

Tree Inventory & Protection Plan

Prepared for:
Fausto Cortese Architects

Subject Site:
51 Napier Street. Vaughan, ON L4H 3N5

Prepared By:
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February 12, 2024

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1.0 Introduction

1.1 Purpose of Assignment

The Urban Arborist Inc was retained by Fausto Cortese Architects to prepare a Tree Inventory and Protection Plan for a residential project. The project consists of completing extensive renovations to the existing home.



Figure 1. Front of 51 Napier Street. Vaughan, ON L4H 3N5.

1.2 Existing Site Characteristics

The grade on the property from the back of the home slopes down to the eastern fence line. There are two adjacent lots.

2.0 *Methodology*

All data used in this report is empirical in nature, unless stated otherwise. All measurements in this report utilize the metric system of measurement.

2.1 *Field Study*

Site inspection and data collection was initiated April 14, 2022. All trees greater than 20cm diameter at base on the property and beyond 6m were tagged and inventoried.

2.2 *Tree Locations*

The locations of all significant trees were surveyed and plotted and shown on drawing in appendix 2.

2.3 *Tree Conditions*

During field study a generalized assessment system was used to give each significant tree a rating based on structural condition and health condition.

The following 5 level assessment for health is listed below.

- Very Poor - Tree displays severe dieback of branches, canopy is extremely sparse. May exhibit extreme pathogen infestation or infection. Or tree is dead.
- Poor - Tree displays some dieback. Branches or canopy is sparse with little or no signs of new growth or vigour. Possible pathogen infestation or infection. Foliar canopy is sparse.
- Average - Tree is developing in a manner typical to others in the area. Canopy is full.
- Good - New growth is vigorous as evidenced by stem elongation and colour. Canopy is dense.
- Very Good - In addition to the attributes of a good rating, tree is displaying extremely vigorous growth and trunk displays a pattern of vigour cracks or lines.

The following 5 level assessment for structural condition was as follows:

- Very Poor - Trunk has large pockets of decay, is bifurcated or has a severe lean. Limbs or branches are poorly attached or dead. Possible hazard.
- Poor - Limbs or branches are poorly attached or developed. Canopy is not symmetrical. Trunk has a lean.
- Average - Trunk, limb and branch development though flawed is typical of this species.
- Good - Trunk is well developed with well attached limbs and branches; some flaws but are hardly visible.
- Very Good - In addition to attributes of a good rating, the tree exhibits a well developed root flare and a balanced canopy.

Factors Assessed were as follows:

Roots	Trunk	Foliage/Buds	Scaffold Branches	Small Branches/Twigs
<ul style="list-style-type: none"> · Collar/flare · Mechanical injury · Girdling roots · Insects/disease · Decay/fungi 	<ul style="list-style-type: none"> · Cavities · Mechanical injury · Cracks · Swollen/sunken areas · Insects/disease · Fungi 	<ul style="list-style-type: none"> · Size of foliage/buds · Foliage colour · Foliage injury · Dieback of buds/foilage · Insects/disease 	<ul style="list-style-type: none"> · Attachments/included bark · Taper · Distribution · Decay/cavities · Deadwood · Insects/disease 	<ul style="list-style-type: none"> · Vigour/growth rates · Distribution · Appearance · Insects/disease · Dieback

3.0 Tree Inventory

A total of 30 trees were inventoried at the subject property and beyond 6m. Some trees exist on site that are lesser than 20cm diameter at base and were not included in the tree inventory as it is not a requirement. (See Tree Inventory Spreadsheet in appendix 1).

3.1 Trees to Preserve

The trees in this section have been evaluated suitable for preservation and fall under the Tree Preservation, Protection and Management guidelines in this report. Different approaches of Tree Preservation can be carried out following tree health and structure evaluation. The following describes the differences in approaches to Tree Preservation.

1. Preserve, Protect & Maintain

Includes protection with tree preservation hoarding, as well as pre and post-construction arboricultural

works.

2. Preserve & Protect

Includes the installation of tree protection hoarding; no maintenance will be required unless specified in the recommendations in Appendix 1

3. Retain

No protection or maintenance measures are required. Installation of tree protection barriers is optional.

# of Trees evaluated as suitable for Preservation	18
# of Trees to use Method 1	n/a
# of Trees to use Method 2	13 (#1459, #1460, #1461, #1462, #1467, #1473, #1477, #1478, #1479, #1480, #1483, #1484, #1486)
# of Trees to use Method 3	5 (#1468, #1469, #1470, #1471, #1472.)

In the case of 51 Napier Street 18 trees can be preserved. All trees near access routes and close to impact areas will require tree protection barriers (Method 2) and all trees at greater distances away from impact area can be retained (Method 3).

3.2 Trees to Remove

All trees scheduled for removal shall be removed prior to any construction, earthworks or installation of tree protection hoarding. Due to site or development, tree condition or location, retention is not warranted. A total of 10 trees are to be removed requiring a permit. 2 Trees are on the property line and neighbouring property owner will require to provide approval in writing.

A previous permit application was made and a permit was given to remove trees #1463, #1464, #1465, #1466, #1474, #1482.

Total of number of Trees to Remove requiring a permit	12
Trees Proposed to be Removed	1463, 1464, 1465, 1466, 1474, 1475, 1476, 1481,

1482, 1485, 1487, 1488

3.3 *Trees to Injure*

There are no trees to injure.

3.4 *Trees to Replant (Replacement)*

There are 12 trees to be removed that require compensation or replacement. A total of 19 trees will be planted on the property in replacement. 6x 50mm Royal Red Maple (*Acer platanoides* 'Royal Red'), 1x 50mm Canadian serviceberry (*Amelanchier canadensis*), 4x 50mm Pyramidal English Oak (*Quercus robur* 'Fastigiata'), 2x 50mm Tricolor Beech (*Fagus sylvatica*), and 6 Columnar European Beech (*Fagus sylvatica* 'fastigiata' have been selected for the site.

***Refer to Replanting Details shown on Landscape Plan by Fausto Cortese Architects Dated January 2024.**

3.5 *Pruning*

No pruning required for the proposed site plan.

4.0 *Tree Preservation, Protection and Management*

4.1 *Tree Protection*

Tree protection barriers will be installed around all trees scheduled for protection and at the limits set out in the Tree Inventory Table (appendix 1).

4.2 *Tree Protection Barriers*

City of Vaughan by-law protected trees:

Tree Protection Fencing is to be installed to minimize the impact on the trees (over 20cm DBH) to be preserved prior demolition/construction and is to remain until the construction is completed. (applicable to Private and Public trees) as per By-Law 052-2018.

MLA-107A or ULA-110A Heavy Duty Tree protection fencing (plywood) is to be installed prior to construction and is to remain until construction is completed, as per By-Law 052-2018.

MLA-107B or ULA-110B Light Duty Tree protection fencing (Snow Fence) may be used where traffic sight lines will be affected within the road allowance, as per By-Law 052-2018.

4.3 Tree Protection Costs:

Prior to the execution of the Site plan Agreement the applicant must enter into a Tree Protection Agreement.

1. Tree Protection Installation costs - \$ 15,650.00
2. Tree removal costs; to be determined by the company conducting the work - \$ 10,000.00
3. Tree compensation costs for all trees as per the requirement of the Tree protection Protocol. For this project 19 replacement trees are required. 19 Replacement Plantings are proposed. 19 Replacement Trees x \$550 = \$10450.00
4. **TOTAL TREE PROTECTION AGREEMENT COST IS \$36,100.00**

5.0 Conclusions and Recommendations

Based on all data collected from on-site field work and review of all site plans the following conclusions and recommendations are made and correspond with Tree Inventory in Appendix 1:

Conclusions	Recommendations
18 trees are to be retained and preserved on site.	Install tree protection as shown in Site Plan / Tree Protection Plan Drawing.
The proposed development will require 12 trees to be removed and 1 tree being injured requiring a permit.	Submit application to remove/injure 13 trees to City of Vaughan.
19 trees are required to be planted back onto the site.	Plant 19 trees after construction is completed.
A previous permit application was made and a permit was given to remove trees #1463, #1464, #1465, #1466, #1474, #1482.	City of Vaughan to update permit conditions.

Attachments are as follows:

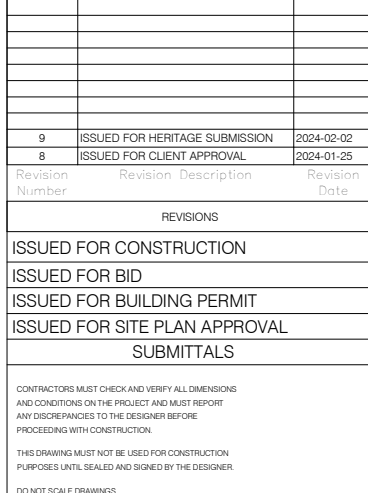
- Appendix 1 Tree Inventory
- Appendix 2 Site Plan / Tree Protection Plan Drawing
- Appendix 3 Landscape Plan by Fausto Cortese Architects
- Appendix 4 City of Vaughan Tree Planting Detail
- Appendix 5 Tree Protection Barrier Detail ULA110A
- Appendix 6 Photographs

This 7 page Report was written by

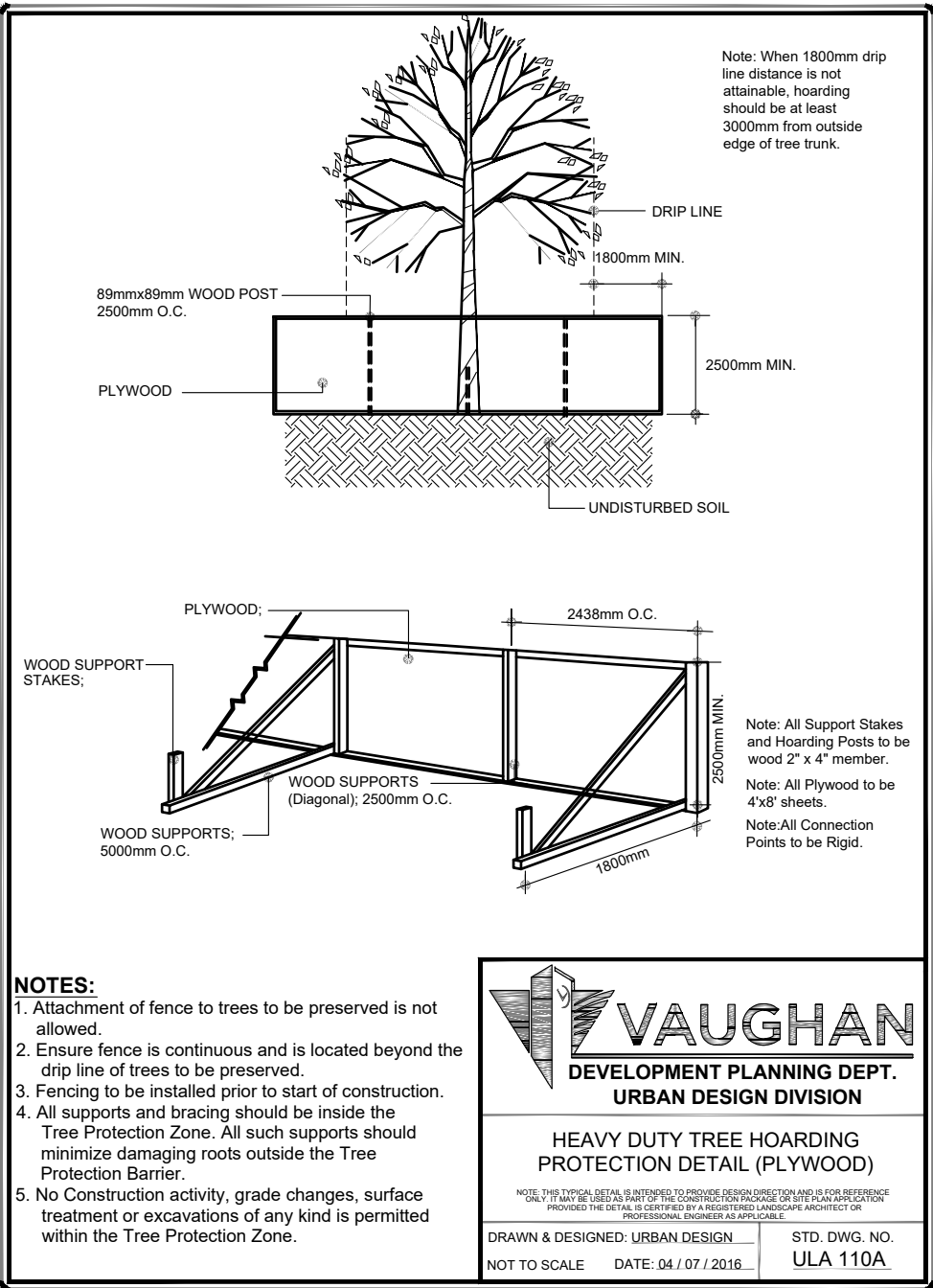
Robert Rafal Lis
The Urban Arborist Inc.
ISA Certified Arborist No. ON-1374A
MTCU Qualified Arborist 18004025
Butternut Health Assessor #644

Tree Inventory – 51 Napier Street. Vaughan, ON L4H 3N5.

Tag #	Common Name	Botanical Name	Diameter @ Base (cm)	Diameter at Breast Height (cm)	Health Condition	Structural Condition	Notes	Recommendations Based on Site Plan	Minimum TPZ (m)	Proposed TPZ (m)	Replacement Trees Required
1459	Norway Maple	Acer platanoides	55	51	Average	Average		Preserve & Protect	3.6	3.6	
1460	Sugar Maple	Acer saccharum	30	28	Good	Average		Preserve & Protect	1.8	1.8	
1461	Colorado Spruce	Picea pungens	40	30	Poor	Poor	Neighbouring Property	Preserve & Protect	2.4	Edge of driveway	
1462	Colorado Spruce	Picea pungens	42	37	Average	Average	Neighbouring Property	Preserve & Protect	2.4	Edge of driveway	
1463	Eastern Red Cedar	Juniperus virginiana	39	32	Average	Average		Remove	2.4	-	2
1464	Eastern Red Cedar	Juniperus virginiana	23	17	Average	Average		Remove	1.2	-	-
1465	Eastern Red Cedar	Juniperus virginiana	26	22	Average	Average		Remove	1.8	-	1
1466	Eastern Red Cedar	Juniperus virginiana	38	32	Poor	Poor	Top has been broken off tree for some time	Remove	2.4	-	2
1467	Sugar Maple	Acer saccharum	52	52	Average	Poor	Cavity, significant deadwood	Preserve & Protect	3.6	3.6	
1468	Honey Locust	Gleditsia triacanthos	18	15	Good	Average	wound at base	Retain	-	-	
1469	Silver Maple	Acer saccharinum	66	69	Average	Poor	several cavities	Retain	4.2	-	
1470	Silver Maple	Acer saccharinum	58	58	Average	Poor	leaning heavy south	Retain	3.6	-	
1471	Silver Maple	Acer saccharinum	54	48	Average	Average		Retain	3	-	
1472	White Spruce	Picea glauca	28	21	Poor	Poor	very sparse foliage	Retain	1.8	-	
1473	Norway Maple	Acer platanoides	21	16	Good	Good		Preserve & Protect	1.8	1.8	
1474	Siberian Elm	Ulmus pumila	164	140	Average	Average	1 large leader removed	Remove	8.4	-	4
1475	Norway Maple	Acer platanoides	21	17	Good	Average		Remove	1.8	-	1
1476	Colorado Spruce	Picea pungens	37	31	Poor	Average	top dying	Remove	2.4	-	2
1477	Black Walnut	Juglans nigra	43	41	Good	Good	Neighbouring Property	Preserve & Protect	3	3	
1478	Silver Maple	Acer saccharinum	53	47	Average	Average/Poor	Cavity at base	Preserve & Protect – INJURE	3	1.8	
1479	Colorado Spruce	Picea pungens	27	22	Poor	Poor	very sparse foliage	Preserve & Protect	1.8	1.8	
1480	Colorado Spruce	Picea pungens	27	20	Poor	Poor	very sparse foliage	Preserve & Protect	1.8	1.8	
1481	Tulip Tree	Liriodendron tulipifera	18	13	Good	Good		Remove	-	-	-
1482	Colorado Spruce	Picea pungens	33	25	Poor	Poor	very sparse foliage	Remove	1.8	-	2
1483	Silver Maple	Acer saccharinum	52	41	Average	Poor	Cavity at base	Preserve & Protect	3	3	
1484	Silver Maple	Acer saccharinum	42	35	Average	Poor	Cavity at base	Preserve & Protect	2.4	2.4	
1485	Yellowwood	Cladrastis kentukea	24	16x16	Average	Poor	Co-dominant with breakage	Remove	1.8	-	1
1486	Honey Locust	Gleditsia triacanthos	18	14x11	Average	Average		Preserve & Protect	-	-	
1487	White Spruce	Picea glauca	30	24	Average	Average		Remove	1.8	-	2
1488	White Spruce	Picea glauca	39	29	Average	Average		Remove	1.8	-	2
								Total Trees Required for Replacement			19



Tree Inventory – 51 Napier Street, Vaughan, ON L4H 3N5.											
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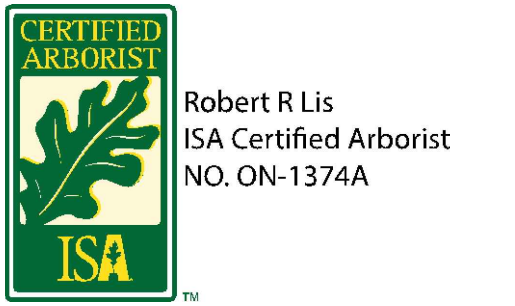


REFER TO REPLANTING DETAILS BY
FAUSTO CORTESE ARCHITECTS SHOWN ON
LANDSCAPE DRAWING DATED JANUARY
2024

19 TREES ARE SHOWN TO BE REPLANTED

A PREVIOUS PERMIT APPLICATION WAS
MADE AND A PERMIT WAS GIVEN TO
REMOVE TREES #1463, #1464, #1465, #1466,
#1474, #1482.

- General Notes
- EXISTING DECIDUOUS TREE
 - EXISTING CONIFEROUS TREE
 - TREE TO REMOVE
 - MINIMUM TREE PROTECTION ZONE
 - TREE PROTECTION BARRIER



No.	Revision/Issue	Date

Firm Name and Address

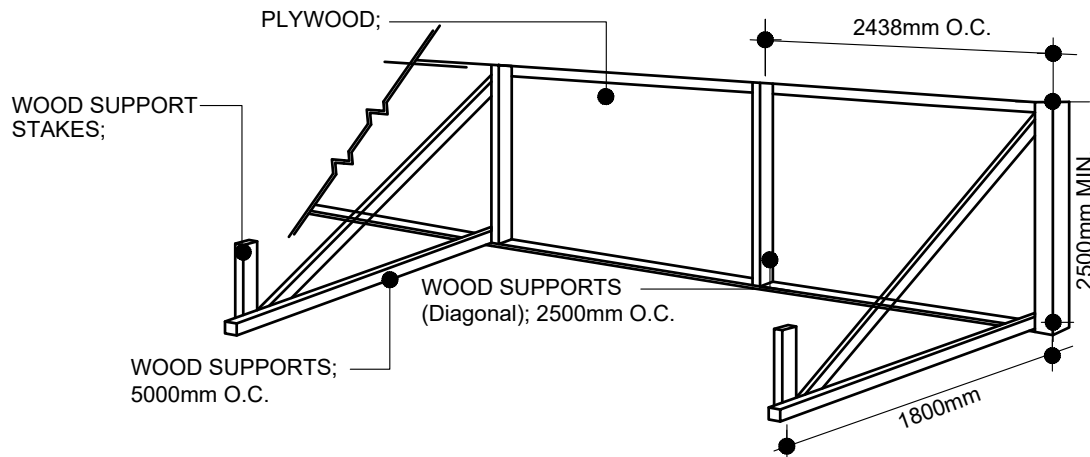
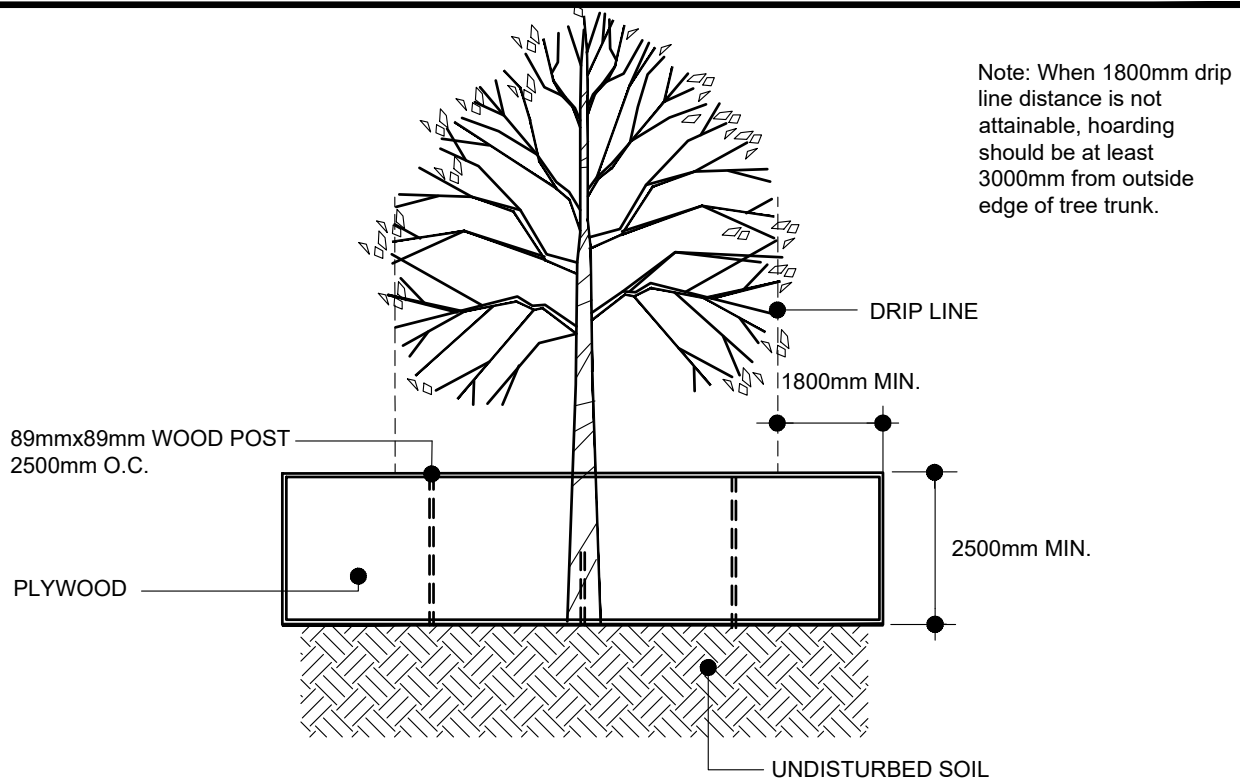
The Urban Arborist Inc.
P.O. Box 74525
Humbertown Centre
Etobicoke, ON
M9A 5E2

THE URBAN ARBORIST
FROM THE ROOTS UP

Project Name and Address

51 Napier Street
Vaughan, ON.
L4H 3N5

Project	Sheet
Tree Inventory Protection Plan	TP-1
Date	12-02-2024
Scale	1:200



Note: All Support Stakes and Hoarding Posts to be wood 2" x 4" member.

Note: All Plywood to be 4'x8' sheets.

Note: All Connection Points to be Rigid.

NOTES:

1. Attachment of fence to trees to be preserved is not allowed.
2. Ensure fence is continuous and is located beyond the drip line of trees to be preserved.
3. Fencing to be installed prior to start of construction.
4. All supports and bracing should be inside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
5. No Construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.



VAUGHAN

DEVELOPMENT PLANNING DEPT.
URBAN DESIGN DIVISION

HEAVY DUTY TREE HOARDING PROTECTION DETAIL (PLYWOOD)

NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

DRAWN & DESIGNED: URBAN DESIGN

NOT TO SCALE DATE: 04 / 07 / 2016

STD. DWG. NO.

ULA 110A

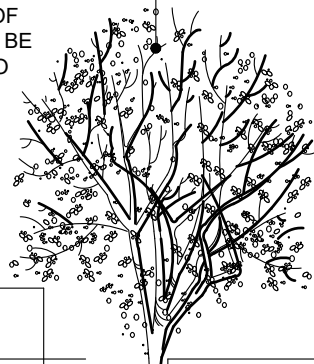
NOTE:
ALL TREES NOT MEETING CITY OF
VAUGHAN REQUIREMENTS WILL BE
REMOVED AND REPLACED AT NO
EXPENSE TO THE CITY.

AT GRADE

100mm WOOD MULCH

1800mm MIN.
BRANCHING
HEIGHT

100mm



DO NOT DAMAGE OR CUT LEADER BRANCH
PRUNE DOMINANT LATERAL BRANCHES

TWO PLY REINFORCED RUBBER HOSE

2 - 2" x 2" WOOD STEAKS SECURED
WITH #4 ALUMINUM WIRE; LOCATE
STAKES AWAY FROM THE TRUNK,
ONE ON SIDE OF PREVAILING WIND,
THE OTHER AT THE OPPOSITE SIDE
(FOR TREES 75mm IN CALIPER OR LESS)
ANGLE STAKES 5 - 15 DEGREES

DRAIN PIPE 100mm DIA.;
450mm PLASTIC CORRUGATED

150mm SPACE

CROWN OF ROOT BALL

SOD

FINISH GRADE

CLEAN SHARP EDGE BETWEEN
SAUCER AND SOD / SEED

CREATE SAUCER AROUND TREE

AERATE AND SCARIFY SOIL SURROUNDING
PLANTING PIT AND BASE OF PIT

APPROVED SOIL MIXTURE

CUT AND REMOVE TOP 1/3 OF BURLAP;
REMOVE ALL SIDES OF WIRE BASKET
AND ALL TIES

SUBGRADE

EXCAVATE 100mm DEPTH FOR
MOUNDING INTO EXISTING SUBSOIL

CREATE SAUCER AROUND TREE

APPROVED SOIL
MIXTURE

FINISH GRADE

VARIES WITH SLOPE

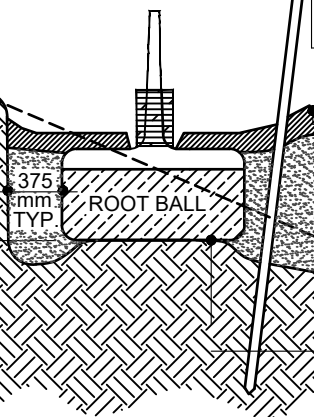
SLOPE PIT BOTTOM FOR DRAINAGE

SUBGRADE

ON A SLOPE

SOD

100mm



NOTES:

1. Position crown of root ball 50mm above finish grade to allow for settling.
2. Do corrective pruning to retain natural form of tree as directed by City Forestry Supervisor.
3. Water all plant material sufficiently to maintain vigorous, healthy growth from time of delivery/ installation until the end of the specified guarantee period.
4. Stake height shall be a minimum of 1.5 metres above finish grade.
5. For trees planted within planting or shrub beds, delete saucer around base of tree.
6. Remove all tree guards/ stakes 12 months after acceptance/ assumption or as specified.
7. No tree pits shall be left open overnight.
8. Do not allow air pockets when backfilling.
9. All dimensions are in millimeters.



VAUGHAN

DEVELOPMENT PLANNING DEPT.
URBAN DESIGN DIVISION

DECIDUOUS TREE PLANTING DETAIL FOR TREES UNDER 90mm IN CALIPER

NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

DRAWN & DESIGNED: URBAN DESIGN

STD. DWG. NO.

NOT TO SCALE

DATE: 03 / 01 / 2011

ULA 101

Tree 1487 - 1488



Tree 1486



Tree 1485



Tree 1483 - 1484



Tree 1482



Tree 1479 - 1480



Tree 1481



Tree 1478



Tree 1476 - 1477



Tree 1475



Tree 1474



Tree 1473



Tree 1472



Tree 1470 - 1471



Tree 1469



Tree 1468 - 1469



Tree 1467



Tree 1463 - 1466



Tree 1461 - 1462



Tree 1460



Tree 1459



Front of House

