



16 WETHERED STREET
LONDON, ONTARIO
TREE ASSESSMENT REPORT FOR REZONING

PREPARED BY: RON KOUDYS LANDSCAPE
ARCHITECTS INC

DATE: NOVEMBER, 2020

RKLA PROJECT #: 20-233



Michelle Peeters
ON 2129A

TM

A handwritten signature in blue ink that reads "M. Peeters".

MICHELLE PEETERS
LANDSCAPE ARCHITECT
BLA, DIP. HORT. TECH, OALA, ISA CERTIFIED ARBORIST

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

Ron Koudys Landscape Architects Inc. (RKLA) was retained to prepare a tree assessment report in conjunction with the proposed development at 16 Wethered Street, London Ontario. The intent of this report is to summarize the findings of the tree assessment and make recommendations regarding tree preservation and removal based on the current site plan and tree condition/health for the purpose of application for rezoning. Note that refinement of these recommendations will be made at the time of application for site plan approval.

1.2 EXECUTIVE SUMMARY

The inventory captured 34 individual trees and one mature Cedar hedge. Trees were identified within the subject site, within 3 meters of the legal property boundary, and within the City ROW adjacent to the site. No endangered species were observed during the tree inventory. All trees observed are common to the current land uses and can be characterized as anthropogenic. The subject site is NOT within or adjacent to a City of London Tree Protection Area.

There are several boundary trees associated with this site that are in poor or hazardous condition. While the current site plan does not significantly impact all of these trees, from a strictly arboricultural perspective, we have recommended that these trees be removed for health and safety reasons. Refer to tree data table for detailed observations about these trees. Note that consent from adjoining land owners is required for removal of boundary trees.

1.2.1 TREE SPECIES BREAKDOWN CHART

The following chart summarizes the amount of each tree species observed. (excluding the Cedar hedge (vegetation unit #1))

%	Qty	Tree Species
38%	13	Norway Maple
12%	4	Hackberry
12%	4	White Spruce
9%	3	Manitoba Maple
9%	3	Mulberry
6%	2	Juniper
3%	1	Balsam Fir
3%	1	Black Walnut
3%	1	Siberian Elm
3%	1	Silver Maple
3%	1	Sugar Maple
100%	34	Total

1.2.2 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS CHART

The following chart summarizes removal and preservation recommendations categorized into location/ownership.

	Trees to Preserve		Trees to Remove	
	qty	tree id #	qty	tree id #
Within Subject Site	6	5, 6, 7, 8, 9, 18	10	3, 11, 12, 13, 15, 16, 17, 19, 20, 33
Within City ROW	1	1	0	0
Private Prop. Beyond Site	7	4, 14, 24, 25, 27, 28, 29	0	0
Boundary	4	10, 21, 22, 34	6	2, 23, 26, 30, 31, 32
	18	Total	16	Total

1.2.3 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS

- Acquire consent from neighbouring land owners to remove 6 boundary trees due to poor/hazardous condition and/or construction impacts:
 - 1160 Oxford St E & City - tree #2
 - 1170 Oxford St E - tree #23 & 24
 - 1168 Oxford St E - tree # 30, 31 & 32
- Remove 10 trees from subject site due to direct conflict with proposed site plan and/or poor tree condition.
- Follow pre, during, and post construction recommendations outlined in Construction Impact Mitigation Recommendations in this report.

2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is the entirety of 16 Wethered Street in London, Ontario. The property is on the east side of Wethered Street and is surrounded to the north, east, and south by single dwelling residential lots.

Existing trees on the property are concentrated along the perimeter of the site, including several boundary trees.

The scope of this tree inventory includes the subject site as well as trees within 3m of the subject site property line. Refer to Figure 1 for scope of tree inventory.

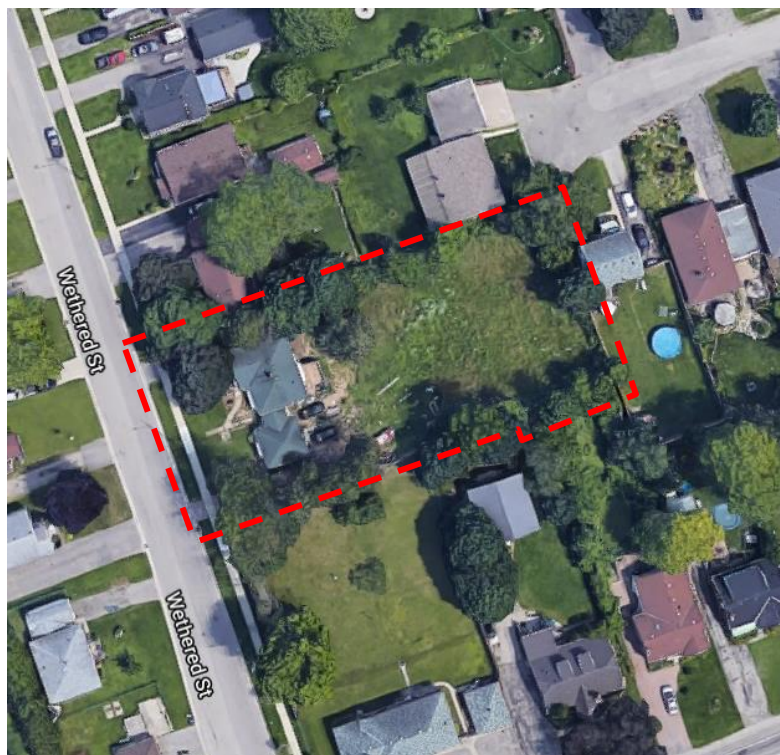


Figure 1 - Image capture from Google Maps
Red dashed line - limit of tree inventory



3.0 METHODOLOGY

Field work was completed on October 30, 2020 by RKLA staff member Michelle Peeters, ISA certified arborist ON 2129A. A topographic survey provided by Zelinka Priamo Ltd was used as a base for the field work. Trees within the given scope with a diameter at breast height (DBH) of ≥ 10 cm were identified and assessed. Trees were NOT tagged in the field. Each tree was assigned a number which are identified in the tree data table and on the tree preservation plan. Tree identification numbers include 1-34. One significant hedge (vegetation unit) was also observed. It is identified in the tree data table as Veg 1.

The following information was recorded for each individual tree:

- Genus + specific epithet (Species)
- Diameter at breast height (DBH) (centimetres)
- Crown radius (metres)
- Crown Condition (overall general vigour of crown)
- Structural Condition (good, fair, poor)
- General Comments

3.1 HEALTH ASSESSMENT

Trees were assessed following accepted arboricultural techniques and best practices using a limited visual inspection. The inspection included a 360 degree visual examination of the above-ground parts of each tree for structural defects including cavities, wounds, scars, external indicators of internal decay, evidence of insect presence, discoloured or deformed foliage, canopy and root distribution, and the overall condition of the tree. Evaluation of tree health was based on visible tree health indicators including live buds, foliage condition, deadwood, structural defects, form, and signs of disease or insect infestation. Field observations were reviewed against available online imagery of the site to assist in determining tree canopy health. Quantified health assessments included in the inventory are explained here:

Crown Condition Classification

- 5 Healthy: less than 10% crown decline
- 4 Slight decline: 11% - 30% crown decline
- 3 Moderate decline: 31% - 60% crown decline
- 2 Severe decline: 61% - 90% crown decline
- 1 Dead - No visible indication of living foliage or buds in crown

Structural Condition Classification

- Good: Defects if present are minor (e.g. twig dieback, small wounds); defective tree part is small (e.g. 5-8 cm diameter limb) providing little if any risk.
- Fair: Defects are numerous or significant (e.g. dead scaffold limbs); defective parts are moderate in size (e.g. limb greater than 5-8 cm in diameter).
- Poor: Defects are severe (trunk cavity in excess of 50%); defective parts are large (e.g. majority of crown).
- Dead: Tree exhibits no signs of life.
- Hazard: Defects are severe and acute; defective part or collective defective parts render the tree a high risk threat to potential targets.

3.2 CRITICAL ROOT ZONES AND TREE PRESERVATION BARRIERS

The critical root zone of a tree is the portion of the root system that is the minimum necessary to maintain tree vitality and stability. Critical root zones are commonly prescribed by municipal bylaws based solely on DBH and/or drip line, and are typically expressed as a circular shape around the tree. There are a number of other factors, however, that are considered when establishing a critical root zone.

Factors that inform location and extent of a tree preservation barriers to protect the critical root zone include: species tolerance to root loss and other construction impacts (as established by authoritative resources and professional experience), tree trunk size (DBH), tree health and vigour, structural condition, landscape context, soil type, moisture availability, topography, ground cover, crown size (drip line) and balance, current physical root restrictions, visible root arrangement, relationship to neighbouring trees, relationship between tree and proposed construction, type of proposed construction, etc.

Critical root zones will be protected in the field with tree preservation barriers.

4.0 BOUNDARY TREE LEGISLATION

There are 10 boundary trees associated with this project. Note that, according to provincial legislation, a tree is considered a boundary tree if any part of the trunk before the first/lowest branch crosses the property line. Boundary trees are shared property of the two (or more) adjacent land owners.

Action associated with boundary trees is governed by provincial legislation:

Forestry Act, R.S.O. 1990, c. F.26

Boundary trees

10 (1) An owner of land may, with the consent of the owner of adjoining land, plant trees on the boundary between the two lands. 1998, c. 18, Sched. I, s. 21.

Trees common property

(2) Every tree whose trunk is growing on the boundary between adjoining lands is the common property of the owners of the adjoining lands. 1998, c. 18, Sched. I, s. 21.

Offence

(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.

Some of the 10 noted boundary trees identified during the inventory were noted as having poor or hazardous structural condition and have been recommended for removal because of their poor condition.

It is the responsibility of the developer to acquire written consent from the appropriate neighbouring land owners to harm or remove boundary trees.

5.0 TREE INVENTORY AND PRESERVATION/REMOVAL RECOMMENDATIONS

The following recommendations are based on requirements of the current site plan as well as tree health and condition.

Grey indicates recommended removal.

GENERAL INFORMATION				SIZE		HEALTH			RECOMMENDATION	
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL CONDITION	COMMENTS	PROPOSED ACTION	RATIONALE
1	<i>Celtis occidentalis</i>	Hackberry	City ROW (blvd)	4	1	5	good	In blvd, tree guard	preserve	no construction impacts expected
2	<i>Acer saccharinum</i>	Silver Maple	BOUNDARY City ROW, subject site & 1160 Oxford St E	-80	11	4	hazard/poor	Grown through chain link and wood fence, entire canopy east of trunk, rot in main trunk just above primary union , 1 low scaffold branch to the north, pruned for hydro line clearance, included bark with crack at primary union	remove	poor/hazardous condition exacerbated by construction impacts
3	<i>Acer platanoides</i>	Norway Maple	Subject site	62	5	5	fair/good	Codominant leaders, significant soil disturbance 360d around tree	remove	conflict with proposed building
4	<i>Acer platanoides</i>	Norway Maple	22 Wethered St	-55	5	4	fair/good	Bulbous trunk, trunk cavities, codominant leaders, thin crown	preserve	beyond subject site, no construction impacts expected
5	<i>Acer platanoides</i>	Norway Maple	Subject site	18	5	5	good	Minimal flare, canopy heavy west	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
6	<i>Acer platanoides</i>	Norway Maple	Subject site	26	5	5	good	Bowed trunk, canopy heavy west	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
7	<i>Acer platanoides</i>	Norway Maple	Subject site	16	5	5	good	Sealing wound at base, suppressed, canopy heavy south	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
8	<i>Acer platanoides</i>	Norway Maple	Subject site	22	5	5	good	Suppressed, canopy heavy south	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
9	<i>Acer platanoides</i>	Norway Maple	Subject site	18, 12, 5	4	5	fair	Multi stem 3, suppressed, canopy heavy south, sealing trunk wounds	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
10	<i>Acer platanoides</i>	Norway Maple	BOUNDARY Subject site & 22 Wethered St	40	7	5	good	Full form	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
11	<i>Picea glauca</i>	White Spruce	Subject site	29	3	3	poor	Significant trunk damage, limbed up approx 8m	remove	conflict with proposed building
12	<i>Picea glauca</i>	White Spruce	Subject site	42	4	5	good	Limbed up approx. 7m	remove	conflict with proposed building
13	<i>Acer negundo</i>	Manitoba Maple	Subject site	<10	7	5	poor	Multistem 7, all epicormic growth emerging from rotting stump that grew through the ex. Chain link fence,	remove	poor tree condition
14	<i>Abies balsamea</i>	Balsam Fir	1166 Dobie St	-15	4	5	good	Suppressed	preserve	beyond subject site, no construction impacts expected
15	<i>Morus alba</i>	Mulberry	Subject site	-25	8	5	poor/fair	Trunk bend & lean south towards the subject site, significant epicormic growth	remove	poor tree condition
16	<i>Acer negundo</i>	Manitoba Maple	Subject site	10, 8, 3	4	4	poor	Multistem 3, significant epicormic growth, scrubby form, vertical trunk wounds	remove	poor tree condition

17	<i>Morus alba</i>	Mulberry	Subject site	11, 10, 9, 5, 4, 4	5	4	poor	Multistem 6, basal rot, heavily suppressed, some main branches full 90 degree bend south, vines climbing into canopy	remove	poor tree condition
18	<i>Ulmus pumila</i>	Siberian Elm	Subject site	20, 12	4.5	5	good	Multistem 2, upright form, vines climbing into lower canopy	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer
19	<i>Acer negundo</i>	Manitoba Maple	Subject site	<10	4	3	poor	Multistem 8, all epicormic growth emerging from rotting stump, significant dead wood	remove	poor tree condition
20	<i>Acer platanoides</i>	Norway Maple	Subject site	32	4	4	poor	Epicormic growth emerging from base, sealing vertical trunk wound, significant cavity in upper crown, gnarly form	remove	poor tree condition
21	<i>Celtis occidentalis</i>	Hackberry	BOUNDARY Subject site & 1171 Dobie St	27	4.5	5	good	Full form, subject side of ex wood fence, periwinkle understory	preserve	no construction impacts expected
22	<i>Celtis occidentalis</i>	Hackberry	BOUNDARY Subject site & 1170 Oxford St E	26	6	5	good	Low branched	preserve	no construction impacts expected
23	<i>Morus alba</i>	Mulberry	BOUNDARY Subject site & 1170 Oxford St E	16, 13, 5	5.5	4	poor	Multistem 3, grown through lattice of fence, suppressed, heavy to the NW, dead wood, weeping wounds	remove	poor tree condition
24	<i>Juniperus spp</i>	Juniper	1170 Oxford St E	10	1.5	5	good	Limbed up 2m	preserve	beyond subject site, no construction impacts expected
25	<i>Juniperus spp</i>	Juniper	1170 Oxford St E	10	1	5	good	Limbed up 2m	preserve	beyond subject site, no construction impacts expected
26	<i>Acer saccharum</i>	Sugar Maple	BOUNDARY Subject site & 1170 Oxford St E	-35	4.5	5	poor	Growing through ex. Chain link fence, codominant leaders, included bark with seam at primary union	remove	poor tree condition
27	<i>Acer platanoides</i>	Norway Maple	1168 Oxford St E	-20	5	5	fair	Large vertical wound	preserve	beyond subject site, very minor construction impacts expected
28	<i>Acer platanoides</i>	Norway Maple	1168 Oxford St E	-35	5	5	good	Bent trunk	preserve	beyond subject site, very minor construction impacts expected
29	<i>Acer platanoides</i>	Norway Maple	1168 Oxford St E	-15	3	5	good	Codominant leaders	preserve	beyond subject site, very minor construction impacts expected
30	<i>Celtis occidentalis</i>	Hackberry	BOUNDARY Subject site & 1168 Oxford St E	17	4	5	good	South of chain link fence, suppressed, slight lean NE, low branched	remove	conflict with proposed laneway
31	<i>Acer platanoides</i>	Norway Maple	BOUNDARY Subject site & 1168 Oxford St E	12, 10	3	5	fair	Multistem 2, grown through chain link fence, primary union just above grade	remove	conflict with proposed laneway
32	<i>Juglans nigra</i>	Black Walnut	BOUNDARY Subject site & 1168 Oxford St E	32, 28	5	5	good	Multistem 2, north of chain link fence, primary union just above grade, fork in line with property line	remove	conflict with proposed laneway
33	<i>Picea glauca</i>	White Spruce	Subject site	33	3	5	good	Limbed up 6m	remove	conflict with proposed laneway
34	<i>Picea glauca</i>	White Spruce	BOUNDARY Subject site & 1168 Oxford St E	-35	5	5	good	Ex. Wood fence leaning on tree trunk, limbed up 5m, some dead lower stubs remaining	preserve	construction impacts

Vegetation Units

Vegl	<i>Thuja occidentalis</i>	White Cedar	Subject site	20 - 30	4	4	good	11 individuals, soil piled high on a few individuals	remove	conflict with proposed laneway
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6.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES

Some trees have been recommended for removal due to direct conflict with the proposed development. Some trees that have been recommended for preservation may be in proximity to the proposed construction. Trees to be preserved may be affected by the construction process, or by the construction itself. It is imperative that the design team and the construction crew understand the potential for, and the causes of tree damage. Trees recommended for preservation may experience some or all of the following potential construction impacts. Strategies and methods to avoid these impacts are outlined in the Construction Impact Mitigation Recommendations section of this report.

6.1 SOIL COMPACTION

Soil compaction is caused by heavy or repeated compression or vibration of the soil around the tree. Soil compaction reduces the amount and size of macro and micro pore space that is vital for subsurface movement of air and water. The harmful effects of soil compaction include, but are not limited to: slower water infiltration, poor aeration, reduced root growth and an overall increased susceptibility to biotic and abiotic stressors.

6.2 ROOT LOSS

Root loss occurs when roots are severed. The majority of roots are typically located within the top 60cm of soil and can extend outward up to three times the extent of the tree drip line. Excavation of any kind within the critical root zone* can sever roots. Two categories of roots need to be considered when evaluating impacts of root loss - small, fibrous absorbing roots, and large structural roots. Significant loss of either or both of these functions can cause stress and/or affect the structural stability of the tree. Note, however, that it is commonly accepted that healthy trees can typically tolerate and recover from the removal of approximately 33% (up to a maximum of 50%) of their root mass. Thorough consideration regarding extent of acceptable root removal is dependent on individual species characteristics, root loss distribution, and site specific conditions (*ref. Trees and Development: A Technical Guide to Preservation of Trees During Land Development by Nelda Matheny and James R. Clark, 1998. Pg 72*).

* Refer to 'Critical Root Zones and Tree Preservation Barriers' in this report for definition.

6.3 GRADE CHANGES

Lowering of the grade around trees has immediate and long term effects on trees. Lowering of grade requires immediate root loss from cutting the roots which results in water stress from the root removal and potential reduced structural stability.

Raising the grade around a tree can be equally damaging. The addition of fill over the root zone of a tree alters the roots' ability for normal water and gas exchange that is necessary for healthy root growth and stability. Fill essentially suffocates the roots and can lead to the slow and eventual decline of the tree.

6.4 MECHANICAL DAMAGE

Mechanical damage is caused by physical contact with a tree that damages the tree to any degree. During land development and construction activities, there is an increased risk of both minor and fatal mechanical damage to trees from construction equipment. Minor damage can create entry points for insects and pathogens, and fatal damage can cause irreparable structural damage.

6.5 CHANGES TO EXPOSURE - SUN AND WIND

Trees can be negatively affected by increased exposure to sun or wind when neighbouring trees are removed. This can be of particular concern when 'interior trees' (trees that have developed surrounded by other trees) are suddenly exposed to forest edge conditions. These trees may experience higher intensity of direct sunlight resulting in leaf scald, and instability due to increased wind and snow loads.

Trees can be negatively affected by decreased exposure to sunlight. Proposed development that includes tall buildings located to the south and west of mature existing trees can greatly reduce the amount of daily direct sunlight. While this change in environment may not cause the immediate or eventual death of a tree, it can certainly slow development and alter growing habits and patterns, and must therefore be a consideration when evaluating trees for potential preservation.

6.6 SOIL CONTAMINATION

Soil health around a tree can be compromised by contamination from spills or leaks of fuels, solvents, or other construction related fluids.

6.7 WATER AVAILABILITY

Grading and servicing requirements for development can affect water availability for trees. Trees may experience a loss of available water due to a lowered water table or the capture or redirection of subsurface and/or overland flow. Conversely, trees may experience an increase of available water due to changes in site grading and storm water retention efforts.

The successful survival of the trees to be preserved is largely dependent on adhering to the construction impact mitigation recommendations that follow.

7.0 CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

The following general recommendations are provided to guide the removal process, mitigate construction impacts, and ensure compliance with provincial, federal, and municipal regulatory requirements. Some of the recommendations listed below are noted to be undertaken by an ISA certified arborist.

7.1 PRE-CONSTRUCTION RECOMMENDATIONS

- a) Prior to any construction activity, tree preservation fencing is to be installed as per the attached tree preservation drawings and detail.

- b) Where high quality specimens to be preserved are adjacent to areas subject to intensive construction activities, these trees are to have additional protection measures implemented to protect their trunks from mechanical damage. These measures may include surrounding the trunk with wood planks. Trees that require additional protection will be clearly identified on the tree preservation plan with detailed information on specific protection measures.
- c) Trees approved for removal are to be clearly indicated in the field (marked with spray paint or other agreed upon method) by the project arborist or landscape architect prior to any tree removal operations. All removals to be undertaken by an ISA certified arborist.
- d) In accordance with the Migratory Birds Convention Act, 1994, all removals must take place between September 1st and March 31st to avoid disturbing nesting migratory birds. If tree removal occurs between April 1st and August 31st, a biologist is required to complete a search for nests. Once cleared, the contractor has 48 hours to remove. If removal does not occur within 48 hours, another search will be required.
- e) Care should be taken during the felling operation to avoid damaging the branches, stems, trunks, and roots of nearby trees to be preserved. Where possible, all trees are to be felled towards the construction zone to minimize impacts on adjacent vegetation. All removals to be undertaken by an ISA certified arborist.
- f) It is recommended that the existing ground-layer vegetation at the base of trees to be preserved remain intact within the critical root zone so as not to disturb the soil around the base of the existing trees.
- g) Final site grading plans should ensure that the existing soil moisture conditions are maintained.
- h) Some trees may be candidates for pre-construction root pruning to help reduce stress and prepare the tree for nearby construction activity. These trees are to be identified on the tree preservation plan along with root pruning specifications. To be undertaken by an ISA certified arborist.

7.2 RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

- a) Tree preservation fencing is to be maintained in good condition and effective for the duration of construction until all construction activity is complete or as per the project arborist or landscape architect.
- b) Tree preservation fencing is to remain intact as per the tree preservation drawings, and can only be temporarily removed with the express written consent from the project arborist or landscape architect. Should tree preservation fencing be temporarily relocated or moved, it is to be reinstated as per the tree preservation plans as soon as possible.
- c) No construction, excavation, adding of fill, stockpiling of construction material, or heavy equipment is permitted within the critical root zone/within the tree preservation fencing.
- d) When excavation near a tree is required, and it is anticipated that roots will be severed and exposed, duration of exposure is to be minimized to prevent root desiccation.

- e) During the excavation process, roots 25mm or larger that are severed and exposed should be hand pruned to leave a clean-cut surface. To be undertaken by an ISA certified arborist. Exposed severed roots that cannot be covered in soil on the same day as the cuts are made are to be kept moist. Exposed roots are to be kept moist by covering them with water soaked burlap or any other means available to prevent them from drying out.
- f) Avoid idling heavy equipment under or within close proximity to trees to be preserved to prevent canopy damage from exposure to the heat of the exhaust.
- g) Broken branches on trees within the subject site to be preserved should be cleanly cut as soon as possible after the damage has occurred. To be undertaken by an ISA certified arborist.

7.3 POST-CONSTRUCTION RECOMMENDATIONS

- a) Avoid discharging rain water leaders adjacent to retained trees, as this may result in an overly moist environment which can cause root rot.
- b) After all work is completed, tree preservation fences and any other impact mitigation paraphernalia must be removed.
- c) Corrective or clearance pruning may be required following construction. Consulting arborist to make specific pruning recommendations following construction if required.
- d) A final review must be undertaken by the project arborist or landscape architect to ensure that all mitigation measures as described above have been met.

8.0 DISCLAIMER

The assessment of the trees presented within this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay, evidence of insect presence, discoloured foliage, the general condition of the trees and the surrounding site, as well as the proximity of property and people. None of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour is constantly changing. They are not immune to changes in site conditions or seasonal variations in the weather.

While reasonable efforts have been made to ensure the trees recommended for retention are healthy, no guarantees are offered or implied, that these trees or any part of them will remain standing.

Note that this arborist report has been prepared using the latest drawings and information provided by the client. Any subsequent design or site plan changes affecting trees may require revisions to this report. Any new information or drawings are to be provided to RKLA prior to report submission to planning authorities

9.0 CONTACT INFORMATION

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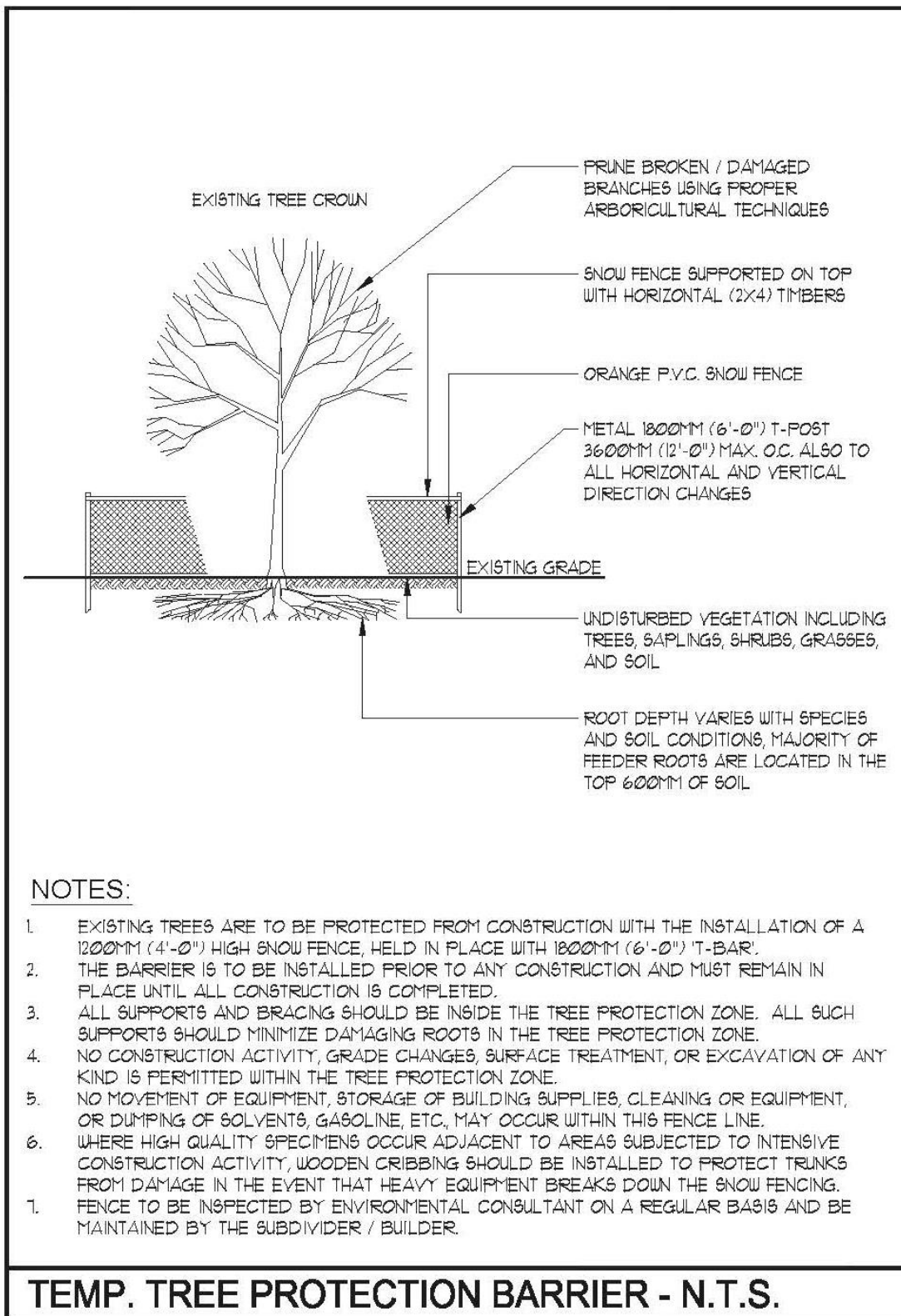
Qualifications ISA Certified Arborist ON-2129A

ISA Tree Risk Assessment Qualified

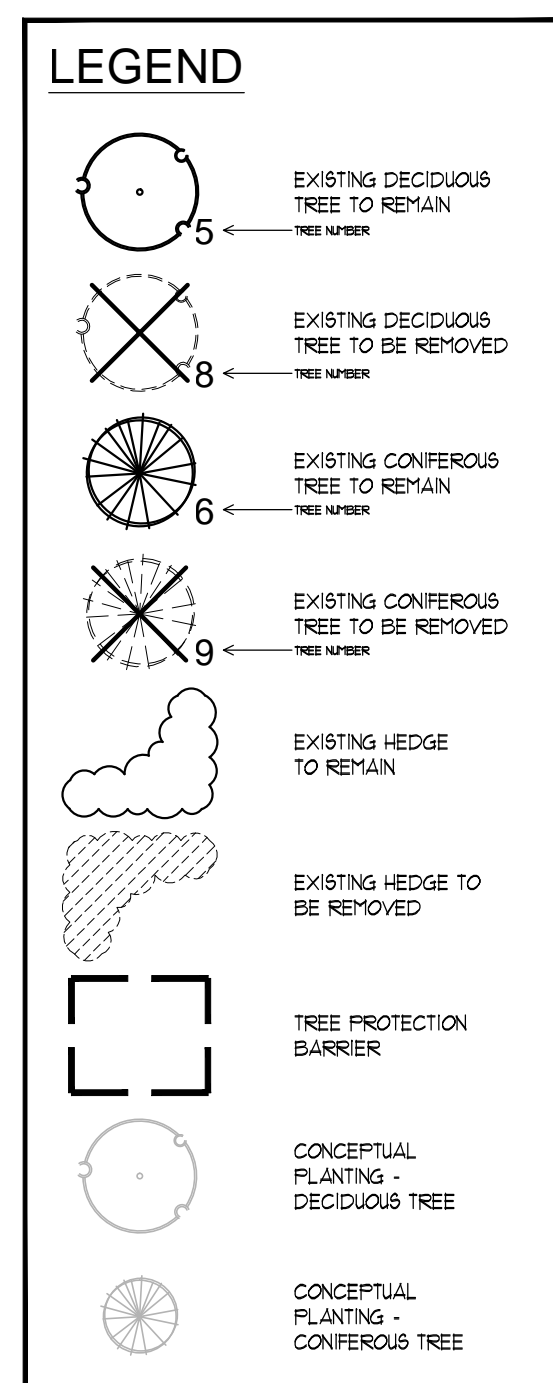
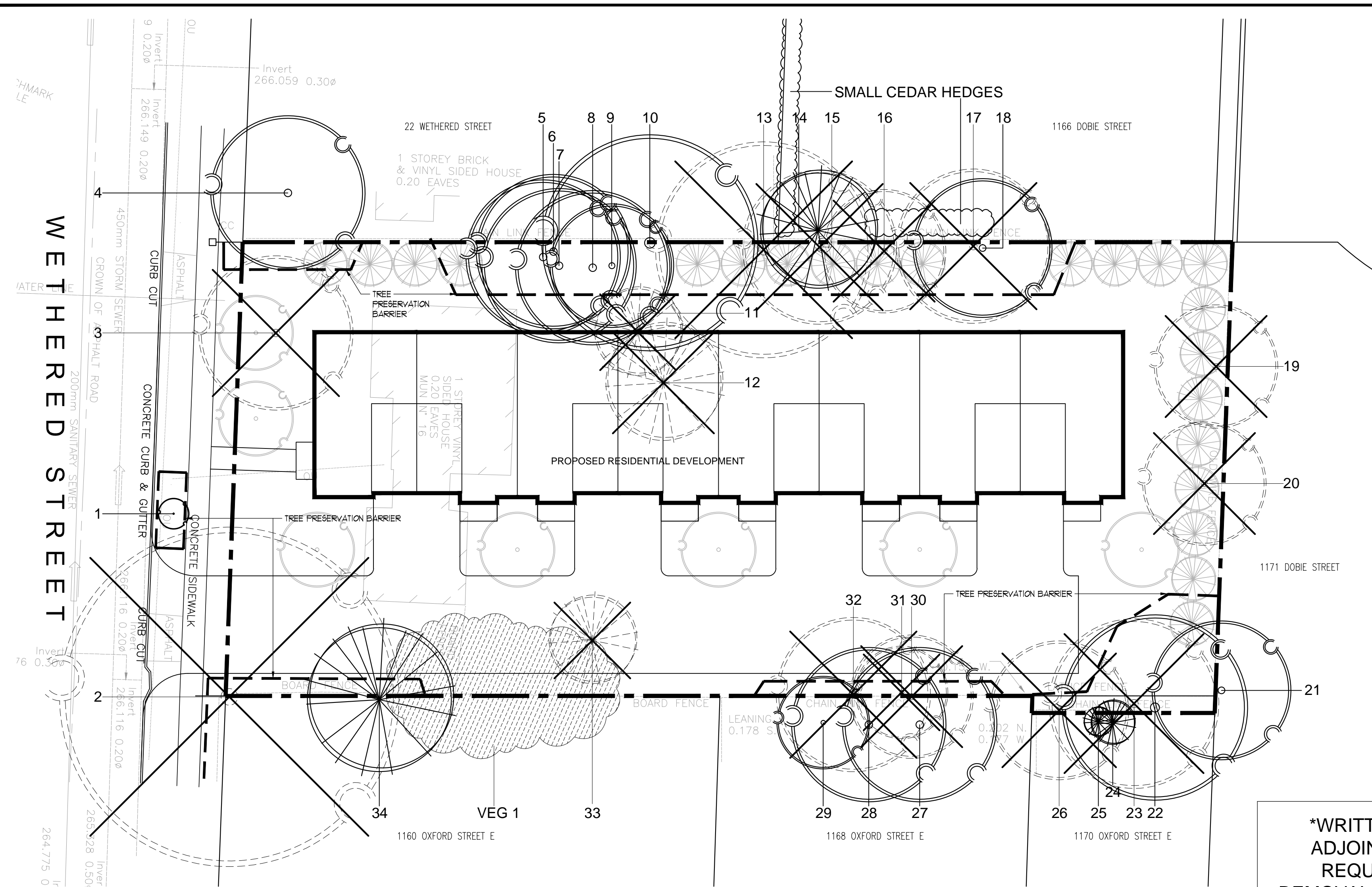
Qualified Butternut Assessor BHA #710

OALA full member - landscape architect

10.0 APPENDIX A - TREE PRESERVATION BARRIER DETAIL



11.0 APPENDIX B - TREE PRESERVATION DRAWING



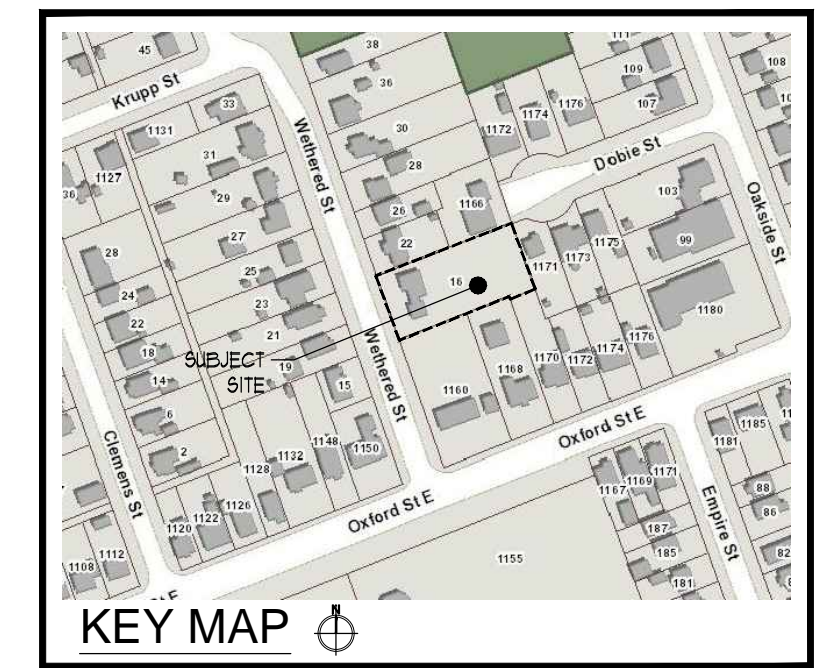
WRITTEN CONSENT FROM ADJOINING LAND OWNERS REQUIRED FOR LAWFUL REMOVAL OF BOUNDARY TREES

TREES RECOMMENDED FOR PRESERVATION (18)										
GENERAL INFORMATION		SIZE			HEALTH		RECOMMENDATION			
ID #	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL CONDITION	COMMENTS	PROPOSED ACTION	RATIONALE	CONSENT FOR REMOVAL REQUIRED
1	Hackberry	City Row (Blvd)	4	1	5	good	blind, tree guard	preserve	no construction impacts expected	N/A
4	Norway Maple	22 Wethered St	-55	5	4	fair/good	Rubous trunk, trunk cavities, codominant leaders, thin crown	preserve	beyond subject site, no construction impacts expected	N/A
5	Norway Maple	Subject site	18	5	5	good	Minimal flare, canopy heavy west	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
6	Norway Maple	Subject site	26	5	5	good	Bowed trunk, canopy heavy west	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
7	Norway Maple	Subject site	16	5	5	good	Sealing wound at base, suppressed, canopy heavy south	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
8	Norway Maple	Subject site	22	5	5	good	Suppressed, canopy heavy south	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
9	Norway Maple	Subject site	18, 12, 5	4	5	fair	Multi stem 3, suppressed, canopy heavy south, sealing trunk wounds	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
10	Norway Maple	BOUNDARY Subject site & 22 Wethered St	40	7	5	good	Full form	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
14	Bakam Fir	166 Dobie St	-16	4	5	good	Suppressed	preserve	beyond subject site, no construction impacts expected	N/A
18	Siberian Elm	Subject site	20, 12	4.5	5	good	Multi stem 2, upright form, vines climbing into lower canopy	preserve	minor construction impacts, preference for preserving existing trees that provide visual buffer	N/A
21	Hackberry	BOUNDARY Subject site & 171 Dobie St	27	4.5	5	good	Full form, subject side of ex wood fence, porwinkle understory	preserve	no construction impacts expected	N/A
22	Hackberry	BOUNDARY Subject site & 170 Oxford St E	26	6	5	good	Low branched	preserve	no construction impacts expected	N/A
24	Juniper	170 Oxford St E	10	1.5	5	good	Limbed up 2m	preserve	beyond subject site, no construction impacts expected	N/A
25	Juniper	170 Oxford St E	10	1	5	good	Limbed up 2m	preserve	beyond subject site, no construction impacts expected	N/A
27	Norway Maple	168 Oxford St E	-20	5	5	fair	Large vertical wound	preserve	beyond subject site, very minor construction impacts expected	N/A
28	Norway Maple	168 Oxford St E	-35	5	5	good	Bent trunk	preserve	beyond subject site, very minor construction impacts expected	N/A
29	Norway Maple	168 Oxford St E	-16	3	5	good	Codominant leaders	preserve	beyond subject site, very minor construction impacts expected	N/A
34	White Spruce	BOUNDARY Subject site & 168 Oxford St E	-35	5	5	good	Ex. Wood fence leaning on tree trunk, limbed up 6m, some dead lower stems remaining	preserve	construction impacts	N/A

TREES RECOMMENDED FOR REMOVAL (16)										
GENERAL INFORMATION		SIZE			HEALTH		RECOMMENDATION			
ID #	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL CONDITION	COMMENTS	PROPOSED ACTION	RATIONALE	CONSENT FOR REMOVAL REQUIRED
2	Silver Maple	BOUNDARY City Row, subject site & 160 Oxford St E	-80	11	4	fair/poor	Crown through chain link and wood fence, entire canopy rest of trunk cut to main trunk level, above primary union. 11m scaffold branch to the north, pruned for hydro line clearance, included bark with crack at primary union	remove	poor/haerous condition exacerbated by construction impacts	YES - consent required from City and owner of 160 Oxford St E
3	Norway Maple	Subject site	62	5	5	fair/good	Codominant leaders, significant soil disturbance 800m around tree	remove	conflict with proposed building	NO
11	White Spruce	Subject site	29	3	3	poor	significant trunk damage, limbed up approx 6m	remove	conflict with proposed building	NO
12	White Spruce	Subject site	42	4	5	good	Limbed up approx. 7m	remove	conflict with proposed building	NO
13	Manitoba Maple	Subject site	-40	7	5	poor	Multi stem 7, all epicormic growth emerging from sitting stump that grew through the ex. chain link fence	remove	poor tree condition	NO
15	Mulberry	Subject site	-25	8	5	poor/fair	Trunk bend & lean south towards the subject site, significant epicormic growth	remove	poor tree condition	NO
16	Manitoba Maple	Subject site	10, 8, 3	4	4	poor	Multi stems 3, significant epicormic growth, scabby from vertical trunk wounds	remove	poor tree condition	NO
17	Mulberry	Subject site	11, 9, 5, 4, 4	5	4	poor	Multi stems 5, basal rot, heavily suppressed, some main stems full 90 degree bend south, vines climbing into canopy	remove	poor tree condition	NO
19	Manitoba Maple	Subject site	-40	4	3	poor	Multi stem 8, all epicormic growth emerging from sitting stump, significant dead wood	remove	poor tree condition	NO
20	Norway Maple	Subject site	32	4	4	poor	Epicormic growth emerging from base, sealing vertical trunk wounds, significant cavity in upper crown, graft union	remove	poor tree condition	NO
23	Mulberry	BOUNDARY Subject site & 170 Oxford St E	16, 15, 5	5.5	4	poor	Multi stems 3, grown through lattice of fence, suppressed, heavy to the NW, dead wood, weeping wounds	remove	poor tree condition	YES - consent required from owner of 170 Oxford St E
26	Sugar Maple	BOUNDARY Subject site & 170 Oxford St E	-35	4.5	5	poor	Growing through ex. Chain link fence, codominant leaders, included bark with seam at primary union	remove	poor tree condition	YES - consent required from owner of 170 Oxford St E
30	Hackberry	BOUNDARY Subject site & 168 Oxford St E	17	4	5	good	South of chain link fence, suppressed, slight lean NE, low branched	remove	conflict with proposed laneway	YES - consent required from owner of 168 Oxford St E
31	Norway Maple	BOUNDARY Subject site & 168 Oxford St E	12, 10	3	5	fair	Multi stem 2, grown through chain link fence, primary union just above grade	remove	conflict with proposed laneway	YES - consent required from owner of 168 Oxford St E
32	Black Walnut	BOUNDARY Subject site & 168 Oxford St E	32, 28	5	5	good	Multi stem 2, north of chain link fence, primary union above grade, fork in line with property line	remove	conflict with proposed laneway	YES - consent required from owner of 168 Oxford St E
33	White Spruce	Subject site	33	3	5	good	Limbed up 6m	remove	conflict with proposed laneway	NO

NOTE THAT THE FOLLOWING TREES ARE BOUNDARY TREES, AND REQUIRE WRITTEN CONSENT FROM THE SHARED OWNER TO BE REMOVED: TREE #S 2, 23, 24, 30, 31 & 32

VEGETATION UNITS RECOMMENDED FOR REMOVAL (1)										
Vegetation Units		SIZE		HEALTH		RECOMMENDATION				
VI	Common Name	DBH (cm)	Canopy Radius (m)	Crown Condition	Structural Condition	Comments	Proposed Action	Rationale	Consent for Removal Required	
VI	White Cedar	Subject site	20-30	4	4	good	11 individuals, soil piled high on a few individuals	remove	conflict with proposed laneway	NO



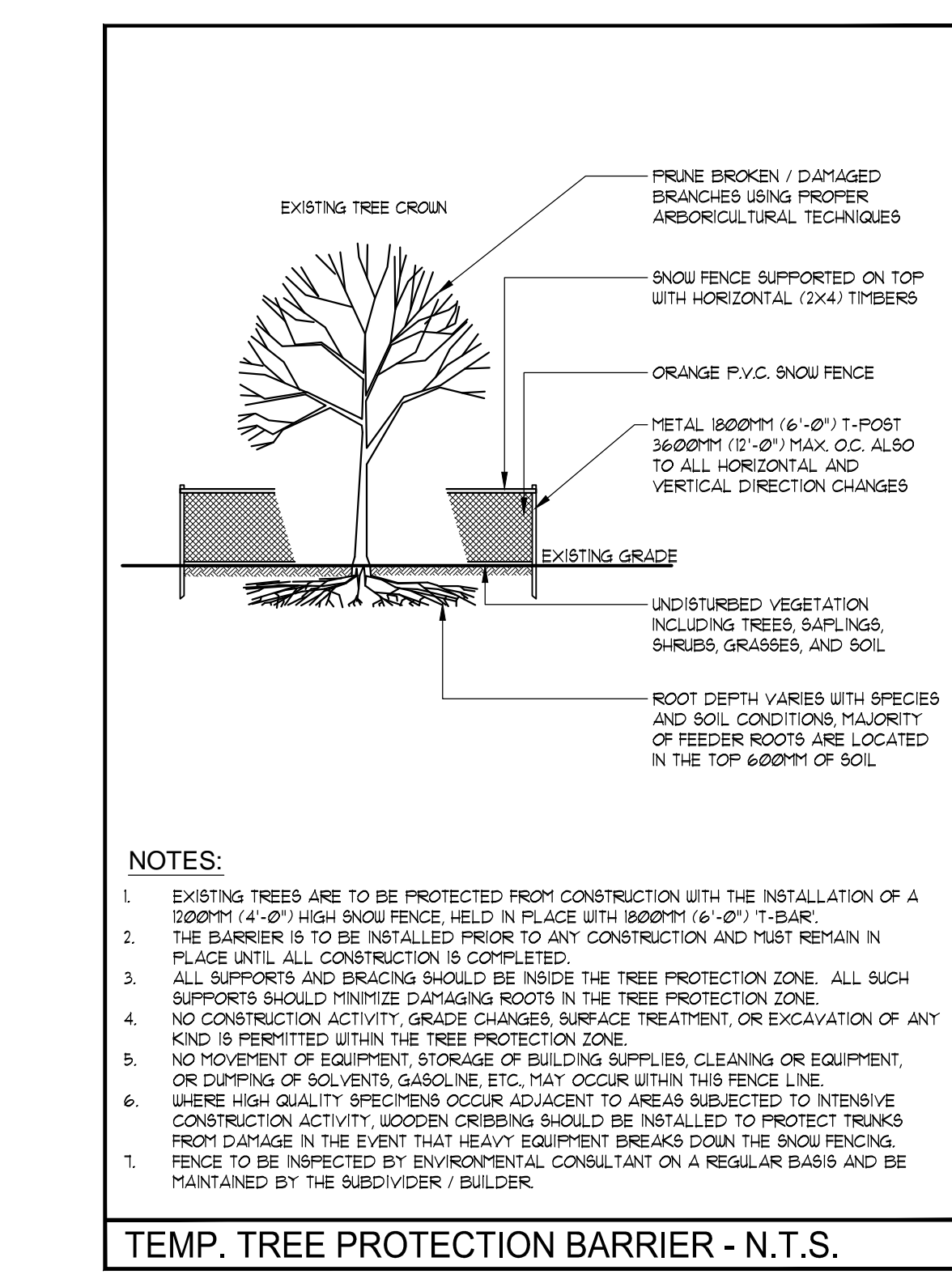
RON KOUDYS LANDSCAPE ARCHITECTS

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Ronald H. Koudys, O.A.L.A. C.S.L.A. DATE

TREE PRESERVATION PLAN
SCALE = 1:200



CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

- PRE-CONSTRUCTION RECOMMENDATIONS**
- PRIOR TO ANY CONSTRUCTION ACTIVITY, TREE PRESERVATION FENCING IS TO BE INSTALLED AS PER THE ATTACHED TREE PRESERVATION DRAWINGS AND DETAIL.
 - WHERE HIGH QUALITY SPECIMENS TO BE PRESERVED ARE ADJACENT TO AREAS SUBJECT TO INTENSIVE CONSTRUCTION ACTIVITIES, THESE TREES ARE TO HAVE ADDITIONAL PROTECTION MEASURES IMPLEMENTED TO PROTECT THEIR TRUNKS FROM MECHANICAL DAMAGE. THESE MEASURES MAY INCLUDE SURROUNDING THE TRUNK WITH WOOD PLANKS. TREES THAT REQUIRE ADDITIONAL PROTECTION WILL BE CLEARLY IDENTIFIED ON THE TREE PRESERVATION PLAN WITH DETAILED INFORMATION ON SPECIFIC PROTECTION MEASURES.
 - TREES APPROVED FOR REMOVAL ARE TO BE CLEARLY INDICATED IN THE FIELD (MARKED WITH SPRAY PAINT OR OTHER AGREED UPON METHOD) BY THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT PRIOR TO ANY TREE REMOVAL OPERATIONS. ALL REMOVALS TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.
 - IN ACCORDANCE WITH THE MIGRATORY BIRDS CONVENTION ACT, 1994, ALL REMOVALS MUST TAKE PLACE BETWEEN SEPTEMBER 1ST AND MARCH 31ST TO AVOID DISTURBING NESTING MIGRATORY BIRDS. IF TREE REMOVAL OCCURS BETWEEN APRIL 1ST AND AUGUST 31ST, A BIOLOGIST IS REQUIRED TO COMPLETE A SEARCH FOR NESTS. ONCE CLEARED, THE CONTRACTOR HAS 48 HOURS TO REMOVE. IF REMOVAL DOES NOT OCCUR WITHIN 48 HOURS, ANOTHER SEARCH WILL BE REQUIRED.
 - CARE SHOULD BE TAKEN DURING THE FELLING OPERATION TO AVOID DAMAGING THE BRANCHES, STEMS, TRUNKS, AND ROOTS OF NEARBY TREES TO BE PRESERVED. WHERE POSSIBLE, ALL TREES ARE TO BE FELLED TOWARDS THE CONSTRUCTION ZONE TO MINIMIZE IMPACTS ON ADJACENT VEGETATION. ALL REMOVALS TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.
 - IT IS RECOMMENDED THAT THE EXISTING GROUND-LAYER VEGETATION AT THE BASE OF TREES TO BE PRESERVED REMAIN INTACT WITHIN THE CRITICAL ROOT ZONE SO AS NOT TO DISTURB THE SOIL AROUND THE BASE OF THE EXISTING TREES.
 - FINAL SITE GRADING PLANS SHOULD ENSURE THAT THE EXISTING SOIL MOISTURE CONDITIONS ARE MAINTAINED.
 - SOME TREES MAY BE CANDIDATES FOR PRE-CONSTRUCTION ROOT PRUNING TO HELP REDUCE STRESS AND PREPARE THE TREE FOR NEARBY CONSTRUCTION ACTIVITY. THESE TREES ARE TO BE IDENTIFIED ON THE TREE PRESERVATION PLAN ALONG WITH ROOT PRUNING SPECIFICATIONS. TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.

RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

- TREE PRESERVATION FENCING IS TO BE MAINTAINED IN GOOD CONDITION AND EFFECTIVE FOR THE DURATION OF CONSTRUCTION UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE OR AS PER THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT.
- TREE PRESERVATION FENCING IS TO REMAIN INTACT AS PER THE TREE PRESERVATION DRAWINGS, AND CAN ONLY BE TEMPORARILY REMOVED WITH THE EXPRESS WRITTEN CONSENT FROM THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT. SHOULD TREE PRESERVATION FENCING BE TEMPORARILY RELOCATED OR MOVED, IT IS TO BE REINSTITATED AS PER THE TREE PRESERVATION PLANS AS SOON AS POSSIBLE.
- NO CONSTRUCTION, EXCAVATION, ADDING OF FILL, STOCKPILING OF CONSTRUCTION MATERIAL, OR HEAVY EQUIPMENT IS PERMITTED WITHIN THE CRITICAL ROOT ZONE/WITHIN THE TREE PRESERVATION FENCING.
- WHEN EXCAVATION NEAR A TREE IS REQUIRED, AND IT IS ANTICIPATED THAT ROOTS WILL BE SEVERED AND EXPOSED, DURATION OF EXPOSURE IS TO BE MINIMIZED TO PREVENT ROOT DESICCATION.
- DURING THE EXCAVATION PROCESS, ROOTS 25MM OR LARGER THAT ARE SEVERED AND EXPOSED SHOULD BE HAND PRUNED TO LEAVE A CLEAN-CUT SURFACE. TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST. EXPOSED SEVERED ROOTS THAT CANNOT BE COVERED IN SOIL ON THE SAME DAY AS THE CUTS ARE MADE ARE TO BE KEPT MOIST. EXPOSED ROOTS ARE TO BE KEPT MOIST BY COVERING THEM WITH WATER-SOAKED BURLAP OR ANY OTHER MEANS AVAILABLE TO PREVENT THEM FROM DRYING OUT.
- AVOID IDLING HEAVY EQUIPMENT UNDER OR WITHIN CLOSE PROXIMITY TO TREES TO BE PRESERVED TO PREVENT CANOPY DAMAGE FROM EXPOSURE TO THE HEAT OF THE EXHAUST.
- BROKEN BRANCHES ON TREES WITHIN THE SUBJECT SITE TO BE PRESERVED SHOULD BE CLEARLY CUT AS SOON AS POSSIBLE AFTER THE DAMAGE HAS OCCURRED. TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.

POST-CONSTRUCTION RECOMMENDATIONS

- AVOID DISCHARGING RAIN WATER LEADERS ADJACENT TO RETAINED TREES, AS THIS MAY RESULT IN AN OVERLY MOIST ENVIRONMENT WHICH CAN CAUSE ROOT ROT.
- AFTER ALL WORK IS COMPLETED, TREE PRESERVATION FENCES AND ANY OTHER IMPACT MITIGATION PARAPHERNALIA MUST BE REMOVED.
- CORRECTIVE OR CLEARANCE PRUNING MAY BE REQUIRED FOLLOWING CONSTRUCTION. CONSULTING ARBORIST TO MAKE SPECIFIC PRUNING RECOMMENDATIONS FOLLOWING CONSTRUCTION IF REQUIRED.
- A FINAL REVIEW MUST BE UNDERTAKEN BY THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT TO ENSURE THAT ALL MITIGATION MEASURES AS DESCRIBED ABOVE HAVE BEEN MET.

DATE	DESCRIPTION	No.
2020/1/17	ISSUED FOR ZBA	2.
2020/1/16	ISSUED FOR REVIEW	1.

ASSOCIATION OF LANDSCAPE ARCHITECTS

MEMBER

PROJECT TITLE: RESIDENTIAL DEVELOPMENT 16 WETHERED STREET LONDON, ONTARIO

DRAWING TITLE: TREE PRESERVATION PLAN

DATE: OCTOBER 2020	SCALE: AS NOTED	DRAWING No.
DRAWN: RKL/Inc.	CHECKED BY: RJK	T-1
PROJECT No. 20-233Lb		