



538 SOUTHDALE ROAD EAST
LONDON, ONTARIO
TREE ASSESSMENT REPORT FOR ZBA

PREPARED BY: RON KOUDYS LANDSCAPE
ARCHITECTS INC

DATE: NOVEMBER, 2021

RKLA PROJECT #: 21-252



TM

Michelle Peeters
ON 2129A

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

Ron Koudys Landscape Architects Inc. (RKLA) was retained by Siv-ik Planning/Design to prepare a tree assessment report in conjunction with the proposed development at 538 Southdale Road East, 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 for the purpose of application for rezoning.

Note that revisions to these recommendations may be made with the development of grading/servicing plans at time of application for site plan approval.

1.2 EXECUTIVE SUMMARY

The inventory captured 18 individual trees. Trees were identified within the subject site, within 3m of the surrounding neighbouring properties, and within the City ROW. No species classified as endangered or threatened under the Ontario Endangered Species Act, 2007, S.O. 2007, c. 6 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.

1.2.1 TREE SPECIES COMPOSITION

The following chart summarizes the quantity of each species observed.

| Qty | % | Species |
|-----|------|--------------------|
| 6 | 33% | Pinus strobus |
| 5 | 28% | Thuja occidentalis |
| 3 | 17% | Acer saccharinum |
| 1 | 6% | Acer negundo |
| 1 | 6% | Acer saccharum |
| 1 | 6% | Juglans nigra |
| 1 | 6% | Ulmus pumila |
| 18 | 100% | Total |

1.2.2 TREE PRESERVATION & REMOVAL CHART

The following chart summarizes current tree removal and preservation recommendations categorized into location. Note that trees 8, 9 & 11 (white pines within the subject site) are currently recommended for removal, but the intent is coordinate with the civil engineer to preserve these trees at the time of application for site plan approval.

| location | Observed | Trees to Remove | | Trees to Preserve | |
|---------------------|----------|-----------------|-------------------|-------------------|---------------------------|
| | qty | qty | tree id # | qty | tree id # |
| within subject site | 4 | 4 | (tree #'s 8 - 11) | 0 | |
| beyond subject site | 12 | 1 | (tree # 3) | 11 | (tree #'s 4 - 7, 12 - 18) |
| boundary w City | 2 | 2 | (tree #'s 1 & 2) | 0 | |
| Total | 18 | 7 | | 11 | |

1.2.3 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS

Note that these recommendations may be refined at time of application for SPA.

- At time of application for SPA, acquire consensual removal for two trees (tree #1 and #2) to be removed from the City ROW on Southdale Road.
- Note that written consent to remove 1 tree (tree #3) from the land owner of 530 Southdale has been acquired and is included as an appendix in this report. Note that at time of application for SPA, a distinctive tree permit application will be submitted as required by the City of London Tree Protection By-Law C.P.-1515-228.
- Install and maintain tree preservation fencing as per the tree preservation drawings and details.
- Follow the pre, during, and post construction impact mitigation recommendations in this report.

2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is 538 Southdale Road East in London, Ontario. It is on the North side Southdale Road East and is surrounded on three sides by similar sized residential lots.

Existing trees are generally located along the perimeter of the site and in association with the existing dwelling. The scope of this tree inventory includes the subject site as well as trees within 3m of the subject site property line.

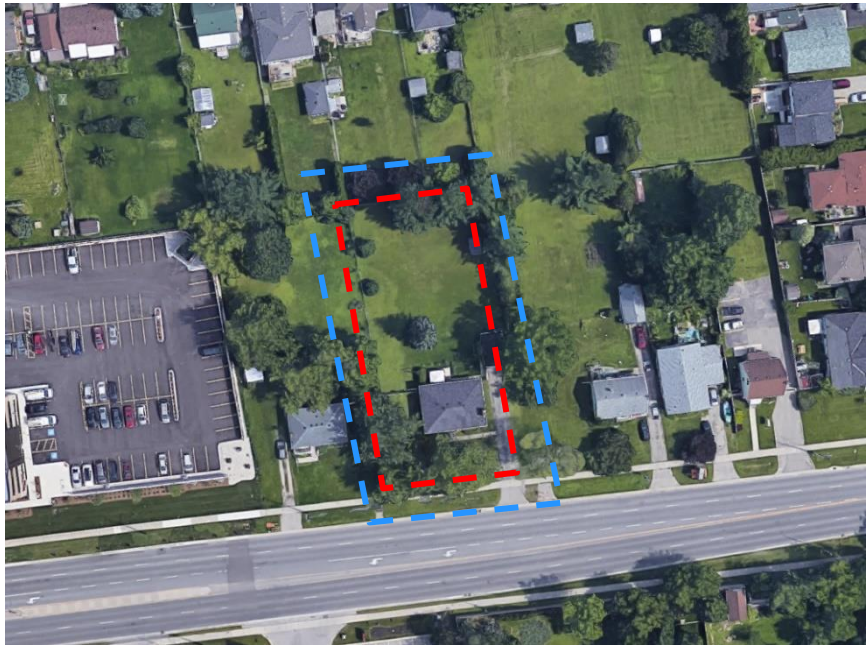


Figure 1 - Image capture from Google aerial imagery 2020.
Red dashed line - subject site
Blue dashed line - limit of tree inventory



3.0 METHODOLOGY

Field work was completed on October 5, 2021 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. Identification numbers include 1-18.

The following information was recorded for each individual tree:

- Genus + specific epithet (tree species)
- Diameter at breast height (DBH) (centimetres)
- Crown radius (metres)
- Crown Condition (overall general vigour of crown)
- Structural Form (excellent, good, fair, poor)
- Structural Integrity (good, fair, poor, hazard)
- 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 Assessment

- 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 Form Assessment

- Excellent: An ideal expression of a specific tree species, true to form, balanced canopy, good flare, typical internode length, full crown, etc.
- Good: A satisfactory and generally expected expression of a specific tree species, with only minor or typical variances from an ideal form.
- Fair: Nearly satisfactory, with defects or a combination of defects such as codominant leaders, unbalanced crown, poor/no flare, shortened internodes, has been poorly pruned, etc.
- Poor: Significantly flawed expression of a specific tree species

Structural Integrity Assessment

- 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).
- 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

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 (C.P.-1555-252) 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”. The Tree Preservation drawing graphically represents this radius for trees to be preserved.

4.0 TREE INVENTORY ASSESSMENT DATA

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

Grey indicates recommended removal.

| GENERAL INFORMATION | | | | SIZE | | HEALTH | | | | RECOMMENDATION | |
|---------------------|-------------------------|----------------|---|----------|-------------------|-----------------|-----------------|----------------------|--|-----------------|---|
| ID # | BOTANICAL NAME | COMMON NAME | LOCATION | DBH (cm) | CANOPY RADIUS (m) | CROWN CONDITION | STRUCTURAL FORM | STRUCTURAL INTEGRITY | COMMENTS | PROPOSED ACTION | RATIONALE COMMENTS CONSENT |
| 1 | <i>Acer saccharinum</i> | Silver Maple | BOUNDARY TREE City ROW & Subject site | 54 | 6 | 3 | fair | poor | Immediately adjacent to public sidewalk, heavily pruned for hydro line clearance, extensive epicormic growth, most of canopy is composed of epicormic growth, 1 low scaffold branch with large cavity, no leader | remove | tree condition & conflict with construction - consent from City Forestry required |
| 2 | <i>Acer saccharinum</i> | Silver Maple | BOUNDARY TREE City ROW & Subject site | 90 | 8 | 3 | fair | poor | Immediately adjacent to public sidewalk, heavily pruned for hydro line clearance, extensive epicormic growth, low clustered primary union, multiple significant cavities | remove | tree condition & conflict with construction - consent from City Forestry required |
| 3 | <i>Acer saccharinum</i> | Silver Maple | 530 Southdale Rd E | 68 | 7 | 5 | fair | good | Elevated at base, low branched, full form | remove | conflict with construction - authorization to remove from owner of 530 Southdale Rd E June 19, 2020 - see attached, distinctive tree permit will be required at time of application for SPA |
| 4 | <i>Acer negundo</i> | Manitoba Maple | 530 Southdale Rd E | -35, -30 | 6 | 5 | fair | good | Multistem 2, full form, primary union at 0.5m from grade | preserve | beyond subject site, no construction impacts expected |

| | | | | | | | | | | | |
|----|---------------------------|--------------|--------------------|----------|-----|---|------|-----------|---|----------|--|
| 5 | <i>Ulmus pumila</i> | Siberian Elm | 544 Southdale Rd E | -70 | 8 | 4 | fair | fair | Heavily pruned for hydro line clearance, extensive epicormic growth, minor dead wood, tip dieback, existing driveway west of tree | preserve | beyond subject site, no construction impacts expected |
| 6 | <i>Acer saccharum</i> | Sugar Maple | 544 Southdale Rd E | -30 | 4 | 4 | fair | fair | Epicormic growth, dead wood, 1 dead scaffold branch | preserve | beyond subject site, no construction impacts expected |
| 7 | <i>Juglans nigra</i> | Black Walnut | 544 Southdale Rd E | -60 | 8 | 5 | fair | good | Elevated at base, minor dead wood, loose crown | preserve | beyond subject site, nominal construction impacts expected |
| 8 | <i>Pinus strobus</i> | White Pine | Subject site | 45 | 5 | 5 | fair | fair | Double leader, limbed up to approx. 2m | remove | potential conflict with required grading |
| 9 | <i>Pinus strobus</i> | White Pine | Subject site | 46 | 5 | 5 | good | good | Limbed up to approx. 2m | remove | potential conflict with required grading |
| 10 | <i>Pinus strobus</i> | White Pine | Subject site | 43 | 5 | 3 | fair | poor/fair | Limbed up to approx. 2m, dead leader, top third of canopy dead | remove | tree condition & potential conflict with required grading |
| 11 | <i>Pinus strobus</i> | White Pine | Subject site | 37 | 4.5 | 5 | good | good | Limbed up to approx. 2m | remove | potential conflict with required grading |
| 12 | <i>Thuja occidentalis</i> | White Cedar | 544 Southdale Rd E | -20, -20 | 3 | 2 | fair | poor | Multistem 2, 1 dead | preserve | beyond subject site, no construction impacts expected |
| 13 | <i>Thuja occidentalis</i> | White Cedar | 544 Southdale Rd E | -13, -10 | 2 | 2 | fair | fair | Multistem 2, only upper quarter of canopy living, large Buckthorn understory | preserve | beyond subject site, no construction impacts expected |
| 14 | <i>Thuja occidentalis</i> | White Cedar | 544 Southdale Rd E | -12, -12 | 2 | 2 | fair | poor | Multistem 2, large Buckthorn understory | preserve | beyond subject site, no construction impacts expected |
| 15 | <i>Pinus strobus</i> | White Pine | 544 Southdale Rd E | -35 | 3.5 | 5 | good | good | Limbed up to approx. 3m, high crown | preserve | beyond subject site, approx 20% of CRZ expected to be affected by construction, preconstruction root pruning and TP fence required |
| 16 | <i>Pinus strobus</i> | White Pine | 544 Southdale Rd E | -30 | 3.5 | 5 | good | good | Limbed up to approx. 3m, high crown | preserve | beyond subject site, approx 15% of CRZ expected to be affected by construction, preconstruction root pruning and TP fence required |
| 17 | <i>Thuja occidentalis</i> | White Cedar | 544 Southdale Rd E | -20 | 2 | 4 | good | good | Branched to grade | preserve | beyond subject site, nominal construction impacts expected |
| 18 | <i>Thuja occidentalis</i> | White Cedar | 544 Southdale Rd E | -10 | 2.5 | 4 | good | good | Branched to grade | preserve | beyond subject site, no construction impacts expected |

5.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES

Some trees have been recommended for removal due to direct and unavoidable conflict with the proposed site layout and expected site grading requirements. 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.

5.1 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.

5.2 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' in this report for definition.

5.3 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.

5.4 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.

5.5 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.

5.6 SOIL CONTAMINATION

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

5.7 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.

6.0 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.

6.1 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) Prior to any construction activity, root pruning for tree #s 15 and 16 shall be executed as per specifications on T1.
- 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.

6.2 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.

6.3 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 to ensure that all mitigation measures as described above have been met.

7.0 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

8.0 CONTACT INFORMATION

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 ISA Tree Risk Assessment Qualified
 Qualified Butternut Assessor BHA #710
 OALA full member - landscape architect

9.0 APPENDIX A - CONSENT TO REMOVE TREE FROM 530 SOUTHDALE RD

June 19, 2020

Both parties agree to have the tree on the lot line between properties 538 Southdale Rd E & 530 Southdale Rd E. to be removed by owner of 538 Southdale Rd E (Sandhyaji Homes Inc.)and Sandhyaji Home Inc. will bear the full financial cost of the removal of the tree and tree stump. Tree branches from neighboring tree will be trimmed off as per instructed and desired by owner of 530 Southdale Rd E. Owner of 530 Southdale Rd E will be the part of photometric plan which will be required to illustrate where and how proposed lighting will be cast, and the owner of 530 Southdale Rd E can be a part of that conversation.

Owner of 538 Southdale Rd E.
SANDHYAJI HOMES INC
SAM SINGH

A handwritten signature in black ink, appearing to read "Sam Singh", written in a cursive style.

WOTTON, VIVIAN WINNIFRED
Owner of 530 Southdale Rd E.

A handwritten signature in black ink, appearing to read "Vivian Wotton", written in a cursive style.

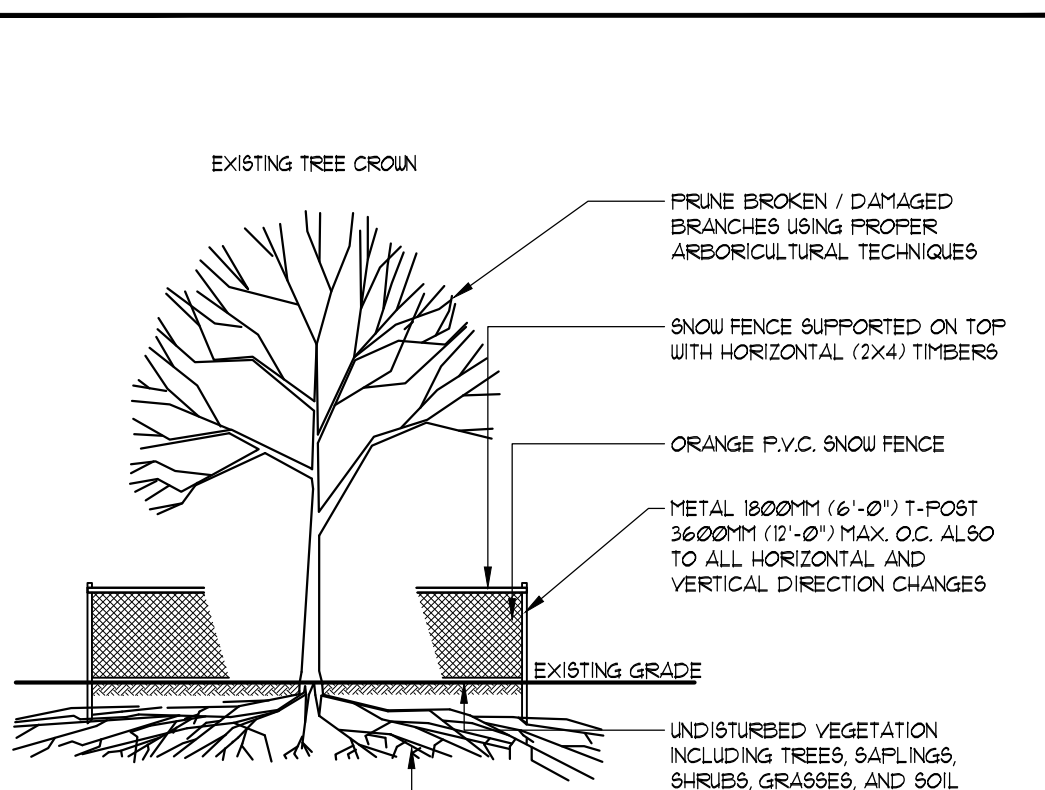
10.0 APPENDIX B - TREE PRESERVATION DRAWING

ROOT PRUNING SPECIFICATIONS

PRE-CONSTRUCTION ROOT PRUNING REQUIRED PRIOR TO EXCAVATION OR GRADING ACTIVITIES. (APPROX. 10 LINEAR METERS)

PRE-CONSTRUCTION ROOT PRUNING INSTRUCTIONS:

1. STAKE OUT THE LINE OF TREE PRESERVATION - AS INDICATED BY THE TREE PRESERVATION BARRIER.
2. USING AN AIR SPADE, CUT A TRENCH 6" - 10" WIDE AND MIN. 18" DEEP.
3. EXPOSED ROOTS TO BE CLEANLY CUT WITH A HAND SAW, CHAIN SAW, OR BYPASS PRUNERS.
4. CUTS TO BE MADE 3" TO 6" INSIDE THE PROPOSED TREE PRESERVATION BARRIER LOCATION.
5. ONCE ALL CUTS ARE MADE, REPLACE SOIL IN THE TRENCH. 'ROOT RESCUE' OR A SIMILAR PRODUCT WITH ACTIVE MYCORRHIZAL FUNGI TO BE INCORPORATED INTO BACKFILL AS PER MANUFACTURER SPECIFICATIONS. IF ADDITIONAL SOIL IS REQUIRED, 2-WAY MIX TOPSOIL CAN ALSO BE INCORPORATED INTO THE BACKFILL. BACKFILLING TO OCCUR WITHIN SAME DAY AS CUTS ARE MADE.
6. TREES TO BE WATERED WITHIN ONE DAY FOLLOWING ROOT PRUNING - WITH WATER DIRECTED TO THE TRENCH TO SETTLE LARGE AIR POCKETS.



NOTES:

1. EXISTING TREES ARE TO BE PROTECTED FROM CONSTRUCTION WITH THE INSTALLATION OF A 1800MM (4'-0") HIGH SNOW FENCE HELD IN PLACE WITH 1800MM (6'-0") T-BAR. THE BARRIER IS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION AND MUST REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED.
2. ALL SUPPORTS AND BRACING SHOULD BE INSIDE THE TREE PROTECTION ZONE. ALL SUCH SUPPORTS SHOULD MINIMIZE DAMAGING ROOTS IN THE TREE PROTECTION ZONE.
3. NO CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT, OR EXCAVATION OF ANY KIND IS PERMITTED WITHIN THE TREE PROTECTION ZONE.
4. NO MOVEMENT OF EQUIPMENT, STORAGE OF BUILDING SUPPLIES, CLEANING OR EQUIPMENT, OR DIPPING OF SOLVENTS, GASOLINE, ETC. MAY OCCUR WITHIN THIS FENCE LINE.
5. WHERE HIGH QUALITY SPECIMENS OCCUR ADJACENT TO AREAS SUBJECTED TO INTENSIVE CONSTRUCTION ACTIVITY, WOODEN CRIBS SHOULD BE INSTALLED TO PROTECT TRUNKS FROM DAMAGE IN THE EVENT THAT HEAVY EQUIPMENT BREAKS DOWN THE SNOW FENCING. FENCE TO BE INSPECTED BY ENVIRONMENTAL CONSULTANT ON A REGULAR BASIS AND BE MAINTAINED BY THE SUBDIVIDER / BUILDER.

TEMP. TREE PROTECTION BARRIER - N.T.S.

CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

PRE-CONSTRUCTION RECOMMENDATIONS

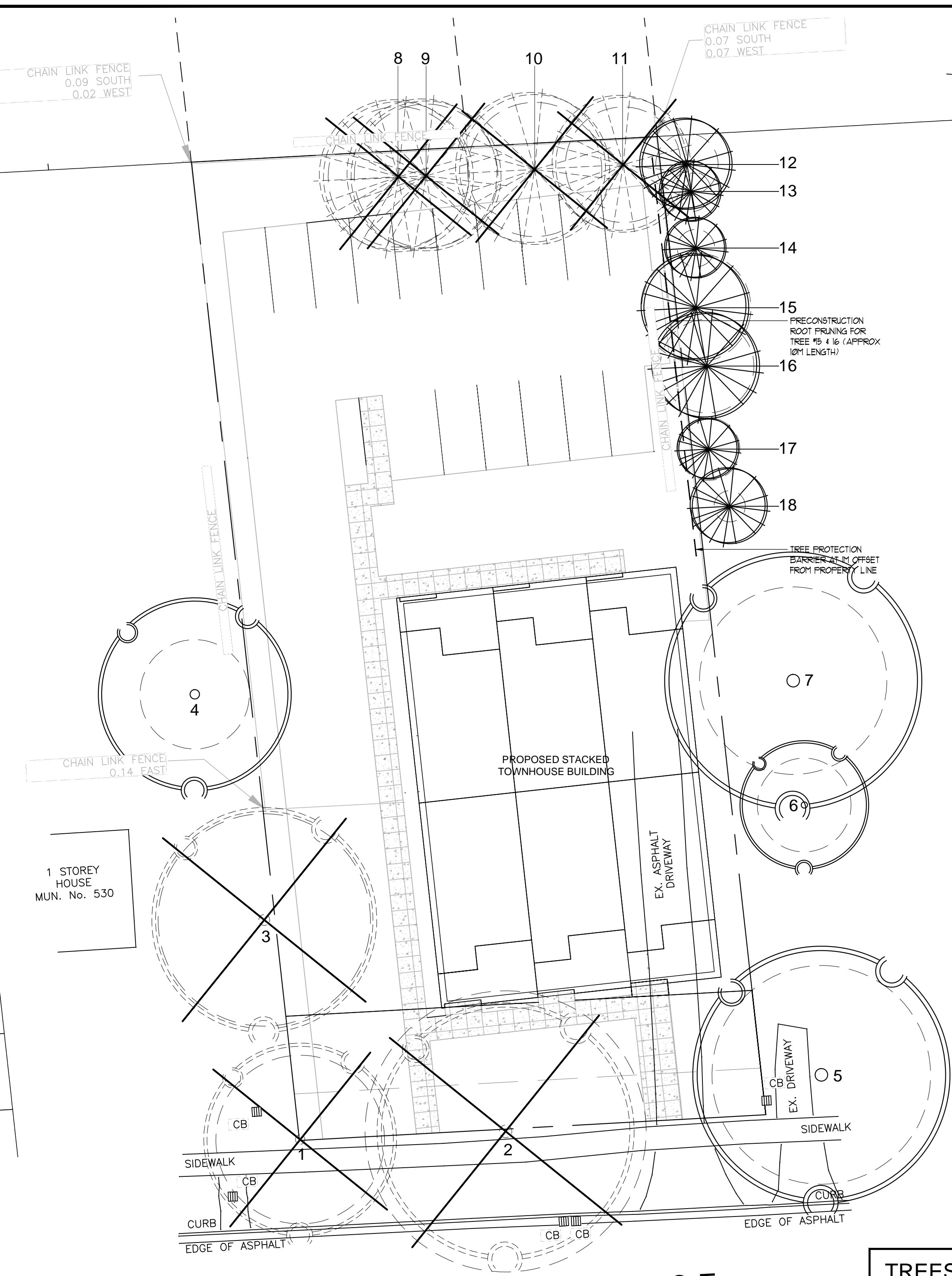
- a) PRIOR TO ANY CONSTRUCTION ACTIVITY, TREE PRESERVATION FENCING IS TO BE INSTALLED AS PER THE ATTACHED TREE PRESERVATION DRAWINGS AND DETAIL.
- b) PRIOR TO ANY CONSTRUCTION ACTIVITY, ROOT PRUNING FOR TREE #S 15 AND 16 SHALL BE EXECUTED AS PER SPECIFICATIONS ON T1.
- c) TREES APPROVED FOR REMOVAL ARE 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.

RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

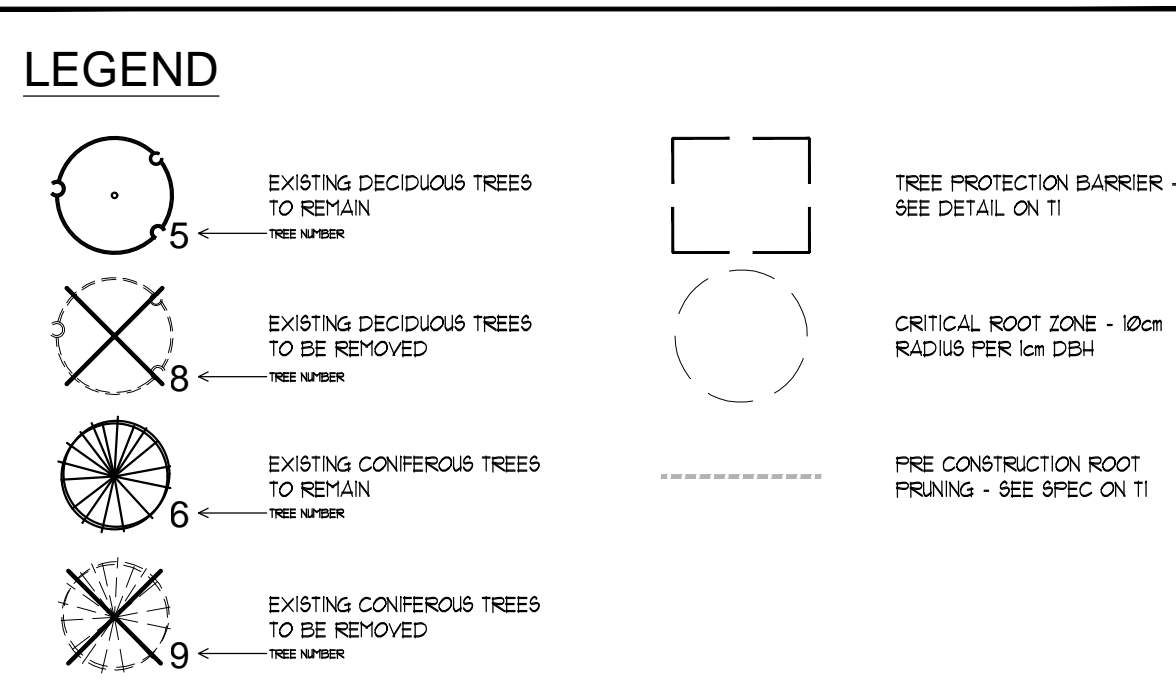
- a) TREE PRESERVATION FENCING IS TO BE MAINTAINED IN GOOD CONDITION AND EFFECTIVE FOR THE DURATION OF CONSTRUCTION UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE OR AS PER THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT.
- b) TREE PRESERVATION FENCING IS TO REMAIN INTACT AS PER THE TREE PRESERVATION DRAWINGS, 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.

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 TO ENSURE THAT ALL MITIGATION MEASURES AS DESCRIBED ABOVE HAVE BEEN MET.



TREE PRESERVATION PLAN
SCALE = 1:200



REFER TO TREE ASSESSMENT REPORT FOR FURTHER INFORMATION

NOTE THAT REFINEMENT OF THESE RECOMMENDATIONS WILL BE MADE AT TIME OF APPLICATION FOR SITE PLAN APPROVAL

TREES TO BE PRESERVED (11 TREES)

| GENERAL INFORMATION | | | SIZE | | HEALTH | | | RECOMMENDATION | |
|---------------------|--------------------|----------------|--------------------|----------|-------------------|---------------|-----------------|----------------------|---|
| ID # | BOTANICAL NAME | COMMON NAME | LOCATION | DBH (cm) | CANOPY RADIUS (m) | ST. CONDITION | STRUCTURAL FORM | STRUCTURAL INTEGRITY | COMMENTS |
| 4 | Acer spicatum | Manitoba Maple | 530 Southdale Rd E | -35 | 6 | 5 | Fair | good | Multistem 2, full form, primary union at 0.5m from grade |
| 5 | Ulmus parvifolius | Siberian Elm | 544 Southdale Rd E | -70 | 8 | 4 | Fair | Fair | Heavily pruned for hydro line clearance, extensive epicormic growth, minor dead wood, tip dieback, existing driveway west of tree |
| 6 | Acer saccharum | Sugar Maple | 544 Southdale Rd E | -30 | 4 | 4 | Fair | Fair | Epicormic growth, dead wood, 1 dead scaffold branch |
| 7 | Juglans nigra | Black Walnut | 544 Southdale Rd E | -60 | 8 | 5 | Fair | good | Elevated at base, minor dead wood, loose crown |
| 12 | Thuja occidentalis | White Cedar | 544 Southdale Rd E | -20 | 20 | 3 | 2 | Fair | Multistem 2, 1 dead |
| 13 | Thuja occidentalis | White Cedar | 544 Southdale Rd E | -15 | 40 | 2 | 2 | Fair | Multistem 2, only upper quarter of canopy living, large Backthorn understory |
| 14 | Thuja occidentalis | White Cedar | 544 Southdale Rd E | -12 | 42 | 2 | 2 | Fair | Multistem 2, large Backthorn understory |
| 15 | Pinus strobus | White Pine | 544 Southdale Rd E | -35 | 3.5 | 5 | good | good | Limbed up to approx. 3m, high crown |
| 16 | Pinus strobus | White Pine | 544 Southdale Rd E | -30 | 3.5 | 5 | good | good | limbed up to approx. 3m, high crown |
| 17 | Thuja occidentalis | White Cedar | 544 Southdale Rd E | -20 | 2 | 4 | good | good | Branched to grade |
| 18 | Thuja occidentalis | White Cedar | 544 Southdale Rd E | -10 | 2.5 | 4 | good | good | Branched to grade |

TREES TO BE REMOVED (7 TREES)

| GENERAL INFORMATION | | | SIZE | | HEALTH | | | RECOMMENDATION | |
|---------------------|------------------|--------------|---------------------------------------|----------|-------------------|---------------|-----------------|----------------------|---|
| ID # | BOTANICAL NAME | COMMON NAME | LOCATION | DBH (cm) | CANOPY RADIUS (m) | ST. CONDITION | STRUCTURAL FORM | STRUCTURAL INTEGRITY | COMMENTS |
| 1 | Acer saccharinum | Silver Maple | BOUNDARY TREE City ROW & Subject site | 54 | 6 | 3 | Fair | poor | Immediately adjacent to public sidewalk, heavily pruned for hydro line clearance, extensive epicormic growth, most of canopy composed of epicormic growth, 1 low scaffold branch with large cavity, no leader |
| 2 | Acer saccharinum | Silver Maple | BOUNDARY TREE City ROW & Subject site | 90 | 8 | 3 | Fair | poor | Immediately adjacent to public sidewalk, heavily pruned for hydro line clearance, extensive epicormic growth, low cleared primary union, multiple significant cavities |
| 3 | Acer saccharinum | Silver Maple | 530 Southdale Rd E | 68 | 7 | 5 | Fair | good | Elevated at base, low branched, full form |
| 8 | Pinus strobus | White Pine | Subject site | 45 | 5 | 5 | Fair | Fair | Double leader, limbed up to approx. 2m |
| 9 | Pinus strobus | White Pine | Subject site | 46 | 5 | 5 | good | good | limbed up to approx. 2m |
| 10 | Pinus strobus | White Pine | Subject site | 43 | 5 | 3 | Fair | poor/fair | limbed up to approx. 2m, dead leader, top third of canopy dead |
| 11 | Pinus strobus | White Pine | Subject site | 37 | 4.5 | 5 | good | good | limbed up to approx. 2m |

TREE #'S 8, 9 & 11 HAVE BEEN RECOMMENDED FOR REMOVAL DUE TO POTENTIAL CONFLICT WITH SITE GRADING REQUIREMENTS. NOTE THAT THE INTENT IS TO COORDINATE WITH THE CIVIL ENGINEER AT THE TIME OF REFINED DESIGN FOR SITE PLAN APPROVAL TO LIMIT GRADING NEAR THESE TREES SO THAT THEY CAN BE PRESERVED.

KEY MAP

RON KOUDYS LANDSCAPE ARCHITECTS INC.

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

| DATE | DESCRIPTION | No. |
|------------|----------------|-----|
| 2021/11/02 | ISSUED FOR ZBA | 1 |

PLOTTING INFORMATION:
PLOTTED DATE = 2021/11/02
PLOTTED SCALE = 1:1

PROPOSED RESIDENTIAL
538 SOUTHDAL RD E
LONDON, ONTARIO

TREE PRESERVATION PLAN

DATE: OCTOBER 2021 SCALE: AS NOTED DRAINING No. T-1

PROJECT No. 21-252Lb