLANTING DETAIL



Centre Wellington

1 MacDonald Square
Elora, Ontario, N0B 1S0
Phone (519) 846- 9691

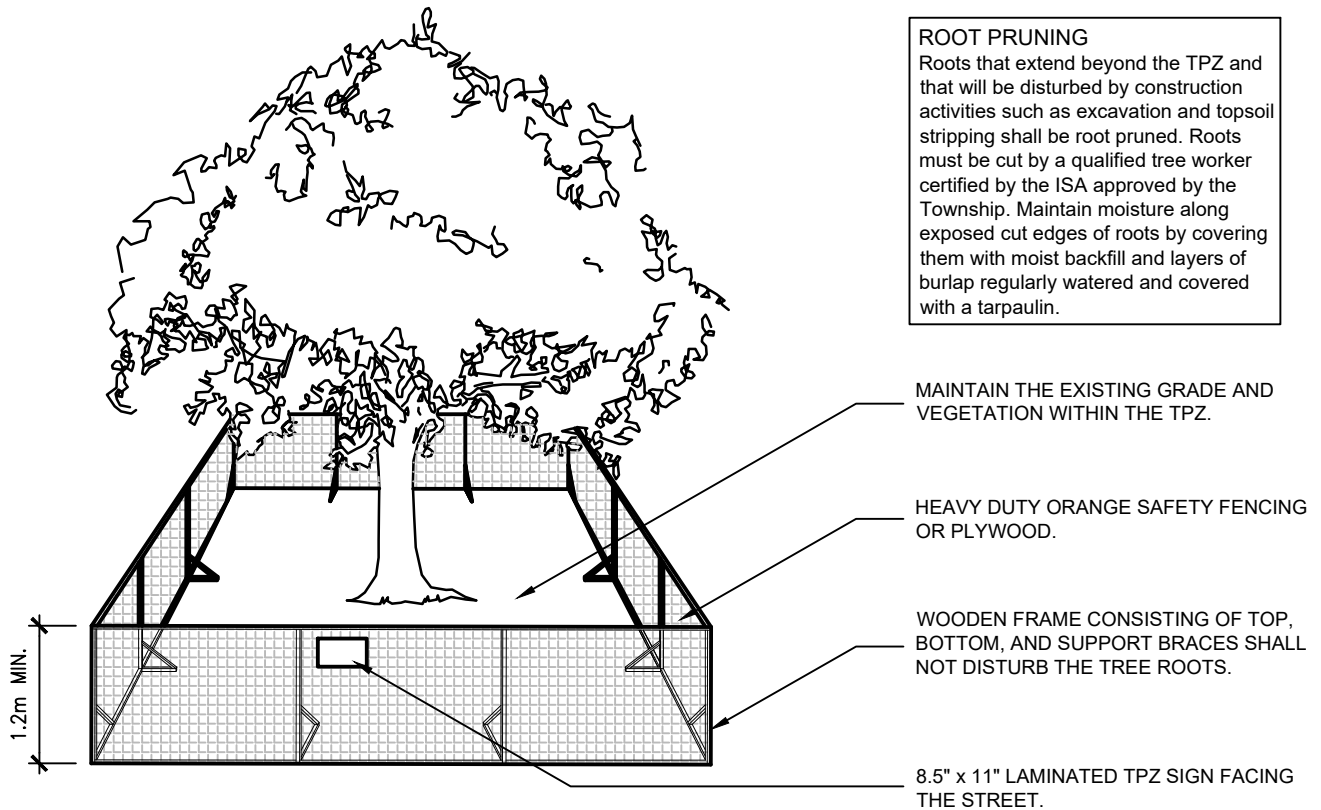
DATE: December 2017

SCALE: NTS

DWG NO.

F4

Appendix 3. Tree Preservation Details



ROOT PRUNING
 Roots that extend beyond the TPZ and that will be disturbed by construction activities such as excavation and topsoil stripping shall be root pruned. Roots must be cut by a qualified tree worker certified by the ISA approved by the Township. Maintain moisture along exposed cut edges of roots by covering them with moist backfill and layers of burlap regularly watered and covered with a tarpaulin.

- TREE PROTECTION BARRIER**
1. Tree Protection Barriers constructed with a solid wood frame are required to define the Tree Protection Zone (TPZ).
 2. No construction activity, grade changes, surface treatment or excavation of any kind is permitted within the TPZ.
 3. All Tree Protection Barriers shall be in place and approved by the Township prior to construction access.
 4. Tree Protection Barriers shall remain in place and in good condition until all construction is complete and approved by the Township.
 5. During construction activities the TPZ will be inspected and monitored by and a certified arborist to monitor tree health.
 6. All arboriculture work such as pruning of both branches and roots, shall be done by a qualified tree worker certified by the International Society of Arboriculture (ISA) approved by the Township.
 7. Sediment control fencing shall be installed as indicated in the Tree Protection Plan and approved by the Township.

MINIMUM TPZ DISTANCE FROM THE BASE OF THE TRUNK

< 10cm DBH	1.2m
11 - 19cm DBH	1.8m
20 - 40cm DBH	2.4m
41 - 50cm DBH	3.0m
51 - 60cm DBH	3.6m
61 - 70cm DBH	4.2m
71 - 80cm DBH	4.8m
81 - 90cm DBH	5.4m
91 - 100cm DBH	6.0m
> 100cm DBH	6cm/1cm dia.

TREE PROTECTION ZONE DETAIL



Centre Wellington

1 MacDonald Square
 Elora, Ontario, N0B 1S0
 Phone (519) 846- 9691

DATE: December 2017

SCALE: NTS

DWG NO.

F5

Appendix 4. Tree Planting Specifications

1. The acceptable caliper size of replacement trees is between 50mm and 70mm for urban areas and between 35mm and 50mm for rural areas.
2. New tree stock should be healthy, free from injurious pests and diseases, be true to name, and to the size, grade and type selected, with undamaged trunks, well balanced branch structure, and a healthy root system of adequate size to support the crown. Acceptable tree stock must comply with the standards described in the Canadian Standards for Nursery Stock, 8th Edition, 2006 or later. Unsatisfactory tree stock will be rejected.
3. Tree species selection should maintain the character of the street, while ensuring a variety of species. Emphasis should be placed on species indigenous to south-central Ontario. Tree species selection should follow *Section C.7 Approved Tree Species for Centre Wellington*, and the *Urban Design Guidelines for the Township of Centre Wellington*. Rare species may be used provided that it is in accordance with applicable legislation and statutes (e.g. Endangered Species Act, 2007). See *Appendix 1, Approved Tree Species for Centre Wellington*.
4. Tree species and cultivated varieties of smaller stature may be chosen over larger types where future conflicts with utilities and buildings may arise.
5. Biodiversity of tree species is essential. A variety of tree species is to be used on each street.
6. The warranty period shall be two (2) years following preliminary acceptance of planting.
7. Inspection of trees for preliminary and final acceptance by the Township will be performed by a Certified Arborist (or equivalent) acceptable to the Township.
8. To ensure establishment success of newly planted trees, supplemental watering is to be provided by the developer as required during the growing seasons of the 2 year warranty period.
9. Planting periods of trees shall be early to mid-spring and fall only.
10. Tree planting details are provided in Appendix 2.
11. All areas for planting shall be stabilized with sod or seed as required, prior to planting of trees.

Tree Planting Design in the Streetscape

Each streetscape must be viewed as a whole and in its relationship to neighbouring streetscapes.



Centre Wellington

Tree Protection Zone (TPZ)

All construction related activities, including grade alteration, excavation, soil compaction, material or equipment storage, disposal of liquids and vehicular access are **PROHIBITED** within the **TPZ**.

The tree protection barrier must not be removed, moved, or altered in any way without the written authorization of the Township.

Concerns or inquiries regarding this **TPZ** can be directed to:

519-846-9691 x218

Appendix 5. Tree Planting Setbacks

Generally the planting of approved tree types will be allowed within road allowances subject to the following requirements:

- a) **Daylighting Triangles:** At the intersections of roadways or vehicular access points, no plant material with a mature height greater than 30cm is permitted within a sight triangle measuring 9 metres by 9 metres along the boundary of each of the intersecting roadways. Trees in the sight triangle shall be 15 metres by 15 metres. This measurement will be taken from the point of intersecting curb lines;
- b) **Boulevard Width:** Boulevards containing a minimum soft service width of 2.0 metres are eligible for planting. Consideration shall be given to overhead and underground utilities, snow storage, salt impacts, and impacts to equipment clearing devices;
- c) **Boulevard Planting Curb Setback:** Tree plantings in boulevards must achieve a minimum setback of 1.2 metres from the edge of the curb. Consideration shall be given to overhead and underground utilities, snow storage, salt impacts, and impacts to equipment clearing devices;
- d) **Curb Face Sidewalk Setback:** Tree planting adjacent to curb face sidewalks must achieve a minimum setback of 1.5 metres from the edge of the sidewalk or 300mm from the property line. Consideration shall be given to overhead and underground utilities, snow storage, and impacts to equipment clearing devices;
- e) **Sidewalk:** Tree planting in new subdivisions will have a minimum setback 1.2 metres from the edge of curb and 1.0 metre from the edge of the sidewalk. In existing neighbourhoods a replanted tree shall have a minimum setback of 1.2m metres from the edge of curb and 0.8 metre from the edge of the sidewalk unless there are special circumstances identified by staff;
- f) **Driveway Setbacks:** Tree plantings shall achieve a minimum setback of 1.5 meters from driveways;
- g) **Municipal Services Setbacks:** Tree planting shall achieve a minimum setback of 1.5 meters from any water, storm, and sanitary service, or water valve;
- h) **Utility Clearances:** Tree plantings shall achieve a minimum setback of 1.5 meter from any fire hydrant, utility pedestal, and transformers;
- i) **Light Standard:** Tree plantings shall achieve a minimum setback of 3 meters from light standards;
- j) **Ditch Setbacks:** Tree plantings shall achieve a minimum setback of 1.5 meters from the top of the backside of any ditch;
- k) **Tree spacing:** Larger maturing trees shall be spaced at 8-10 meters apart, and smaller maturing trees at 6-8 meters apart;
- l) **Overhead Clearances:** Only low growing tree species that do not attain a mature height greater than 7 meters shall be planted under or within 3 meters of any overhead power lines, exclusive of street lights or service lines;
- m) **Building Setbacks:** Tree plantings shall achieve a minimum setback of 3 meters from any building or structure;
- n) **Locates:** Locates shall be obtained prior to any tree being planted, and
- o) **Siting:** The location of trees shall be determined and approved by the Township Urban Forestry Project Manager or Horticulturist and Public Works foreman.

Appendix 6. Tree Removal Notice



Centre Wellington

TREE REMOVAL PLANNED

Month of removal:

For more information contact:

Appendix 7. Tree Planting Door Hanger



Dear Resident

A new street tree will be planted on the boulevard next to your property. Your new tree will need your care for the first two years, as urban trees face more stresses than ever. Here are some tips to help promote your tree's health.

Watering

Water your new tree once or twice a week for the first two years during the summer months. Place a hose on a very slow trickle for 20 to 30 minutes. If you don't have a hose, slowly pour 5-6 buckets of water around the tree. Let the water seep in before adding more. It is best to avoid sprinklers, as they can lead to mildew problems on the leaves.

Mulch

- Retain the woodchip mulch in a saucer shape around the base of the tree (no more than 5 cm from the point where the trunk meets the soil).
- Do not build concrete, brick or wood planters around the tree; this impacts root growth.
- Do not mow or use a whipper snipper near your tree. Dings can damage your tree, even fatally.

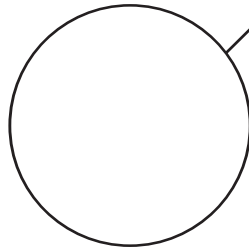


Improper Mulch
Root flare buried &
Mulch piled high up against the trunk



Proper Mulch
Root flare visible at the base of the tree &
Mulch extends to dripline of canopy



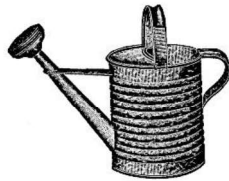


WHAT WILL YOUR TREE DO FOR YOU?

- Improves the look of our urban environment.
- Reduces the amount of greenhouse gases which contribute to global warming.
- Leaves absorb vibrations in the air, reducing noise pollution.
- Provides a habitat for wildlife.

Staking

If your tree has been staked please remove it after one year. Avoid tying, nailing or attaching anything to your tree. Even string can cut the flow of water and nutrients to the tree.



Love Trees?

Consider becoming a NeighbourWoods Tree Steward! Tree Stewards are trained volunteers working to improve the health of our urban forest by tending to young trees in their neighbourhood. Visit www.neighbourwoods.ca for more information.

The Township of Centre Wellington is committed to protecting and maintaining our municipal trees. For more information please visit www.centrewellington.ca/trees or call (519)-846-9691



Promoting a healthy urban forest