Yonge Street and Mapleview Drive East– Arborist Report

March 31, 2022

Prepared for Sobeys Capital Inc.
by IBI Group
Date March 31, 2022

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1 INTRODUCTION AND OVERVIEW

IBI Group was retained by Sobeys Capital Inc. to complete a Tree Inventory and Preservation Plan Report in support of the development application for Phase 1 of a project located at the southwest corner of Yonge street and Mapleview Drive East in Barrie, Ontario. The Project Site is approximately 7.45 ha in area with Phase 1 representing 3.35 ha. Phase 1 vegetation includes a woodlot, isolated tree groupings, hedge rows, coniferous plantations and individual trees. Under Zoning By-law 054-04, the site is currently zoned as an Agricultural General Zone. The surrounding land uses are characterized by a mix of commercial, institutional, and residential uses. Commercial areas are located to the north and east of the site. St. Paul's Anglican church zoned as institutional land use is located to the east of the site. The lands to the west are currently vacant and zoned for residential use. The site is serviced by local transit including the 3B Barrie South GO Bus and 68 Barrie/Newmarket Bus Routes

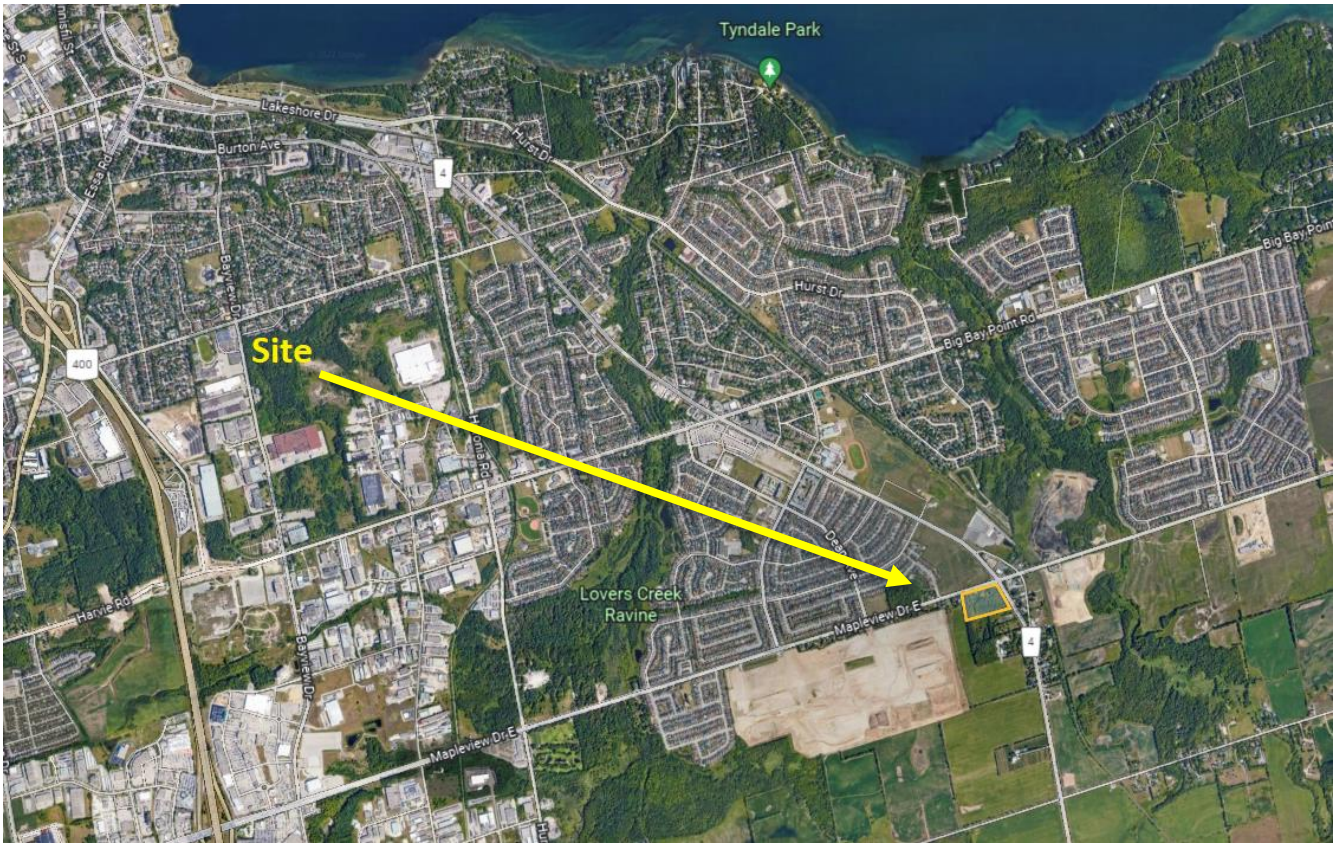

Figure 1: Site Context Map

Figure 2: Site Location Map

The intent of this project is to develop a newly proposed 78,000 sq. ft. retail shopping centre anchored by a new grocery store. The development will ultimately include five (5) retail stores and associated parking lots.

The purpose of this report is to:

- Correlate and categorize all trees on site into broad vegetation units, i.e. individual trees, groups of trees, woodlot compartments
- Identify species, location, size, condition, and category of all existing trees within the limits of work, or within 2.0m from the subject property line
- Provide tree protection and preservation recommendations, if applicable considering future construction footprints;
- Provide rationale for removal of trees.

2 METHODOLOGY

1. The trees and surrounding sites were assessed over three site visits on February 23, February 28, and March 1, 2022.
2. Trunk diameter was measured using a calibrated diameter tape. Trees on private property were not physically measured, but approximated. The measurement was taken at the standard 1.4m above ground or grade crown level, generally referred to as diameter at breast height (DBH).
3. Woodlot trees were demarcated from tree groupings and individual trees based on a review of the limits in the field, air photos, and with City of Barrie interactive mapping.
4. Woodlot compartments and tree groupings were delineated based on general species composition, health and maturity.
5. This report is accompanied by Tree Inventory and Preservation Plan L-001 dated March 31, 2022 by IBI Group.

The individual trees, tree groupings, and woodlot compartments were assessed based on:

1. Tree health at time of analysis including, but not limited to:
    a. Obvious defects (leaf discoloration, abnormal leaf size, shortened nodes)
    b. Decay
    c. Dieback
    d. Disfigured stem
    e. Broken roots
    f. Fungal conks
    g. Disease (biotic/abiotic/non-infectious)
    h. Chemical damage (pesticides/herbicides/fertilizers);
2. Structural integrity
    a. Root conditions and stability
    b. Trunk soundness
    c. Decay/cavities
    d. Co-dominant stems
    e. Dead limbs;
3. Species response to proposed construction;
4. Projected tree age and longevity; and
5. Tree species' response to the proposed construction were evaluated.

Based on the Tree Inventory and Assessment, individual trees, tree groupings, and woodlot compartments were assigned a "high", "medium" or "low" preservation value. Trees that could be preserved were then put into one of three categories:

1. Level 1 Protection Trees: Trees that must be protected would include:
    i. Endangered species and/or their habitat;
    ii. Heritage Trees; or
    iii. Boundary trees which the adjacent property owner does not provide written consent to remove.

2. Level 2 Protection Trees: Protect, where feasible, any tree or group of trees assigned a “high” preservation value that would result in minor or no impact on the proposed development plan and/or grading limits. Accommodations to be considered for site development in terms of grading and/or lot fabrics. The qualified professional will recommend modifications to proposed development plans which are sensitive to Level 2 Protection Trees.

3. Level 3 Protection Trees: Protect, where feasible, any tree or group of trees assigned a “medium” preservation value that would not result in any impact to the proposed development plan and/or grading limits.

3 BY-LAW / PERMITS

1. The arborist report is prepared in accordance with the City of Barrie’s Tree Preservation By-law 2014-115
2. All trees in woodlots within the boundaries of the City of Barrie require a permit for removal under the Tree Preservation By-law 2014-115.
3. All trees adjacent to municipal Right-of-Ways require a permit for removal under Right-of-Way Activity By-law (2005-256).

4 GENERAL OBSERVATIONS AND COMMENTS

There are total of three (3) woodlot compartments, nineteen (19) tree groupings and thirty three (33) individual trees that have been inventoried within the project site and on adjacent property. Detailed information on all woodlot areas, groupings, and trees are displayed in Appendix A: Tree Data Sheets. The majority of the existing trees are immature, in varying conditions and were part of a woodlot. Implementation of the project design will require the removal of the majority of the trees.

5 TREE REMOVALS/ INJURIES

The removal of the majority of trees located on the property will be necessary to implement the design. The following is a summary of the anticipated removals and injuries to trees within the site and on adjacent properties. Refer to the Appendix A: Tree Data Table for individual recommendations for each woodlot compartment, grouping, and tree. For specific locations of trees refer to Appendix B: Tree Management Plan.

1. **A total of thirty one (31) individual trees** are anticipated to be removed as a result of the proposed project. Permits are required for trees adjacent to municipal Right-of-Ways under Right-of-Way Activity By-law (2005-256).
2. **A total of eighteen (18) tree groupings** are anticipated to be removed as a result of the proposed project. These groupings represent an approximate total of 900 trees. Tree removal permits will be

required for groupings adjacent to municipal Right-of-Ways under Right-of-Way Activity By-law (2005-256).

3. **A total of three (3) woodlot compartments** are anticipated to be removed as a result of the proposed project. A tree removal permit must be issued prior to any trees being removed from the woodlot under Tree Preservation By-law (2014-115).

Base on the anticipated impacts, a tree removal permit will be required.

6 PRESERVATION AND PROTECTION RECOMMENDATIONS

The survival rates for trees, which are in proximity to construction, are dependent on the resultant changes to a variety of environmental and anthropogenic factors. These construction activities bring about changes to a variety of environmental features such as the existing microclimate that includes wind, air temperature, soil moisture, amount of available sunlight, soil quality and the level of the water table. Increased human activities may also damage the structure and/ or physiological activities of the trees. The full effects of the damage may not appear until several years after its occurrence. Thus, it is essential that both vegetative clearing and preservation methods follow the guidelines below. It is required by the City of Barrie to follow the guidelines below for the protection of individual trees which are in keeping with good horticultural and construction practices.

1. Tree Protection Policy and Specifications for Construction Near Trees

   The following by-laws protect trees located on private property in the City of Barrie:

   - Tree Preservation By-law (2014-115) protects all trees in woodlots within the boundaries of the City of Barrie.
   - Right-of-Way Activity By-law (2005-256) stipulates requirements for instituting a Tree protection Zone (TPZ) when activities are planned near trees on or adjacent to a municipal Right-of-Way.

   a. Protecting Trees Adjacent to a Municipal Right-of-Way

      - The minimum TPZ must be delineated by a preservation fence following City of Barrie Standards (see Appendix C). Minimum and optimal Tree Protection Zones for different tree size categories are listed in table 1.

      Table 1. Minimum and optimum Tree Protection Zones described in the City of Barrie Tree protection Manual.

DBH	MINIMUM TPZ DISTANCE	OPTIMUM TPZ DISTANCE
>=10cm	1.0m	Dripline
11-25cm	1.5m	Dripline
26-40cm	2.0m	Dripline
41-60cm	2.5m	Dripline
61-80cm	3.0m	Dripline
81cm +	4.0m	Dripline

      - Open excavations must be completed outside of the minimum TPZ.

- Excavations that are under the dripline of a tree should be completed by the use of a trencher, vacuum truck, air-blaster or high pressure water excavation technique to reduce damage to the tree roots.
- An excavation or trench may run up the limit of the minimum TPZ, however large roots (>5cm in diameter) must be pruned and sealed by a qualified professional or a trencher.
- All excavation materials must be piled outside of the minimum TPZ and no equipment may enter the minimum TPZ at any time.
- Directional micro-tunnelling and boring are permitted activities within (under) a TPZ, provided the required open excavation and materials remain outside of the minimum TPZ.
- Boring or tunnelling should not go directly under the trunk of the tree to avoid disturbing the root plate or major anchor roots.
- Boring should remain at least 1.0 m (horizontally) away from the trunk of the tree, and be at least 1.0 metre in depth.
- To minimize the impact to tree roots during road widening or sidewalk installations, excavations within the optimum-to-minimum TPZ should be completed by the use of a trencher, vacuum truck, air-blaster or high pressure water excavation techniques. Roots in open face cuts must be pruned and sealed under the direction of a qualified professional.

b. Tree removal implementation

- Tree Removal Permit must be issued prior to any trees being removed from an ecological woodlot. The application for tree removals must be accompanied by the Tree Removal Permit Fee (as set in By-law 2009-020) and the current contact information (legal company name or person, primary company contact person's name, mailing address, telephone number(s), fax number, email address) for the following:

  1. Property Owner;

  2. Consultant (Qualified Professional); and

  3. Tree Removal Contractor.

- The owner of the property (or a person with legal signing authority for the owner) must sign the Tree Removal Permit. The Tree Removal Permit will not be released until the Soil and Erosion Control Plan, showing the limits of tree preservation, has been approved by the Engineering Department.
- "Notice of Tree Removals" sign (Appendix C) must be posted by the applicant in a clearly visible location on site a minimum of 7 days before any tree removals begin. This notice can be posted at any time during the process after approval of the Tree Preservation Plan but no less than 7 calendar days prior to any tree removals taking place on site.
- The limits of the tree preservation areas (and property boundaries) must be surveyed and clearly marked by a licensed Ontario Land Surveyor.
- In the situations where access to the site is restricted (*e.g.* fully wooded parcels), an alternative process may be followed, subject to a written request to Development Approvals Branch (PPD) staff by the applicant's qualified professional supervising the tree preservation and removal process. This process is only used where it would be extremely difficult or not possible to install the full Tree Preservation Fencing (Appendix C) without first removing trees to obtain access/clearance to install the fencing. First, the limits of tree preservation are clearly marked by an approved method by the qualified professional and/or licensed Ontario Land Surveyor. The method must be approved in writing by the PPD staff prior to use on the site.

- The alternative marking method must be inspected and certified by the applicant's qualified professional. Written notice should be provided by the applicant's qualified professional to PPD staff, along with a request for inspection. The request should allow for a minimum of 48 hours notice to PPD staff to schedule a joint site inspection.
- PPD staff inspect the alternative marking with the applicant's qualified professional and the applicant's tree removal contractor. The inspection is to identify any issues, and to ensure that the tree removal contractor is aware of the limits of cutting, and confirm that no trees can be felled into any tree preservation areas. If there are issues with the marking identified during the joint inspection, they must be corrected prior to written approval to commence cutting.
- PPD staff must issue written approval prior to the applicant's tree removal contractor commencing work on site. The approval will identify that tree removals may only take place within a 6 metre wide strip along the boundary of the tree preservation areas to facilitate installation of the Tree Preservation Fencing. Written approval will not be provided until the minimum 7-day public notification period has expired.
- Tree Preservation Fencing must be installed and inspected by the applicant's qualified professional. Tree Preservation Area signs (Appendix C) should be posted at 50 metre intervals along tree preservation fencing before tree removals begin. The Tree Removal Permit (if applicable) must be posted or available on site at all times.
- Written notification of certification of the Tree Preservation Fencing must be provided to PPD staff by the applicant's qualified professional, along with a request for inspection. The request should allow for a minimum of 48 hours notice to PPD staff to schedule a joint site inspection.
- If there are issues with the installation of the Tree Preservation Fencing and/or signage the applicant must have these corrected and recertified by the qualified professional.
- PPD staff will issue written approval to proceed with all tree removals identified on the approved Tree Preservation Plan. Written approval will not be provided until the minimum 7-day public notification period has expired. Tree removals may not commence until written authorization has been received by the applicant
- Tree removals may commence under the supervision of the applicant's qualified professional. Any issues that arise during the tree removal process must be promptly dealt with, and summarized within the bi-monthly inspection reports. Should the issues be of a serious nature, requiring the involvement of PPD staff, an immediate request for site meeting must be requested by the applicant's qualified professional.
- A qualified professional must provide bi-monthly Tree Preservation Fencing inspection reports to the City during the period of active construction on the site. A final inspection report must be submitted to PPD staff by the applicant's qualified professional for review prior to final inspection of the site.

c. Migratory Bird Protection:

- Nesting migratory birds are protected under the Migratory Birds Conservation Act, MBCA (1994) and Regulations.
- No work is permitted to proceed that would result in the destruction of nests or eggs, or the wounding or killing of birds species protected under the MBCA and / or Regulations under that Act. It is the responsibility of the proponent and/or contractor to ensure compliance with the MBCA. Guidance for assessing potential risk of MBCA contravention and other relevant information is found on Environment Canada's website.
- In general, it is recommended that activities which could result in an MBCA contravention be conducted outside of the area-specific "Regional Nesting Period".

- If works are proposed within that Regional Nesting Period, the proponent must demonstrate due diligence, including an evaluation of risk (per Environment Canada guidelines at the referenced web links) and appropriate avoidance / mitigation measures. This is a site specific analysis based on habitat, species recorded / expected and potential risk due to activities.

7 CONCLUSION

The proposed development at the south west corner of Yonge Street and Mapleview Drive East will require the removal of three (3) woodlot compartments, eighteen (18) tree groupings and thirty one (31) individual trees to accommodate elements of the proposed design. One (1) of the tree groupings and two (2) individual trees are located on adjacent private property. They are categorized as Level 2 Protection given their high preservation value and that their preservation would pose minor or no impacts on the proposed development plan and/or grading limit. Written consent must be attained by the property owner before the removal of any trees from the adjacent private property.

Care must be taken to protect trees to be retained with tree mitigation measures as illustrated in the Approved tree mitigation measures and signage (Appendix B). Tree protection fencing shall be erected prior to the start of demolition and construction and maintained for the duration of the work.

There were no endangered species and/or endangered species habitat, or heritage trees on or adjacent to the subject property.

8 LIMITATIONS OF ASSESSEMENT

Portions of the Greater Toronto Area have been regulated by the Canadian Food Inspection Agency under the federal Plant Protection Act to restrict movement of specific wood materials for the management and control of the Asian Longhorn Beetle and Emerald Ash Borer. Contractors undertaking tree pruning and removals for this project shall ensure that the disposal of all tree material is completed in accordance with these and other applicable regulations.

The assessment presented in this report has been made using accepted standard arboriculture techniques as outlined in the Council of Tree and Landscape Appraisers (CTLA) Guide for Plant Appraisal, 9th Edition (2000). These techniques include visual examination of above-ground parts of each tree. The tree observed were not climbed, probed, cored, or dissected, and excavation for detailed root crown inspection was not performed. Since some symptoms may only be present seasonally, the extent of observations that can be made may be limited by the time of year in which the inspection took place.

It must be realized that trees are living organisms, and their health and vigor continually change over time due to seasonal variations, changes in site conditions, and other factors. For this reason, the assessment presented in this report is valid at the time of inspection, and no guarantee is made about the continued health of trees that are deemed to be in good condition. It is recommended that the trees be re-assessed periodically. While every standing tree has the potential for failure and therefore poses some risk, a tree assessment is a good indication of present health and potential problems that could arise in the future.

Respectfully Submitted By:

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ISA Certified Arborist – ON-2685A

APPENDIX A – TREE DATA TABLES

Individual Trees

Tree ID	Scientific Name	Common Name	DBH	TI	CI	CV	Value	DL	Preservation Value	Comments	Action
1	*Acer saccharum*	Sugar Maple	71	Good	Fair	Good-Fair	Fair	7	Low	Upright form, 10% dieback , included bark at branches. Impacted by proposed building.	Remove
2	*Pinus sylvestris*	Scots Pine	51.5	Good-Fair	Fair	Fair	Fair	6	Low	Crown limited to top 1/3. Gypsy moth egg masses present. Impacted by proposed parking lot.	Remove
3	*Robinia pseudoacacia*	Black Locust	25.5	Good-Fair	Fair	Fair	Fair	5	Low	Narrow form. Impacted by proposed parking lot.	Remove
4	*Acer platanoides*	Norway Maple	18.5	Good	Good	Good	Good	4	Low	Impacted by proposed parking lot.	Remove
5	*Robinia pseudoacacia*	Black Locust	36	Good	Fair	Good-Fair	Fair	6	Low	10% dieback. Impacted by proposed parking lot.	Remove
6	*Acer platanoides*	Norway Maple	47	Good-Fair	Good-Fair	Good-Fair	Good-Fair	6	Low	Included bark in branch unions, minor wound at base. Impacted by proposed parking lot.	Remove
7	*Prunus serotina*	Black Cherry	45	Fair	Fair	Fair-Poor	Poor	8	Low	Multi stem 45,45,40,38 union at grade. Impacted by proposed parking lot.	Remove

8	*Pinus sylvestris*	Scots Pine	46.5	Good	Good-Fair	Good-Fair	Good-Fair	5	Low	Impacted by proposed building.	Remove
9	*Robinia pseudoacacia*	Black Locust	20.5	Good-Fair	Good-Fair	Good-Fair	Good-Fair	4	Low	Impacted by proposed building.	Remove
10	*Robinia pseudoacacia*	Black Locust	12	Good-Fair	Good	Good	Good-Fair	2	Low	Impacted by proposed building.	Remove
11	*Robinia pseudoacacia*	Black Locust	15	Good	Good	Good	Good	3	Low	Impacted by proposed building.	Remove
12	*Robinia pseudoacacia*	Black Locust	15	Good	Good	Good	Good	3	Low	Impacted by proposed building.	Remove
13	*Robinia pseudoacacia*	Black Locust	13	Good-Fair	Good	Good	Good-Fair	2	Low	Impacted by proposed building.	Remove
14	*Acer platanoides*	Norway Maple	38	Poor	Poor	Poor	Poor	6	Low	Multi stem, 3 stems. 2 dead. One on grid, crack at union. Impacted by proposed building.	Remove
15	*Picea abies*	Norway Spruce	40	Good	Good-Fair	Fair	Fair	3	Low	30% dieback. Impacted by proposed building.	Remove
16	*Acer saccharinum*	Sugar Maple	102	Fair	Good-Fair	Good-Fair	Fair	7	Low	Included bark at union. Impacted by proposed building.	Remove
18	*Betula papyrifera*	Paper Birch	33	Good	Good	Good	Good	5	Low	Impacted by proposed parking lot.	Remove
20	*Quercus rubra*	Red Oak	24	Good	Good	Good-Fair	Good-Fair	4.5	Low	Impacted by proposed parking lot.	Remove
21	*Acer saccharum*	Sugar Maple	26.5	Good-Fair	Good-Fair	Good-Fair	Good-Fair	4.5	Low	Codominant stem and included bark. Impacted by proposed parking lot.	Remove

22	*Acer platanoides*	Norway Maple	31	Fair	Good-Fair	Good-Fair	Fair	4	Low	Large wound on stem. codominant structure with included bark. 10% dieback. Impacted by proposed parking lot.	Remove
23	*Tilia cordata*	Little Leaf Linden	30	Fair-Poor	Good-Fair	Good-Fair	Fair-Poor	3.5	Low	Large open wound on trunk. Signs of rotting on trunk. Impacted by proposed parking lot.	Remove
24	*Juglans nigra*	Black Walnut	18	Fair	Good-Fair	Good-Fair	Fair	6	Low	Tree leaning to the north east. Codominant leader with included bark. Impacted by proposed parking lot.	Remove
25	*Robinia pseudoacacia*	Black Locust	20	Good-Fair	Good-Fair	Good-Fair	Good-Fair	4	Low	Impacted by proposed parking lot.	Remove
26	*Sorbus aucuparia*	Mountain Ash	17.5	Good-Fair	Fair	Fair	Fair	4	Low	Codominant stem with included bark. woodpecker damage. 10% dieback. Impacted by proposed entrance from Mapleview Drive.	Remove
27	*Picea abies*	Norway Spruce	29.5	Good-Fair	Good-Fair	Fair	Fair	3.5	Low	Suppressed lower limb development. Large open wound on trunk. Impacted by proposed parking lot.	Remove
28	*Picea abies*	Norway Spruce	25	Good-Fair	Fair-Poor	Fair	Fair	4	Low	Topped. Suppressed limb development on North side. Impacted by proposed parking lot.	Remove
29	*Acer platanoides*	Norway Maple	44	Good-Fair	Fair	Fair	Fair	5	Low	Branch failures, 15% canopy dieback. Impacted by proposed parking lot.	Remove
30	*Acer platanoides*	Norway Maple	38.5	Fair	Fair	Good-Fair	Fair	4.5	Low	Large crack on stem. epicormic shoots. codominant structure with included bark. Impacted by proposed entrance from Mapleview Drive.	Remove

31	*Acer platanoides*	Norway Maple	48	Good-Fair	Fair-Poor	Fair	Fair	4	Low	Branch failures, 10% dieback, epicormic shoots. Impacted by proposed entrance from Mapleview Drive.	Remove
32	*Thuja occidentalis*	White Cedar	18	Good-Fair	Good-Fair	Fair	Fair	2.5	Low	10% dieback. Impacted by proposed etrance from Mapleview Drive.	Remove
33	*Thuja occidentalis*	White Cedar	19	Good-Fair	Good-Fair	Fair	Fair	2.5	Low	10% dieback. Impacted by proposed entrance from Mapleview Drive.	Remove
34	*Picea abies*	Norway Spruce	39	Good	Good	Good	Good	4	High	Level 2 Protection Category. On adjacent private property.	Preserve
35	*Picea abies*	Norway Spruce	25	Good	Good	Good	Good	4	High	Level 2 Protection Category. On adjacent private property.	Preserve

Tree Groupings

Group ID	Species Composition	Common Names	Average DBH	Canopy Form	Value	Preservation Value	Comments	Action
TG-2	*Pinus sylvestris* *Acer saccharum*	Scots Pine Sugar Maple	10-25cm	Codominant	Good-Fair	Low	Plantation trees planted in rows. Isolated mature sugar maple trees (15-20cm DBH) making up 10% of the compartment. Supressed limb development on bottom ¾ of the scots pine trees. There were approximately 130-145 stems. Sparse understory consisting scots pine, sugar maple, and black locust evenly distributed throughout the compartment. Average understory DBH is ≤5cm. Understory is in good condition. Topography is relatively flat. Soil characteristics could not be assessed due to snow cover. Impacted by proposed building and landscaped area.	Remove

TG-3	*Pinus sylvestris*	Scots Pine	10-25cm	Codominant	Poor	Low	Plantation trees planted in rows. Primarily dead scots pine. There were approximately 35-40 stems in this compartment. Sparse understory consisting of immature scots pine, sugar maple, and sumac ranging from 3-10cm DBH in good condition. Topography is relatively flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed parking lot and landscaped area.	Remove
TG-4	*Pinus sylvestris* *Acer saccharum*	Scots Pine Sugar Maple	15-25cm	Codominant	Good-Fair	Low	Approximately 80% scots pine in fair condition. Sugar maple trees ranging from 5-20cm DBH in good condition are evenly distributed throughout making up 20% of this compartment. Scots pine have supressed lower limb development on bottom ¾. Approximately 100-120 stems in this compartment. Sparse understory consisting of immature scots pine, sugar maple, and American beech ranging from 5-15cm DBH and in good to fair condition. Topography is relatively flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and landscaped area.	Remove
TG-5	*Robinia pseudoacacia*	Black Locust	25-40cm	Dominant	Good-Fair	Low	>95% of grouping consists of mature black locust in good to fair condition. Sparse understory consisting of immature Norway maples and an individual apple tree in good to fair condition ranging from 8-10cm DBH. Approximately 50 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed building, parking lot and walkway.	Remove

TG-6	*Robinia pseudoacacia*	Black Locust	5-10cm	Dominant	Good - Fair	Low	95% immature black locust in good to fair condition. Sparse understory consisting of immature scots pine in good to fair condition and 1-2cm DBH. Approximately 80 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and landscaped area.	Remove
TG-7	*Acer saccharum* *Robinia pseudoacacia* *Acer platanoides*	Sugar Maple Black Locust Norway Maple	10-15cm	Dominant	Good - Fair	Low	50% sugar maple, 30% Norway maple, and 20% black locust in good to fair condition. Understory consists of honey suckle shrubs towards the north side of the grouping. Approximately 49 stems in this grouping. Topography is elevated on the north side of the grouping. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and parking lot.	Remove
TG-8	*Thuja occidentalis*	White Cedar	3-20cm	Dominant	Good	Low	White cedars planted in a line in good condition. There are 34 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed parking lot.	Remove
TG-9	*Robinia pseudoacacia*	Black Locust	20-30cm	Dominant	Good-Fair	Low	Mature black locusts in good to fair condition. Sparse understory consisting of immature black locust, Norway maple, and Manitoba maple in fair condition ranging from 2-8cm DBH. There are 42 stems in total. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed parking lot.	Remove
TG-12	*Picea glauca*	White Spruce	15-20cm	Dominant	Good	Low	4 white spruce trees planted in a line. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by	Remove

							proposed building and parking lot entrance from Mapleview Drive.	
TG-13	*Thuja occidentalis* *Picea glauca* *Acer saccharum*	White Cedar White Spruce Sugar Maple	20-30cm	Dominant	Good	Low	Cedar and white spruce hedges in good condition. There are approximately 42 stems in this compartment. Topography is elevated towards the west side of the compartment. The soil conditions could not be assessed due to snow cover. Impacted by proposed building and parking lot entrance from Mapleview Drive.	Remove
TG-14	*Thuja occidentalis*	White Cedar	15-25cm	Dominant	Good	Low	Cedar hedge planted in a line. There are 25 stems in this grouping. Understory consists of shaded out immature white cedar. Topography is raised. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and landscaped area.	Remove
TG-15	*Picea abies* *Pinus sylvestris*	Norway Spruce Scots Pine	25-40cm	Dominant	Fair	Low	4 norway spruce and 1 scots pine planted in a line on an elevated platform. All trees showed supressed limb development and 20-50% canopy dieback. Topography is elevated. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and landscaped area.	Remove
TG-16	*Acer saccharinum* *Acer platanoides* *Pinus sylvestris* *Ulmus americana*	Silver Maple Norway Maple Scots Pine White Elm	40-50cm	Dominant	Fair	Low	40% silver maples, 40% Norway maples, 10% scots pine, and 10% white elm in fair condition planted in a line. Trees are experiencing 20-30% canopy dieback and white elm mortality is present. There are approximately 37 stems n this grouping. Understory consists of Norway maples ranging from 5-10cm DBH and in good condition. Topography is elevated on the north end. Soil conditions could not be	Remove

							assessed due to snow cover. Impacted by proposed building, and parking lot.	
TG-19	*Tilia cordata* *Acer platanoides* *Acer negundo* *Thuja occidentalis*	Little Leaf Linden Norway Maple Manitoba Maple White Cedar	20-30cm	Dominant	Fair-Good	Low	50% Manitoba maple, 20% white cedar, 15% Norway maple, and 15% little leaf linden in fair to good condition. Trees displayed fair vigor and canopy dieback. There is an isolated white birch 20cm DBH in good condition. Understory consists of immature Manitoba maple in fair condition ranging from 3-5cm DBH. There are approximately 30 stems in this grouping. Topography is elevated towards the north side of the grouping. Soil conditions could not be assessed due to snow cover. Impacted by proposed parking lot and building.	Remove
TG-20	*Pinus sylvestris* *Pinus strobus*	Scots Pine White Pine	15-25cm	Codominant	Good	Low	60% scots pine and 40% white pine in good condition. Isolated Norway maple 20cm DBH in good condition. There are 30 stems in this grouping. Understory consists of white cedar, white pine, and Norway maple ranging from 3-8cm DBH and in good condition. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed parking lot.	Remove
TG-25	*Picea glauca* *Pinus strobus* *Pinus sylvestris*	White Spruce White Pine Scots Pine	10-15cm	Dominant	Good	Low	Approximately 50% white spruce, 30% scots pine, and 20% white pine in good to fair condition. There is a sparse understory consisting of sumac, immature white cedar, and black locust ranging from 2-3cm DBH and in good condition. There are 27 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow	Remove

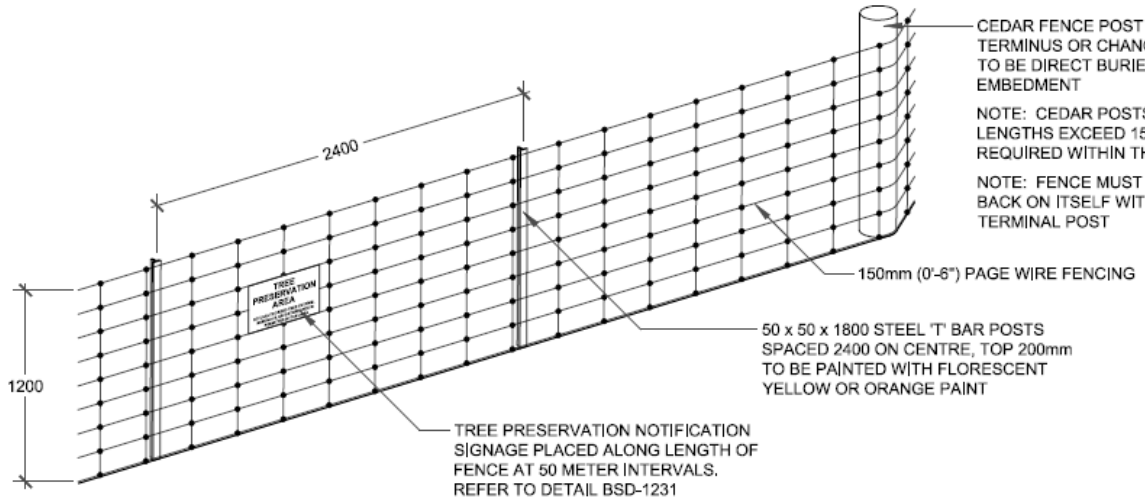
							cover. Impacted by proposed building and roadway.	
TG-26	*Populus tremuloides* *Pinus strobus* *Pinus sylvestris*	Trembling Aspen White Pine Scots Pine	5-12cm	Dominant	Good-Fair	Low	Primarily immature trembling aspen (90%), white pine (5%), and scots pine (5%) in good to fair condition. There is a sparse understory consisting of white pine and scots pine ranging from 3-5cm DBH and in good condition. Approximately 90 stems in this compartment. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed building and roadway.	Remove
TG-27	*Robinia pseudoacacia* *Acer negundo* *Populus tremuloides*	Black Locust Manitoba Maple Trembling Aspen	10-20cm	Dominant	Good-Fair	Low	90% black locust, 5% Manitoba maple, and 5% trembling aspen. Understory consists of immature white spruce and sumac in fair condition. There are approximately 70 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed building.	Remove
TG-100	*Pinus sylvestris* *Picea abies*	Scots Pine Norway Spruce	40-50cm	Dominant	Good	High	Mature scots pine and Norway spruce located on adjacent private property in good condition. There are 7 stems in this grouping. Topography is flat. Soil conditions could not be assessed due to snow cover. Level 2 Protection Category. On adjacent private property.	Preserve

Woodlot Compartments

Compartment ID	Species Composition	Common Names	Average DBH	Canopy Form	Value	Preservation Value	Comments	Action
WC-18	*Robinia pseudoacacia*	Black Locust	5-10cm	Codominant	Good - Fair	Low	Primarily immature black locust trees in good to fair condition. The understory consists of immature black locust, sugar maple, red oak, and Manitoba maple in fair to good condition. There are approximately 3,700 stems in this compartment. The topography is elevated. Soil conditions could not be assessed due to snow cover. Impacted by proposed buildings, parking lot and roadway.	Remove
WC-22	*Pinus sylvestris*	Scots Pine	20-30cm	Codominant	Good - Fair	Low	Plantation trees planted in rows. Supressed lower limb development on bottom ¾ of trees. Sparse understory consisting of Norway maple and Manitoba maple ranging from 10-15cm DBH in good condition and concentrated along the west side of the compartment. There are approximately 400 stems in this compartment. Topography is flat. Soil conditions could not be assessed due to snow cover. Impacted by proposed roadway, landscaped area, and building.	Remove
WC-24	*Prunus pensylvanica* *Quercus rubra* *Acer platanoides* *Robinia pseudoacacia*	Pin Cherry Red Oak Norway Maple Black Locust	5-10cm	Dominant	Good	Low	Compartment consists of approximately 50% pin cherry, 30% red oak, 10% Norway maple, and 5% black locust in good. Understory consists of immature scots pine ranging and sumac in good condition. There are approximately 1,000 stems in this compartment. Topography on south west section	Remove

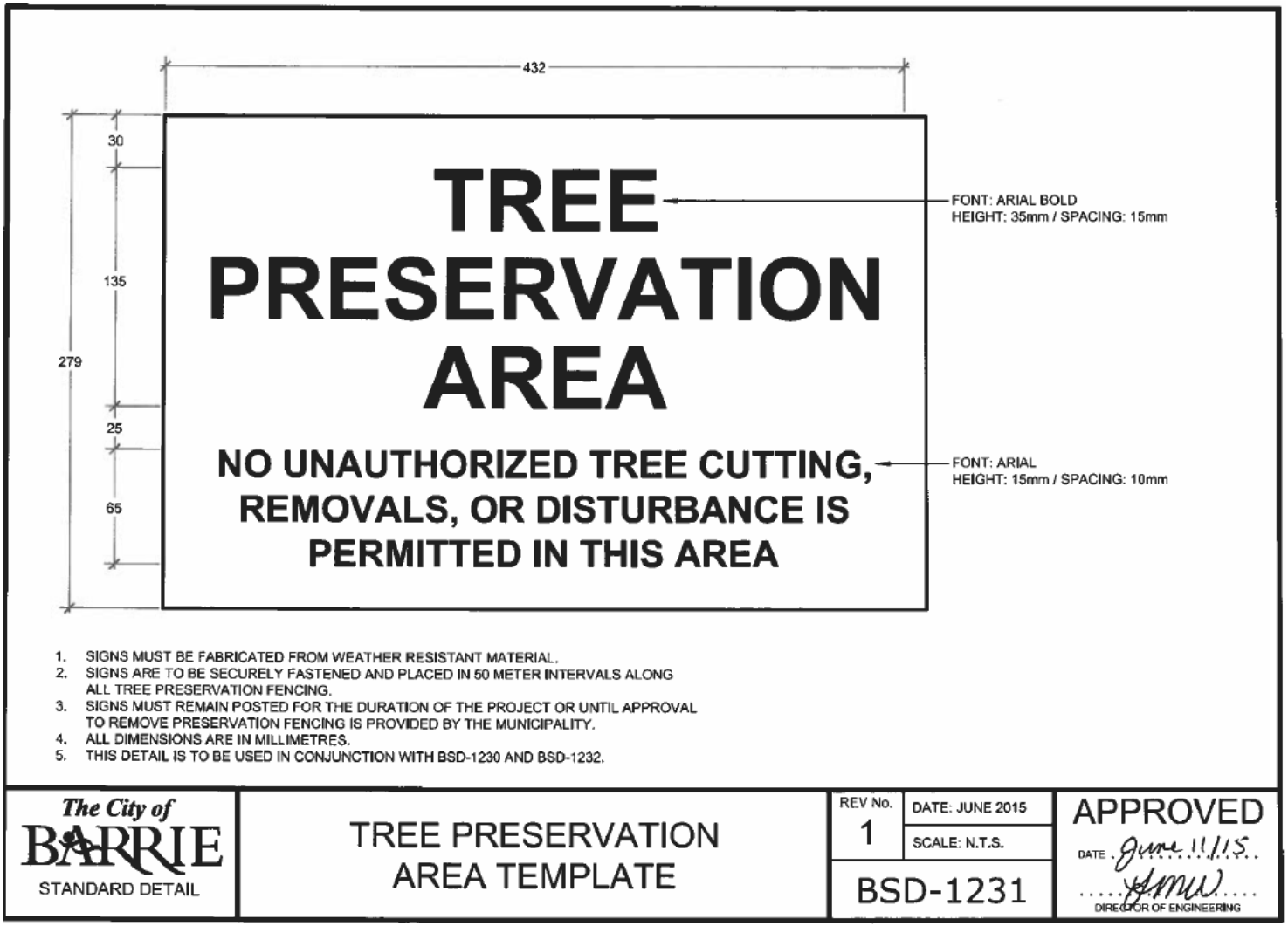
							of the compartment is elevated. Soil conditions could not be assessed due to snow cover. Impacted by proposed buildings, parking lot and roadway.	

APPENDIX B – APPROVED TREE MITIGATION MEASURES AND SIGNAGE



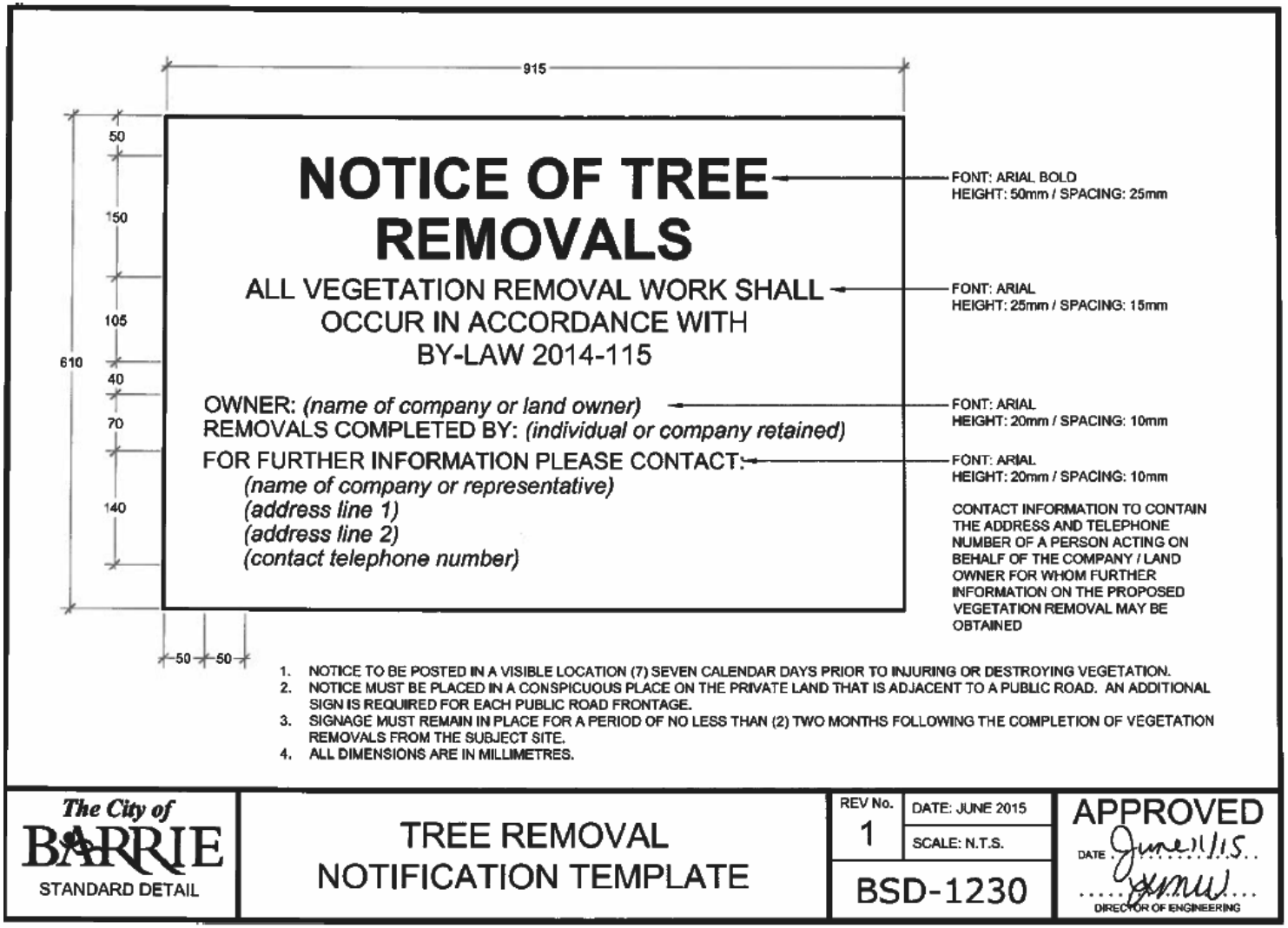
1. THIS DETAIL IS USED IN CONJUNCTION WITH BSD-1233 -SEDIMENTATION CONTROL FENCE.
2. PAGE WIRE FENCE TO BE ATTACHED TO CEDAR RAIL POSTS WITH 'U' SHAPED GALVANIZED NAILS ON EACH HORIZONTAL STRAND.
3. USE A MINIMUM OF FOUR (4) 100MM, 16 GAUGE GALVANIZED T-POST CLIPS TO ATTACH PAGE WIRE FENCE TO EACH 'T' BAR POST.
4. 'T' BARS ARE TO BE DRIVEN INTO THE GROUND TO A MINIMUM DEPTH OF 600mm.
5. ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
6. THIS DETAIL TO BE USED IN CONJUNCTION WITH BSD-1230, BSD-1231, BSD-1234 AND BSD-1235.

The City of BARRIE STANDARD DETAIL	TREE PRESERVATION FENCING	REV No. 1 / DATE: JUNE 2015 / SCALE: N.T.S.	APPROVED DATE . . . . . DIRECTOR OF ENGINEERING
		BSD-1232	

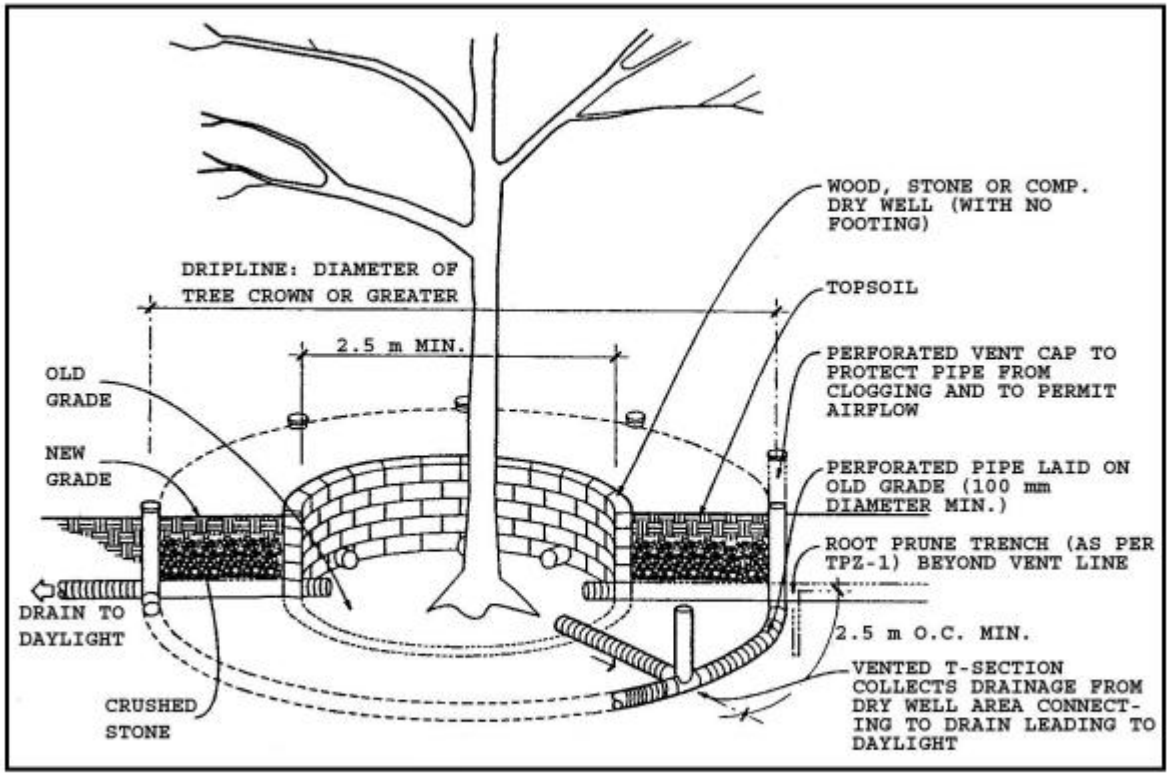


1. SIGNS MUST BE FABRICATED FROM WEATHER RESISTANT MATERIAL.
2. SIGNS ARE TO BE SECURELY FASTENED AND PLACED IN 50 METER INTERVALS ALONG ALL TREE PRESERVATION FENCING.
3. SIGNS MUST REMAIN POSTED FOR THE DURATION OF THE PROJECT OR UNTIL APPROVAL TO REMOVE PRESERVATION FENCING IS PROVIDED BY THE MUNICIPALITY.
4. ALL DIMENSIONS ARE IN MILLIMETRES.
5. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH BSD-1230 AND BSD-1232.

The City of BARRIE STANDARD DETAIL	TREE PRESERVATION AREA TEMPLATE	REV No. 1 / DATE: JUNE 2015 / SCALE: N.T.S. / BSD-1231	APPROVED DATE June 11/15 DIRECTOR OF ENGINEERING

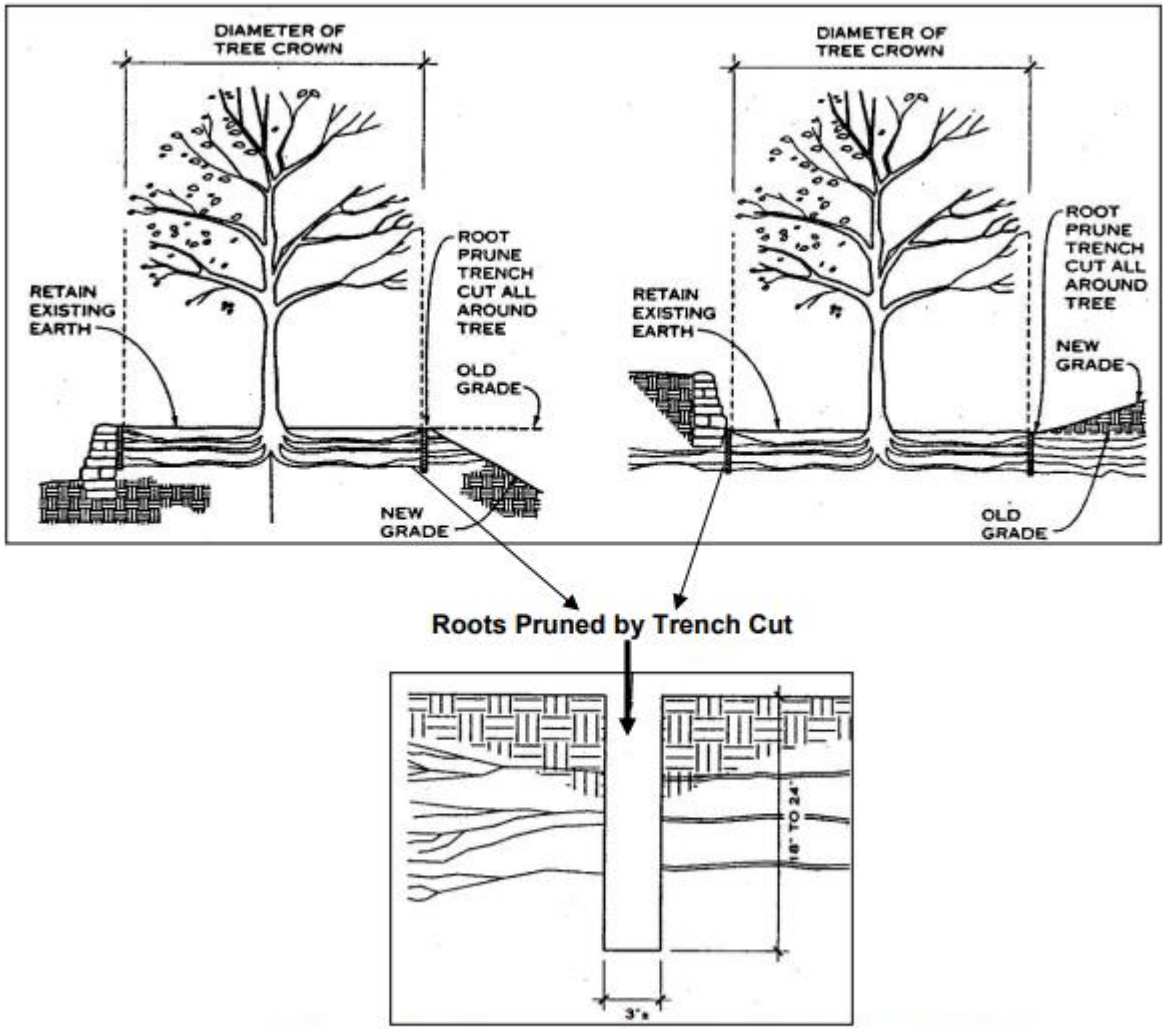

915
610
50
150
105
40
70
140
50
50
NOTICE OF TREE REMOVALS
ALL VEGETATION REMOVAL WORK SHALL OCCUR IN ACCORDANCE WITH BY-LAW 2014-115
OWNER: (name of company or land owner)
REMOVALS COMPLETED BY: (individual or company retained)
FOR FURTHER INFORMATION PLEASE CONTACT:
(name of company or representative)
(address line 1)
(address line 2)
(contact telephone number)
FONT: ARIAL BOLD
HEIGHT: 50mm / SPACING: 25mm
FONT: ARIAL
HEIGHT: 25mm / SPACING: 15mm
FONT: ARIAL
HEIGHT: 20mm / SPACING: 10mm
FONT: ARIAL
HEIGHT: 20mm / SPACING: 10mm
CONTACT INFORMATION TO CONTAIN THE ADDRESS AND TELEPHONE NUMBER OF A PERSON ACTING ON BEHALF OF THE COMPANY / LAND OWNER FOR WHOM FURTHER INFORMATION ON THE PROPOSED VEGETATION REMOVAL MAY BE OBTAINED
1. NOTICE TO BE POSTED IN A VISIBLE LOCATION (7) SEVEN CALENDAR DAYS PRIOR TO INJURING OR DESTROYING VEGETATION.
2. NOTICE MUST BE PLACED IN A CONSPICUOUS PLACE ON THE PRIVATE LAND THAT IS ADJACENT TO A PUBLIC ROAD. AN ADDITIONAL SIGN IS REQUIRED FOR EACH PUBLIC ROAD FRONTAGE.
3. SIGNAGE MUST REMAIN IN PLACE FOR A PERIOD OF NO LESS THAN (2) TWO MONTHS FOLLOWING THE COMPLETION OF VEGETATION REMOVALS FROM THE SUBJECT SITE.
4. ALL DIMENSIONS ARE IN MILLIMETRES.
The City of BARRIE
STANDARD DETAIL
TREE REMOVAL NOTIFICATION TEMPLATE
REV No. 1
DATE: JUNE 2015
SCALE: N.T.S.
BSD-1230
APPROVED
DATE June 11/15
DIRECTOR OF ENGINEERING

TPZ-2: Dry-welling around significant trees to be retained.



Source of tree protection base drawings: Architectural Graphic Standards, Tenth Edition, John Ray Hoke, Jr. FAIA, Ed. In Chief, *Tree Planting and Protection* p. 179.

TPZ-1: Cutting or Filling Grades Around a Tree That is to be Preserved



Note: A root pruning trench cut severs roots cleanly, protecting the remaining roots from cracking, invasion by diseases and root rot fungi.