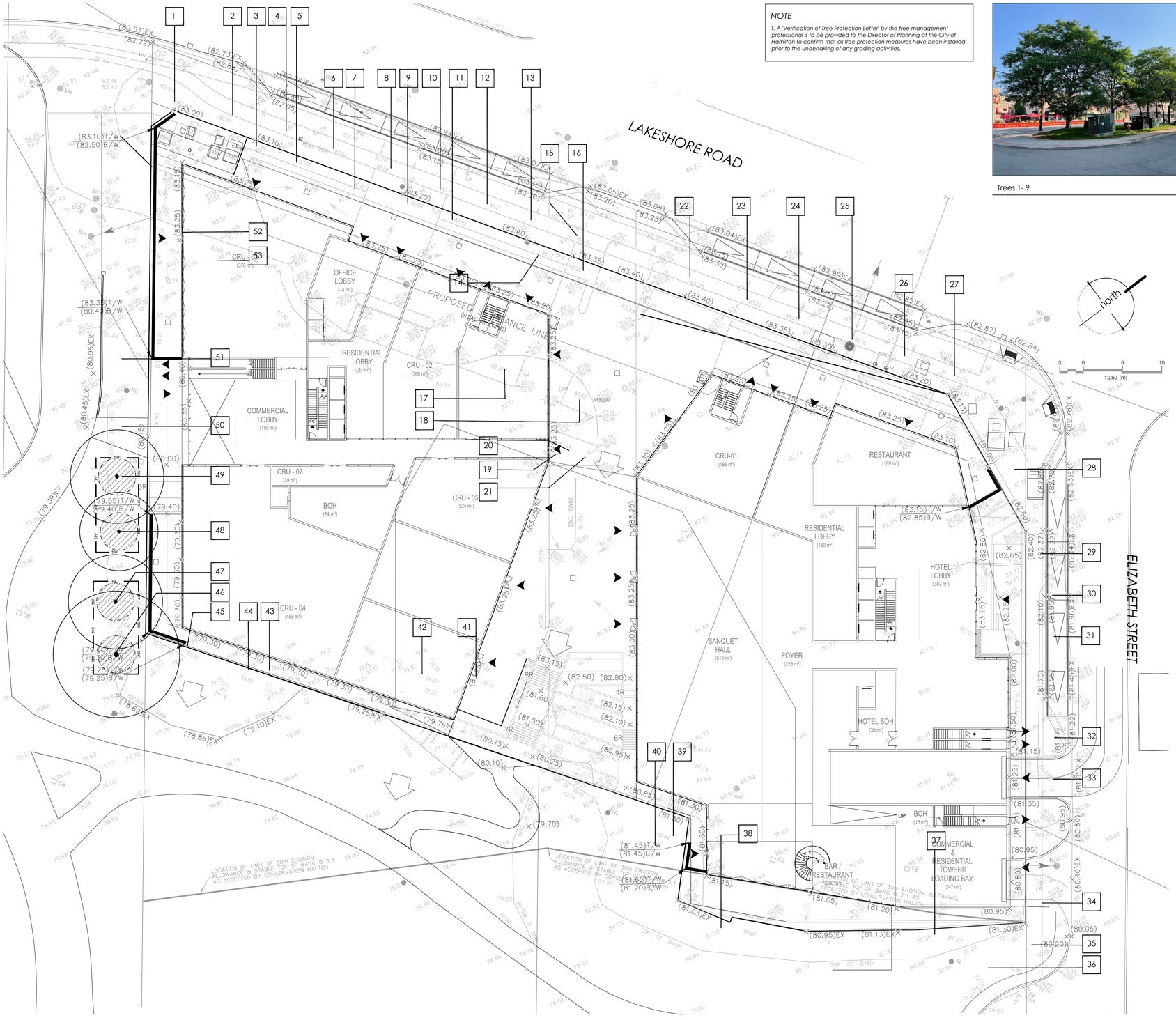
project #: 21-160

NOTE

1. A 'Verification of Tree Protection Letter' by the tree management professional is to be provided to the Director of Planning at the City of Hamilton to confirm that all tree protection measures have been installed prior to the undertaking of any grading activities.



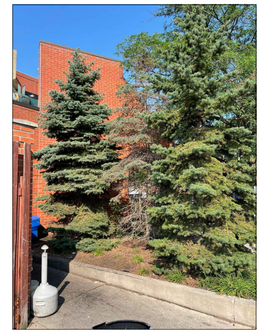
Trees 1- 9



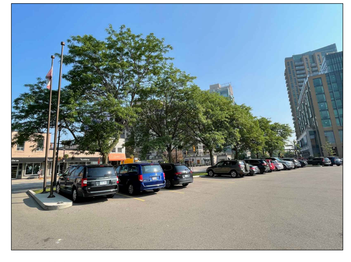
Trees 9 - 16



Trees 9 - Root Rot



Trees 19-21

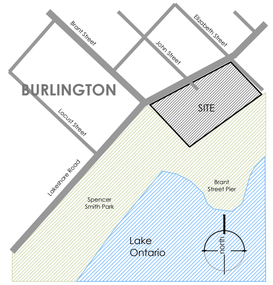


Trees 22-27



Trees 30-31

KEY MAP - N.T.S.



LEGEND

- property line
- UNIT 2 — vegetation unit (refer to chart)
- 2 — existing tree number (refer to chart)
- existing vegetation to remain
- existing vegetation to be removed
- existing elevations
- tree protection fence (with silt fence) - see detail D1, L-2
- minimum tree protection zone

NOT FOR CONSTRUCTION
ISSUED FOR REVIEW & COMMENTS ONLY

NOTE:
Vegetation inventory undertaken *by Jackson Arboriculture Inc., Jeremy Jackson, ISA Certified Arborist (ON-1089A)* on July, 26, 2021.

REVISIONS/ SUBMISSIONS

#	DATE	DESCRIPTION
1	2021-10-14	Issued ZBA

STAMP

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — GERMAIN D. TAYLOR — OALA MEMBER

CLIENT
Burlington 2020 Lakeshore Inc.

MUNICIPALITY
City of Burlington

PROJECT
Burlington Waterfront
2020 Lakeshore Road
Burlington, ON

MUNICIPAL FILE NUMBER

SHEET
Tree Protection Plan — L-1

adesso design inc.
landscape architecture

218 Locke Street South, 2nd Floor
Hamilton, ON L8P 4B4
t. 905.526.8876
www.adessodesigninc.ca

REF:\\Project Files\Projects_2021\21-160 2020 Waterfront Rd, Burlington\01 Current Drawings\01 CAD\L-1 LAYOUT1.TPP
LAST SAVED BY:brianna02, October 14, 2021 4:01:12 PM PLOTTED BY:brianna02, October 14, 2021 4:04:51 PM

project #: 21-160

EXISTING VEGETATION IDENTIFICATION TABLE

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	CC	Comments	Potential Impacts from Construction	Recommendation
1	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	38	G	G	G	7	2.4	CD		Conflicts with proposed hardscape	Remove
2	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	FG	G	G	8	2.4	CD	Swollen flare - likely lawn mower/whipper snipper damage	Conflicts with proposed hardscape	Remove
3	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	27	FG	G	G	7	2.4	CD	Exposed roots - planted too high, structural root growing over curb	Conflicts with proposed hardscape	Remove
4	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	23	G	G	G	6	2.4	CD		Conflicts with proposed hardscape	Remove
5	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	G	G	G	8	2.4	CD	Union at 3 m	Conflicts with proposed hardscape	Remove
6	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	21	G	G	G	6	2.4	CD	Union at 2.5 m	Conflicts with proposed hardscape	Remove
7	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	33	G	G	G	7	2.4	CD		Conflicts with proposed hardscape	Remove
8	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	FG	G	G	5	2.4	CD	Seam	Conflicts with proposed hardscape	Remove
9	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	P	P	P	3	2.4	CD	Sign screwed to trunk, 70% dieback, root rot with ganoderma fruiting bodies -> REMOVE	Conflicts with proposed hardscape	Remove
10	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	FG	G	FG	5	2.4	CD	Seam	Conflicts with proposed hardscape	Remove
11	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	G	G	G	5	2.4	CD	Union at 2 m	Conflicts with proposed hardscape	Remove
12	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	23	G	G	G	5	2.4	CD	Union at 2 m	Conflicts with proposed hardscape	Remove
13	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	5	FG	PF	PF	1	2.4	I	Stem wound, 40% dieback	Conflicts with proposed hardscape	Remove
14	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	25	G	G	G	5	2.4	CD	Union at 3 m	Conflicts with proposed hardscape	Remove
15	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	37	FG	G	G	7	2.4	CD	Union at 3 m, seam, broken branches	Conflicts with proposed hardscape	Remove
16	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	37	G	G	G	6	2.4	CD		Conflicts with proposed hardscape	Remove
17	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	22	G	G	G	5	2.4	D		Conflicts with proposed hardscape	Remove
18	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	G	G	G	6	2.4	D	Union at 3 m	Conflicts with proposed hardscape	Remove
19	Blue Spruce	*Picea pungens*	13	G	G	G	1.5	2.4	CD		Conflicts with proposed hardscape	Remove
20	Blue Spruce	*Picea pungens*	13	P	P	P	1	2.4	CD	90% dieback	Conflicts with proposed hardscape	Remove
21	Blue Spruce	*Picea pungens*	11	G	G	FG	1.5	2.4	CD	10% dieback	Conflicts with proposed hardscape	Remove
22	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	43	FG	G	G	7	3.0	CD	Union at 3 m, seam	Conflicts with proposed hardscape	Remove
23	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	35	G	G	G	7	2.4	CD	Union at 3.5m	Conflicts with proposed hardscape	Remove
24	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	35	FG	G	G	7	2.4	CD	Union at 2.5 m, girdling root	Conflicts with proposed hardscape	Remove
25	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	F	G	G	6	2.4	CD	Swollen flare - likely lawn mower/whipper snipper damage	Conflicts with proposed hardscape	Remove
26	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	29	G	G	G	5	2.4	CD		Conflicts with proposed hardscape	Remove
27	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	38	G	G	FG	8	2.4	CD	Union at 2.5 m, seam	Conflicts with proposed hardscape	Remove
28	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D	Light crook in crown	Conflicts with proposed hardscape	Remove
29	Red Oak	*Quercus rubra*	4	G	G	G	1	1.8	D		Conflicts with proposed hardscape	Remove
30	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Conflicts with proposed hardscape	Remove
31	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Conflicts with proposed hardscape	Remove
32	Red Oak	*Quercus rubra*	6	G	G	FG	1	1.8	D		Conflicts with proposed hardscape	Remove
33	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Conflicts with proposed hardscape	Remove
34	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	D		Conflicts with proposed hardscape	Remove
35	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	D		Conflicts with proposed hardscape	Remove
36	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	CD			Remove
37	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	44	G	G	G	7	3.0	D		Conflicts with proposed patio	Remove
38	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	52	G	G	G	9	3.6	D	Union at 3 m	Conflicts with proposed building	Remove
39	Manitoba Maple	*Acer negundo*	32	FG	G	G	6	2.4	CD	Unions at 1.6 m and 3 m	Conflicts with proposed building	Remove
40	Austrian Pine	*Pinus nigra*	23, 34	F	F	FG	5	2.4	CD	Union at 1 m with 1 dead stem, poor form	Conflicts with proposed building	Remove
41	Red Maple	*Acer rubrum*	15, 16	FG	F	F	2	2.4	D	Union at ground, chlorotic, 20% dieback	Conflicts with proposed building	Remove
42	Red Maple	*Acer rubrum*	13, 10, 7, 8, 8	FG	F	F	2	2.4	D	Union at ground, chlorotic	Conflicts with proposed building	Remove
43	Apple species	*Malus sp.*	16	G	G	G	2	2.4	CD	Pruning wounds, epicormic branching	Conflicts with proposed building	Remove
44	Apple species	*Malus sp.*	13, 10	F	G	G	2	2.4	CD	Stem wound with heart rot, pruning wounds, epicormic branching	Conflicts with proposed building	Remove
45	Austrian Pine	*Pinus nigra*	30	G	G	G	3	2.4	D		Conflicts with proposed building	Remove
46	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	33	G	G	G	8	2.4	D			Save
47	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	G	G	G	6	2.4	CD			Save
48	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	G	G	G	5	2.4	CD			Save
49	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	G	G	G	6	2.4	CD	Union at 2.5 m		Save
50	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	27	G	G	G	6	2.4	CD		Conflicts with proposed hardscape	Remove
51	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	G	G	FG	9	2.4	CD	Union at 2 m	Conflicts with proposed building	Remove
52	Serviceberry species	*Amelanchier sp.*	15, 9	FG	G	G	4	2.4	CD	Union at 0.4 m with included bark	Conflicts with proposed building	Remove
53	Columnar English Oak	*Quercus robur 'fastigiata'*	25	G	G	G	2	2.4	CD		Conflicts with proposed building	Remove

MIGRATORY BIRDS AND NESTS:

1. *The Owner and Contractor must be aware of the Migratory Birds Convention Act, 1994 - specifically:*
   - *No tree removal or construction activity shall contravene the Act.*
   - *Construction activities with the potential to harm migratory birds or their nest should be restricted from March 15 to August 31.*
   - *If work must occur during the migratory bird breeding season, a nest survey should be taken by a qualified avian biologist.*
   - *A mitigation plan (showing active nests and appropriate buffers) may be required for review and approval by the Canadian Wildlife Services.*

NOTES:

1. *The area within the dripline of all existing trees shall be properly protected with temporary fencing.*
2. *The area within the protective fencing shall remain undisturbed with no construction activity, grade changes, surface treatment, compaction, or excavation. Area shall not be used for the storage of building materials or equipment access/storage or project related garbage.*
3. *Tree protection measures shall be installed prior to any demolition, tree removal or construction and shall remain until the completion of fine grading and sodding or seeding.*
4. *Prune all trees for dead, diseased, weak or hazardous branches only, also trim back branches which will interfere with construction, prune for structural restoration where necessary.*
5. *No stockpiles and/or excavated material shall be placed within the tree preservation area.*
6. *No rigging cable shall be wrapped around or installed to trees.*
7. *Where root systems of protected trees are exposed directly adjacent to or damaged by construction work they are to be root pruned and the area back filled with topsoil to prevent root desiccation.*
8. *Any fine grading within the preservation area is to be done by hand, no heavy equipment is permitted within the preservation zone.*
9. *Sediment accumulations to be removed by subdivider/builder when sediment deposits reach within 150mm of top of filter fabric barrier.*
10. *A copy of the approved and signed Vegetation Management Plan will be on site for the duration of construction and available upon request.*
11. *This detail does not represent any particular tree species.*

TREE REMOVAL:

1. *No trees shall be removed prior to municipal approvals of the Tree Management/Tree Preservation Plan.*

BOUNDARY TREES:

2. *Note that boundary trees are protected under the Ontario Forestry Act. Boundary trees are defined in the Forestry Act (Section 10.2) and are considered shared or co-owned property. The Forestry Act indicates that it is a prosecutable offense for one co-owner to injure or cut down a boundary tree without the other co-owner's permission.*
3. *Written permission from the neighbouring property owner is required prior to removal or injury of any boundary tree(shared ownership) or any tree that is not fully on the subject property.*
4. *An ISA certified Arborist should be on site prior to any work being performed within the rootzone of a boundary or neighbouring tree to perform root pruning as required.*

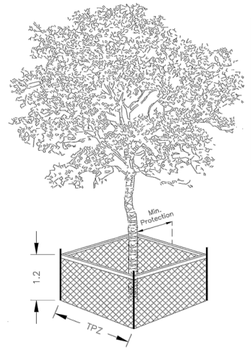
** CROWN CLASS*
Dominant- (D) Emergent canopy (receives full sunlight)
Co-dominant - (C) Not fully emergent (top of canopy receives sunlight)
Intermediate - (I) Sub-canopy tree (receives partial sunlight)

*** CONDITION - consideration of trunk integrity, crown structure and crown vigor*
Good - few or no issues related to trunk integrity, crown structure or crown vigor
Fair - minor issues related to trunk integrity, crown structure (form, some dead or damged branches) or crown vigor (20-80% healthy foliage)
Poor - issues with trunk integrity such as cavities or exposed dead wood, poor crown structure (poor form, no clear leader, significant dead or damaged branches) or poor crown vigor (<20% healthy foliage)

CONDITION OF TREES
The decision to remove or retain a tree is subject to the forecasted development impacts, the structural condition of the tree (e.g. cracks, cavities, decay, weak branching, leaning, hazard potential), the biological condition of the tree (e.g. pest or disease concerns, overall health) and the suitability of the tree in its location (e.g. hardiness, soil conditions, salt tolerance, visual obstruction, available soil volume)

REF:K:\Projects\Burlington 2020 LSI\2020 Updates\L-2 Burlington Tree Protection Plan_Oct 14.dwg, 8.5"x11" Landscape, LAYOUT2, Chad
LAST SAVED BY: Rebekah2, October 14, 2021 4:51:12 PM PLOTTED BY: Rebekah2, October 14, 2021 5:03:23 PM

Tree Protection and Preservation
Specification No.: SS12A



Detail TP-1 – Tree Protection Detail.

Trunk Diameter (DBH) [2]	Minimum Tree Protection Zone (MTPZ) Distances Required [3]	Critical Root Zone (CRZ) Distances Required [3&4]
< 10 cm	1.8 m	1.8 m
11 - 40 cm	2.4 m	4.0 m
41 - 50 cm	3.0 m	5.0 m
51 - 60 cm	3.6 m	6.0 m
61 - 70 cm	4.2 m	7.0 m
71 - 80 cm	4.8 m	8.0 m
81 - 90 cm	5.4 m	9.0 m
91 - 100+ cm	6.0 m	10.0 m

NOTES:
[1] The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the drip line.
[2] Diameter at breast height (DBH) is the measurement of tree trunk taken at 1.4 metres above ground.
[3] Minimum Tree Protection Zone and Critical Root Zone distances are to be measured from the outside edge of the tree base towards the drip line and may be limited by an existing paved surface, provided the existing paved surface remains intact throughout the construction work and is subject to Section 6 of this specification.
[4] Where work is being performed beyond the Minimum Tree Protection Zone but within the Critical Root Zone the works are subject to Section 8 of this specification.

TREE PROTECTION BARRIER

1. The required barrier is a 1.2 metre (4 ft) high orange plastic web snow fencing on 2" x 4" frame. Where orange plastic web snow fencing creates a restriction to sightlines, page wire fencing with reflective tape can be used.
2. Tree protection barriers are to be erected prior to the commencement of any construction or grading activities on the site and are to remain in place throughout the entire duration of the project. The barriers shall be maintained erect and in good repair throughout the duration of construction operations with breaks and unsupported sections repaired immediately. Tree protection may be not be removed prior to the completion of construction without written authorization from the City Arborist.
3. All supports and bracing used to safely secure the barrier should be located outside the MTPZ. All supports and bracing should minimize damage to roots.
4. Where some fill or excavated material must be temporarily located near a MTPZ, a wooden barrier with silt fencing must be used to ensure no material enters the MTPZ.
5. No materials or fill may be stored within the MTPZ.
6. Equipment or vehicles shall not be operated, parked, repaired, or refueled within the MTPZ.
7. No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the MTPZ without written authorization from the City Arborist.
8. A laminated Minimum Tree Protection Zone sign (See Detail TP-3 – Minimum Tree Protection Zone Sign) must be attached to the side of the Tree Protection where it will be visible by persons entering the site. Minimum size must be 10"x14".

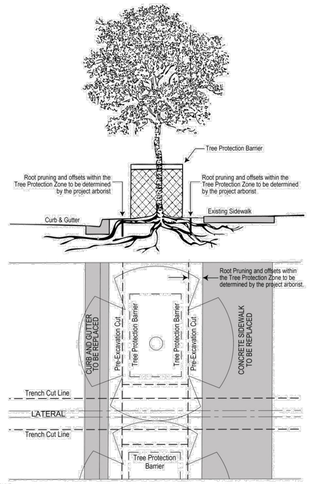
1 / L-2

City of Burlington Tree Protection Barrier - No. SS12

SCALE: NTS

Tree Protection and Preservation
Specification No.: SS12A

Detail TP-2 – Root Pruning Detail



NOTE:
For excavations perpendicular to to the curbing (ie. sidewalk, curbing, water or sewer laterals renewal)

(a) The contractor is to use a trench box to minimize the width of the open cut.
(b) When the lateral replacement is within the Tree Protection Zone of a tree, the contractor is to complete the works using trenchless technologies.

2 / L-2

City of Burlington Root Pruning - No. SS12A

SCALE: NTS

Burlington

TREE PROTECTION ZONE (TPZ)

No equipment or vehicles shall be operated, parked, repaired or refueled within the Tree Protection Zone.

No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

No materials or fill may be stored within the Tree Protection Zone.

This tree protection barrier must not be removed prior to the completion of construction without written authorization from the City of Burlington, Urban Forestry Department.

For information, contact:
City of Burlington, Development and Infrastructure Division,
905-335-7642.

3 / L-2

City of Burlington Minimum Tree Protection Zone Sign

SCALE: NTS

Table 1 – Minimum Tree Protection Zones

Trunk Diameter (DBH) [2]	Minimum Tree Protection Zone (MTPZ) Distances Required [3]	Critical Root Zone (CRZ) Distances Required [3&4]
< 10 cm	1.8 m	1.8 m
11 - 40 cm	2.4 m	4.0 m
41 - 50 cm	3.0 m	5.0 m
51 - 60 cm	3.6 m	6.0 m
61 - 70 cm	4.2 m	7.0 m
71 - 80 cm	4.8 m	8.0 m
81 - 90 cm	5.4 m	9.0 m
91 - 100+ cm	6.0 m	10.0 m

NOT FOR CONSTRUCTION
ISSUED FOR REVIEW & COMMENTS ONLY

NOTE:
Vegetation inventory undertaken *by Jackson Arboriculture Inc., Jeremy Jackson, ISA Certified Arborist (ON-1089A)* on July, 26, 2021.

REVISIONS/ SUBMISSIONS

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ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
GRAHAM D. TAYLOR
OALA MEMBER

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MUNICIPAL FILE NUMBER

SHEET
Tree Protection Plan

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