

ARBORIST REPORT

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LOCATION: 2 Station Road Ave. Toronto

SUMMARY: Removal of one Silver Maple @ Mimico Ave., removal of West property line trees affecting construction; Protection of 3 trees along Station Rd.and Maple fronting Mimico Ave.

Tree Inventory: Tree locations and protection zones shown on attached T-1 Protection Plan 03/14/2013

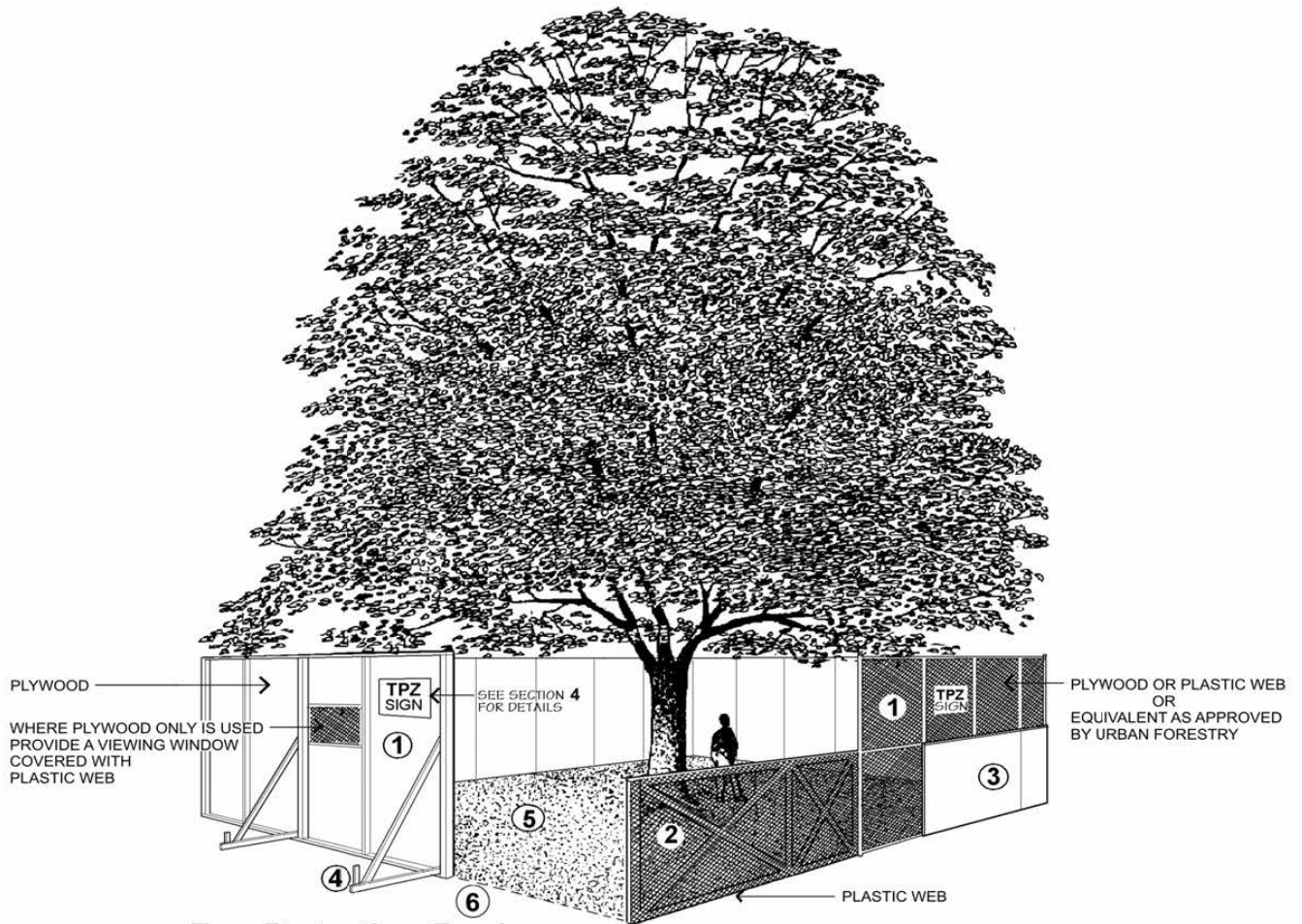
As per the The City of Toronto requirements, this report details the pre-construction assessment of the existing trees of 2 Station Road. Due to the proposed additions to the existing structure, including the creation of an underground extension and proposed excavation for waterproofing the existing building lower level, a number of trees will be impacted, resulting in recommended removal. Station Road frontage trees on City property will be protected and retained.

Table 1 below lists the species, size and condition of the existing trees and the recommended action to protect or remove.

Tree	Species	DB H cm	Condition & Assessment
T1	Acer saccharinum Silver Maple	85	Remove - Below Acceptable condition. The Acer saccharum T-1 facing Mimico Ave. is infected with advanced Mushroom growth in a large open wound from a major branch that broke off within the past 2 years at a height of 4.5 metres. The presence of mushroom so recent to this branch removal indicates internal weakness of the wood. (see photo) The upper branching form leans toward the church building and will be affected by construction and require limb removal. The heavy lean of the top weight in one direction will pose a wind-blown hazard in extreme weather. There are some signs of perennial frost crack in the trunk bark. Crown growth is good but areas of suckering also present. Suckering will create unstable branching form over time. This is typical of soft wooded trees such as silver maple that become liabilities in later age. Given the age of the tree- 80+ years, and species – Silver Maple, removal and replacement with a harder wood tree species with strong leader form and long-lived is highly recommended. The tree could live for another 5 years before becoming a hazard. However, given the proposed building additions and the chances of survival after construction, replacement trees as compensation for the existing Maple are a better option for the site and local context. The landscape plan should include a quantity of more desirable, long lived species with stronger wood as replacements.
T2	Acer saccharinum Silver Maple	73	Retain Fair condition. Retain and protect. Well branched, good form. Proposed underground excavation will require injury permit within the required protection zone. Aged tree however showing no signs of injury or decline. Heavy lean of branches due to over-head wire pruning over the years. Proposed cut to roots would be 20%. It is recommended that the proposed underground parking space impacting tree [protection zone be eliminated

			and walls adjusted away to better protect the tree roots. Nothing less than 2.4 metre from tree should be considered for root pruning. A major root could be eliminated which will kill the tree. Altered underground layout excavation will be required with onsite supervision of arborist for this portion. To sever roots cleanly use compressed air applied for soil removal of exposed roots. After soil is cleanly removed by air, Arborist will cleanly root prune by saw, pruners and dress with alcohol and optional shellac seal.
T3	Quercus robur Red Oak	66	City Tree Station Road, Retain & Protect. Good condition. No signs of disease. Strong trunk form balanced branching. Requires protection for proposed entry expansion. Finished grade of expanded entry should be raised to avoid excavation in the dripline zone.
T4	Quercus robur Red Oak	55	City Tree Station Road, Retain & Protect. Good condition. No signs of disease. Strong trunk form balanced branching. Requires protection for proposed entry expansion. Finished grade of expanded entry should be raised to avoid excavation in the dripline zone.
T5	Acer saccharinum Silver Maple	70	Fair condition. Retain and protect. Well branched, good form. Proposed underground excavation may impact & injure within the required protection zone. Trench and scaffold locations to be adjusted to ensure protection of tree. Aged tree showing signs of injury at base with 60 cm. sq. open wound. Bare wood exposed has carpenter ant holes. Wound to be sealed with approved tree wound dressing with high elongation. Lean of branches due to over-head wire pruning over the years is acceptable. Nothing less than 2.4 metre from tree should be considered for root pruning.
T6	Fraxinus pensylvanica Red Ash	37	Remove or Retain. Fair Condition. Optional removal. Twisted form from heavy shade over the years. Non-diseased, Leaning very much over neighbour property. For soil removal of exposed roots. After soil is cleanly removed by air, Arborist will cleanly root prune by saw, pruners and dress with alcohol and optional shellac seal.
T7	Fraxinus pensylvanica Red Ash	45	Remove Good Condition. Leaning over neighbour property. For soil removal of exposed roots. After soil is cleanly removed by compressed air, Arborist will cleanly root prune by saw, pruners and dress with alcohol and optional shellac seal. Excavation for water proofing. Typical.
T8	Fraxinus pensylvanica Red Ash	38	Remove Fair Condition. Leaning over neighbour property. Impacted by new addition and waterproofing requirements. Replace with multiple additional trees in landscape plan away from property line.
T9	Fraxinus pensylvanica Red Ash	32	Remove Fair Condition Leaning over neighbour property. Impacted by new addition and waterproofing requirements. Replace with multiple additional trees in landscape plan away from property line.
T10	Fraxinus pensylvanica Red Ash	38	Remove Fair Condition. Leaning over neighbour property. Impacted by new addition and waterproofing requirements. Replace with multiple additional trees in landscape plan away from property line.

See Tree Protection Plan.



Tree Protection Barriers

- ① Tree protection barriers must be a plywood or plastic web hoarding or equivalent as approved by Urban Forestry.
- ② Tree protection barriers for trees situated on the City road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of orange plastic web snow fencing on a wood frame made of 2" x 4"s .
- ③ Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.
- ④ All supports and bracing should be outside the Tree Protection Zone. All such supports should minimize damaging roots outside the Tree Protection Barrier.
- ⑤ No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.
- ⑥ Sediment control fencing shall be installed in locations indicated in an Urban Forestry approved Tree Protection Plan. The sediment control fencing must be installed to Ontario Provincial Standards (OPSD-219.110) and to the satisfaction of Urban Forestry.

Prior to site disturbance the owner must confirm that no migratory birds are making use of the site for nesting. The owner must ensure that the works are in conformance with the Migratory Bird Convention Act and that no migratory bird nests will be impacted by the proposed work.

It is the applicants' responsibility to discuss potential tree injury of trees on shared property lines with their neighbours. Should such trees be injured to the point of instability or death the applicant may be held responsible for removal and such issues would be dealt with in civil court or through negotiation. The applicant would be required to replace such trees to the satisfaction of Urban Forestry.

TREE PROTECTION ZONE:

No construction activity including grade changes, surface treatments or excavations of any kind is permitted within the area identified on the Tree Protection Plan or Site Plan as a Tree Protection Zone (TPZ). No root cutting is permitted. No storage of materials or fill is permitted within the TPZ. No movement or storage of vehicles or equipment is permitted within the TPZ. The area(s) identified as a TPZ must remain undisturbed at all times.

TREE PROTECTION BARRIERS:

For City-owned Trees:

Tree protection barriers for trees situated on the City road allowance where visibility must be maintained, can be 1.2m (4ft.) high and consist of chain link, or orange plastic web snow fencing on a 2" x 4" wood frame. All supports and bracing used to secure the barrier should be located outside the TPZ. All supports and bracing should minimize damage to roots outside the TPZ.

Where some fill or excavate has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the TPZ.

If the TPZ needs to be reduced to facilitate construction access, the tree protection barrier must be maintained at a lesser distance and the exposed TPZ protected with plywood and wood chips. This must first be approved by Urban Forestry.

For trees on private property situated on or adjacent to construction sites:

Tree protection barriers must be installed around trees to be protected using plywood clad hoarding or an equivalent approved by Urban Forestry. All supports and bracing to safely secure the barrier should be outside the TPZ. All such supports and bracing should minimize damage to roots outside the TPZ.

Tree Protection Hoarding in the Ravine & Natural Feature Protected Areas

The applicant/owner shall protect all trees in the protected area that have not been approved for removal or injury, throughout development works to the satisfaction of Urban Forestry.

Plywood (or chain link fence, if agreed to by Urban Forestry) tree protection hoarding shall be installed in the locations as indicated in the Urban Forestry approved tree protection plan. Tree protection hoarding shall be installed to standards as detailed in the City's Tree Protection Policy and Specifications for Construction near Trees and to the satisfaction of Urban Forestry.

Tree protection hoarding must remain in place and in good condition during demolition and/or construction and must not be altered or moved until authorized by Urban Forestry. Established tree protection zones must not be used as construction access, storage or staging areas. Grade changes are not permitted within established TPZ.

All additional tree protection or preservation requirements, above and beyond the required tree protection hoarding, must be undertaken or implemented as detailed in the Urban Forestry approved arborist report and/or the approved tree protection plan and to the satisfaction of Urban Forestry.

Sediment control fencing shall be installed in the locations as indicated in the Urban Forestry approved sediment control plan. The sediment control fencing must be installed to Ontario Provincial Standards (OPSD-219.110) and to the satisfaction of Urban Forestry.



Photo 1 - Mimico Ave, Silver Maple with all weight leaning to building. Formerly double leader. One leader facing overhead wires detached in wind storm previous year. This tree is becoming a hazard and is best replaced. Silver Maple in background has kept better form and health condition and should be retained. **Photo 2** below : Mushroom growth in large wound of Silver Maple Foreground.





Photo 3 - Mimico Ave, Silver Maple with most weight leaning to building. Still strong form. Good condition; Roots impacted by proposed expansion. Oak in background in good form and health condition and should be retained. **Photo 4**- Station Road, Silver Maple in background, acceptable but lower injury. Oaks in foreground have strong form. Good condition; Roots impacted by proposed expansion.

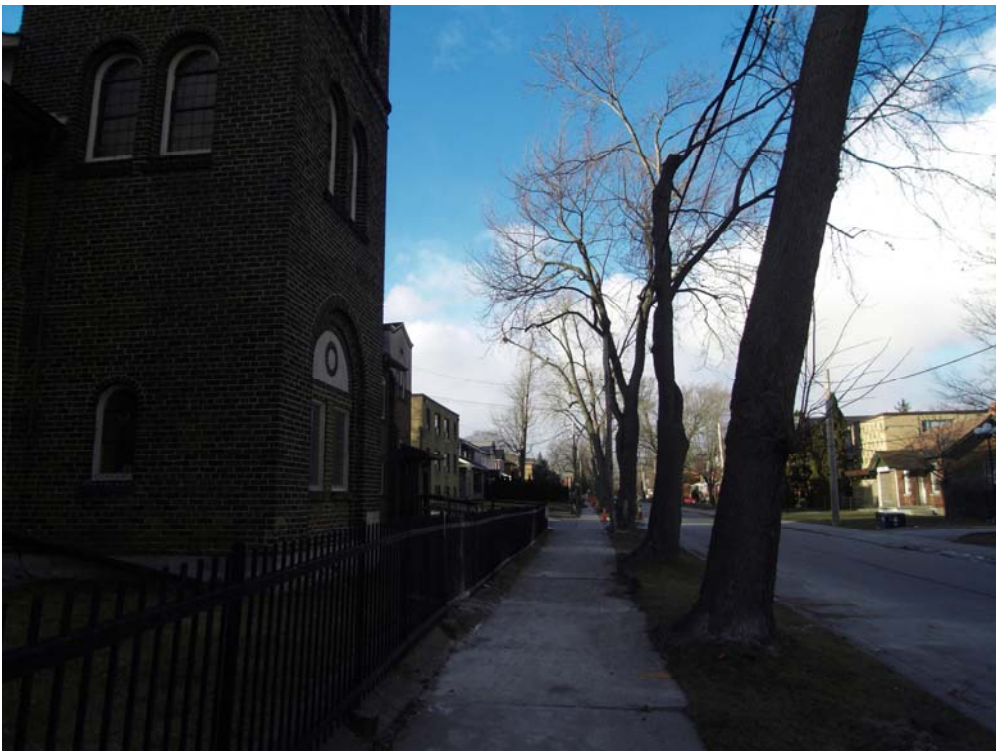




Photo 5 - Station Road , Silver Maple with branching away from building. Double leader. One leader facing overhead wires. Has good form and overall health condition and should be retained. **Photo 6** rear west property line: Red Ash . heavy leaning marginal form. No serious health conditions but bad placement, tree form that will create a hazard in the future. Not critical to remove. However, replacement trees in quantities to match value of existing trees will serve the site and the neighbour better. Removal will also facilitate excavation for water-proofing. Recommend replacement trees placed further from property line than these existing trees.





Photo 7- West property line: White ash and Red ash with strong upright form. Propose to replace with more desirable tree species in this zone away from property line. Access walkway to hug the building to create acceptable planting bed space along the property line.

Discussion:

The Mimico Ave. Maple at Station Road will be impacted and require protection and heavy mulch in the area. Underground excavation to be supervised by Arborist in the section affecting the tree. Compressed air and selective pruning to be done to minimize impact with the tree protection zone.

The rear access area will require one truck load @ 15 cubic metre is prescribed of utility grade wood chip mulch to cover the access zone. Over that mulch, 5/8" utility plywood is to be placed for easy access and clean-up. No stock piling of dirt or materials permitted within the protection zones. This preventive procedure will deflect and reduce point loads that could compact weight of persons, materials and any light equipment. Construction consists of an addition that requires excavation of a trench for the concrete footing. Alternately, a bobcat or mini excavator could fit in the access area to complete excavation for the footing trench and transport cut soil to a dumpster placed in the ex. Parking space for later removal when full. This process will be tolerable for the trees.

The site has some very narrow access during construction. Tree protection fencing zones required per City of Toronto standards would mean very limited access. Since construction access must be done in the rear, a compromise is required for tree retention. Replacement of property line trees with more desirable trees is a better solution. Excavation for foundation trench and waterproofing. Trucks must remain in the outside area. A bobcat and mini excavator over the plywood and mulch may be enough to access the excavation zone with minimal impact to Neighbour's plant material especially the yew near the property line.

To mitigate root compaction in the event of temporary access required within a tree protection zone, that may be incurred within the drip zone, the roots. Machinery weight will be dispersed horizontally to outside the drip line. This technique will ensure long term tree survival even though the access is

within the drip line. Water percolation and oxygen exchange will continue in the drip line. It is my recommendation that the project be permitted to proceed with the safeguards outlined herein.

Additional planting

The removal of west property line trees will be compensated with additional desirable species trees as part of the landscape plan to replace these west boundary trees and located new them in a more logical location offset from the property line. The proposed west property line access path will hug the building in order to create space for these replacement trees

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