



# **257 - 263 SPRINGBANK DRIVE LONDON, ONTARIO TREE ASSESSMENT REPORT FOR SITE PLAN APPROVAL**

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**RKLA PROJECT #:       19-271**



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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 257, 259 & 263 Springbank Drive in London Ontario. The intention of this report is to make recommendations for tree removal and preservation based on tree health/condition and the current site plan and grading/servicing plan.

## 1.2 EXECUTIVE SUMMARY

The inventory captured 52 individual trees and 5 vegetation units. Trees were identified within the subject site, on neighbouring properties and within the City ROW. No species classified as endangered, threatened, or 'at risk' under the Ontario Endangered Species Act, 2007, S.O. 2007, c. 6 were observed during the tree inventory. All trees observed are common and typical of the current land use. The subject site as well as the surrounding properties are not within a City of London defined Tree Protection Area (note that at the time of application for ZBA, the lands were within a Tree Protection Area, but as of the latest revision (December 21, 2021) to the Tree Protection By-law, the lands are no longer within a protected area.

Note that several boundary trees and trees within 3m of the subject site will be impacted by this development. See Section 4 of this report for additional information.

### 1.2.1 TREE SPECIES COMPOSITION

The following chart includes all individually assessed trees. Vegetation units are not included.

%	QTY	BOTANICAL NAME	COMMON NAME
35%	18	<i>Thuja occidentalis</i>	White Cedar
19%	10	<i>Celtis occidentalis</i>	Hackberry
13%	7	<i>Juglans nigra</i>	Black Walnut
12%	6	<i>Acer negundo</i>	Manitoba Maple
8%	4	<i>Picea abies</i>	Norway Spruce
2%	1	<i>Acer saccharinum</i>	Silver Maple
2%	1	<i>Acer spp</i>	Maple
2%	1	<i>Betula papyrifera</i>	Paper Birch
2%	1	<i>Fraxinus spp</i>	Ash
2%	1	<i>Pinus nigra</i>	Austrian Pine
2%	1	<i>Prunus sp</i>	Cherry
2%	1	<i>Ulmus pumilia</i>	Siberian Elm
100%	52		

### 1.2.2 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS

- Acquire consent from the City Forestry Operations to remove 2 City owned/partially owned trees & 2 vegetation units. (tree #'s 20 & 21, veg #'s 3 & 4)
- Acquire consent from owner of 265 Springbank Drive for the removal of 7 boundary trees and trees beyond the subject site (tree #'s 39, 40, 44, 45, 46, 47 & 51)
- Acquire consent from owner of 187 Forest Hill Avenue for the removal of 1 vegetation unit (Veg # 5)
- Removal of interior trees where there is conflict with construction or individuals are in poor health/condition.
- Tree preservation fencing is to be installed prior to any grading or site work as per the details and layout on the tree preservation drawing.
- Follow all construction impact mitigation recommendations in this report.

## 2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is located at the North West corner of Springbank Drive and Forest Hill Ave in the Southcrest neighbourhood of London, Ontario. It is comprised of three properties known as 257, 259 & 263 Springbank Drive. It is bordered to the north and west by single family residential lots. The site is currently occupied by three single family dwellings and one out building.

Existing trees are located primarily along lot lines, existing fence lines, and associated with the existing buildings. Municipal #265 Springbank drive and the trees along its easterly property line sits slightly elevated compared to the subject site.



Figure 1 - Image capture from City of London online mapping with 2021 aerial image. Scope of tree inventory noted by red dashed line.



## 3.0 METHODOLOGY

Field work was completed on January 28 & December 3, 2020 by RKLA staff member Michelle Peeters, ISA certified arborist ON 2129A. Two topographic surveys prepared by

MTE Ltd., dated December 16, 2019 & November 25, 2020 and were used as a base for the field work.

Trees were not tagged in the field. Trees within the given scope with a diameter at breast height (DBH) of  $\geq 10$ cm were identified and assessed as individuals. Prominent hedge rows and groups of smaller trees were grouped and assessed as vegetation units rather than as individuals. Each individually assessed tree and vegetation unit were assigned a number which is identified in the tree data table and on the tree preservation plan. Individual tree identity numbers include 1 through 52, and vegetation unit identity numbers include Veg1 through Veg5.

The following information was recorded for each individual tree:

- Genus + specific epithet (species)
- Diameter at breast height (DBH) (centimeters)
- Crown radius (meters)
- 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 (if accessible) 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.

The City of London Tree Protection By-law defines the critical root zone as “the area of land within a radius of ten (10) cm from the trunk of a tree for every one (1) cm of trunk diameter”.

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

## **4.0 BOUNDARY TREES & TREES BEYOND SUBJECT SITE**

### **4.1 BOUNDARY TREE LEGISLATION**

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.*

## **4.2 BOUNDARY TREES & TREES BEYOND THE SUBJECT SITE ASSOCIATED WITH THIS DEVELOPMENT**

There are several boundary trees and trees beyond the subject site that will be impacted by this development. Consent is required from the appropriate adjoining landowners for lawful removal of the following 7 trees and 1 vegetation unit:

Tree #39 (Manitoba Maple) is located just north of the subject site, on 265 Springbank Drive. This tree is in poor condition, negatively affects the subject site, and will be impacted by construction. Removal is recommended, consent is required.

Tree #40 (Manitoba Maple) is a boundary tree - the common property of the subject site and 265 Springbank Drive. This tree is in poor condition, negatively affects the subject site, and will be impacted by construction. Removal is recommended, consent is required.

Tree #44 (Hackberry) is located just west of the subject site, on 265 Springbank Drive. This tree is generally in good condition, however it is growing on/rooted into an existing concrete retaining wall that does not appear to be in good condition. Required site grading will result in significant impacts to nearly 50% of the root mass. Removal is recommended, consent is required.

Tree #45 (Hackberry) is located just west of the subject site, on 265 Springbank Drive. This tree is generally in fair condition, however it is growing on/rooted into an existing concrete retaining wall that does not appear to be in good condition. Required site grading will result in significant impacts to nearly 50% of the root mass. Removal is recommended, consent is required.

Tree #46 (Hackberry) is located just west of the subject site, on 265 Springbank Drive. This tree is generally in fair condition, however it is growing on/rooted into an existing rocky retaining wall that does not appear to be in good condition. Required site grading will result in significant impacts to nearly 50% of the root mass. Removal is recommended, consent is required.

Tree #47 (Black Walnut) is located just west of the subject site, on 265 Springbank Drive. This tree is generally in fair condition, however it is growing on/rooted into an existing rocky retaining wall that does not appear to be in good condition. Required site grading will result in significant impacts to nearly 50% of the root mass. Removal is recommended, consent is required.

Tree #51 (Manitoba Maple) is a boundary tree - the common property of the subject site and 265 Springbank Drive. This tree is in poor condition and negatively affects the subject site. Required site grading will result in significant impacts to nearly 50% of the root mass. Removal is recommended, consent is required.

Veg #5 (6 Emerald Cedars) are located on or near the property line between the subject site and 187 Forest Hill Ave. These small trees are in conflict with a proposed wood fence. Removal is recommended, consent is required.



## 5.0 TREE INVENTORY AND PRESERVATION/REMOVAL RECOMMENDATIONS

### 5.1 TREE DATA CHART

The following recommendations are based on a combination of tree health/condition and requirements of the current site plan and servicing/grading plan.

Grey indicates recommended removal.

GENERAL INFORMATION				SIZE		HEALTH		RECOMMENDATION			
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm) - = approx	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL CONDITION	COMMENTS	PROPOSED ACTION	RATIONALE	CONSENT AND PRESERVATION REQUIREMENTS
1	<i>Celtis occidentalis</i>	Hackberry	subject site	-10	3	3	poor	Crooky stem, 1m west of fence line, elevated at base compared to subject site, low branched	Remove	Condition and proximity to proposed parking field	
2	<i>Acer negundo</i>	Manitoba Maple	subject site	-20, 15, 12	5	4	poor	Multistem 3, gnarly primary union at grade, rot at primary union, on slope epicormic growth, canopy heavy NE	Remove	Condition and proximity to proposed parking field	
3	<i>Picea abies</i>	Norway Spruce	subject site	-12	3	4	good	Supressed, vines up 2/3 of canopy, exposed roots, branched to grade, thin crown	Remove	construction impacts	
4	<i>Picea abies</i>	Norway Spruce	subject site	-30	4	4	good	Thin crown, branched to grade, canopy does not extend into subject site	Remove	construction impacts	
5	<i>Acer negundo</i>	Manitoba Maple	subject site	89	8	4	poor	Loose crown, large cavities in main trunk, epicormic through crown and from base, deadwood	Remove	Condition and construction	
6	<i>Juglans nigra</i>	Black Walnut	subject site	56	5	5	good	Straight trunk, full form, asphalt driveway butts up against SW side of tree	Remove	Construction of building	
7	<i>Celtis occidentalis</i>	Hackberry	subject site	17, 12	4	4	poor	Multistem 2, completely grown through ex. Chain link fence, crooky trunk, growing immediatley beside tree 6	Remove	Construction of building	
8	<i>Celtis occidentalis</i>	Hackberry	subject site	9	2.5	4	good	Entire westerly roots under asphalt, supressed	Remove	Construction of building	
9	<i>Thuja occidentalis</i>	White Cedar	subject site	12	2.5	5	good	Supressed, foundation planting for ex. Dwelling	Remove	Construction of building	
10	<i>Thuja occidentalis</i>	White Cedar	subject site	-30	3	5	fair	Supressed, foundation planting for ex. Dwelling	Remove	Construction of building	
11	<i>Ulmus pumilia</i>	Siberian Elm	subject site	26, 17	5	5	good	Multistem 2, open high crown	Remove	Construction of parking field	
12	<i>Acer negundo</i>	Manitoba Maple	subject site	52, 32, 28, 16, 14, 11	8	4	poor	Multistem 6, wide gnarly base, 2 fully dead and rotting stems, epicormic growth through crown and from base, many stems on 45d angles	Remove	Condition and construction of parking field	
13	<i>Picea abies</i>	Norway Spruce	subject site	-45	5	5	good	On small mound behind ex. Dwelling, limbed up 6m	Remove	Construction of building	
14	<i>Thuja occidentalis</i>	White Cedar	subject site	-25	2.5	5	good	foundation planting for ex. Shed	Remove	Construction of parking field	
15	<i>Thuja occidentalis</i>	White Cedar	subject site	-25	2.5	5	good	foundation planting for ex. Shed	Remove	Construction of parking field	
16	<i>Thuja occidentalis</i>	White Cedar	subject site	-25	3	5	good	foundation planting for ex. Shed	Remove	Construction of parking field	



17	<i>Juglans nigra</i>	Black Walnut	subject site	-50	7	5	good	Low branched, full form, no fence damage, 1 small buckthorn and 1 small hackberry at base	Preserve	Quality specimen, construction impacts can be minimized	tree protection barrier
18	<i>Prunus sp</i>	Ornamental Cherry	subject site	19, 16	4	5	fair	Included bark at primary union, primary union at 1m from grade	Remove	Conflict with proposed driveway	
19	<i>Celtis occidentalis</i>	Hackberry	subject site	20	3	5	good	Fence wrapped around trunk but no damage, full form	Remove	Conflict with proposed driveway	
20	<i>Acer saccharinum</i>	Silver Maple	BOUNDARY TREE with the City of London - within ultimate road widening	81	7	4	fair	1 large low scaffold branch, cavities in scaffold branches, weak attachments, lost limbs, epicormic growth, raised grade at base, thin canopy	Remove	Condition and construction impacts	Consent from City required
21	<i>Acer spp</i>	Maple	City ROW	5	1	5	good	Recently planted street tree - not on City online tree mapping, not on survey	Remove	Conflict with proposed driveway	Consent from City required
22	<i>Betula papyrifera</i>	Paper Birch	subject site	33, 30, 29, 25, 23	7	5	good	Multistem 5, exposed roots, on slope, minor epicormic growth	Remove	Conflict with anticipated grading requirements	
23	<i>Thuja occidentalis</i>	White Cedar	subject site	22	4	5	good	part hedge with tree 24 & 25	Remove	Conflict with construction	
24	<i>Thuja occidentalis</i>	White Cedar	subject site	29	4	5	good	part hedge with tree 23 & 25	Remove	Conflict with construction	
25	<i>Thuja occidentalis</i>	White Cedar	subject site	26	4	5	fair	part hedge with tree 23 & 24, lean south toward fence	Remove	Conflict with construction	
26	<i>Thuja occidentalis</i>	White Cedar	subject site	36	5	5	fair	part hedge with tree 27 & 28, on slope, included bark, exposed roots, multi leader, suppressed	Remove	Conflict with construction	
27	<i>Thuja occidentalis</i>	White Cedar	subject site	34	5	5	fair	part hedge with tree 26 & 28, on slope, bowed trunk, exposed roots	Remove	Conflict with construction	
28	<i>Thuja occidentalis</i>	White Cedar	subject site	39	5	4	poor	part hedge with tree 26 & 27	Remove	Conflict with construction	
29	<i>Thuja occidentalis</i>	White Cedar	subject site	26, 18	5	4	poor	Multistem 2, included bark at primary union, thin crown	Remove	Conflict with construction	
30	<i>Thuja occidentalis</i>	White Cedar	subject site	31	4	5	fair	multiple leaders, south end of hedge (trees 30-34)	Remove	Conflict with construction	
31	<i>Thuja occidentalis</i>	White Cedar	subject site	16, 15, 12	4	5	fair	Multistem 3	Remove	Conflict with construction	
32	<i>Thuja occidentalis</i>	White Cedar	subject site	15, 11, 10, 6, 5	4	4	poor	Multistem 5	Remove	Conflict with construction	
33	<i>Thuja occidentalis</i>	White Cedar	subject site	16, 13, 11, 5	4	3	fair	Multistem 4	Remove	Conflict with construction	
34	<i>Thuja occidentalis</i>	White Cedar	subject site	17, 15, 13, 12	4	3	fair	Multistem 4, north end of hedge (trees 30-34)	Remove	Conflict with construction	
35	<i>Juglans nigra</i>	Black Walnut	subject site	82	9	5	good	On slope, significant cavities with wound wood present, large specimen	Remove	Conflict with construction	
36	<i>Celtis occidentalis</i>	Hackberry	subject site	11	3	5	good	Sparse crown, low branched	Remove	Conflict with construction	
37	<i>Picea abies</i>	Norway Spruce	subject site	31	3.5	4	good	Sparse crown, branched to grade	Remove	Conflict with construction	
38	<i>Thuja occidentalis</i>	White Cedar	subject site	13, 13, 12, 10	6	5	poor	Multistem 4, 45 and 90 degree lean south, essentially laying horizontally on the ground, with upright correctional epicormic growth emerging from lateral trunk	Remove	Conflict with construction	
39	<i>Acer negundo</i>	Manitoba Maple	265 Springbank Dr	-40	6	4	poor	30 degree lean south over fence, significant trunk cavity, dead wood, crooky stems and scaffolds, 60% of crown south of fence	Remove	Construction impact & poor tree condition	Consent from 265 Springbank Drive required
40	<i>Acer negundo</i>	Manitoba Maple	BOUNDARY TREE 265 Springbank Dr & subject site	-50	5	4	poor	Basal rot, unbalanced crown, entire crown south of fence, epicormic growth, dead wood	Remove	Construction impact & poor tree condition	Consent from 265 Springbank Drive required
41	<i>Fraxinus spp</i>	Ash tree	subject site	11	2	3	fair	Straight trunk, no evidence of Emerald Ash Borer	Remove	tree species and conflict with	

											construction	
42	<i>Juglans nigra</i>	Black Walnut	subject site	19	3	5	good	On steep slope, supressed	Remove	Conflict with construction		
43	<i>Juglans nigra</i>	Black Walnut	subject site	21	4	5	good	Base of slope, supressed	Remove	Conflict with construction		
44	<i>Celtis occidentalis</i>	Hackberry	265 Springbank Dr	-30	5	5	good	West of fence, growing on/under/through concrete retaining wall, structural roots visible within subject site, straight trunk, full form	Remove	Conflict with construction	Consent from 265 Springbank Drive required	
45	<i>Celtis occidentalis</i>	Hackberry	265 Springbank Dr	-28, 16	6	5	fair	West of fence, growing on/under/through concrete retaining wall, multistem 2, primary union just above grade, no structural roots visible within subject site	Remove	Conflict with construction	Consent from 265 Springbank Drive required	
46	<i>Celtis occidentalis</i>	Hackberry	265 Springbank Dr	-18	5	5	fair	West of fence, roots growing into rocky wall, straight trunk, no visible large roots extending into subject site	Remove	Conflict with construction	Consent from 265 Springbank Drive required	
47	<i>Juglans nigra</i>	Black Walnut	265 Springbank Dr	-22	5	5	fair	West of fence, roots growing into rocky wall, straight trunk, no visible large roots extending into subject site	Remove	Conflict with construction	Consent from 265 Springbank Drive required	
48	<i>Celtis occidentalis</i>	Hackberry	subject site	21	5	5	good	Wide flare, roots intertwined with tree #49, on slope	Remove	Conflict with construction		
49	<i>Juglans nigra</i>	Black Walnut	subject site	19	5	5	good	Roots intertwined with tree #48, on slope	Remove	Conflict with construction		
50	<i>Celtis occidentalis</i>	Hackberry	subject site	25, 24	5	5	fair	Multistem 2 with included bark at primary union, primary union just above grade, on slope	Remove	Conflict with construction		
51	<i>Acer negundo</i>	Manitoba Maple	BOUNDARY TREE 265 Springbank Dr & subject site	-40, 40	9	4	poor	Multistem 2, west of fence, canopy extending well into subject site, on slope, no flare, rot and epicormic growth at base, epicormic growth in crown, *limited visual access to tree*	Remove	Conflict with construction	Consent from 265 Springbank Drive required	
52	<i>Pinus nigra</i>	Austrian Pine	265 Springbank Dr	-50	7	5	fair	3 leaders emerging from tight primary union, tree on top side of existing retaining wall	Preserve	no construction impacts expected	none required	
Vegetation Units												
Veg 1	<i>Thuja occidentalis</i>	White Cedar	subject site	10 - 35	3 - 5	4 - 5	fair	13 individuals, typical loose crown of mature Cedar hedge, 1 individual leaning west	Remove	Conflict with construction		
Veg 2	<i>Thuja occidentalis</i>	White Cedar	subject site	8 - 12	2 - 4	3 - 5	fair	9 individuals, along ex. Chain link fence	Remove	conflict with proposed parking field		
Veg 3	<i>Acer negundo</i> <i>Fraxinus spp</i> <i>Rhamnus spp</i>	Manitoba Maple Ash Buckthorn	partial BOUNDARY with City	3 - 12	3 - 4	4 - 5	poor/fair	Approx. 20 individuals, scrubby hedge row along east property line, some multistem	Remove	overall construction, removal of undesirable species, improved sight lines	Consent from City required	
Veg 4	<i>Thuja occidentalis</i>	White Cedar	City ROW	5 - 10	2	3	fair	3 individuals, scrubby form	Remove	overall construction, improved sight lines	Consent from City required	
Veg 5	<i>Thuja occidentalis</i> <i>Thuja occidentalis</i> 'Smaragd'	White Cedar Emerald Cedar	BOUNDARY with 187 Forest Hill Ave	<8	1	5	good	6 individuals located on or immediately beside property line	Remove	conflict with construction, facilitate fence installation	Consent from owner of 187 Forest Hill Ave required	

## **6.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES**

Several trees have been recommended for removal due to direct and unavoidable conflict with the proposed site layout and required site grading. Other trees that may be in proximity to the proposed construction are candidates for preservation. 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) 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.
- c) 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.
- d) 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.
- e) 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.
- f) Final site grading plans should ensure that the existing soil moisture conditions are maintained.

### **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. Adequate moisture levels are to be maintained until such time as topsoil has been replaced satisfactorily or as otherwise directed by the contract administrator.

- 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. Should branches on City owned trees be damaged by or during construction, the contractor is to notify City of London Forestry Operations as soon as possible. No person(s) other than City staff or the City's designated contractor may perform work on any City tree.
- h) Regular communication with the site supervisor and regular monitoring of the site by the project arborist or landscape architect is recommended to ensure proper procedures are followed and protection barriers are maintained. It is the responsibility of the site supervisor to promptly contact the project arborist if any concerns or questions arise regarding trees.
- i) Watering of preserved trees may be required during construction. Watering details including frequency, timing, method, and volume will be determined by the consulting arborist and the contract administrator.

### **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 can be removed under the direction of the project arborist or landscape architect.
- c) 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.
- d) Post construction monitoring of trees may be required. Monitoring schedule to be determined with design team and City consensus.

## **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

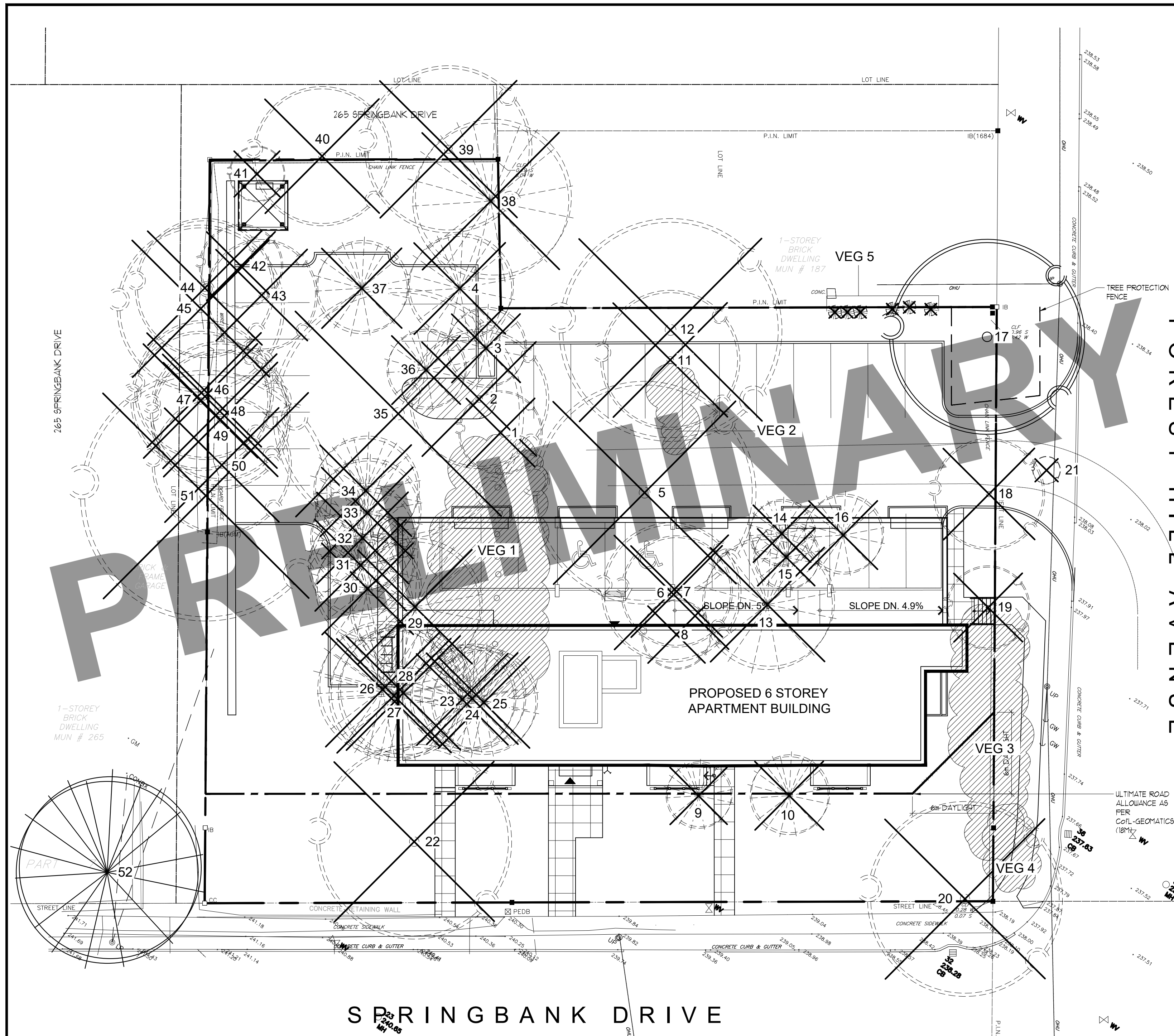
## **9.0 CONTACT INFORMATION**

Office:  
Ron Koudys Landscape Architects  
Inc. 368 Oxford Street East  
London, Ontario  
N6A 1V7  
Ph: 519-667-3322  
Fax: 519-645-2474



**10.0 APPENDIX A - TREE PRESERVATION DRAWING**





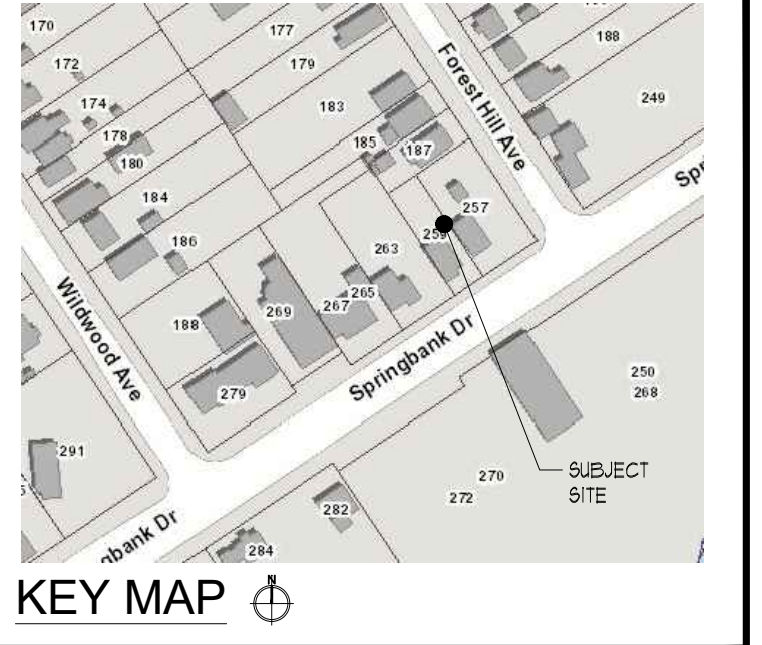
### TREES AND VEG UNITS RECOMMENDED FOR REMOVAL

TREES (50), VEGETATION UNITS (4)

GENERAL INFORMATION			SIZE	HEALTH	RECOMMENDATION						
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (CM) +/- APPROX	HEIGHT (M) +/- APPROX	SPERMATOPHYTES	COMMENTS	PROPOSED ACTION	RATIONALE	CONSENT AND PRESERVATION REQUIREMENTS	
1	Ulmus americana	Hackberry	subject site	10	3	3	Good	Remove	Condition and proximity to proposed parking field		
2	Aster repens	Manitoba Maple	subject site	10.5	2	4	poor	Remove	Condition and proximity to proposed parking field		
3	Alnus alba	Norway Spruce	subject site	12	1	4	good	Remove	Construction impacts		
4	Alnus alba	Norway Spruce	subject site	10	4	4	good	Remove	Construction impacts		
5	Aster repens	Manitoba Maple	subject site	8	8	4	poor	Remove	Condition and construction		
6	Agropyron	Black Walnut	subject site	16	5	5	good	Remove	Construction of building		
7	Ulmus americana	Hackberry	subject site	10	4	4	poor	Remove	Construction of building		
8	Ulmus americana	Hackberry	subject site	9	25	4	good	Remove	Construction of building		
9	Ulmus americana	White Cedar	subject site	12	25	5	good	Remove	Construction of building		
10	Ulmus americana	White Cedar	subject site	10	3	5	fair	Remove	Construction of building		
11	Ulmus americana	White Cedar	subject site	26	11	5	poor	Remove	Construction of parking field		
12	Aster repens	Manitoba Maple	subject site	32	28	8	4	poor	Remove	Condition and construction of parking field	
13	Alnus alba	Norway Spruce	subject site	46	5	5	poor	Remove	Construction of building		
14	Ulmus americana	White Cedar	subject site	25	25	5	poor	Remove	Construction of parking field		
15	Ulmus americana	White Cedar	subject site	25	25	5	poor	Remove	Construction of parking field		
16	Ulmus americana	White Cedar	subject site	25	3	5	poor	Remove	Construction of parking field		
17	Prunus sp	Ornamental cherry	subject site	18	4	4	fair	Remove	Conflict with proposed driveway		
18	Ulmus americana	Hackberry	subject site	20	3	5	poor	Remove	Conflict with proposed driveway		
19	Aster repens	Manitoba Maple	subject site	81	17	4	poor	Remove	Condition and construction impacts	Consent from City required	
20	Aster repens	Manitoba Maple	subject site	33	26	7	5	poor	Remove	Conflict with proposed driveway	Consent from City required
21	Aster repens	Manitoba Maple	subject site	33	26	7	5	poor	Remove	Conflict with proposed driveway	Consent from City required
22	Ulmus americana	White Cedar	subject site	33	26	7	5	poor	Remove	Conflict with proposed driveway	Consent from City required
23	Ulmus americana	White Cedar	subject site	22	4	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
24	Ulmus americana	White Cedar	subject site	29	4	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
25	Ulmus americana	White Cedar	subject site	26	4	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
26	Ulmus americana	White Cedar	subject site	56	5	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
27	Ulmus americana	White Cedar	subject site	34	5	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
28	Ulmus americana	White Cedar	subject site	39	5	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
29	Ulmus americana	White Cedar	subject site	36	5	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
30	Ulmus americana	White Cedar	subject site	31	4	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
31	Ulmus americana	White Cedar	subject site	16	5	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
32	Ulmus americana	White Cedar	subject site	15	10	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
33	Ulmus americana	White Cedar	subject site	16	10	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
34	Ulmus americana	White Cedar	subject site	16	10	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
35	Ulmus americana	White Cedar	subject site	16	10	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
36	Agropyron	Black Walnut	subject site	82	9	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
37	Ulmus americana	Hackberry	subject site	11	3	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
38	Ulmus americana	White Cedar	subject site	31	15	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
39	Aster repens	Manitoba Maple	subject site	40	6	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
40	Aster repens	Manitoba Maple	subject site	50	5	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
41	Ulmus americana	Hackberry	subject site	11	2	3	poor	Remove	Conflict with proposed driveway	Consent from City required	
42	Agropyron	Black Walnut	subject site	19	3	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
43	Ulmus americana	White Cedar	subject site	21	4	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
44	Ulmus americana	Hackberry	subject site	10	5	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
45	Ulmus americana	Hackberry	subject site	28	6	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
46	Ulmus americana	Hackberry	subject site	8	3	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
47	Ulmus americana	Hackberry	subject site	12	5	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
48	Ulmus americana	Hackberry	subject site	21	5	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
49	Ulmus americana	Hackberry	subject site	25	24	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
50	Ulmus americana	Hackberry	subject site	25	24	5	poor	Remove	Conflict with proposed driveway	Consent from City required	
51	Aster repens	Manitoba Maple	subject site	40	6	4	poor	Remove	Conflict with proposed driveway	Consent from City required	
52	Ulmus americana	Hackberry	subject site	10	3	5	poor	Remove	Conflict with proposed driveway	Consent from City required	

### 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 ARE TO BE PRESERVED 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 FLANKS. 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 AND TO COINCIDE WITH THE APPROPRIATE BAT TIMING WINDOWS, ALL REMOVALS MUST TAKE PLACE BETWEEN OCTOBER 1ST AND MARCH 31ST TO AVOID DISTURBING NESTING MIGRATORY BIRDS AND BATS. IF TREES, SHRUBS OR GROUND VEGETATION REMOVAL OCCURS BETWEEN APRIL 1ST AND SEPTEMBER 30TH, A BIOLOGIST IS REQUIRED TO COMPLETE A SEARCH FOR NESTS / BAT HABITAT POTENTIAL (IN THE EVENT THAT A SNAG TREE NEEDS TO BE REMOVED) AND 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
- POST-CONSTRUCTION RECOMMENDATIONS
- 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 REMOVED OR MOVED, IT IS TO BE REINSTATED 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. ADEQUATE MOISTURE LEVELS ARE TO BE MAINTAINED UNTIL SUCH TIME AS TOPSOIL HAS BEEN REPLACED SATISFACTORILY OR AS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR.
  - 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 CLEANLY CUT AS SOON AS POSSIBLE AFTER THE DAMAGE HAS OCCURRED. TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST. SHOULD BRANCHES ON CITY OWNED TREES BE DAMAGED BY OR DURING CONSTRUCTION, THE CONTRACTOR IS TO NOTIFY THE LOCAL MUNICIPAL FORESTRY OR URBAN FORESTRY DEPARTMENT AS SOON AS POSSIBLE. NO PERSONS OTHER THAN CITY STAFF OR THE CITY'S DESIGNATED CONTRACTOR MAY PERSONALLY WORK ON ANY CITY TREE.
  - OPEN TRENCHING WITHIN A CRITICAL ROOT ZONE IS PROHIBITED. ALTERNATIVE EXCAVATION METHODS SUCH AS HORIZONTAL BORING AND VACUUM EXCAVATION ARE REQUIRED WHERE PROPOSED SERVICES OR INSTALLATION REQUIREMENTS CONFLICT WITH CRITICAL ROOT ZONES. IF, DURING CONSTRUCTION, THERE IS CONCERN REGARDING THE FEASIBILITY OF EMPLOYING TRENCHLESS EXCAVATION METHODS, THE CONTRACTOR IS TO IMMEDIATELY NOTIFY AND CONSULT WITH THE CONTRACT ADMINISTRATOR, CONSULTING ENGINEER AND CONSULTING ARBORIST TO FIND A SOLUTION.
  - FORM NEW CONCRETE SIDEWALKS, IF PROPOSED, WITH FIBRE EXPANSION MATERIAL IN PLACE OF WOOD FORMS WHERE THE TRUNK FLARE OF A TREE CONFLICTS WITH (IS IN DIRECT CONTACT WITH) EXISTING CONCRETE SIDEWALKS.
  - SIDEWALKS TO BE REPLACED THAT ARE IN CLOSE PROXIMITY TO TREES SHOULD REMAIN IN PLACE AS LONG AS POSSIBLE OR UNTIL THE REPLACEMENT SIDEWALKS ARE READY TO BE INSTALLED. EXISTING AGGREGATE BASE MATERIAL TO BE LEFT IN PLACE IF SUITABLE.
  - REGULAR COMMUNICATION WITH THE SITE SUPERVISOR AND REGULAR MONITORING OF THE SITE BY THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT IS RECOMMENDED TO ENSURE PROPER PROCEDURES ARE FOLLOWED AND PROTECTION BARRIERS ARE MAINTAINED. IT IS THE RESPONSIBILITY OF THE SITE SUPERVISOR TO PROMPTLY CONTACT THE PROJECT ARBORIST IF ANY CONCERNS OR QUESTIONS ARISE REGARDING TREES.
  - WATERING OF PRESERVED TREES MAY BE REQUIRED DURING CONSTRUCTION. WATERING DETAILS INCLUDING FREQUENCY, TIMING, METHOD, AND VOLUME WILL BE DETERMINED BY THE CONSULTING ARBORIST AND THE CONTRACT ADMINISTRATOR.
- 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 PARAPHERNELIA CAN BE REMOVED UNDER THE DIRECTION OF THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT.
  - 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.
  - POST CONSTRUCTION MONITORING OF TREES MAY BE REQUIRED. MONITORING SCHEDULE TO BE DETERMINED WITH DESIGN TEAM AND CITY CONSENSUS.



**RON KOUJDYS LANDSCAPE ARCHITECTS INC.**

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

DATE	DESCRIPTION	No.
APRIL 2013	REISSUED FOR SPA	1.
2022.07.06	ISSUED FOR SPA	6.
2022.06.14	ISSUED FOR REVIEW	5.
2021.01.13	ISSUED FOR REZONING	4.
2020.02.21	ISSUED FOR REVIEW	3.
2020.02.10	ISSUED FOR REVIEW	2.
2020.03.10	ISSUED FOR COORDINATION	1.

FLOTTING INFORMATION:  
 PLOTTED DATE : 2023.04.14  
 PLOTTED SCALE : 1:1

ASSOCIATION OF LANDSCAPE ARCHITECTS OF ONTARIO

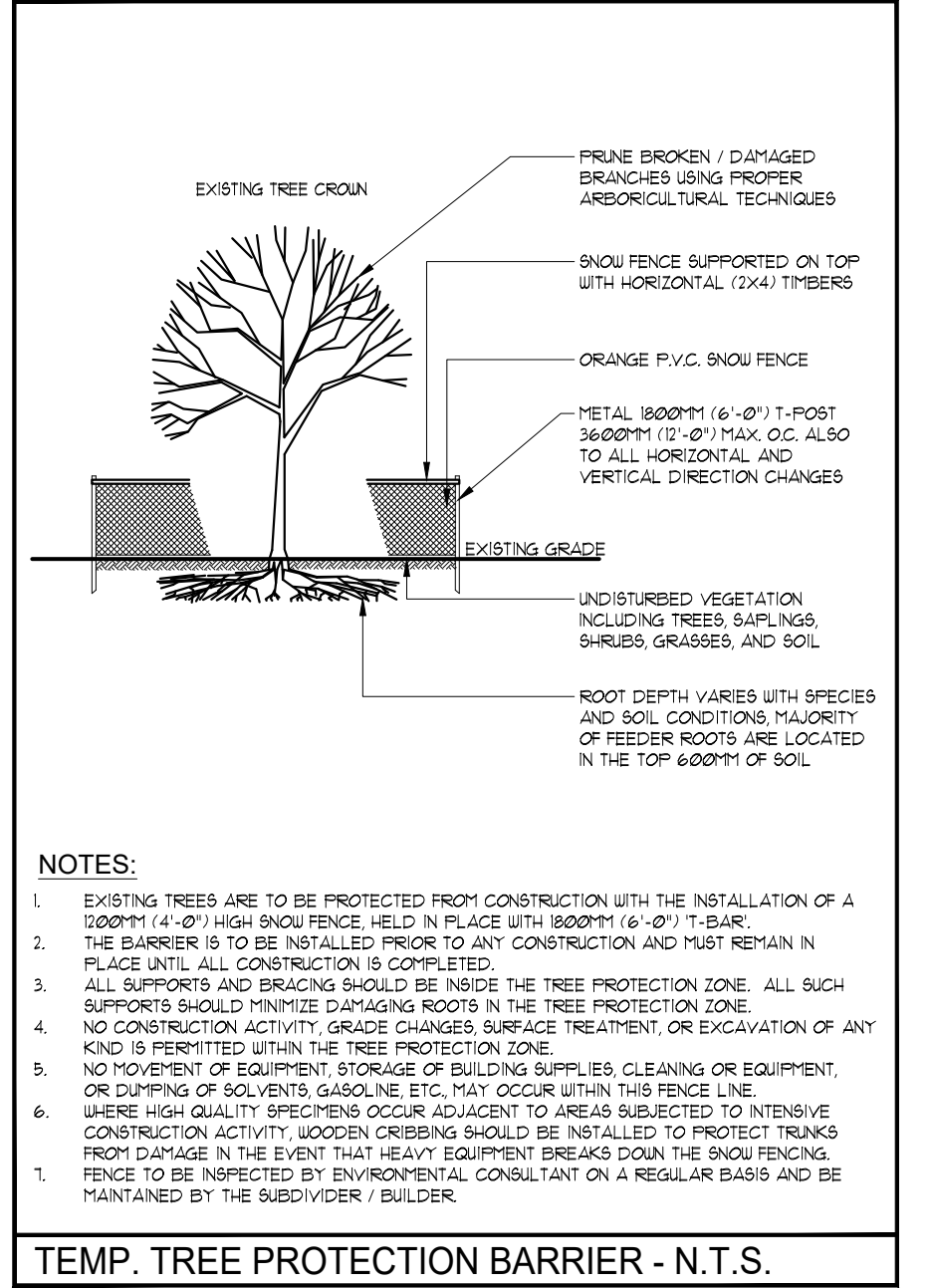
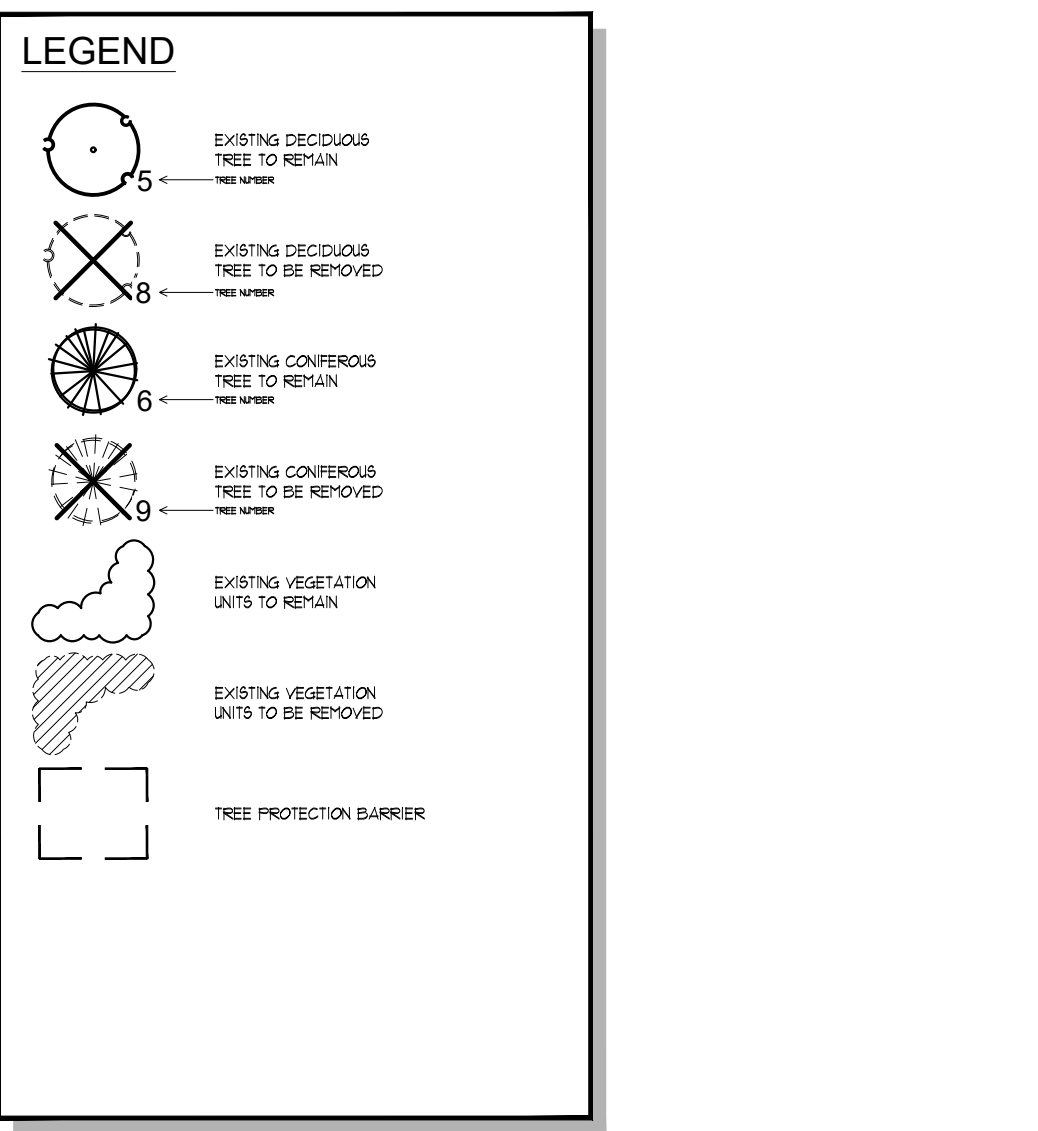
PROJECT TITLE:  
**257 - 259 SPRINGBANK DRIVE**  
 LONDON, ONTARIO

DRAWING TITLE:  
**TREE PRESERVATION PLAN**

DATE: JANUARY 2020 SCALE: AS NOTED DRAWING No. PROJECT No. RKL Inc. CHECKED BY: RHLK

### TREE PRESERVATION PLAN

SCALE = 1:200



REFER TO TREE ASSESSMENT REPORT FOR ADDITIONAL INFORMATION

NOTE THAT CONSENT FROM ADJACENT NEIGHBOURS FOR REMOVAL OF BOUNDARY TREES AND/OR TREES BEYOND THE SUBJECT SITE IS REQUIRED FOR THIS DEVELOPMENT

NOTE THAT CONSENT FROM THE CITY OF LONDON IS REQUIRED FOR THE REMOVAL OF TREES WITHIN THE CITY ROW

### TREES AND VEG UNITS RECOMMENDED FOR PRESERVATION

TREES (2), VEGETATION UNITS (0)

GENERAL INFORMATION			SIZE	HEALTH	RECOMMENDATION					
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (CM) +/- APPROX	HEIGHT (M) +/- APPROX	SPERMATOPHYTES	COMMENTS	PROPOSED ACTION	RATIONALE	CONSENT AND PRESERVATION REQUIREMENTS
1	Ulmus americana	Hackberry	subject site	10	3	3	good	Preserve	Quality specimen, construction impacts can be minimized	tree protection barrier required
2	Ulmus americana	Hackberry	subject site	10	3	3	good	Preserve	Quality specimen, construction impacts can be minimized	tree protection barrier required