

**TREE PROTECTION AND PRESERVATION
GENERAL POLICY -- CITY OF BURLINGTON**

CONSTRUCTION ACTIVITIES NEAR TREES MAY RESULT IN INJURY TO THE TRUNK, LIMBS OR ROOTS OF TREE CAUSING DAMAGE OR DEATH OF THE TREE. IN ORDER TO PREVENT SUCH DAMAGE:

1. TREES WITHIN OR ADJACENT TO A CONSTRUCTION AREA MUST BE PROTECTED DURING CONSTRUCTION BY MEANS OF A BARRIER SURROUNDING THE MINIMUM TREE PROTECTION ZONE (MTPZ) AS OUTLINED IN SECTION 5 AND 6 OF THE CITY OF BURLINGTON'S SPECIFICATIONS INDEX FOR TREE PROTECTION AND PRESERVATION.
2. ACTIVITIES WHICH ARE LIKELY TO INJURE OR DESTROY THE TREE ARE NOT PERMITTED WITHIN THE MTPZ. EQUIPMENT OR VEHICLES SHALL NOT BE OPERATED, PARKED, REPAIRED OR REFUELED WITHIN THE DRIPLINE OF TREES.
3. TREE PRUNING OR ROOT CUTTING OF CITY OWNED TREES IS TO BE DONE IN ACCORDANCE WITH SECTION 8 OF THE CITY OF BURLINGTON'S SPECIFICATIONS INDEX FOR TREE PROTECTION AND PRESERVATION.
4. NO OBJECTS MAY BE ATTACHED TO TREES PROTECTED BY THE CITY TREE BY-LAW WITHOUT WRITTEN AUTHORIZATION BY THE CITY. CONSTRUCTION MATERIAL, SUPPLIES, OR EQUIPMENT AND EARTH SHALL NOT BE STOCKPILED WITHIN THE DRIPLINE OF ANY TREE.
5. NO CITY TREE OR TREE PROTECTED BY THE CITY TREE BY-LAW MAY BE REMOVED WITHOUT THE WRITTEN PERMISSION OF THE CITY ARBORIST.
6. EXPOSED ROOTS FROM EXCAVATION MUST BE COVERED WITH SOIL, MULCH OR BURLAP AND WATERED WITHIN 24 HOURS OF EXPOSURE TO PREVENT DYING OUT.

TREE PROTECTION BARRIERS -- CITY OF BURLINGTON

TREES WITHIN MINIMUM TREE PROTECTION ZONES SHALL BE PROTECTED BY MEANS OF A "TREE PROTECTION BARRIER" MEETING THE FOLLOWING SPECIFICATIONS:

1. THE REQUIRED BARRIER IS A 1.2 METRE (4FT) HIGH ORANGE PLASTIC WEB SNOW FENCING ON 2" X 4" FRAME. WHERE ORANGE PLASTIC WEB SNOW FENCING CREATES A RESTRICTION OF SIGHTLINES, PAGE WIRE FENCING WITH REFLECTIVE TAP CAN BE USED.
2. TREE PROTECTION BARRIERS ARE TO BE ERRECTED 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 ERRECT AND IN GOOD REPAIR THROUGHOUT THE DURATION OF THE CONSTRUCTION OPERATIONS WITH BREAKS AND UNSUPPORTED SECTIONS REPAIRED IMMEDIATELY. TREE PROTECTION MAY 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 OF 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 MUST BE ATTACHED TO THE MOST VISIBLE SIDE OF THE TREE PROTECTION BARRIER, WHERE IT WILL BE VISIBLE BY THOSE PERSONS ENTERING THE SITE. MINIMUM SIZE MUST BE 10" X 14". REFER TO SHEET L0.1 FOR SIGNAGE DETAIL.

TREE REPAIR -- CITY OF BURLINGTON

TREES DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED AS FOLLOWS, WITHIN FIVE (5) DAYS OF THE DAMAGE:

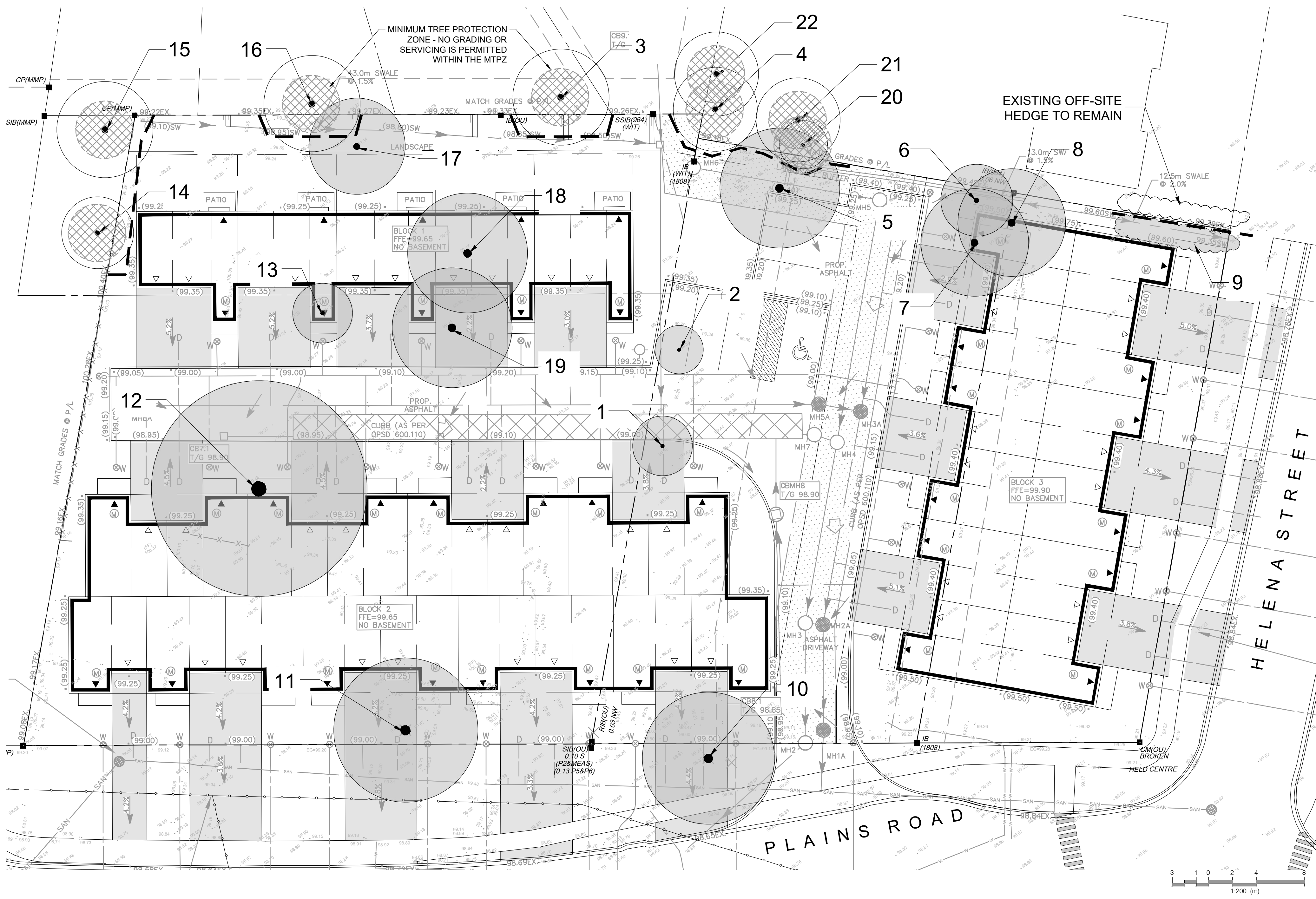
1. BRANCHES 25mm OR GREATER IN DIAMETER THAT ARE BROKEN SHALL BE CUT BACK CLEANLY ON THE TREE SIDE OF THE BREAK OR TO WITHIN 10mm OF THEIR BASE, IF A SUBSTANTIAL PORTION OF THE BRANCH IS DAMAGED.
2. BARK THAT IS DAMAGED SHALL BE NEATLY TRIMMED BACK TO THE UNINJURED BARK WITHOUT CAUSING FURTHER INJURY TO THE TREE.
3. ROOT PRUNING WITHIN THE MINIMUM TREE PROTECTION ZONE OF ANY TREE REQUIRES ROOT EXPLORATION VIA SUPERSONIC AIR TOOL OR HYDRO VACUUM UNIT TO FIRST REMOVE THE SOIL AND EXPOSE THE ROOTS.
4. ROOTS UNDER 2cm IN DIAMETER CAN BE PRUNED USING A SHARPENED TOOL SUCH AS HAND PRUNERS OR A SHARPENED SPADE UNDER THE SUPERVISION OF THE CONSTRUCTION INSPECTOR.
5. ROOTS BETWEEN 2 AND 8cm IN DIAMETER CAN BE PRUNED BY THE ARBORIST USING A SHARPENED TOOL, SUCH AS A HANDSAW, HAND PRUNER OR LOPPERS AND UNDER THE SUPERVISION OF THE CONSTRUCTION INSPECTOR AND THE ADVICE OF THE PROJECT ARBORIST.
6. ALL ROOTS OVER 8cm IN DIAMETER MUST BE ASSESSED BY THE PROJECT ARBORIST PRIOR TO PRUNING UNLESS THE ARBORIST ON-SITE CAN CONFIDENTLY ASSESS THE EFFECT OF THE REMOVAL OF THE ROOT AS NOT DETRIMENTAL TO THE TREE.
7. ROOT PRUNING WITHIN THE CRITICAL ROOT ZONE AND OUTSIDE OF THE MTPZ, TYPICALLY REQUIRES THE USE OF A SHARPENED GARDEN SPADE, CUTTING A LINE TO A DEPTH OF ABOUT 30cm BY THE ON-SITE ARBORIST UNDER THE ADVICE OF THE PROJECT ARBORIST IF NEEDED. HOWEVER, THE SAME PRUNING PROTOCOL FOR THE SIZE OF THE ROOTS ENCOUNTERED (IN THE MTPZ) APPLIES TO THE ROOTS FOUND WITHIN THIS AREA.
8. THE TRENCHES ARE TYPICALLY BACKFILLED WITH THE SAME EXCAVATED SOIL OR NEW TOPSOIL OR COMPOST AND HOARDING SHOULD BE INSTALLED ALONG THIS TRENCH TO PROTECT THE REMAINING ROOTS.

TREE MANAGEMENT NOTES - GENERAL

1. THE PREPARATION OF THE TREE PRESERVATION PLAN HAS BEEN COORDINATED WITH THE PREPARATION OF THE GRADING CONTROL PLAN AND EROSION & SEDIMENT CONTROL PLAN. THE PLANS HAVE BEEN REVIEWED BY THE LANDSCAPE ARCHITECT AND ENGINEERING CONSULTANTS. THE RELEVANT FEATURES OF THESE PLANS ARE IN CONFORMITY WITH EACH OTHER.
2. NO SERVICING, GRADING OR OTHER CONSTRUCTION ACTIVITY IS TO BEGIN UNTIL THE INSTALLATION OF THE TREE PROTECTION FENCING AND ANY OTHER PROTECTION MEASURES HAVE BEEN CERTIFIED BY THE LANDSCAPE ARCHITECT AND THE CITY. PROTECTION FENCING SHALL NOT BE REMOVED OR RELOCATED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THEY ARE AWARE OF ALL MEASURES BEING TAKEN TO PROTECT ALL TREES IDENTIFIED.
4. ALL DAMAGE TO TREES WILL BE REPORTED TO THE CONSULTANT IMMEDIATELY BY THE CONTRACTOR'S FOREPERSON.
5. FOR SILT FENCING DETAILS REFER TO EROSION AND SEDIMENT CONTROL PLAN BY J.H. GELBLOOM SURVEYING LTD.
6. FOR SERVICING AND GRADING INFORMATION, REFER TO DRAWINGS BY J.H. GELBLOOM SURVEYING LTD.

NOTE:

TREE PROTECTION DETAILS FOUND ON SHEET L0.1.

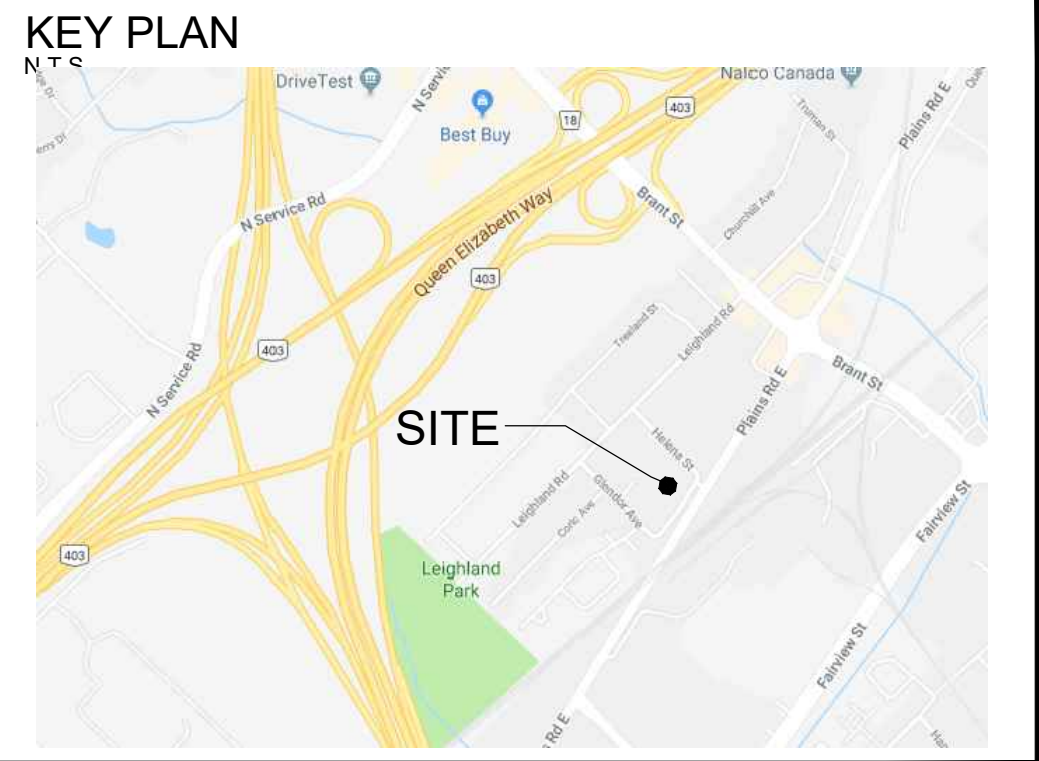


NOTE:
FINAL TREE MANAGEMENT
PLAN REPORT TO BE
SUBMITTED BY:
Samantha Hughes, ER(PG)
Ecologist
ISA Certified Arborist ON-2260A

Tree Inventory-Table 1

Site Dates: December 4, 2017 updated March 29, 2018
Field Personel: GSP Group- Richard Turner, CLD

Tree #	Botanical Name	Common Name	Stems	DBH	Crown Dia.	Condition	Comments	Environment	Ownership	Recommendations	Minimum Tree Protection Zone
01	Acer platanoides	Norway Maple	1	12.5	4.5	Good	Uniform specimen, minor bark cracking	Dominant	Private	Remove (construction)	M
02	Acer saccharinum	Silver Maple	1	20	5.5	Fair-Good	Uniform specimen, minor bark cracking	Dominant	Private	Remove (construction)	
03	Catalpa speciosa	Northern Catalpa	1	25	8	Good	Uniform specimen, heavy fruit	Dominant	Neighbour (1321 Bonnie Court)	Retain- off site	2.4
04	Picea pungens	Colorado Spruce	2	35	7	Good	Uniform, some minor interior dieback	Dominant	Neighbour (1024 Helena Street)	Retain- off site	2.4
05	Catalpa speciosa	Northern Catalpa	1	55	10	Good	Uniform specimen, heavy fruit	Dominant	Private	Remove (construction)	
06	Pinus strobus	White Pine	1	37.5	6	Good	Uniform good canopy	Co-Dominant	Private	Remove (construction)	
07	Pinus strobus	White Pine	1	45	9.5	Good	Uniform good canopy	Co-Dominant	Private	Remove (construction)	
08	Pinus strobus	White Pine	2	45	9.5	Good	Uniform good canopy	Co-Dominant	Private	Remove (construction)	
09	Thuja	Cedar Hedge	30	9.5-15	1-2.5	Good	Hedge, no sign of dieback good buffer	Dominant	Private	Remove (construction)	
10	Catalpa speciosa	Northern Catalpa	1	65	11	Good	Uniform specimen, heavy fruit	Dominant	City Tree	Remove (construction)- off site	
11	Gleditsia triacanthos	Honeylocust	1	40	12	Good	Uniform specimen minor deadwood	Dominant	Private	Remove (construction)	
12	Acer saccharinum	Silver Maple	2	120	18	Fair-Good	Large mature specimen starting decline	Dominant	Private	Remove (construction)	
13	Acer rubrum	Red Maple	1	12.5	5	Good	Uniform nursery specimen	Dominant	Private	Remove (construction)	
14	Ulmus pumila	Siberian Elm	1	32.5	8	Good	Invasive specimen	Dominant	Neighbour (1329 Plains Rd. E.)	Retain- off site	2.4
15	Fraxinus americana	White Ash	1	35	10	Fair-Poor	Emerald Ash borer	Dominant	Neighbour (1329 Plains Rd. E.)	Retain- off site	2.4
16	Morus	Mulberry	5	30	8	Fair-Good	Weedy many suckers off site	Dominant	Neighbour (1319 Bonnie Court)	Retain- off site	2.4
17	Acer platanoides	Norway Maple	1	10.5-15	8	Fair-Good	Uniform specimen, minor bark cracking	Dominant	Private	Remove (construction)	
18	Juniperus virginiana	Eastern Red Cedar	3	45	10	Good	Uniform solid canopy no signs of decline	Dominant	Private	Remove (construction)	
19	Juniperus virginiana	Eastern Red Cedar	4	45	10	Good	Uniform solid canopy no signs of decline	Dominant	Private	Remove (construction)	
20	Picea abies	Norway Spruce	1	15	6	Fair-Good	Irregular canopy, some interior dieback	Co-Dominant	Neighbour (1024 Helena Street)	Retain- off site	2.4
21	Picea abies	Norway Spruce	1	32.5	8	Good	Uniform, some minor interior dieback	Co-Dominant	Neighbour (1024 Helena Street)	Retain- off site	2.4
22	Picea pungens	Colorado Spruce	1	22	6	Good	Uniform, some minor interior dieback	Co-Dominant	Neighbour (1024 Helena Street)	Retain- off site	2.4



Legend

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING HEDGEROW TO BE REMOVED
- TREE PROTECTION FENCING
- MINIMUM TREE PROTECTION ZONE (NO GRADING OR SERVICING IS PERMITTED WITHIN THE MTPZ)
- TREE TAG NUMBER
- UNDER GROUND STORMWATER STORAGE
- EASEMENT
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION

- GENERAL NOTES:**
1. DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT
 2. CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS PRIOR TO COMMENCEMENT OF THE WORK
 3. ALL UTILITY LOCATES ARE THE RESPONSIBILITY OF THE CONTRACTOR. HAND DIG WITHIN THE LIMITS RECOMMENDED BY THE SERVICE UTILITY. UTILITY CONFLICTS WITH PROPOSED TREE LOCATIONS MUST BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT
 4. BASE DRAWING PROVIDED BY J.H. GELBLOOM SURVEYING LTD.
 5. VEGETATION INVENTORY BY GSP GROUP.
 6. FOR GRADING INFORMATION REFER TO DRAWING BY J.H. GELBLOOM SURVEYING LTD. FOR SERVICING INFORMATION REFER TO DRAWINGS BY J.H. GELBLOOM SURVEYING LTD.
 7. LANDSCAPE DRAWINGS SHOW ENGINEERING INFORMATION FOR DESIGN PURPOSES ONLY. DO NOT CONSTRUCT ENGINEERING WORKS FROM THESE DRAWINGS.

**VEGETATION
MANAGEMENT PLAN**
1335 PLAINS ROAD
BURLINGTON, ON.

ISSUED FOR ZONING, NOT FOR CONSTRUCTION.

DATE	ISSUE	BY
Dec 6, 2017	Issued for SPA	RT
Apr 5, 2018	Re-issued for SPA	RT
Oct 15, 2018	Issued for Zoning Application	RT

DATE	REVISIONS	BY

GSP group

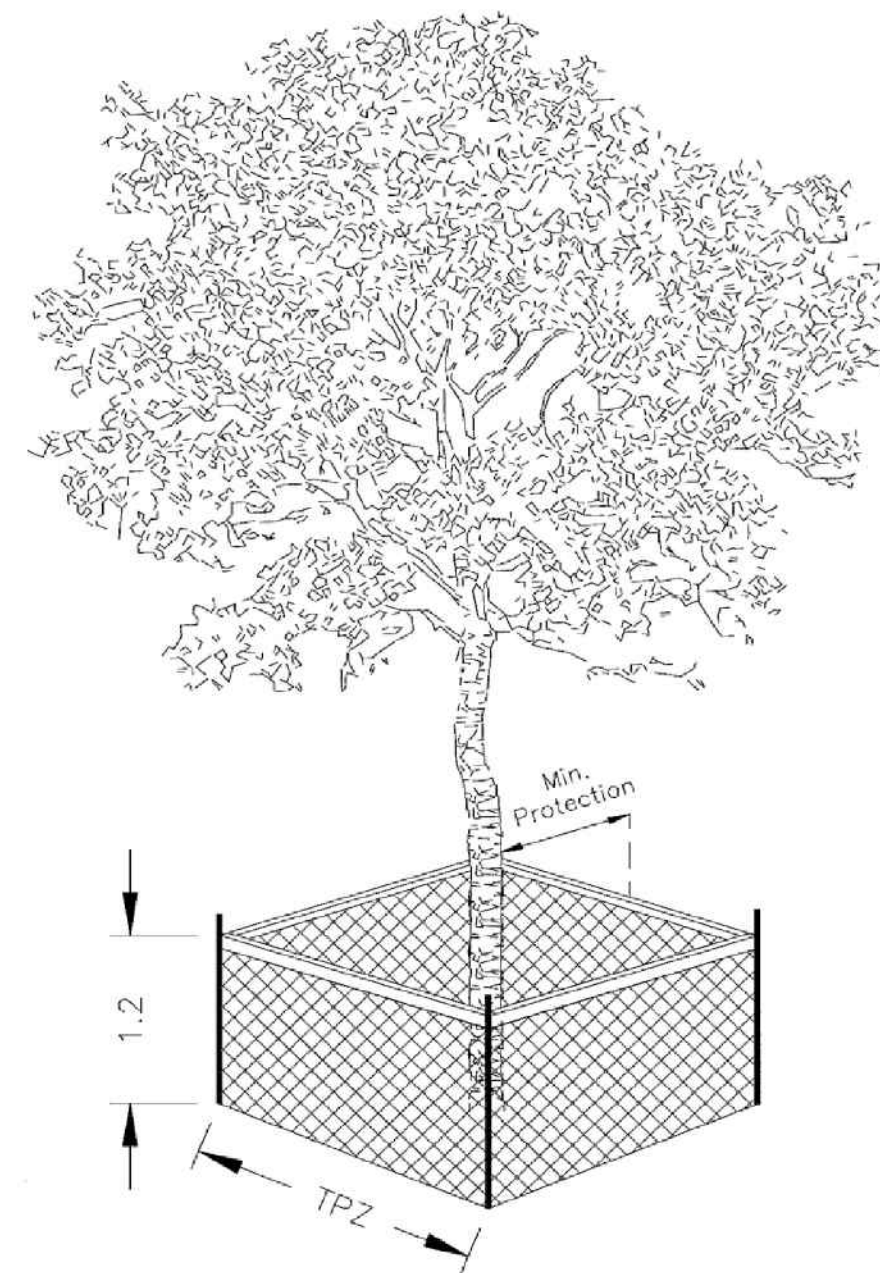
201-72 Victoria Street South
Kelowna, Ontario V1Y 9V8
1-800-988-8883
F 250-868-8883
www.gspgroup.ca

182 Locke Street South, Suite 200
Hamilton, Ontario L8P 4R8
1-800-572-7417

Drawn By: JW
Project No.: 17149

0.07

**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".



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.

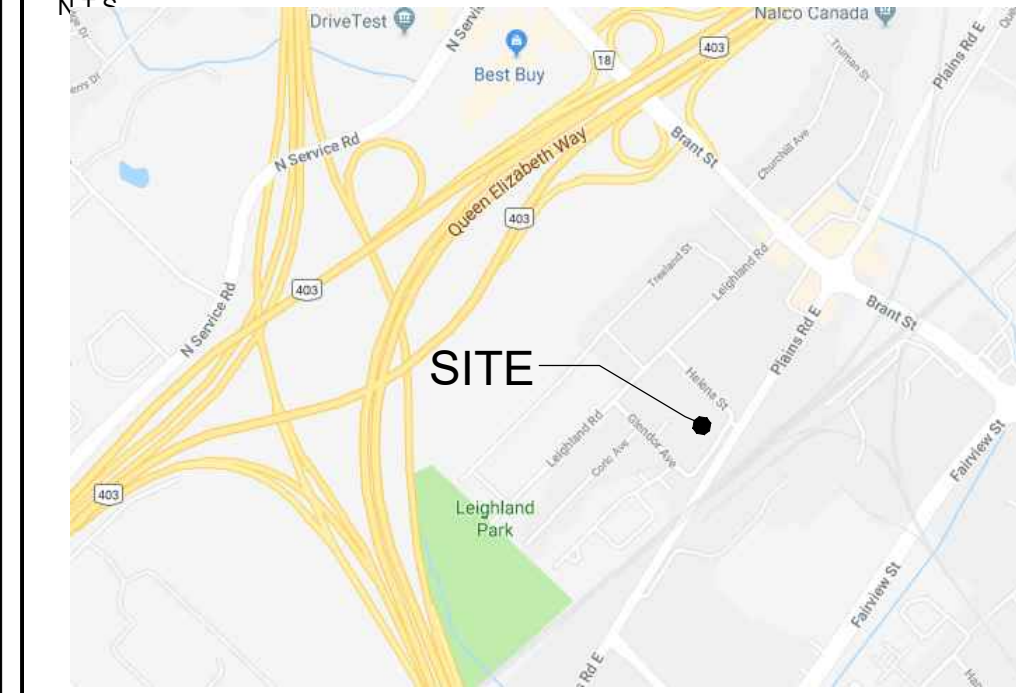
For information, contact:
City of Burlington, Development and Infrastructure Division,
905-335-7642.



NOTE:

TREE INVENTORY AND NOTES
FOUND ON SHEET L0.1.

KEY PLAN



Legend

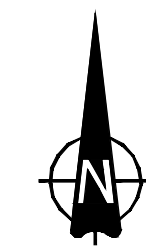
GENERAL NOTES:

1. DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT
2. CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS PRIOR TO COMMENCEMENT OF THE WORK
3. ALL UTILITY LOCATES ARE THE RESPONSIBILITY OF THE CONTRACTOR. HAND DIG WITHIN THE LIMITS RECOMMENDED BY THE SERVICE UTILITY. UTILITY CONFLICTS WITH PROPOSED TREE LOCATIONS MUST BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT
4. BASE DRAWING PROVIDED BY J.H. GELBLOOM SURVEYING LTD.
5. VEGETATION INVENTORY BY GSP GROUP.
6. FOR GRADING INFORMATION REFER TO DRAWING BY J.H. GELBLOOM SURVEYING LTD. FOR SERVICING INFORMATION REFER TO DRAWINGS BY J.H. GELBLOOM SURVEYING LTD.
7. LANDSCAPE DRAWINGS SHOW ENGINEERING INFORMATION FOR DESIGN PURPOSES ONLY. DO NOT CONSTRUCT ENGINEERING WORKS FROM THESE DRAWINGS.

**VEGETATION
MANAGEMENT DETAILS**

1335 PLAINS ROAD
BURLINGTON, ON.

ISSUED FOR ZONING, NOT
FOR CONSTRUCTION.



DATE	ISSUE	BY
Dec 6, 2017	Issued for SPA	RT
Apr 5, 2018	Re-issued for SPA	RT
Oct 15, 2018	Issued for Zoning Application	RT
DATE	REVISIONS	BY



201-72 Victoria Street South
Kitchener, Ontario N2G 1P3
T 519 350 8883
F 519 350 8562
www.gspgroup.ca

Date: Dec 5, 2017
Scale:
Drawn By: JW
Project No.: 17149

L0.1