

June 7, 2018

BEL 217069

Mr. Armin Fatehi, P.Eng., MBA
Nyx Capital Corp
201-1131A Leslie Street
Toronto, ON M3C 3L8

Re: Arborist Report for 51 and 57 Tannery Street and 208 Emby Ave, Mississauga, ON

Dear Mr. Fatehi:

Beacon Environmental Limited (Beacon) is pleased to provide you with this Arborist Report and Tree Inventory and Preservation Plan (TIPP) in support of the proposed Site Plan for properties located at 51 and 57 Tannery Street and 208 Emby Ave in the City of Mississauga.

This report summarizes the findings of a tree inventory and assessment of all trees ≥10 cm in diameter at breast height (DBH, measured 1.4 m above grade) located on or within 6 m of the subject property and provides recommendations for tree removal or preservation based on the proposed development plan which are reflected on the Tree Inventory and Preservation Plan.

Methods

All trees measuring ≥10 cm in diameter at breast height (DBH, measured 1.4 m above grade) on and adjacent to the subject properties (where accessible) within 6.0 m of the property line, were inventoried and assessed by an ISA Certified Arborist on April 24, 2017. Trees on the subject property were marked with numbered aluminum forestry tags. Tagged trees were surveyed by a registered Ontario Land Surveyor. The assessment included collecting data on species, trunk diameter (DBH), and health and condition. The condition of individual trees was assessed in terms of overall health and structural integrity based on indicators such as live leaves and buds, dead wood, decay, structural defects, and presence of disease. Each tree was assigned a condition rating of good, fair, poor, or dead, based on the following criteria:

- **Poor** – Severe dieback, significant lean, missing leader, major defects, significant decay and/or disease presence;
- **Fair** – Moderate dieback and/or lean, limb defects, multiple stems, moderate foliage damage from stress;
- **Good** – Healthy vigorous growth, minor visible defects or damage; and
- **Dead** – No live growth.

Findings

A total of 110 trees were inventoried on and adjacent to the subject property. A complete list of trees is provided in **Appendix A**. Tree locations are illustrated in **Figure 1**. Trees range in size from 10 to 95 cm DBH, with a median DBH of 22 cm. The majority of the trees are Manitoba Maple. A summary of the species and size class distribution is provided in **Table 1**. Tree condition is summarized as follows:

- Good: 19;
- Fair-Good: 6;
- Fair: 27;
- Fair-Poor: 14;
- Poor: 33; and
- Dead: 11.

Table 1. Tree Species and Size Class Summary

Species	Common Name	DBH Range (cm)							Total
		10-14	15-19	20-29	30-39	49-49	50-59	90-99	
<i>Acer negundo</i>	Manitoba Maple	9	14	14	12	4	3	-	56
<i>Acer platanoides</i>	Norway Maple	-	2	-	1	-	-	-	3
<i>Acer x freemanii</i>	Freeman's Maple	-	-	-	1	-	-	-	1
<i>Betula papyrifera</i>	White Birch	-	1	1	-	-	-	-	2
<i>Crataegus sp</i>	Hawthorn	2	1	-	-	-	-	-	3
<i>Fraxinus americana</i>	White Ash	1	-	3	1	-	-	-	5
<i>Ulmus pumila</i>	Siberian Elm	-	-	1	-	-	-	-	1
<i>Juglans nigra</i>	Black Walnut	4	4	5	1	1	-	-	15
<i>Juglans regia</i>	English Walnut	-	-	-	2	-	-	-	2
<i>Magnolia sp</i>	Magnolia	1	-	-	-	-	-	-	1
<i>Malus sp</i>	Apple	-	4	1	-	-	-	-	5
<i>Picea abies</i>	Norway Spruce	-	-	1	-	3	1	-	5
<i>Picea pungens</i>	Colorado Blue Spruce	-	-	4	-	-	-	-	4
<i>Pinus nigra</i>	Austrian Pine	-	-	1	-	-	-	-	1
<i>Quercus macrocarpa</i>	Bur Oak	1	-	-	-	-	-	-	1
<i>Salix x sepulcralis</i>	Hybrid Crack Willow	-	-	-	-	-	-	1	1
<i>Ulmus americana</i>	White Elm	1	1	-	1	-	-	-	3
<i>Populus deltoides</i>	Cottonwood	-	-	-	-	-	1	-	1
Total		19	27	31	19	8	5	1	110

Description of Proposed Redevelopment

The proposed re-development of the subject property consists of seven townhouse buildings totaling 155 stacked, back-to-back units, outdoor amenity space, and underground parking. Emby Drive will be extended across the subject property to connect with Tannery Street. A crash wall and berm are proposed on the east side of the subject property adjacent to the railway corridor.

Impact Assessment and Recommendations

Tree Removals

A total of 82 trees are recommended for removal to accommodate the proposed development, of which 35 are in fair or good condition, 27 are in poor condition, 10 are in fair-poor condition, and 10 are dead. The majority are Manitoba Maple.

The *Migratory Birds Convention Act* protects the nests, eggs, and young of most bird species from harassment, harm, or destruction. Therefore, it is recommended that tree removals be conducted between mid-August and mid-April to avoid the time period when birds are nesting. For any proposed clearing of vegetation during the breeding bird season (approx. April 15 and August 15), an avian biologist should undertake nest searches immediately prior (within two days) to site alteration to identify whether nests are present and what actions are necessary to avoid impacts.

Tree Preservation

A total of 28 trees are identified for preservation (see **Figure 1** and **Appendix A**), primarily along Mullet Creek.

Tree health and structural integrity can be compromised by grade changes, soil compaction, root cutting, and mechanical damage to trunks and branches resulting from the operation of construction equipment.

Trees to be retained shall be protected through the establishment of a tree protection zone (TPZ). The minimum recommended TPZ's are based on the DBH of the tree as indicated in **Table 2** and illustrated on **Figure 1**. While not explicitly recognized by the City of Mississauga, comparable TPZs are accepted in other area municipalities, including the City of Toronto, City of Burlington, the Town of Richmond Hill, and the Town of Aurora.

Table 2. Minimum Tree Protection Zones

Trunk Diameter (cm)	Minimum TPZ (m)*
<10	1.2
10-29	1.8
30-40	2.4
41-50	3
51-60	3.6
61-70	4.2
71-80	4.8
81-90	5.4
91-100	6

* to be measured from the outside edge of the base of the tree

The TPZ should be demarcated with tree protection hoarding consisting of 1.2 m orange plastic fencing framed with solid top and bottom rail, or 1.2 m plywood (see **Figure 1** for fence location and detail), or an alternative approved by the City. Fencing should be installed before any construction or site alteration takes place.

No grading, soil disturbance, or surface treatments shall occur within the TPZ and no equipment or materials shall be stored inside the TPZ.

In addition to the establishment of the TPZ, the following specifications are recommended to ensure the health and survival of any retained trees:

- Before the beginning of work, the contractor and qualified arborist, should meet on site to review work procedures, access routes, storage areas and the TPZ or other tree protection measures.
- Where underground utilities are to be installed, the route shall be outside any TPZ, or tunnelling or boring methods should be used for installation.
- Some tree roots may extend beyond the tree protection zone. Any root damage occurring during construction should be cut cleanly with a hand saw or pruning shears.
- Any injury to a tree during construction should be evaluated by a qualified arborist.
- Any pruning of trees for construction clearance shall be performed by a qualified arborist.

Tree Replacement/Compensation

To compensate for the loss of trees from the subject property, generous tree planting is proposed in the conceptual landscape plan. Additionally, the Scoped Environmental Impact Study (Beacon 2018) has provided recommendations for a buffer management plan that targets the Mullet Creek valleylands and 10 m setback zone. The buffer management plan will consist of removing garbage and debris from the valley, controlling invasive trees and shrubs, and naturalizing the area using native trees and shrubs. These efforts will involve substantial tree plantings which will offset impacts associate with tree removals

from the site. Focussing plantings within this area will provide far better ecological functions (e.g., additional buffering, edge protection, wildlife habitat) than the existing trees currently provide.

Should you have any questions, please do not hesitate to contact the undersigned.

Report prepared by:
Beacon Environmental



Dan Westerhof, B.Sc., MES
Terrestrial Ecologist, Certified Arborist (ON-
1536A)

Report reviewed by:
Beacon Environmental

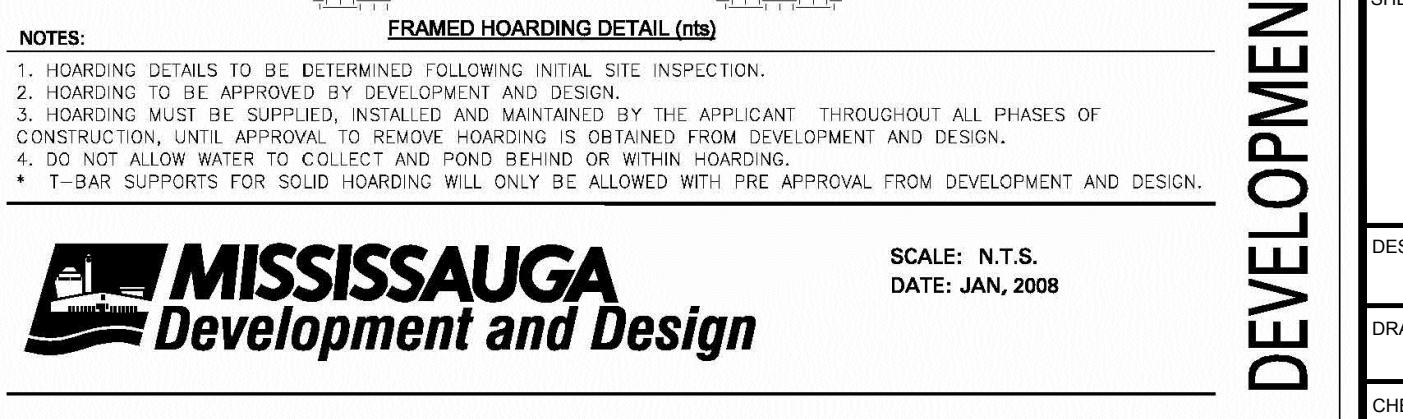
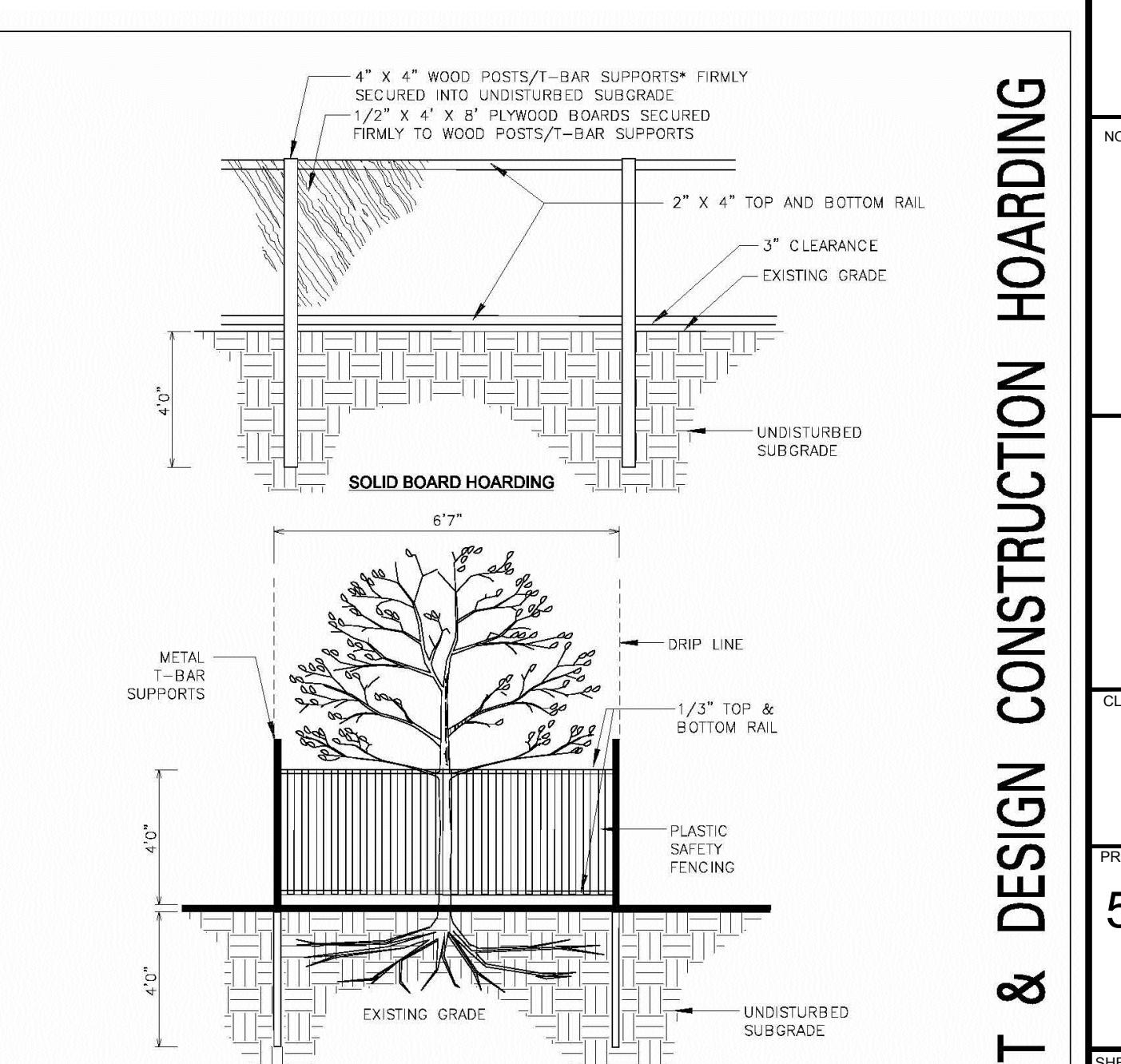


Ken Ursic
Senior Ecologist



GENERAL NOTES :

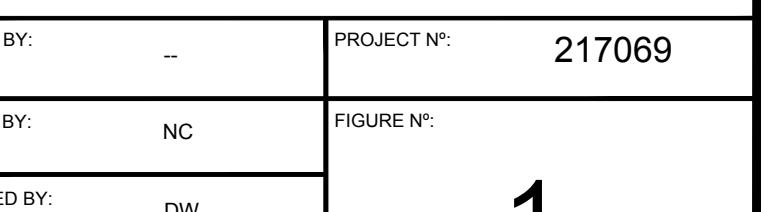
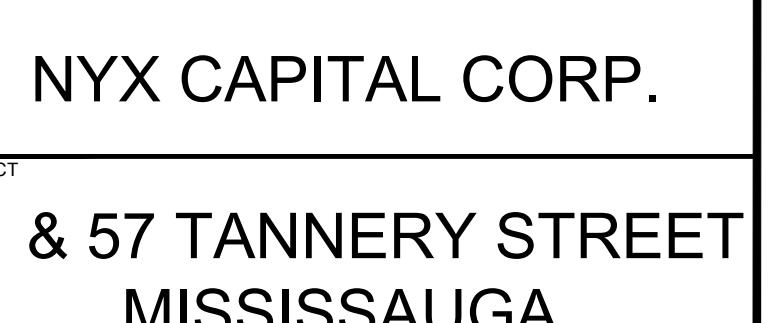
- This plan is to be read in conjunction with the arborist report prepared by Beacon
- Any ambiguity in this drawing or accompanying details is to be reported to the project Arborist from Beacon Environmental. Contractor is not to proceed in uncertainty and is to understand the project fully before commencing work.
- Drawings may be scaled for layout measurement but dimensions and elevations shown are subject to verification on site.
- The Contractor must notify the project Arborist a minimum of 5 (five) days prior to the commencement of any construction work.
- Contact local underground utility service companies to obtain utility locates and identification prior to commencing work.
- The Contractor shall maintain all areas until Owner's acceptance of the project in accordance with the specifications.
- The Contractor is to have the required Tree Removal Permit in hand prior to the removal of any trees. The Contractor shall keep a copy of the Tree Removal Permit on site while performing any works.
- All existing trees which are to remain shall be fully protected with hoarding as specified of this plan and Tree Protection Hoarding Detail on Sheet TP-1.
- The applicant is responsible for ensuring that tree protection hoarding is maintained throughout all phases of demolition and construction in the location and condition as approved by the City.



Notes: Scale shown is for an 36" x 24" page.
For illustrative purposes. Do not scale.

N°	REVISIONS	DATE:	BY:
6			
5			
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2	Revised to include new site plan	2018/06/07	DW
1	Revised	2018/04/16	DW

SCALE: 0 2 5 10 20m
1:400





Appendix A

Tree Inventory and Evaluation

Appendix A

Tree Inventory and Evaluation

Tree #	Species	DBH (cm)	Crown (m)	Condition	Comments	TPZ	Recommendation
338	<i>Acer platanoides</i>	18	5	Good	Good form and vigour	1.8	Remove
339	<i>Picea pungens</i>	37	6	Fair	Branch dieback	2.4	Remove
340	<i>Picea pungens</i>	34	5	Good		2.4	Remove
341	<i>Picea pungens</i>	37	6	Good		2.4	Remove
342	<i>Betula papyrifera</i>	12,15,16,17	6	Good		2.4	Remove
343	<i>Magnolia</i> sp.	10,10	4	Good		1.8	Remove
344	<i>Acer platanoides</i>	19	5	Good		1.8	Remove
345	<i>Picea abies</i>	40	8	Good		3	Remove
346	<i>Picea abies</i>	50	8	Good		3.6	Remove
347	<i>Picea abies</i>	27	5	Fair	Thin crown	1.8	Remove
348	<i>Picea abies</i>	44	7	Good		3	Remove
349	<i>Juglans nigra</i>	15	4	Good		1.8	Protect
350	<i>Salix x sepulcralis</i>	95	20	Fair	broken branches, cavity at 4 m	5.4	Remove
351	<i>Acer negundo</i>	35	6	Poor	Significant dieback	2.4	Remove
352	<i>Acer negundo</i>	50	8	Poor	lean, significant dieback	3.6	Remove
353	<i>Betula papyrifera</i>	20,20,22	6	Fair-Good		2.4	Remove
354	<i>Picea abies</i>	40	8	Fair-Poor	surrounded by gravel/pavent, significant dieback	3	Remove
355	<i>Acer negundo</i>	35,44,40	8	Poor	old wound at base, significant dieback	4.2	Remove
356	<i>Acer negundo</i>	24,27	8	Poor	Poor form, dieback	2.4	Remove
357	<i>Acer negundo</i>	37,38	8	Fair-Poor	significant lean in one stem, large cavity at 4 m, poor form	3.6	Remove
358	<i>Acer negundo</i>	20,28	8	Poor	top broken off one stem	2.4	Remove
359	<i>Acer negundo</i>	26	7	Fair	lean west	1.8	Remove
360	<i>Acer negundo</i>	40	8	Fair-Poor		3	Remove
361	<i>Acer negundo</i>	13,10	4	Fair-Poor	lean, poor form	1.8	Remove
362	<i>Acer negundo</i>	32	8	Fair-Poor	large broken branch, poor form, arched over	2.4	Remove
363	<i>Acer negundo</i>	18	2	Poor	nearly dead	1.8	Remove
364	<i>Acer negundo</i>	30	2	Poor	top snapped	2.4	Remove
365	<i>Acer negundo</i>	18	4	Fair		1.8	Remove
366	<i>Acer negundo</i>	25	6	Poor	poor form, uneven crown	1.8	Remove
367	<i>Acer negundo</i>	27	1	Dead		-	Remove

Tree #	Species	DBH (cm)	Crown (m)	Condition	Comments	TPZ	Recommendation
368	<i>Acer negundo</i>	28,38	8	Fair-Poor	poor form, uneven crown, cavity at 4 m	3.6	Remove
369	<i>Malus sp</i>	15	4	Poor	poor form, arched over	1.8	Remove
370	<i>Acer negundo</i>	25	1	Dead		-	Remove
371	<i>Ulmus americana</i>	32	8	Fair		2.4	Remove
372	<i>Acer negundo</i>	16	4	Poor	Top dead, significant lean	1.8	Remove
373	<i>Juglans nigra</i>	21	4	Fair-Poor	uneven crown	1.8	Remove
374	<i>Acer negundo</i>	14,14	1	Dead	basal sprouts	-	Remove
375	<i>Acer negundo</i>	34	8	Poor		2.4	Remove
376	<i>Malus sp</i>	16,15	1	Dead	extensive dieback	-	Remove
377	<i>Juglans nigra</i>	14	3	Fair-Poor		1.8	Remove
378	<i>Acer negundo</i>	13,14,14,15,15,21	6	Poor	poor form	2.4	Remove
379	<i>Acer negundo</i>	20,23	6	Poor	extensive dieback	2.4	Remove
380	<i>Acer negundo</i>	15,14	4	Poor	poor form, branch dieback, stems arching over	1.8	Remove
381	<i>Acer negundo</i>	12	3	Poor	poor form, branch dieback, stems arching over	1.8	Remove
382	<i>Acer negundo</i>	16	4	Poor	arching over, dieback	1.8	Remove
383	<i>Acer negundo</i>	21	2	Poor	extensive dieback	1.8	Remove
384	<i>Acer negundo</i>	31	2	Poor	nearly dead	2.4	Remove
385	<i>Acer negundo</i>	25,33,24	4	Poor	one stem fallen over, main stem nearly dead, extensive dieback	3	Remove
386	<i>Acer negundo</i>	10,12	2	Poor	poor form	1.8	Remove
387	<i>Acer negundo</i>	27	6	Poor	leaning over	1.8	Remove
388	<i>Malus sp</i>	16,16	5	Poor	poor form, branch dieback	1.8	Remove
389	<i>Malus sp</i>	18,23,15	6	Fair-Poor		2.4	Protect
390	<i>Ulmus pumila</i>	24,20,19	8	Fair-Good		2.4	Protect
391	<i>Acer negundo</i>	55	10	Fair-Poor	large branch stub, heavily pruned on one side	3.6	Remove
392	<i>Juglans regia</i>	37	8	Fair-Good	uneven crown	2.4	Remove
393	<i>Juglans regia</i>	37	8	Fair-Good	slight lean	2.4	Remove
394	<i>Picea pungens</i>	30	5	Fair-Good		2.4	Remove
395	<i>Pinus nigra</i>	24	6	Fair	Flat top	1.8	Remove
396	<i>Acer negundo</i>	17	3	Poor	against building, debris piled around tree	1.8	Remove
397	<i>Acer negundo</i>	17	3	Poor	against building, debris piled around tree	1.8	Remove
398	<i>Quercus macrocarpa</i>	12	3	Fair		1.8	Remove
399	<i>Juglans nigra</i>	13	3	Fair	vine in crown	1.8	Remove
400	<i>Juglans nigra</i>	25	6	Good		1.8	Remove
447	<i>Juglans nigra</i>	19	6	Good		1.8	Remove
448	<i>Juglans nigra</i>	18	6	Good		1.8	Remove
449	<i>Juglans nigra</i>	44	10	Good		3	Remove
450	<i>Juglans nigra</i>	12	3	Fair		1.8	Remove
451	<i>Juglans nigra</i>	31	8	Fair-Good	uneven crown	2.4	Remove

Tree #	Species	DBH (cm)	Crown (m)	Condition	Comments	TPZ	Recommendation
452	<i>Fraxinus americana</i>	20	1	Dead		-	Remove
453	<i>Juglans nigra</i>	10	3	Poor	stunted, covered in fine	1.8	Remove
454	<i>Fraxinus americana</i>	22	1	Dead		-	Remove
455	<i>Fraxinus americana</i>	14	1	Dead		-	Remove
456	<i>Acer negundo</i>	22	1	Poor	nearly dead	1.8	Remove
457	<i>Fraxinus americana</i>	22	1	Dead		-	Remove
458	<i>Ulmus americana</i>	16	4	Fair		1.8	Remove
459	<i>Acer negundo</i>	16	1	Dead		-	Remove
460	<i>Ulmus americana</i>	13	3	Fair		1.8	Remove
461	<i>Acer negundo</i>	15	3	Poor	poor form, dieback	1.8	Remove
462	<i>Acer negundo</i>	11	2	Fair-Poor		1.8	Remove
463	<i>Fraxinus americana</i>	30	1	Dead		-	Remove
464	<i>Acer negundo</i>	10,10	4	Fair		1.8	Remove
465	<i>Acer x freemanii</i>	39	8	Fair	cavity/decay in crotch, good vigour	2.4	Remove
466	<i>Juglans nigra</i>	15	4	Good	old wound in trunk	1.8	Remove
467	<i>Acer negundo</i>	38,50	10	Poor	knobby old trunk, large stub @ 2 m, dieback, broken branches, large hanging branch	4.2	Protect
468	<i>Juglans nigra</i>	22	6	Good		1.8	Remove
469	<i>Acer platanoides</i>	31	7	Good		2.4	Remove
470	<i>Crataeagus sp</i>	14,10,11	4	Fair		1.8	Protect
471	<i>Crataeagus sp</i>	14,13	4	Fair		1.8	Protect
472	<i>Crataeagus sp</i>	16,14	4	Fair		1.8	Protect
473	<i>Malus sp</i>	15,18	4	Fair-Poor	one stem dead	1.8	Protect
474	<i>Populus deltoides</i>	55	10	Fair	Branch dieback	3.6	Protect
475	<i>Juglans nigra</i>	20	6	Good	vine in crown	1.8	Protect
476	<i>Juglans nigra</i>	28	6	Good	vine in crown	1.8	Protect
477	<i>Acer negundo</i>	39	10	Fair	lean toward creek, uneven crown, broken branches	2.4	Protect
478	<i>Acer negundo</i>	40	10	Fair	sprawling, uneven form	3	Protect
479	<i>Acer negundo</i>	35	6	Fair-Poor	lean north, dieback	2.4	Protect
480	<i>Acer negundo</i>	35	6	Poor	split in crotch, one stem fallen over onto trailer along top of bank	2.4	Protect
481	<i>Acer negundo</i>	16	4	Poor	significant lean south	1.8	Protect
482	<i>Acer negundo</i>	10	2	Poor		1.8	Protect
483	<i>Acer negundo</i>	35,30	1	Dead	dead trunk fallen over onto tableland	-	Protect
484	<i>Acer negundo</i>	26,24,24	10	Poor	diverging stems, uneven crown, poor form	3	Protect
485	<i>Acer negundo</i>	20	5	Fair	uneven crown	1.8	Protect
486	<i>Acer negundo</i>	25	6	Poor	significant dieback	1.8	Protect
487	<i>Acer negundo</i>	20,20	8	Fair	down slope	2.4	Protect
488	<i>Acer negundo</i>	40	10	Fair	decayed stub at 2 m	3	Protect
489	<i>Acer negundo</i>	10	3	Fair	arching east	1.8	Protect

Tree #	Species	DBH (cm)	Crown (m)	Condition	Comments	TPZ	Recommendation
490	<i>Acer negundo</i>	6,8,10	4	Fair		1.8	Protect
491	<i>Acer negundo</i>	17	6	Fair-Poor	lean toward creek, dieback	1.8	Protect
492	<i>Acer negundo</i>	16	6	Fair	uneven crown	1.8	Protect
493	<i>Acer negundo</i>	16,18,15	8	Fair		2.4	Protect