

June 19, 2019 [Revised, October 14, 2022]

## ARBORIST REPORT

3171 Lakeshore Rd West (Cudmore's Nursery Site), Oakville, Ontario

MHBC File: 11161E

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### BACKGROUND

MHBC was retained to conduct a detailed tree assessment and arborist report for the existing trees within the boundaries of 3171 Lakeshore Rd West, in the Town of Oakville. Original field work was completed on April 20th, 2017 and follow up field reviews were completed in 2019, 2020 and 2022. A Tree Risk Assessment Survey was conducted by GreenPrint Consulting Arborists on April 11-13, 2022 with the final report being dated May 16<sup>th</sup>, 2022. This report shall be read in conjunction with this Tree Risk Assessment Survey.

### PROCEDURE

The on-site inventory of existing trees was carried out using the current survey of the property and relies on the accuracy of this survey. The inventory includes all trees within the site boundary, all trees within 6.0 metres of the site boundary and all Town owned trees along the adjacent boulevards.

This inventory is summarized graphically in the Tree Inventory Plan TI-1, which shall form part of this report and shall always be read in conjunction with this report. For the purposes of this report, trees and groupings of trees are identified by both common and botanical name and are evaluated in terms of size and condition per Town of Oakville standards. Comments and recommendations are provided based on our observations.

The following codes were used in describing the ownership of the trees inventoried:

- P Privately owned tree on subject property
- N Neighbour (privately) owned tree
- SN Shared ownership with neighbour (private)
- M Municipal tree on boulevard
- M1 Municipal / Public tree in park, open space, or naturalized area
- SM Shared ownership with Municipality / Public Agency

The following rating system was used in describing the general condition of the trees inventoried:

- Good: Indicates a condition of vigor and no major concerns.
- Fair: Indicates an adequate tree, which may have some minor issues.
- Poor: Indicates declining health, bad form, or other more serious issues.
- Dead: Indicates a dead tree that should be removed.

### ASSUMPTIONS AND LIMITING CONDITIONS

- Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible and is assumed to be correct; however MHBC can neither guarantee nor be responsible for the accuracy of information provided by others.
- It is assumed that the properties are not in violation of any applicable codes, ordinances, statutes, or other governmental regulations.
- Unless otherwise required by law, possession of this report or a copy thereof does not imply right of publication or use for any purpose in whole or in part by any other than the person or company by whom it was commissioned.
- The use of excerpts from this report or alterations to this report, without the authorization of MHBC Planning will invalidate the entire report. This report may not be used for any purpose other than its intended purpose as outlined.
- Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination or accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies in the plants inventoried may not arise in the future.
- The determination of ownership of any subject tree(s) is the responsibility of the owner and any civil or common-law issues, which may exist between property owners with respect to trees, must be resolved by the owner. The recommendation to remove or maintain any tree(s) does not grant authority to encroach in any manner onto adjacent private properties.

### SUMMARY OF TREES INVENTORIED

The following table summarizes our findings and comments. The trees shown with a tone are recommended for removal due to conflicts with the proposed development or due to condition.

Tree No.	Owner	Common Name	Botanical Name	DBH (CM)	Min. TPZ Radius (m)	Cond.	Structure	Canopy Diameter (m)	Comments	Recommendation
658	P	Austrian Pine	Pinus nigra	39	3	F/G	F	10		Remove
659	P	Col. Blue Spruce	Picea pungens	17	2.4	F/G	F/G	4	Competing for sunlight has led to crooked form.	Remove
660	P	Austrian Pine	Pinus nigra	38	3	F	F/G	7	Tree in decline.	Remove
661	P	Paper Birch	Betula papyrifera	49	3	F	F	14	Light amount of deadwood in canopy.	Remove
662	P	Black Walnut	Juglans nigra	53	3.6	F	F/G	14	Volunteer tree.	Remove
663	P	Black Walnut	Juglans nigra	68	4.2	F	F	15	Volunteer tree. Co-dominant stems.	Retain

664	P	Red oak	Quercus rubra	45	3	D	D	12	Heavy amounts of deadwood in canopy. Tree has been topped and is dead	Remove
665	P	White Ash	Fraxinus americana	31	3	F/P	F/G	10	Signs of EAB.	Remove
666	P	Littleleaf Linden	Tilia cordata	26	2.4	F/G	F/G	7		Remove
667	P	Chanticleer Pear	Pyrus calleryana	25	2.4	F/G	F/G	6		Remove
668	P	Sugar Maple	Acer saccharum	22	2.4	F/G	F/G	7		Remove
669	P	Norway Maple	Acer platanoides	57	3.6	F/P	F	15	Volunteer tree. Tree is in decline. Moderate to heavy amounts of deadwood in canopy. Root girdling evident	Remove
670	P	Norway Maple	Acer platanoides	21	2.4	F/G	F/G	7		Remove
671	P	Blue Ash	Fraxinus quadrangulata	42	3	F	F	14	Signs of EAB. Moderate deadwood in canopy.	Remove
672	P	Austrian Pine	Pinus nigra	42	3	F/G	F	11	Double leader.	Remove
673	P	Black Walnut	Juglans nigra	39	3	F	F	12	Volunteer tree. Exposed roots.	Remove
674	P	Red Oak	Quercus rubra	28	2.4	F/G	F/G	11		Remove
675	N	Norway Maple	Acer platanoides	41	3	F	F	14	Moderate to severe crown dieoff. Tree is in decline.	Retain
676	P	Norway Maple	Acer platanoides	44	3	F	F	16	Beginning signs of decline.	Retain
677	M	Norway Maple	Acer platanoides	75	4.8	F	F/P	18		Retain
678	M	Norway Maple	Acer platanoides	68	4.2	F	F/P	18	Moderate deadwood in canopy. Co-dominant leaders. Signs of internal rot.	Remove
679	M	White Spruce	Picea glauca	22	2.4	F	F/P	6	Tree has been topped in past.	Remove
680	M	White Spruce	Picea glauca	19	2.4	F	F	4		Retain
681	M	White Spruce	Picea glauca	26	2.4	F	F	5		Retain

682	M	White Spruce	<i>Picea glauca</i>	18	2.4	F	F	4	Past insect damage evident.	Retain
683	M	White Cedar	<i>Thuja occidentalis</i>	20	2.4	F	F	3	Trunk split; Healed over.	Retain
684	M	White Cedar	<i>Thuja occidentalis</i>	16	2.4	F	F	3	Trunk split; Healed over.	Retain
685	M	White Cedar	<i>Thuja occidentalis</i>	17	2.4	F	F/P	2	Trunk split; Healed over.	Remove
686	M	Scots Pine	<i>Pinus sylvestris</i>	28	2.4	F	F	6		Retain
687	M	Scots Pine	<i>Pinus sylvestris</i>	29	2.4	F	F	6		Retain
688	M	Silver Maple	<i>Acer saccharinum</i>	117	7.2	F	F/P	24	Moderate deadwood in canopy. Older growth tree. Evidence of branch breakage. Beginning stages of decline.	Retain
689	M	Sugar Maple	<i>Acer saccharum</i>	78	4.8	F	F	19	Shallow, girdled roots. Moderate deadwood in canopy. Water shoots present.	Retain
690	M	Norway Maple	<i>Acer platanoides</i>	32	3	F	F	14	Shallow exposed, girdled roots. Minor deadwood in canopy.	Remove
691	M	Norway Maple	<i>Acer platanoides</i>	63	4.2	F	F	18	Shallow exposed roots. Moderate deadwood in canopy. Showing girdling. Signs of crown dieoff. Tree is in decline.	Retain
692	M	Norway Maple	<i>Acer platanoides</i>	42	3	F	F	12		Retain
693	M	Norway Maple	<i>Acer platanoides</i>	52	3.6	F	F	18	Slight lean. Interfering with hydro lines. Moderate deadwood in canopy. Signs of crown dieoff. Beginning stages of decline.	Retain

694	M	White Oak	Quercus alba	16	2.4	F/G	F/G	8	Interfering with hydro lines.	Retain
695	M	Norway Maple	Acer platanoides	75	4.8	F	F	20	Shallow exposed, girdled roots. Minor deadwood in canopy.	Retain
696	M	Black Walnut	Juglans nigra	71	4.8	F	F/G	24		Retain
697	M	White Cedar	Thuja occidentalis	30	2.4	F	F/G	7		Retain
698	M	Black Walnut	Juglans nigra	67	4.2	F	F	20	Minor to moderate deadwood in canopy.	Retain
699	M	Silver Maple	Acer saccharinum	47	3	F/P	F/P	11	Tree is in decline. Evidence of rot in trunk. Moderate to heavy deadwood in canopy. Tree has been heavily pruned in past.	Retain
700	M	Manitoba Maple	Acer negundo	32	3	F/P	P	6	Moderate lean. Water shoots present.	Retain
906	P	Manitoba Maple	Acer negundo	23, 27, 62	4.2	p	P	22	Volunteer tree. 3 stems. 1 stem limb failure. Growing into fence.	Removed previously due to tree failure. Town issued permit
907	P	Manitoba Maple	Acer negundo	37	3	F	P	14	Volunteer tree. Moderate lean.	Retain
908	P	Manitoba Maple	Acer negundo	29	2.4	F	P	14	Volunteer tree. Moderate lean.	Retain
909	P	Grey Birch	Betula populifolia	38	3	D	P	12	Tree 100% dead	Remove
910	SN	Manitoba Maple	Acer negundo	30	2.4	p	P	12	Volunteer tree. Moderate lean. Poor form. Additional trunks cut away in past.	Retain

911	P	Manitoba Maple	Acer negundo	36	3	F	P	10	Volunteer tree. Moderate to heavy lean. Co-dominant stem removed.	Remove
912	P	Manitoba Maple	Acer negundo	25	2.4	P	F/P	8	Volunteer tree.	Retain
913	P	Manitoba Maple	Acer negundo	20	2.4	F	P	8	Volunteer tree. Moderate to heavy lean.	Remove
914	P	Manitoba Maple	Acer negundo	15	2.4	F	P	5	Volunteer tree. Dead co-dominant stem. Moderate lean	Retain
915	P	Manitoba Maple	Acer negundo	16	2.4	P	P	4	Volunteer tree. Signs of rot in trunk. Moderate to heavy lean.	Remove
916	P	Manitoba Maple	Acer negundo	18, 20	2.4	P	P	10	Volunteer tree. 2 stems with stems fused at center point. Included bark. Moderate lean. Failure in upper canopy	Remove
917	P	Manitoba Maple	Acer negundo	26	2.4	F	P	8	Volunteer tree. Moderate lean.	Retain
918	P	Manitoba Maple	Acer negundo	24	2.4	F	F/P	8	Volunteer tree. Slight lean. One branch requires pruning	Retain
919	P	Manitoba Maple	Acer negundo	30	2.4	F	F/P	10	Volunteer tree. Slight lean.	Retain
920	P	Manitoba Maple	Acer negundo	31	3	F	F/P	13	Volunteer tree.	Retain
921	P	Manitoba Maple	Acer negundo	20	2.4	P	P	7	Volunteer tree. In decline	Retain
922	P	Manitoba Maple	Acer negundo	50	3	P	F/P	23	Volunteer tree. Moderate deadwood in canopy. Signs of rot in main crotch. Some structural failures.	Retain
923	P	Manitoba Maple	Acer negundo	35	3	P	F/P	24	Volunteer tree. Moderate die-back in canopy	Retain

924	P	Manitoba Maple	Acer negundo	28	2.4	F	P	8	Volunteer tree. Moderate to heavy lean.	Tree has been removed prior to construction
925	P	Manitoba Maple	Acer negundo	29	2.4	P	P	9	Volunteer tree. Moderate lean. Cut co dominant stem.	Remove
926	P	Manitoba Maple	Acer negundo	40	3	F	P	12	Volunteer tree.	Retain
927	P	Manitoba Maple	Acer negundo	30	2.4	P	P	12	Volunteer tree. Significant lean. Moderate/Significant deadwood	Remove
928	P	Manitoba Maple	Acer negundo	39	3	P	P	14	Volunteer tree. Tree in decline. Significant deadwood in canopy. Major structural failures	Remove
929	P	Manitoba Maple	Acer negundo	27	2.4	P	F/P	8	Volunteer tree. Tree in decline. Moderate deadwood in canopy. Major structural failures from impact of Tree 928.	Remove
930	P	Manitoba Maple	Acer negundo	14, 22	2.4	F	F/P	7	Volunteer tree. Former 3 stem tree. 1 stem cut. Moderate deadwood in canopy. Tree is in decline.	Retain
931	P	Manitoba Maple	Acer negundo	16	2.4	P	P	6	Volunteer tree. Tree in decline. Water shoots evident. Moderate to heavy lean.	Remove
932	P	Manitoba Maple	Acer negundo	27	2.4	P	P	9	Volunteer tree. Tree in decline. Water shoots evident. Significant lean. Moderate deadwood	Remove
933	P	Manitoba Maple	Acer negundo	28	2.4	F	P	8	Volunteer tree. Mild to moderate lean.	Retain

934	P	Manitoba Maple	Acer negundo	36	3	F	F/P	12	Volunteer tree. Fruiting bodies	Retain
935	P	Manitoba Maple	Acer negundo	33	3	F	F/P	14	Volunteer tree. Moderate deadwood in canopy.	Retain
936	P	Manitoba Maple	Acer negundo	17	2.4	P	F/P	6	Tree in decline. Volunteer tree. Significant deadwood in canopy. Water shoots present. Main leader dead.	Remove
937	P	Manitoba Maple	Acer negundo	30	2.4	P	F/P	12	Volunteer tree. Moderate to severe deadwood in canopy. Tree in decline.	Retain
938	P	Manitoba Maple	Acer negundo	40	3	F	F/P	22	Volunteer tree. Moderate deadwood in canopy. One limb overhanging, to be pruned.	Retain
939	P	Manitoba Maple	Acer negundo	22	2.4	F	P	9	Volunteer tree. Moderate lean.	Retain
940	P	Manitoba Maple	Acer negundo	32	3	F	F/P	18	Volunteer tree. Moderate deadwood in canopy.	Retain
941	P	Manitoba Maple	Acer negundo	17	2.4	P	F/P	5	Volunteer tree. Moderate to heavy deadwood in canopy. Signs of internal rot. Significant lean.	Remove
942	P	Manitoba Maple	Acer negundo	30	2.4	F	F/P	16	Volunteer tree. Moderate deadwood in canopy.	Retain
943	P	Manitoba Maple	Acer negundo	15	2.4	F	P	3	Moderate to heavy deadwood in canopy.	Retain
944	P	Manitoba Maple	Acer negundo	30	2.4	F	F/P	19	Minor deadwood in canopy.	Retain



945	P	Manitoba Maple	Acer negundo	26	2.4	F	P	16	Moderate deadwood in canopy.	Retain
946	P	Manitoba Maple	Acer negundo	20	2.4	F	P	14	Tree in decline. Moderate to heavy deadwood in canopy.	Retain
947	P	Manitoba Maple	Acer negundo	20	2.4	F	P	10	Tree in decline. Moderate to heavy deadwood in canopy. Slight to moderate lean.	Retain
948	P	Manitoba Maple	Acer negundo	30	2.4	P	P	18	Slight to moderate lean.	Remove
949	P	Manitoba Maple	Acer negundo	37	3	P	P	20	Moderate to heavy deadwood in canopy.	Retain
950	P	Manitoba Maple	Acer negundo	35	3	P	P	22	Moderate to heavy deadwood in canopy. Significant overhang, requires pruning	Remove
951	P	Manitoba Maple	Acer negundo	23, 22	2.4	P	P	20	Tree in decline. Moderate to heavy deadwood in canopy. 2 stems. May cause future issues.	Remove
952	P	Manitoba Maple	Acer negundo	24	2.4	D	D	12	Tree in severe decline. Significant deadwood in canopy. Major structural failure/dead	Remove
953	P	Manitoba Maple	Acer negundo	30	2.4	P	P	22	Moderate deadwood in canopy. Potential issues resulting from overhang	Remove

954	P	Manitoba Maple	Acer negundo	27, 38	3	P	P	25	2 stems. Larger stem is in F condition- smaller stem is in F/P with signs of decline. Potential overhang issue on one stem. Moderate/significant deadwood.	Remove
955	P	Austrian Pine	Pinus nigra	25	2.4	F	F/P	10	Moderate lean.	Remove
956	P	Austrian Pine	Pinus nigra	25	2.4	F	F	8		Remove
957	P	Colorado Spruce	Picea pungens	19	2.4	F/G	F/G	6		Remove
958	P	Scots Pine	Pinus sylvestris	21	2.4	F	F	8	Insect infestation.	Remove
959	P	Colorado Spruce	Picea pungens	17	2.4	F/G	F/G	5		Remove
960	M	Black Walnut	Juglans nigra	74	4.8	F	P	19	Cavity in trunk. Minor to moderate deadwood in canopy. Signs of rot extending through main trunk into upper canopy. Structural limb failure.	Retain
961	P	Black Walnut	Juglans nigra	66	4.2	F	F	24	Minor to moderate deadwood in canopy.	Retain
962	P	Black Walnut	Juglans nigra	69	4.2	F	F	24	Minor to moderate deadwood in canopy.	Retain
963	M	Silver Maple	Acer saccharinum	91	6	F/P	F/P	21	Tree is in decline. Moderate deadwood in canopy. Very heavily limbed over time.	Retain
964	M	Black Walnut	Juglans nigra	67	4.2	F	F	25	Minor to moderate deadwood in canopy.	Retain
O1	M	Norway Maple	Acer platanoides	60	3.6	F/G	F	12	Off property. Near 659.	Retain
O2	M	Black Walnut	Juglans nigra	70	4.2	F	F	25	Off property. Near 964. Minor deadwood in canopy.	Retain

O3	N	Paper Birch	Betula papyrifera	20	2.4	F/P	F/P	9	5-stem clump. Tree is in decline. 3/5 stems showing stress.	Retain
O4	N	Oak sp.	Quercus sp.	65	4.2	F	F	20	Moderate deadwood in canopy.	Retain
O5	M	Manitoba Maple	Acer negundo	30	2.4	F	F/P	15	Moderate deadwood in canopy.	Retain

### TREE APPRAISAL

The following tree appraisal was conducted on all municipally owned trees surrounding the subject property.

Tree #	Botanical Name	DBH (cm)	Condition Rating	Species Rating	Location Rating	Replacement Tree Size (Trunk Area cm <sup>2</sup> )	Replacement Tree Cost	Installation Cost	Installed Tree Cost	Unit Tree Cost	Appraised Trunk Area (cm <sup>2</sup> )	Appraised Trunk Area Increase (cm <sup>2</sup> )	Basic Tree Cost	Appraised Value
664	Quercus Rubra	45	0%	81	75%	78.54	\$325.00	487.5	812.5	6.51	1589.625	1511.085	\$10,649.66	\$0.00
677	Acer platanoides	75	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	4415.625	4337.085	\$29,046.92	\$10,369.75
678	Acer platanoides	68	60%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	3629.84	3551.3	\$24,442.76	\$7,479.48
679	Picea glauca	22	60%	72%	75%	78.54	\$300.00	450	750	6.51	379.94	301.4	\$3,223.41	\$1,044.38
680	Picea glauca	19	70%	72%	75%	78.54	\$300.00	450	750	6.51	283.385	204.845	\$2,594.84	\$980.85
681	Picea glauca	26	70%	72%	75%	78.54	\$300.00	450	750	6.51	530.66	452.12	\$4,204.60	\$1,589.34
682	Picea glauca	18	70%	72%	75%	78.54	\$300.00	450	750	6.51	254.34	175.8	\$2,405.75	\$909.37
683	Thuja occidentalis	20	70%	70%	75%	78.54	\$300.00	450	750	6.51	314	235.46	\$2,794.14	\$1,026.85
684	Thuja occidentalis	16	70%	70%	75%	78.54	\$300.00	450	750	6.51	200.96	122.42	\$2,058.25	\$756.41
685	Thuja occidentalis	17	60%	70%	75%	78.54	\$300.00	450	750	6.51	226.865	148.325	\$2,226.89	\$701.47
686	Pinus sylvestris	28	70%	53%	75%	78.54	\$300.00	450	750	6.51	615.44	536.9	\$4,756.51	\$1,323.50
687	Pinus sylvestris	29	70%	53%	75%	78.54	\$300.00	450	750	6.51	660.185	581.645	\$5,047.80	\$1,404.55
688	Acer saccharinum	117	70%	60%	75%	78.54	\$325.00	487.5	812.5	6.51	10745.865	10667.325	\$70,768.08	\$22,291.95
689	Acer saccharinum	78	70%	60%	75%	78.54	\$325.00	487.5	812.5	6.51	4775.94	4697.4	\$31,903.87	\$10,049.72
690	Acer platanoides	32	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	803.84	725.3	\$6,045.50	\$2,158.24
691	Acer platanoides	63	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	3115.665	3037.125	\$21,095.48	\$7,531.09
692	Acer platanoides	42	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	1384.74	1306.2	\$9,827.16	\$3,508.30
693	Acer platanoides	52	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	2122.64	2044.1	\$14,630.89	\$5,223.23

694	Quercus alba	16	80%	79%	75%	78.54	\$325.00	487.5	812.5	6.51	200.96	122.42	\$2,120.75	\$1,005.24
695	Acer platanoides	75	70%	68%	75%	78.54	\$325.00	487.5	812.5	6.51	4415.625	4337.085	\$29,558.22	\$10,552.28
696	Juglan nigra	71	70%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	3957.185	3878.645	\$26,573.77	\$9,347.33
697	Thuja occidentalis	30	70%	70%	75%	78.54	\$300.00	450	750	6.51	706.5	627.96	\$5,349.32	\$1,965.87
698	Juglan nigra	67	70%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	3523.865	3445.325	\$23,752.86	\$8,355.07
699	Acer saccharinum	47	50%	60%	75%	78.54	\$325.00	487.5	812.5	6.51	1734.065	1655.525	\$12,101.26	\$2,722.78
700	Acer negundo	32	50%	38%	75%	78.54	\$325.00	487.5	812.5	6.51	803.84	725.3	\$6,045.50	\$861.48
960	Juglan nigra	74	70%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	4298.66	4220.12	\$28,796.78	\$10,129.27
961	Juglan nigra	66	80%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	3419.46	3340.92	\$23,073.18	\$9,275.42
962	Juglan nigra	69	80%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	3737.385	3658.845	\$25,142.88	\$10,107.44
963	Acer saccharinum	91	85%	60%	75%	78.54	\$325.00	487.5	812.5	6.51	6500.585	6422.045	\$43,131.31	\$16,497.73
964	Juglan nigra	67	80%	67%	75%	78.54	\$325.00	487.5	812.5	6.51	3523.865	3445.325	\$23,752.86	\$9,548.65
												Total to be Removed		\$11,383.58

## PHOTO RECORD



Trees 658, 659, O1 looking South West.



Trees 907 through 911 looking West.



Trees 911 through 939, 955 through 959 looking North West.



Tree 660 looking North.



Trees 665 through 667 looking South.



Trees 950 through 959, 661 looking South West.





Trees 943 through 947 looking North East.



Trees 668 through 670 looking East.



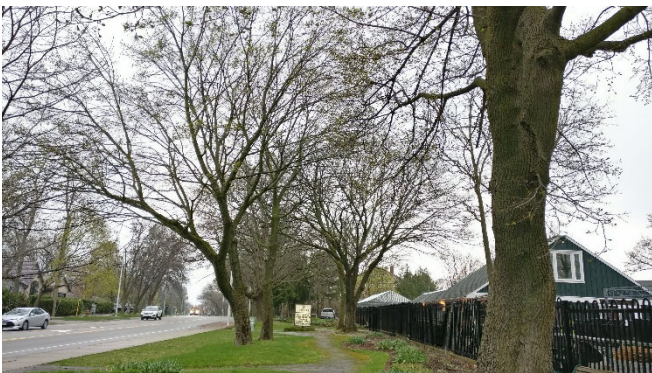
Trees 960 through 964, 697 through 700, 664 looking East.



Trees 949 through 954 looking South.



Trees 697 through 700, 960 through 964, 664 looking West.



Trees 695 through 690 looking South.



## TREE PROTECTION MEASURES

The following tree protection measures shall be undertaken and are shown on the accompanying Tree Protection Plan 2/TI-2. All tree protection measures cited for retained trees must comply with the Town of Oakville EN-TRE-001 Tree Protection Policy and Tree Protection During Construction specifications noted under procedure number EN-TRE-001-001 (as updated from time to time). Any variation from the standard tree protection must be approved by Development Services, Urban Forestry Coordinator.

### 1.0 ESTABLISH A TREE PROTECTION ZONE

The purpose of the tree protection zone is to prevent root damage, soil compaction and soil contamination during construction activities. Workers and machinery shall not disturb the tree protection zone in any way. In order to prevent access, the following directives are offered.

- Install tree protection hoarding as per Town of Oakville detail 2/TI-2. Trees to be retained shall be protected with a tree protection barrier which shall consist of a 3/8" thick, 8'x4' (1.2m or 4 ft. high) plywood hoarding. Within a Town road allowance or when visibility is a consideration, the barrier shall consist of a 1.2 meter (4 ft.) high orange plastic snow fence on 2" x 4" frame.
- Attach a filter cloth 600mm high to the construction side of the hoarding to act as sediment control. Sediment control fencing per OPSD-219.110, and installed to the satisfaction of Urban Forestry.
- All supports and bracing used to safely secure the barrier should be located outside the Tree Protection Zone (TPZ). All supports and bracing should minimize damage to roots.
- The fence is to be installed along the edge of the tree protection zones. This hoarding is to remain in place and remain in good condition throughout the entire duration of the project. Dismantling the tree protection barrier prior to approval by the Town of Oakville, Urban Forestry staff may constitute a contravention to the Town of Oakville bylaw or permit issue.
- The applicant shall notify the Town of Oakville and the Consulting Arborist to confirm that the tree protection barriers are in place.
- A **TREE PROTECTION ZONE** sign must be mounted on one side of the tree protection barrier for the duration of site construction. The sign should be a minimum of 40cm x 60cm and made of white gator board or equivalent material. The sign must contain the same notes and be similar to the illustration shown below.

### **TREE PROTECTION ZONE (TPZ)**

No grade change, storage of materials or equipment is permitted within this area. Tree protection barrier must not be removed without the written authorization of the Town of Oakville.

Report any contraventions to

**Contact Name** \_\_\_\_\_ **Tel. No.** \_\_\_\_\_

Unauthorized removal of the tree protection barrier or other contraventions may result in prosecution.

- Where some fill or excavated material must be temporarily located near a TPZ, a wooden barrier must be used to ensure no material enters the TPZ. Allow no fill, equipment, supplies, or waste within the tree protection zone.
- Remove any garbage and foreign debris from the tree protection zones.
- All contractors shall be informed of the tree preservation and protection measures at a pre-construction meeting.

## **2.0 ROOT PRUNING**

Where possible, and in particular within the Tree Protection Zone for municipally owned trees along Lakeshore Road West, hand dig areas closest to each tree to prevent any unnecessary tearing or pulling of roots. Removal of roots that are greater than 2.5 centimeters in diameter or roots that are injured or diseased should be performed as follows:

- Preserve the root bark ridge (similar in structure to the branch bark ridge). Directional Root Pruning (DRP) is the recommended technique and should be employed during hand excavation around tree roots. Roots are similar to branches in their response to pruning practices. With DRP, objectionable and severely injured roots are properly cut to a lateral root that is growing downward or in a favorable direction.
- All roots needing to be pruned or removed shall be cut cleanly with sharp hand tools, by a Certified Arborist.
- No wound dressings or pruning paint shall be used to cover the ends of each cut.
- All roots requiring pruning shall be cut using any of the following tools:  
Large or small loppers, Hand pruners, Small hand saws, Wound scribes
- Avoid prolonged exposure of tree roots during construction - keep exposed roots moist and dampened with mulching materials, irrigation or wrap in burlap if exposed for longer than 4 hours.

## **3.0 FERTILIZATION AND IRRIGATION**

The following measures are recommended:

- Aeration and deep root fertilize to ensure that all trees receive the appropriate nutrients for healthy growth.
- Fertilizer must be a low nitrogen formula such as 5-30-30 to promote root growth rather than shoot growth.
- If construction occurs during July and / or August, roots must be irrigated during conditions of drought.

## **4.0 ESTABLISH MAINTENANCE PROGRAM**

### **Pre-Construction:**

- Prune all trees to remove any deadwood and obstruction prune as required.

### **During Construction:**

- All areas within the protective hoarding shall remain undisturbed for the duration of construction. There will be no grade changes, dumping, and storage of any materials, structures or equipment within these areas. The tree protection barrier must not be removed without written authorization of the Town of Oakville.
- Minor grading works will be permitted at the edge of the preservation zone as required to correct localized depressions adjacent to the new development, and for hand-digging of swales for minor

grading through TPZ's of trees as shown on the approved Tree Protection Plan. This work to be undertaken under the direct supervision of a Certified Arborist.

- All underground services and utilities should be routed around tree protection zones (TPZ's). If this is not possible, they should utilize directional underground boring / tunneling under the root zones of trees (minimum 1.6m depth). All service and utility connections and disconnections / decommissioning must be made outside of the TPZ's of trees to prevent significant root damage from occurring.
- A qualified Arborist will undertake proper root pruning in accordance with acceptable arboriculture practices when and if roots of retained trees are to be exposed, damaged, or severed by construction work. The exposed roots will be backfilled with appropriate material as soon as possible to prevent desiccation. Root pruning prior to excavation will help prevent unnecessary damage to tree roots. The use of low-water pressure Hydrovac technology or careful hand digging to expose roots is recommended.
- The Town of Oakville and the designated on-site Certified Arborist must be notified for all work that impacts the tree preservation zones or for temporary removal of a section of hoarding to gain access for fine grading or other works. All works to be supervised by the Town of Oakville and/or on-site Certified Arborist.
- No cables, wire or ropes of any kind shall be wrapped around or installed in trees to be preserved.
- No contaminants will be dumped or flushed in the TPZ areas or where feeder roots of trees exist (generally beyond the TPZ areas).
- Inspect the site daily to ensure hoarding is in place and in good condition. Inspect trees to monitor condition.

#### **Post Construction:**

- Following the completion of all site works, and after review by a Certified Arborist and approval by the Town of Oakville Urban Forestry staff, the protective hoarding may be removed.
- After removal of the protective hoarding, the tree protection areas shall be inspected by a Certified Arborist and Town of Oakville Urban Forestry staff. Any remaining dead, diseased, or hazardous limbs or trees are to be removed by a qualified tree care professional as directed by a Certified Arborist.
- Inspect trees two times per year, May and September to monitor condition for a minimum of two years.

#### **5.0 LANDSCAPING**

Any landscaping completed within the tree preservation zones, after construction is completed and tree protection fencing / hoarding has been removed, is to be carried out in such a way that it will not cause damage to any of the trees or their roots. The trees must be protected to the same standards listed earlier in this report, but without the use of tree protection fence or hoarding.

The following guidelines are recommended:

- **No grade changes** are permitted which include adding and/or removing soil.
- **No excavation** is permitted that can cause damage to the roots of the tree.
- **No heavy equipment** can be used to compact the soil within the tree protection zone.

- Where possible, hard surface paving around trees to be protected should be constructed using permeable products such as interlocking stone. Areas to be paved must be hand dug when encroaching within the tree protection zone.

## CONCLUSIONS

Based on our detailed review of the existing trees on the subject site and our evaluation of same with respect to the lotting pattern for the proposed development, we offer several observations and conclusions, with notable trees and groupings being referenced.

With respect to this proposal, trees that come into conflict with the proposed development are recommended for removal. This includes tree numbers 658-662, 665-674, 678-679, 685, 690, 911, 913, 929, and 955-959. In addition, there are a number of trees that are recommended for removal due to their current state of health. These are 664, 909, 915-916, 925-928, 931-932, 936, 941, 948, and 950-954. Trees 906 and 924 were previously removed prior to construction and had received permit for their removal. For ease of reference, these are identified with a dark grey tone on the corresponding identification keys and on the Tree Inventory List on drawings TI-1 and TI-2.

All other trees noted are to be retained. In retaining these trees, a number of methods are recommended in order to minimize damage to roots, particularly when working near or within the prescribed Tree Protection Zones. Considerations should include: hand digging or the use of low pressure hydrovac / air spade to minimize root damage; the use of structural soil and granite based HPB type granular to reduce compaction; and the use of alternative materials such as larger permeable pavers which will minimize point loads and disperse weight over a larger area. A design to address each of the trees specifically will need to be developed during the detailed design phase.

It is our opinion that the trees identified for retention can be successfully retained if the recommendations contained herein are followed. The trees along the Lakeshore Road West boulevard will require site specific details and recommendations for their protection. As requested by the Town of Oakville, root exploration will be required (through low pressure hydrovac or air spade method), after which site specific recommendations can be made for these trees.

Kindly direct any questions regarding this report to the undersigned.

Respectfully submitted,  
**MHBC Planning, Urban Design & Landscape Architecture**

Nick A. Miele BLA, OALA, CSLA, ISA  
Partner  
ISA Certified Arborist No. ON-1251A

