

ee mber* ees not gged	Species Acer saccharinum	DBH (cm) Diameter Measured at Breast Height (1.4m) [Denotes Multiple Leaders]	Crown Reserve (Diameter, m)	MTPZ (Radius, m)	Biological Condition	Structural Condition	Overall Condition	Ownership - Offsite Municipal (OM); Onsite Private (P); Offsite Private (S)	Recommendation - Condition: Preserve; Remove	Recommendation - Development: Preserve; Remove	Recommendation - Final	Compensation	Comment	Reason for Removal (If applicable)
1	Silver Maple Acer saccharum	60	14	3.6	M	M	Fair	ОМ	P	P	Р	0	Course broken (madeuts)	In conflict with proposed commercial area
2	ssp. saccharum Acer saccharinum	42	15	3.0	M	M	Fair	0	P	R	RD	2	Crown broken (moderate).	construction. In conflict with proposed commercial area
3	Silver Maple Aesculus	38	10	2.4	M	M .	Fair	0	P	R	RD	2	Crown broken (light). Crown broken (heavy); Trunk decay	construction. In conflict with proposed commercial area
4	hippocastanum Picea abies	28	7	1.8	M(L)	L	Poor	0	R	Р	RC	0	(Moderate)	construction and in poor condition. In conflict with proposed commercial area
5	Norway Spruce Acer saccharinum	34	7	2.4	L	L	Very Poor	0	R	R	RCD	0	Crown dieback (heavy); 95% dead.	construction and in poor condition.
6	Silver Maple	114	15	7.2	M(L)	M(L)	Poor	P	R	R	RCD	0	Crown dieback (heavy); deadwood (heavy).	construction and in poor condition. In conflict with proposed commercial area
7*	Acer negundo Manitoba Maple	50	10	3.0	H(M)	L	Very Poor	Р	R	Р	RC	0	Group of 3 trees. Crown broken (heavy).	construction and in poor condition.
8	Acer negundo Manitoba Maple	28	10	1.8	М	М	Fair	Р	Р	R	RD	2		In conflict with proposed commercial area construction.
9	Gleditsia triacanthos	20	8	1.8	H(M)	H(M)	Good	0	Р	Р	Р	0		
10	Acer saccharum ssp. saccharum	18	5	1.8	H(M)	H(M)	Good	0	Р	Р	Р	0		
11	Gleditsia triacanthos	22	6	1.8	М	М	Good	0	Р	Р	Р	0	Construction in MTPZ. Root pruning recommended. See Notes.	
12	Juniperus chinensis Chinese Juniper	18	3	1.8	H(M)	М	Good	Р	Р	Р	Р	0		May be in conflict with proposed storm water management pond; confirm at detailed design
13	Juniperus chinensis Chinese Juniper	15	3	1.8	H(M)	М	Fair	0	Р	Р	Р	0	Construction in MTPZ. Root pruning recommended. See Notes.	
14	Prunus virginiana	15	8	1.8	H(M)	H(M)	Good	0	Р	Р	Р	0	Construction in MTPZ. Root pruning recommended. See Notes.	
15	Acer saccharinum	25	6	1.8	Н	H(M)	Ex cellent	0	Р	Р	P	0	Construction in MTPZ. Root pruning recommended. See Notes.	
16*	Silver Maple Thuja occidentalis	10	2	1.8	Н	H(M)	Good	P	P	Р	P	0	Group of 4 trees along fence.	May be in conflict with proposed storm water
17	'Spiralis' Acer platanoides	15	8	1.8	H(M)	H(M)	Good	0	P	Р	P	0	Construction in MTPZ. Root pruning	management pond; confirm at detailed design.
18	Norway Maple Quercus palustris	30	8	2.4	H	Н	Ex cellent	0	P	Р	P	0	recommended. See Notes. Construction in MTPZ. Root pruning	
19*	Pin Oak Picea glauca	12	4	1.8	Н	Н Н	Ex cellent	P	P	R	RD	0	recommended. See Notes. 2 trees 2m apart.	In conflict with proposed residential construction
	White Spruce Thuja occidentalis												'	<u> </u>
20*	Eastern White Cedar		2	1.2	Н	M	Good	P	P	R	RD	0	Hedgerow of 30 trees. Front yard of existing house #68. Construction	In conflict with proposed residential construction
21	'Greenspire' Acer rubrum	12	4	1.8	Н	M	Good	0	P	P	P 	0	in MTPZ. Root pruning recommended. See	
22	'Franksred' Acer negundo	10	4	1.8	H(M)	H(M)	Good	0	Р	Р	Р	0	In front yard of existing house #20. Crown broken (heavy); no other candidate trees	
23	Manitoba Maple Fraxinus	45	4	3.0	М	L	Very Poor	Р	R	Р	RC	0	in corner;	In poor condition.
24	pennsylvanica	15	5	1.8	М	М	Fair	Р	Р	Р	Р	0		
25*	Acer saccharinum Silver Maple	22	6	1.8	H(M)	М	Fair	Р	Р	Р	Р	0	Group of 5 trees.	
26*	Acer saccharinum Silver Maple	20	6	1.8	H(M)	М	Fair	Р	Р	Р	Р	0	Group of 4 trees.	
27*	Acer saccharinum Silver Maple	20	6	1.8	H(M)	М	Fair	Р	Р	Р	Р	0	Group of 4 trees.	
28	Carya ovata Shagbark Hickory	45	10	3.0	M(L)	M(L)	Fair	Р	Р	Р	Р	0	Crown dieback (moderate); crown sprouts (moderate).	
29	Quercus macrocarpa	90	16	5.4	L	L	Dead	Р	R	Р	RC	0		In poor condition.
30	Carya ovata Shagbark Hickory	40	12	2.4	H(M)	н	Good	Р	Р	Р	Р	0		
31	Populus tremuloides	30 [22,20]	6	1.8	H(M)	М	Fair	Р	Р	Р	Р	0		
32	Populus tremuloides	28 [22, 18]	6	1.8	H(M)	М	Fair	Р	Р	Р	Р	0		
33	Carya ovata Shagbark Hickory	42	10	3.0	H(M)	H(M)	Good	Р	P	Р	Р	0		
34	Malus pumila	30	8	2.4	H(M)	M	Fair	Р	Р	R	RD	2		
35	Apple Carya ovata	45	10	3.0	М	M	Fair	Р	P	Р	P	0	Crown broken (moderate); Crown dieback	
36	Shagbark Hickory Acer saccharinum	85	12	5.4	М	M(L)	Fair	Р	P	Р	P	0	(light). Crown dieback (moderate); Multi-branched node	
37	Silver Maple Fraxinus	15	5	1.8	М	H(M)	Good	P	P	Р	P	0	at 2m.	
38	pennsylvanica Fraxinus	19	6	1.8	М	M	Fair	P	P	Р	P	0		
39	pennsylvanica Fraxinus	[15, 12] 18	4	1.8	М М	L	Very Poor	Р	R	P	RC	0	Crown broken (heavy).	In poor condition.
40	pennsylvanica Populus		4				<u> </u>	, D						<u> </u>
	tremuloides Fraxinus	20		1.8	M	M(L)	Poor	'	R	Р	RC	0	Crown broken (moderate).	In poor condition.
41	pennsylvanica Crataegus sp.	18	6	1.8	M	L	Very Poor	P	R	P	RC	0	Crown broken (heavy). Group of approximately 50 trees. DBH and	In poor condition. In conflict with proposed residential construction
42*	Haw thorn Acer saccharum	5 - 10	4 - 8	1.8	H(M)	M .	Good	P	R	R	RCD	0	Crown Reserve are ranges. Crown broken	and in poor condition.
43	ssp. saccharum Acer saccharum	4	2	1.2	L	L	Dead	ОМ	R	Р	RC	0	Crown broken (heavy). Crown dieback (moderate); Removal of wire	In poor condition.
44	ssp. saccharum	4	2	1.2	M(L)	M(L)	Poor	ОМ	R	Р	RC	0	recommended. Crown dieback (moderate); Removal of wire recommended. Crown dieback (moderate); Removal of wire	In poor condition.
45	Acer saccharinum 'Laciniatum'	5	2	1.2	M(L)	M(L)	Poor	ОМ	R	Р	RC	0	recommended.	In poor condition.
46	Acer saccharinum 'Laciniatum'	5	2	1.2	M(L)	M(L)	Poor	ОМ	R	Р	RC	0	Crown dieback (moderate); Removal of wire recommended.	In poor condition.
47	Acer saccharinum 'Laciniatum'	4	2	1.2	M(L)	M(L)	Poor	ОМ	R	Р	RC	0	Crown dieback (moderate); Removal of wire recommended.	In poor condition.
48	Acer saccharum ssp. saccharum	3	2	1.2	L	L	Dead	ОМ	R	Р	RC	0		In poor condition.
49	Acer saccharinum 'Laciniatum'	4	2	1.2	L	L	Very Poor	ОМ	R	Р	RC	0	Crown dieback (heavy);	In poor condition.
50	Acer saccharinum 'Laciniatum'	5	2	1.2	L	L	Very Poor	ОМ	R	Р	RC	0	Crown dieback (heavy);	In poor condition.
51	Acer saccharinum 'Laciniatum'	5	2	1.2	L	L	Very Poor	ОМ	R	Р	RC	0	Crown dieback (heavy);	In poor condition.
52	Acer saccharum ssp. saccharum	4	2	1.2	L	L	Very Poor	ОМ	R	Р	RC	0	Crown dieback (heavy).	In poor condition.
53	Acer saccharum	4	2	1.2	L	L	Dead	ОМ	R	Р	RC	0		In poor condition.
54	ssp. saccharum Acer saccharinum	5	2	1.2	L	L	Very Poor	ОМ	R	Р	RC	0	Crown dieback (heavy);	In poor condition.
55	'Laciniatum' Acer saccharum	4	2	1.2	L	L	Dead	OM	R	Р	RC	0		In poor condition.
56	ssp. saccharum Acer saccharinum	5	2	1.2	M(L)	L	Poor	OM	R	Р	RC	0	Crown dieback (moderate); Removal of wire	In poor condition.
57	'Laciniatum' Acer saccharinum	4					1			P			recommended. Crown dieback (heavy); Removal of wire	'
	'Laciniatum'		2	1.2	L	L	Very Poor	OM	R		RC	0	recommended.	In poor condition.
58	Norway Spruce Pinus sylvestris	35	8	2.4	M(L)	M(L)	Poor	ОМ	R	P	RC	0	Crown thinning (moderate).	In poor condition.
	Scots Pine Picea abies	30	6	2.4	L	L	Dead	ОМ	R	Р	RC	0	1	In poor condition.
59	ו וטכם מטופט	35	8	2.4	M(L)	М	Fair	ОМ	Р	Р	Р	0	Crown thinning (moderate).	In conflict with seasons
	Norway Spruce	_	۱ ،	2.4	M(L)	м	Fair	Р	Р	R	RD	2	Crown thinning (moderate).	In conflict with proposed commercial area
59 60	Picea abies Norway Spruce	38	8		(=)									construction.
59 60	Picea abies	38 45	8	3.0	M(L)	М	Fair	Р	Р	R	RD	2	Crown thinning (moderate).	In conflict with proposed commercial area construction.
59 60 61	Picea abies Norway Spruce Picea abies						1	P P	P P	R R	RD RD	2	Crown thinning (moderate). Crown thinning (moderate).	In conflict with proposed commercial area

Tree Number*	Species	DBH (cm) Diameter Measured at Breast Height (1.4m) [Denotes Multiple Leaders]	Crown Reserve (Diameter m)	MTPZ (Radius, m)	Biological Condition	Structural Condition	Overall Condition	Ownership - Offsite Municipal (OM); Onsite Private (P); Offsite Private (O); Shared (S)	Recommendation - Condition: Preserve; Remove	Recommendation - Development: Preserve; Remove	Recommendation - Final	Compensation	Comment	Reason for Removal (If applicable)
66	Thuja occidentalis	24	5	1.8	М	M(L)	Fair	P	P	R	RD	2		In conflict with proposed commercial a
67	Eastern White Ceda Thuja occidentalis Eastern White Ceda	20	3	1.8	M	M(L)	Fair	Р	Р	R	RD	2	Crown broken (moderate).	construction. In conflict with proposed commercial a construction.
68	Picea abies	48	10	3.0	м	м	Fair	Р	Р	R	RD	2	Crown thinning (light).	In conflict with proposed commercial a
69*	Norway Spruce Acer negundo Manitoba Maple	15 - 30	5 - 10	2.40	M	М	Fair	Р	Р	R	RD	12	Tree group of 6 stems. DBH and Crown Reserve are ranges. Crown thinning (light).	construction. In conflict with proposed commercial a construction.
70	Picea abies Norway Spruce	35	8	2.4	H(M)	H(M)	Good	Р	Р	R	RD	2		In conflict with proposed commercial a construction.
71	Picea glauca White Spruce	25	6	1.8	H(M)	М	Fair	Р	Р	R	RD	2		In conflict with proposed commercial a construction.
72*	Acer negundo Manitoba Maple	15 - 40	5 - 10	2.4	м	M(L)	Fair	Р	Р	R	RD	10	Tree group of 5 stems. DBH and crown Reserve are ranges.	In conflict with proposed commercial a construction.
73	Picea abies Norway Spruce	45	8	3.0	M	М	Fair	Р	Р	R	RD	2	incoeive are ranges.	In conflict with proposed commercial a construction.
74	Picea abies	45	8	3.0	м	м	Fair	Р	Р	R	RD	2		In conflict with proposed commercial a
75	Norway Spruce Picea abies Norway Spruce	45	8	3.0	M(L)	M(L)	Poor	Р	R	R	RCD	0	Crown thinning (moderate).	construction. In conflict with proposed commercial a construction and in poor condition.
76	Acer negundo	38	8	2.4	M(L)	L	Poor	P	R	R	RCD	0	Trunk lean (heavy).	In conflict with proposed commercial a
77	Manitoba Maple Acer negundo Manitoba Maple	35	8	2.4	M(L)	L	Poor	P	R	R	RCD	0	Trunk lean (heavy).	construction and in poor condition. In conflict with proposed commercial a
78	Manitoba Maple Acer negundo	30	5	2.4	M(L)	1	Poor	P	R	R	RCD	0	Trunk lean (heavy)	construction and in poor condition. In conflict with proposed commercial a
79	Manitoba Maple Picea abies	45	8	3.0	M(L)	L	Dead	Р Р	R	R	RCD	0	Trunk lean (heavy).	construction and in poor condition. In conflict with proposed commercial a
	Norway Spruce Acer negundo													construction and in poor condition. In conflict with proposed commercial a
80	Manitoba Maple	55	10	3.6	М	M(L)	Poor	Р	R	R	RCD	0	Trunk lean (heavy).	construction and in poor condition.
81	Acer negundo Manitoba Maple	28	6	1.8	М	L	Poor	Р	R	R	RCD	0	Trunk lean (heavy).	In conflict with proposed commercial a construction and in poor condition.
82	Picea abies Norway Spruce	55	10	3.6	М	H(M)	Good	Р	Р	R	RD	2		In conflict with proposed commercial a construction.
83	Picea abies Norway Spruce	30	6	2.4	М	М	Fair	Р	Р	R	RD	2		In conflict with proposed commercial a construction.
84	Picea abies Norway Spruce	24	6	1.8	M(L)	М	Poor	Р	R	R	RCD	0		In conflict with proposed commercial a construction and in poor condition.
85	Picea abies	45	8	3.0	М	М	Fair	Р	Р	R	RD	2		In conflict with proposed commercial a
86	Norway Spruce Picea abies	30	6	2.4	M(L)	M	Poor	Р	R	R	RCD	0		construction. In conflict with proposed commercial a
87	Norway Spruce Picea abies	25	6	1.8	M(L)	М	Poor	Р	R	R	RCD	0		construction and in poor condition. In conflict with proposed commercial a
88	Norway Spruce Acer negundo	59	12	3.6	M	M(L)	Fair	P) '` P	R	RD	2		construction and in poor condition. In conflict with proposed commercial a
	Manitoba Maple Picea abies	[45,38]												construction. In conflict with proposed commercial a
90	Norway Spruce Picea abies	40	6	3.0	M(L)	M M	Poor	P P	R R	R R	RCD RCD	0	Crown thinning (moderate). Crown thinning (moderate).	construction and in poor condition. In conflict with proposed commercial a
	Norway Spruce Picea abies		8											construction and in poor condition. In conflict with proposed commercial a
91	Norway Spruce Picea abies	25		1.8	M(L)	M	Poor	P	R	R	RCD	0	Crown thinning (moderate).	construction and in poor condition. In conflict with proposed commercial a
92	Norway Spruce Picea abies	35	8	2.4	M(L)	М	Poor	Р	R	R	RCD	0	Crown thinning (moderate).	construction and in poor condition. In conflict with proposed commercial a
93	Norway Spruce	35	8	2.4	M(L)	М	Poor	Р	R	R	RCD	0	Crown thinning (moderate).	construction and in poor condition.
94	Picea abies Norway Spruce	45	10	3.0	M(L)	М	Poor	Р	R	R	RCD	0	Crown thinning (moderate).	In conflict with proposed commercial a construction and in poor condition.
95*	Acer negundo Manitoba Maple	15 - 30	5 - 10	2.4	М	M(L)	Fair	Р	Р	R	RCD	10	Group of 5 trees. DBH and crown Reserve are ranges. Crown thinning (moderate).	In conflict with proposed commercial a construction and in poor condition.
96	Acer negundo Manitoba Maple	55 [35,30,30]	12	3.6	М	M(L)	Poor	Р	R	R	RCD	0	Trunk lean (heavy).	In conflict with proposed commercial a construction and in poor condition.
97	Picea abies Norway Spruce	45	8	3.0	М	М	Fair	Р	Р	R	RD	2	Crown thinning (light).	In conflict with proposed commercial a construction.
98	Picea abies Norway Spruce	32	6	2.4	М	M(L)	Fair	Р	Р	R	RD	2	Crown thinning (light); trunk lean (moderate).	In conflict with proposed commercial a construction.
99	Picea abies Norway Spruce	50	10	3.0	М	М	Fair	Р	Р	R	RD	2	Crown thinning (light).	In conflict with proposed commercial a construction.
100	Picea abies Norway Spruce	32	6	2.4	L	M(L)	Very Poor	Р	R	R	RCD	0	Crown thinning (heavy).	In conflict with proposed commercial a
101	Picea abies	35	6	2.4	М	M	Fair	P	Р	R	RD	2	Crown thinning (light).	construction and in poor condition. In conflict with proposed commercial a
102	Norway Spruce Picea abies	35	6	2.4	L	L	Dead	P	R	R	RCD	0		construction. In conflict with proposed commercial a
	Norway Spruce Picea abies				_									construction and in poor condition. In conflict with proposed commercial a
103	Norway Spruce Picea abies	35	6	2.4	L	L	Dead	Р	R	R	RCD	0		construction and in poor condition. In conflict with proposed commercial a
104	Norway Spruce Picea abies	40	6	2.4	M(L)	M(L)	Poor	P	R	R	RCD	0	Crown thinning (heavy).	construction and in poor condition. In conflict with proposed commercial a
105	Norway Spruce	35	6	2.4	L	L	Dead	Р	R	R	RCD	0		construction and in poor condition.
106	Picea abies Norway Spruce	30	4	2.4	L	L	Dead	Р	R	R	RCD	0		In conflict with proposed commercial a construction and in poor condition.
107	Picea abies Norway Spruce	35	6	2.4	L	L	Dead	Р	R	R	RCD	0		In conflict with proposed commercial a construction and in poor condition.
108	Acer saccharinum Silv er Maple	90	10	5.4	М	L	Poor	Р	R	R	RCD	0	Crown broken (heavy).	In conflict with proposed commercial a construction and in poor condition.
109	Fraxinus pennsylvanica	35	8	2.4	L	L	Dead	Р	R	R	RCD	0		In conflict with proposed commercial a construction and in poor condition.
110	Acer saccharinum Silv er Maple	45	8	3.0	M(L)	L	Poor	Р	R	R	RCD	0	Trunk decay (moderate); Crown broken (moderate).	In conflict with proposed commercial a construction and in poor condition.
111	Acer saccharinum Silv er Maple	60	12	3.6	H(M)	М	Fair	Р	Р	R	RD	2	Crown broken (light); Crown dieback (light);	In conflict with proposed commercial a construction.
OWNERS	ніР:						Onsite (P)	78						
							ite - Private (O)	14						
						Offsite -	Municipal (OM) Shared (S)	19 0						
						Tree Ov	vnership Total	111						
PRESER\	ATION BASED ON CO	NDITION:										[

APPENDIX 1. TREE INVENTORY AND ASSESSMENT DEFINITIONS Note: Not all definitions may apply.

DBH (cm): Diameter at breast height, 1.4 m above ground, measured in centimeters. Numbers in square brackets [xx, xx, ...] denotes the DBH's of each stem of tree with multiple stems. Crown Reserve (meters): Diameter of tree canopy estimated in meters.

Minimum Tree Protection Zone (MTPZ): The minimum setback required to maintain the structural integrity of the tree's anchor roots, based on generally accepted arboricultural principles. If trees are protected to the TPZ then the tree's anchor root structure is expected to be maintained. Protection zone distances from: Specifications for Trees (SS-31) City of Guelph. February 2012. The Tree Protection Zone is a distance in metres measured from the outside edge of the tree base.

Biological Condition: Related to presence and extent of disease/disease symptoms and the vigour of the tree. H (High) - No diseases/disease symptoms present, and moderate to high vigour.
 M (Moderate) - Presence of minor diseases/disease symptoms, and/or moderate vigour.

L (Low) - Presence of major diseases/disease symptoms, (i.e., extensive crown dieback), and/or

A further rating may be assigned of ML = Low side of Moderate, HM = Moderate side of High.

Structural Condition: Related to defects in a tree's structure, (i.e., lean, co-dominant trunks). H (High) - No structural defects, well-developed crown.

M (Moderate) - Presence of minor structural defects. L (Low) - Presence of major structural defects.

A further rating may be assigned of M(L) = Low side of Moderate, H(M) = Moderate side of High.

Overall Condition: Excerpted from the City of Kitchener's Tree Management Policy (I-1160. February 28, 2002) Excellent - Sound, thrifty, full-crowned trees of natural shape with no dead limbs in the top of the crown and no significant evidence of decline.

Good - Full-to-medium crowned tree of natural shape with a live crown ratio > 40% that exhibit no more than minor dead wood (e.g. up to 10% secondary branches only and mainly in the lower crown) and no more than one moderate trunk defect or indicator of decline.

Fair – Full-to-small crowned trees with a live crown ratio > 25% that exhibit no more than moderate dead wood (e.g. 11 to 35% secondary branches mostly) and no more than two moderate trunk defects or indicators of decline. **Poor** – Medium-to-very small crowned trees (e.g. live crown ratio < 25%) that exhibit one or more of the following conditions:

a) Trees with significant foliage of poor colour and less than normal size

b) Trees with significant crown dieback (e.g. > 35% dead wood in primary limbs) c) Trees with major trunk defects or decay (e.g. one extensive problem, or 3 or more distinct but moderate decline indicators).

Very Poor – Dying trees with very little live crown. Dead – No live foliage present.

Private (On-site) Tree: Tree trunk located completely within the boundary of the subject property. Off-site Tree: Tree trunk located on private property completely outside of the property boundary of the subject property. Municipal Tree: Tree is located on the property of the municipality/region, e.g., within Right-of-Way. Shared (Boundary) Tree: Tree located on property boundary of the subject property and adjacent private or public property.

Recommended Action: A recommendation of the following three categories is assigned to preserve or remove a tree:

i) The tree's current biological health and structural condition ii) The anticipated impacts from proposed development

iii) The summary of the previous two categories. Note: Only trees having a recommendation of preserve for both health and structure, and impacts from the proposed development are assigned a final recommendation of preserve. P (Preserve) - Tree typically has a Biological Health rating of Moderate Low or higher AND a Structural Condition rating of Moderate Low or higher, AND is likely to survive impact from the proposed development (if present). The tree is likely to

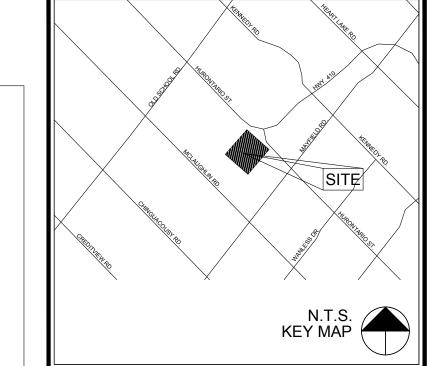
survive for at least 5 to 10 years. R (Remove) - Tree typically has a Biological Health rating of Low, AND/OR a Structural Condition rating of Low, AND/OR will not survive the proposed development impacts (if present). The tree is not likely to survive more than 3 to 5 years.

^{**} An asterisk beside the tree number indicates a group of trees of the same type and in the same general area.

Compensation: Candidate trees for compensation are 15cm DBH and greater, removed based on impacts from the proposed development, and having an existing condition of Fair, Good or Excellent. The ratio of compensation of removed candidate trees is 2:1. Trees less than 15cm DBH, with an existing condition of Poor, Very Poor or Dead, or hazardous do not require compensation.

ABOUD & ASSOCIATES INC.

App 1 Tree Definitions for Mayfield West (w MTPZ) R1



LEGEND:



ISA Certified Arborist, No: ON-0323A ISA Tree Risk Assessment Qualified

INFORMATION SOURCES

BASE PLAN (DEVELOPMENT CONCEPT PLAN) DATED SEPTEMBER 12, 2017 PREPARED BY GLEN SCHNARR & ASSOCIATES. TREE INVENTORY CONDUCTED BY ABOUD &

ASSOCIATES ON JUNE 14, 2017.

SA 10 JUL-17 0 SUBMISSION TO TOWN No. Description By Date

REVISIONS: All previous issues of this drawing are superced

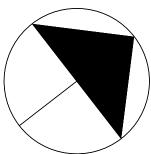


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TREE INVENTORY AND

PRESERVATION PLAN

MAYFIELD WEST PHASE 2 TOWN OF CALEDON CALEDON 410 DEVELOPMENTS LTD.

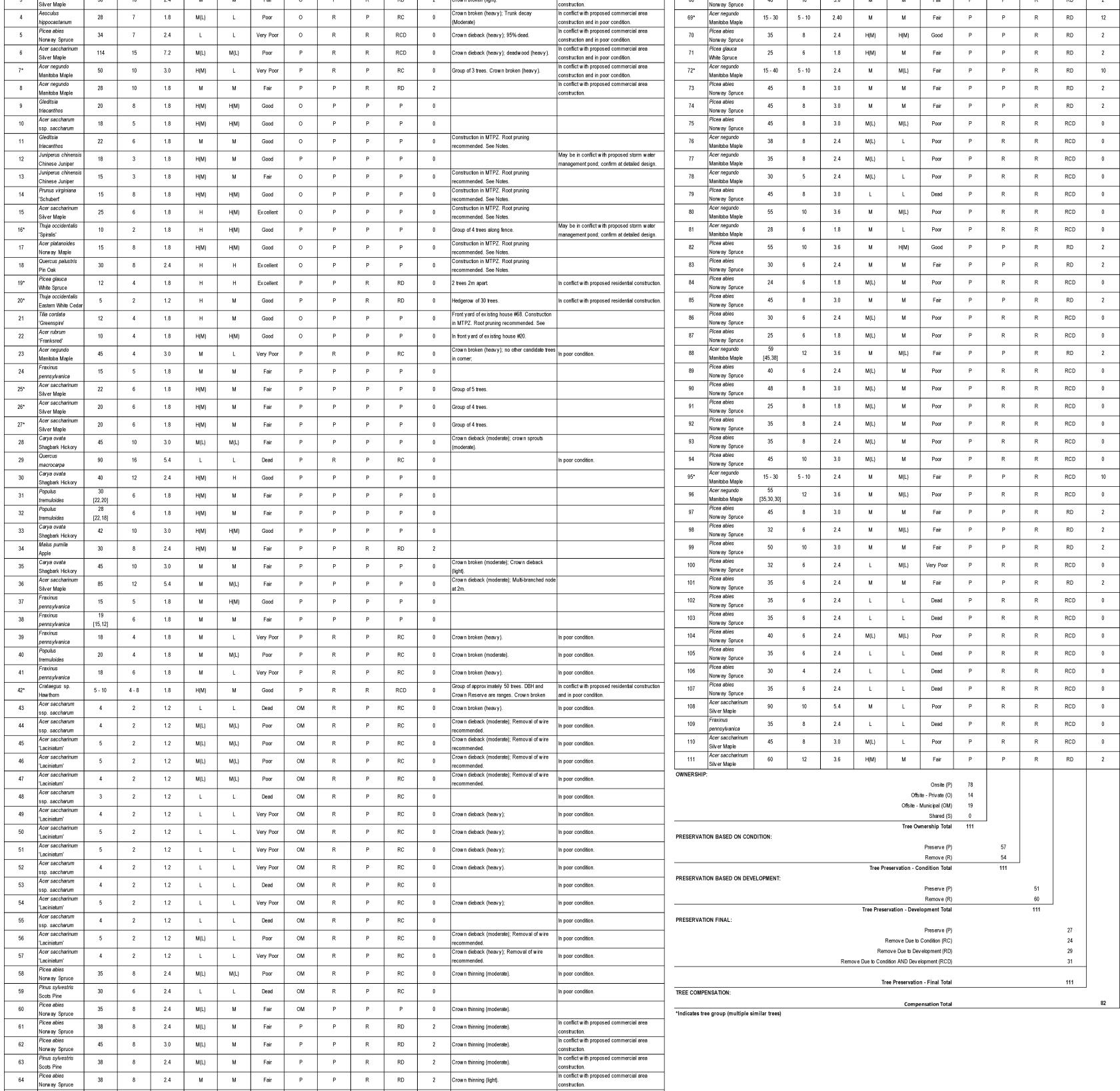


Drawing No:

Date: JULY 2017 Project: AA17-093A Scale: N/A

Designer: SA Drawn: NH Checked: SA

TPP3



GENERAL TREE NOTES

- 1. ALL ARBORICULTURAL WORK PERFORMED ON TREES SUCH AS PRUNING OF BRANCHES AND ROOTS SHALL BE CONDUCTED BY AN ISA CERTIFIED ARBORIST.
- 2. PRUNE AND MITIGATE LIMBS AND ROOTS DAMAGED BY CONSTRUCTION WORK IN ACCORDANCE WITH ANSI A300 (PART 1) 2008 PRUNING AND THE BEST MANAGEMENT PRACTICES COMPANION PUBLICATION (PEVISED 2008)
- 3. TREE PROTECTION FENCE TO BE ERECTED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION
- OR GRADING, AND MAINTAINED THROUGHOUT THE DURATION OF THE WORK.

 4. TREE PROTECTION ZONE IS DELIMITED BY TREE PROTECTION FENCE SHOWN ON THE DRAWINGS.
- 5. NO CONSTRUCTION OR ACTIVITIES INCLUDING THE FOLLOWING TO OCCUR WITHIN TREE PROTECTION ZONE: EXCAVATION, EQUIPMENT PARKING OR ACCESS, STORAGE OF SUPPLIES, TOPSOIL OR FILL, AND REFUELING.
- 6. TREE REMOVALS (IF REQUIRED) WILL BE UNDERTAKEN IN COMPLIANCE WITH THE MIGRATORY BIRDS CONVENTION ACT. EFFORTS WILL BE MADE TO REMOVE VEGETATION OUTSIDE THE GENERAL NESTING PERIOD (APRIL 1 AUG 31) FOR REGIONS C1 AND C2 OF ONTARIO. IN THE EVENT VEGETATION MUST BE REMOVED WITHIN THE GENERAL NESTING PERIOD, A QUALIFIED AVIAN BIOLOGIST IS TO REVIEW THE SITE PRIOR TO REMOVAL TO ENSURE COMPLIANCE WITH THE MIGRATORY BIRDS CONVENTION ACT.
- 7. ANY SOILS AND VEGETATION WITHIN TREE PROTECTION ZONE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THE SATISFACTION OF THE MUNICIPALITY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION WITHIN MINIMUM TREE PROTECTION ZONE

- 1. AN ISA CERTIFIED ARBORIST MUST BE PRESENT ON SITE DURING CONSTRUCTION ACTIVITIES WITHIN MTPZ TO CONFIRM AND/OR MODIFY MITIGATION MEASURES FOR TREES TO BE PRESERVED.
- 2. USE TRENCHLESS METHODS (E.G. HORIZONTAL DIRECTIONAL DRILLING) TO INSTALL UNDERGROUND SERVICES (E.G. SANITARY SEWERS AND WATER LINES) WITHIN MINIMUM TREE PROTECTION ZONES.

CONSTRUCTION ACCESS PIT WITHIN MINIMUM TREE PROTECTION ZONE

WHERE ACCESS WITHIN/IMMEDIATELY ADJACENT THE MTPZ CANNOT BE AVOIDED (E.G. UNDERGROUND SERVICE CONNECTION), A PIT FOR WORKER ACCESS MAY BE CONSTRUCTED WITHIN THE MTPZ AS PER THE FOLLOWING INSTRUCTIONS.

- 1. EXCAVATE SOIL USING AIR-SPADE OR HYDRO-VAC OR ACCEPTED ALTERNATIVE (E.G. HAND DIG) TO AVOID/MINIMIZE DAMAGE TO ROOTS.
- 2. IMMEDIATELY FOLLOWING CONSTRUCTION, TOPSOIL IS TO BE REPLACED WITHIN THE EXCAVATED PIT THROUGHOUT THE ROOT ZONE. THE DEPTH OF TOPSOIL WILL BE AT LEAST 600MM BELOW THE SOIL SURFACE SO AS TO COVER ALL ROOTS.
- 3. A QUALIFIED TREE PROFESSIONAL (E.G. ISA CERTIFIED ARBORIST) MUST BE PRESENT TO ASSESS THE CONSTRUCTION PROCESS, THE CONDITION OF ROOTS DURING EXCAVATION, AND PROVIDE GUIDANCE ON POOT PRUNING AS NEEDED WITHIN THE MTP?
- ON ROOT PRUNING AS NEEDED WITHIN THE MTPZ.

 4. ROOTS OVER 8CM DIAMETER MUST BE ASSESSED BY AN ISA CERTIFIED ARBORIST PRIOR TO PRUNING, THE RESULTS OF WHICH MAY NECESSITATE RELOCATION OF CONSTRUCTION ACTIVITIES OR TREE
- 5. DO NOT LEAVE TREE ROOTS EXPOSED FOR MORE THAN SIX (6 HOURS). WHERE ROOTS MUST BE LEFT EXPOSED LONGER AND TO PREVENT DRYING, SEE EXPOSED ROOT PROTECTION.

EXISTING UNDERGROUND SERVICES WITHIN TREE PROTECTION ZONES

- 1. EXISTING SANITARY/STORM SEWERS AND WATERMAINS TO BE DISCONTINUED WITHIN TREE PROTECTION ZONES WILL BE FILLED (AS NEEDED) AND ABANDONED.
- 2. EXCAVATION AND ACCESS FOR CONSTRUCTION/REMOVAL OF ABANDONED UNDERGROUND SERVICES WILL BE CONDUCTED OUTSIDE OF TREE PROTECTION ZONES.

POLE / POST CONSTRUCTION NEAR TREES - INCLUDES FENCES, RAMPS, DECKS, ETC.

- 1. AN ISA CERTIFIED ARBORIST MUST BE PRESENT ON SITE DURING CONSTRUCTION ACTIVITIES WITHIN TREE PROTECTION ZONES (E.G. WITHIN 1.5 METRES OF OUTER EDGE OF TRUNKS) TO CONFIRM AND/OR MODIFY ANY OF THE MITIGATION MEASURES FOR TREES TO BE PRESERVED.
- 2. PRUNING OF BRANCHES/LIMBS/ROOTS SHALL BE IN ACCORDANCE WITH ANSI A300 (PART 1)-2008
- PRUNING AND THE BEST MANAGEMENT PRACTICES COMPANION PUBLICATION (REVISED 2008).

 3. EXCAVATE POST HOLES USING AIR-SPADE OR HYDRO-VAC TECHNOLOGY.
- 4. PRUNE EXPOSED ROOTS USING SHARP TOOLS
- 5. ROOTS OVER 8CM IN DIAMETER MUST BE ASSESSED BY AN ISA CERTIFIED ARBORIST PRIOR TO PRUNING AND MAY REQUIRE RELOCATION OF PROPOSED CONSTRUCTION.
- 6. DO NOT LEAVE TREE ROOTS EXPOSED FOR MORE THAN SIX (6 HOURS). WHERE ROOTS MUST BE LEFT EXPOSED LONGER AND TO PREVENT DRYING, SEE EXPOSED ROOT PROTECTION.

SIDEWALK / DRIVEWAY CONSTRUCTION WITHIN TREE PROTECTION ZONES

- WHERE NEW SIDEWALKS OR DRIVEWAYS ARE CONSTRUCTED WITHIN TREE PROTECTION ZONES, OR WHERE SIDEWALK REPLACEMENT CONSTRUCTION WITHIN TREE PROTECTION ZONES WILL REQUIRE EXCAVATION, OR WHERE ROOTS ARE FOUND OR LIKELY TO BE FOUND WITHIN THE EXCAVATION AREA,
- THE FOLLOWING STEPS ARE REQUIRED.

 1. EYCAVATE BASE USING AIR SPADE OR HYDRO VAC TECHNOLOGY TO DERTH REQUIRED.
- 1. EXCAVATE BASE USING AIR-SPADE OR HYDRO-VAC TECHNOLOGY TO DEPTH REQUIRED FOR
- CONSTRUCTION ACTIVITIES TO PROVIDE DEPTH REQUIRED FOR BASE INSTALLATION.

 2. PRUNE ROOTS AS PER GENERAL TREE NOTES.
- BACKFILL USING CU-STRUCTURAL SOIL BASE WITHIN EXPOSED ROOTS TO DEPTH REQUIRED AS BASE.
 COMPACT BASE TO SPECIFICATIONS AS REQUIRED BY PROJECT ENGINEER.
- 5. INSTALL SURFACE TREATMENT (E.G. CONCRETE, ASPHALT OR PAVERS). INSTALL GEOTEXTILE OVER CU-STRUCTURAL SOIL WHERE PAVERS ARE USED.

FINISH GRADING WITHIN TREE PROTECTION ZONES

WHERE FINISH GRADING OF CUTS AND FILLS, AND INCLUDING SWALES OCCURS WITHIN TREE PROTECTION ZONES, THE FOLLOWING STEPS ARE REQUIRED.

GRADE CUT:

1. EXCAVATE BY HAND OR AIR-SPADE TECHNOLOGY TO A MAXIMUM DEPTH OF 100MM.

- 2. ROOTS ENCOUNTERED ARE TO BE ASSESSED BY THE PROJECT ARBORIST TO DETERMINE THE EXTENT OF ROOTS TO BE PRUNED. BASED ON FINDINGS, OTHER TREATMENTS MAY BE REQUIRED (E.G. CROWN REDUCTION, TREE REMOVAL), AND WHICH MAY REQUIRE APPROVAL FROM THE CITY.
- 3. BASED ON ROOT FINDINGS, LOCAL, MINOR ADJUSTMENTS TO GRADING WITHIN THE TREE PROTECTION ZONE MAY BE REQUIRED BASED ON FIELD CONSULTATION BETWEEN THE PROJECT ARBORIST AND PROJECT ENGINEER.
- 4. NO ACCESS BY HEAVY EQUIPMENT INTO TREE PROTECTION ZONE IS PERMITTED. FINE GRADING TO BE CARRIED OUT USING LIGHT EQUIPMENT AND/OR BY HAND.

GRADE FILL:

- 5. ADD TOPSOIL TO MEET GRADE REQUIREMENTS TO A MAXIMUM OF 150MM.
- NO TOPSOIL TO BE ADDED ONTO TRUNK BASE OR ABOVE-GROUND SECTION OF TRUNK BASE FLARE.
 MAINTAIN POSITIVE DRAINAGE AWAY FROM TRUNK BASE.
- 8. BASED ON LOCAL CONDITIONS (E.G. SURFACE DRAINAGE), LOCAL, MINOR ADJUSTMENTS TO GRADING WITHIN THE TREE PROTECTION ZONE MAY BE REQUIRED BASED ON FIELD CONSULTATION BETWEEN THE PROJECT ARBORIST AND PROJECT ENGINEER.

TREES OWNED BY OTHERS

- 1. TREES OWNED BY OTHERS REQUIRE PERMISSION (I.E. WRITTEN CONSENT) FROM THE LAND OWNER(S) PRIOR TO ACTIVITIES THAT MAY DAMAGE OR DESTROY TREES. TREES OWNED BY OTHERS ARE OFFSITE TREES AND SHARED TREES:
- a. OFFSITE TREES TREES ON PROPERTY ADJACENT TO THE SUBJECT PROPERTY;
- b. SHARED (BOUNDARY) TREES TREES WHOSE TRUNK INCLUDING THE BASAL TRUNK FLARE GROWING ON THE BOUNDARY BETWEEN THE SUBJECT PROPERTY AND ADJOINING PROPERTY (FROM *ONTARIO FORESTRY ACT*).

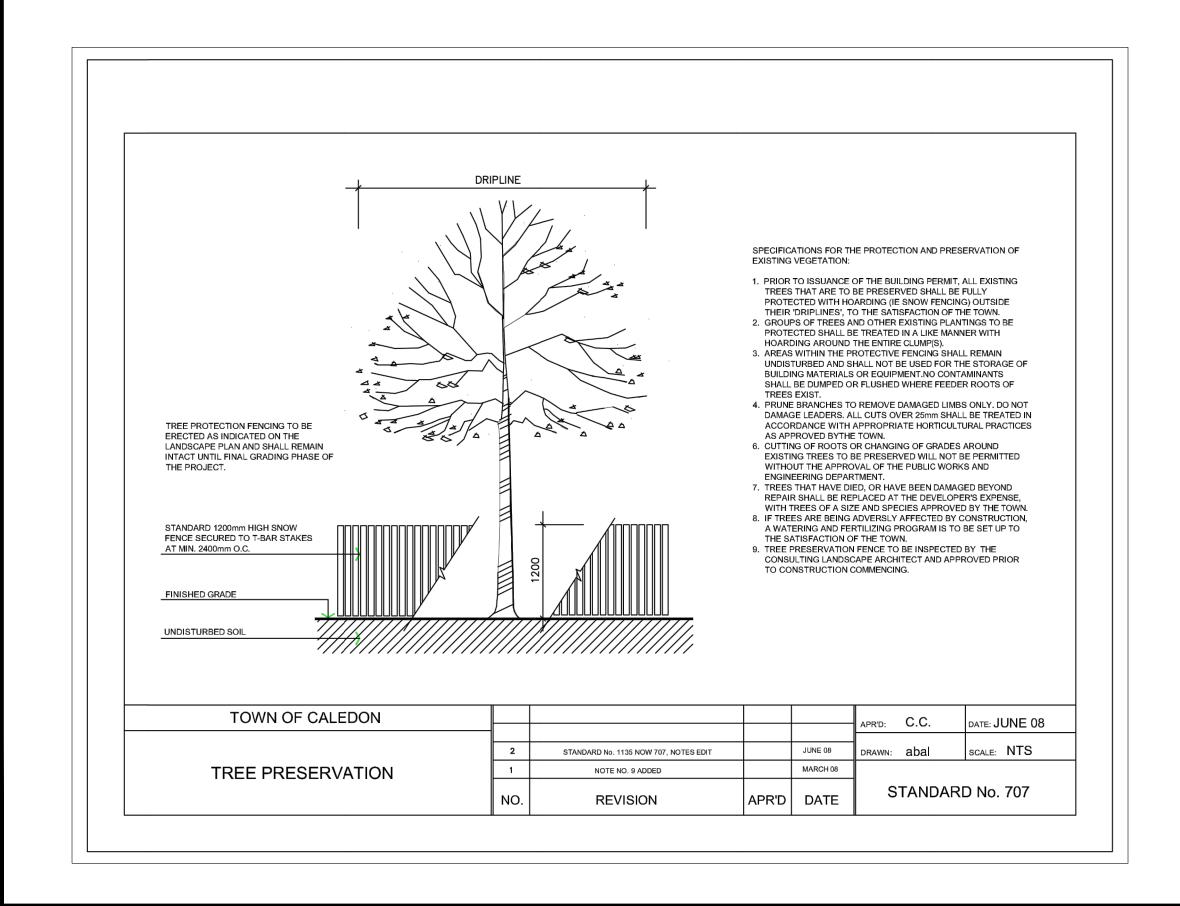
THE PROVINCIAL FORESTRY ACT, R.S.O. 1990 (SECTION 10):

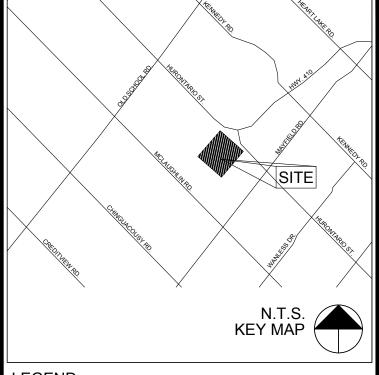
- 10. (2) EVERY TREE WHOSE TRUNK IS GROWING ON THE BOUNDARY BETWEEN ADJOINING LANDS IS THE COMMON PROPERTY OF THE OWNERS OF THE ADJOINING LANDS. 1990, C. 18 SCHED. I, S. 21.
- (3) EVERY PERSON WHO INJURES OR DESTROYS A TREE GROWING ON THE BOUNDARY BETWEEN ADJOINING LANDS WITHOUT THE CONSENT OF THE LAND OWNERS IS GUILTY OF AN OFFENCE UNDER THIS ACT. 1998, C. 18, SCHED. I, S. 21.

EXPOSED ROOT PROTECTION

- DO NOT LEAVE TREE ROOTS EXPOSED FOR MORE THAN SIX (6 HOURS). WHERE ROOTS MUST BE LEFT EXPOSED LONGER AND TO PREVENT DRYING, IMPLEMENT THE FOLLOWING MEASURES.

 1. PLACE TOPSOIL TO 150MM DEPTH OVER EXPOSED ROOTS AND SOAK UNTIL WATER PENETRATES 150MM INTO SOIL;
- 2. APPLY LIGHT-COLOURED, BREATHABLE TARPAULIN OVER TOPSOIL AND PRUNED ROOTS;
- APPLY LIGHT-COLOURED, BREATHABLE TARPAULIN OVER SIX, WET LAYERS OF BURLAP OVER PRUNED ROOTS:
- 3. MAINTAIN TARPAULIN, TOPSOIL/BURLAP AND MOIST CONDITIONS IN PLACE UNTIL BACKFILLING COMPLETED.





LEGEND:



Steven Aboud
ISA Certified Arborist, No: ON-0323A
ISA Tree Risk Assessment Qualified

INFORMATION SOURCES

- BASE PLAN (DEVELOPMENT CONCEPT PLAN)
 DATED SEPTEMBER 12, 2017 PREPARED BY GLEN
 SCHNARR & ASSOCIATES.

 THEE INVENTORY CONDUCTED BY ABOUT &
- 2. TREE INVENTORY CONDUCTED BY ABOUD & ASSOCIATES ON JUNE 14, 2017.

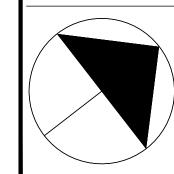


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TREE INVENTORY AND PRESERVATION PLAN

Project

MAYFIELD WEST PHASE 2
TOWN OF CALEDON
CALEDON 410 DEVELOPMENTS LTD.



Drawing No:

Date: JULY 2017
Project: AA17-093A
Scale: N/A
Designer: SA

Drawn: NH
Checked: SA

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