

March 01, 2021 *[Revised July 7, 2022]*
ARBORIST REPORT
7449 Montrose Road, Niagara Falls, Ontario

BACKGROUND

MHBC was retained to conduct an inventory of the existing trees within the subject lands located at 7449 Montrose Road, located within the City of Niagara Falls. This investigation examined approximately 137 trees within and around the subject lands. Field work was completed on January 5, 2021, this report relates to the condition of the trees as observed on that date.

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 trees within the site boundary and all trees within adjacent public boulevard.

This inventory is summarized graphically in the Tree Inventory Plan TI-1 and TI-2, which shall always be read in conjunction with this report and shall form part of this report. For the purposes of this report, trees and groupings of trees are identified in terms of species, size, condition, and recommendations.

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

Good (G): Indicates a condition of vigour and no major concerns;
Fair (F): Indicates an adequate tree, which may have some minor issues;
Poor (P): Indicates declining health, bad form, or other more serious issues;
Dead (D): 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 the on-site trees. The trees shown with a tone are recommended for removal due to conflicts with the proposed works.

Tree #	Common Name	Botanical Name	DBH (CM)	Condition	Comments	Recommendation
135	White Oak	Quercus alba	57	F	2 Stem, co-dominant at base with included bark, signs of urban stress, epicormic throughout	Remove due to construction
136	Red Oak	Quercus rubra	18	F		Remove due to construction
137	Red Oak	Quercus rubra	13	F		Remove due to construction
138	American Elm	Ulmus americana	16	F/G		Remove due to construction
139	White Oak	Quercus alba	85	F/P		Remove due to construction
140	Pin Oak	Quercus palustris	16	F/P	Broken leader, significant trunk damage	Remove due to construction
141	White Oak	Quercus alba	27	F	Mechanical damage at base	Remove due to construction
142	White Oak	Quercus alba	75	F	Moderate/significant deadwood in canopy	Remove due to construction
143	Red Oak	Quercus rubra	58	F	Moderate lean at crown	Remove due to construction
144	Red Oak	Quercus rubra	17	F	Co-dominant stems at base, 2 stem, mechanical damage at base	Remove due to construction
145	Poplar Sp.	Populus Sp.	23	F		Remove due to construction
146	Poplar Sp.	Populus Sp.	17	F	Broken leader	Remove due to construction
147	Poplar Sp.	Populus Sp.	22	F	Moderate lean, high canopy	Remove due to construction

148	Poplar Sp.	Populus Sp.	20	F	High canopy	Remove due to construction
149	Poplar Sp.	Populus Sp.	22	F	High canopy, mechanical damage at 1.5m above grade	Remove due to construction
150	American Elm	Ulmus americana	21	F/P		Remove due to construction
151	Red Oak	Quercus rubra	30	F	3 Stem at 0.6m above grade, poor union	Remove due to construction
152	Red Oak	Quercus rubra	34	F/G		Remove due to construction
153	American Elm	Ulmus americana	13	F	Entangled by vines	Remove due to construction
154	Bur Oak	Quercus macrocarpa	19	F	Entangled by vines	Remove due to construction
155	Red Oak	Quercus rubra	20	F	Signs of urban stress	Remove due to construction
156	Red Oak	Quercus rubra	39	F	High canopy	Remove due to construction
157	Red Oak	Quercus rubra	51	F	Oak galls on twigs	Remove due to construction
158	Red Oak	Quercus rubra	37	F	Oak galls on twigs	Remove due to construction
159	Red Oak	Quercus rubra	35	F	Co-dominant at 0.9m with included bark	Remove due to construction
160	Sugar Maple	Acer saccharum	15	F	4 Stems, poor form, poor unions	Remove due to construction
161	Red Oak	Quercus rubra	41	F	some signs of urban stress	Remove due to construction
162	Ash Sp.	Fraxinus Sp.	26	D	EAB, Standing dead	Remove due to construction
163	Red Oak	Quercus rubra	19	F	Oak galls on twigs	Remove due to construction
164	Red Oak	Quercus rubra	41	F/P	Co-dominant at 0.8 with included bark, multiple limb failures	Remove due to construction
165	Sugar Maple	Acer saccharum	20	F	3 Stem, poor union, co-dominant, multiple bark inclusions	Remove due to construction
166	Sugar Maple	Acer saccharum	13	F		Remove due to construction
167	White Oak	Quercus alba	65	F		Remove due to construction

168	Poplar Sp.	Populus Sp.	24	F/P	High canopy	Remove due to construction
169	Poplar Sp.	Populus Sp.	28	F		Remove due to construction
170	Ash Sp.	Fraxinus Sp.	24	D	Emerald Ash Borer (EAB)	Remove due to construction
171	Sugar Maple	Acer saccharum	26	F/G	2 Stem, co-dominant with included bark	Remove due to construction
172	Ash Sp.	Fraxinus Sp.	17	D	EAB	Remove due to construction
173	Red Oak	Quercus rubra	36	F		Remove due to construction
174	Ash Sp.	Fraxinus Sp.	19	D	EAB	Remove due to construction
175	Black Oak	Quercus velutina	33	F	Co-dominant shoot is dead, rot evident at base	Remove due to construction
176	Red Oak	Quercus rubra	21	F	Co-dominant at base	Remove due to construction
177	Sugar Maple	Acer saccharum	28	F	3 Stem, high canopy with multiple hangers	Remove due to construction
178	Red Oak	Quercus rubra	19	F	Oak galls present at twigs	Remove due to construction
179	Red Oak	Quercus rubra	29	F	Oak galls present at twigs	Remove due to construction
180	Red Oak	Quercus rubra	32	F		Remove due to construction
181	Red Oak	Quercus rubra	42	F		Remove due to construction
182	Ash Sp.	Fraxinus Sp.	31	D	EAB	Remove due to construction
183	Sugar Maple	Acer saccharum	21	F/G		Remove due to construction
184	Red Oak	Quercus rubra	40	F	Oak galls at twigs	Remove due to construction
185	Red Oak	Quercus rubra	17	F	Co-dominant at base, poor union	Remove due to construction
186	Red Oak	Quercus rubra	43	F	6 stems at base, moderate deadwood in canopy, exposed roots	Remove due to construction
187	Red Oak	Quercus rubra	27	D	3 stem, EAB	Remove due to construction

188	Ash Sp.	Fraxinus Sp.	19	F		Remove due to construction
189	Shagbark Hickory	Carya Ovata	17	F		Remove due to construction
190	Sugar Maple	Acer saccharum	25	F	Co-dominant at 0.9m with included bark, Rot evident	Remove due to construction
191	White Oak	Quercus alba	29	F	Co-dominant stem is dead	Remove due to construction
192	White Oak	Quercus alba	40	F	Co-dominant shoot at 1.2m	Remove due to construction
193	Red Oak	Quercus rubra	23	F	Significant bow at upper canopy	Remove due to construction
194	Ash Sp.	Fraxinus Sp.	21	D	EAB	Remove due to construction
195	Sugar Maple	Acer saccharum	20	F/P	Significant rot noted in main trunk	Remove due to construction
196	Red Oak	Quercus rubra	55	F		Remove due to construction
197	Red Oak	Quercus rubra	2	F		Remove due to construction
198	Red Oak	Quercus rubra	57	F		Remove due to construction
199	Red Oak	Quercus rubra	50	F		Remove due to construction
200	Red Oak	Quercus rubra	35	F		Remove due to construction
201	Red Oak	Quercus rubra	21	F/G		Remove due to construction
202	Ash Sp.	Fraxinus Sp.	35	D	EAB	Remove due to construction
203	Red Oak	Quercus rubra	14	F	Oak galls at twigs	Remove due to construction
204	Red Oak	Quercus rubra	29	F		Remove due to construction
205	Red Oak	Quercus rubra	25	F	Oak galls at twigs	Remove due to construction
206	American Elm	Ulmus americana	16	F		Remove due to construction
207	White Oak	Quercus alba	28	F		Remove due to construction
208	Red Oak	Quercus rubra	49	F		Remove due to construction

209	Shagbark Hickory	Carya Ovata	23	F		Remove due to construction
210	Shagbark Hickory	Carya Ovata	22	F		Remove due to construction
211	Red Oak	Quercus rubra	30	F		Remove due to construction
212	Shagbark Hickory	Carya Ovata	25	F		Remove due to construction
213	American Elm	Ulmus americana	14	F		Remove due to construction
214	Red Oak	Quercus rubra	37	F		Remove due to construction
215	Red Oak	Quercus rubra	44	F		Remove due to construction
216	Red Oak	Quercus rubra	18	F		Remove due to construction
217	American Elm	Ulmus americana	35	F	Co-dominant shoot at base	Remove due to construction
218	Red Oak	Quercus rubra	74	F	Co-dominant at 1.5m with included bark	Remove due to construction
219	Sugar Maple	Acer saccharum	27	F		Remove due to construction
220	White Oak	Quercus alba	29	F		Remove due to construction
221	American Elm	Ulmus americana	15	F		Remove due to construction
222	Sugar Maple	Acer saccharum	30	F	2 Stems, co-dominant at base	Remove due to construction
223	Red Oak	Quercus rubra	30	F		Remove due to construction
224	Ash Sp.	Fraxinus Sp.	26	D	EAB	Remove due to construction
225	Red Oak	Quercus rubra	57	F		Remove due to construction
226	Red Oak	Quercus rubra	25	F	Oak galls at twigs	Remove due to construction
227	Red Oak	Quercus rubra	27	F	Oak galls at twigs	Remove due to construction
228	Red Oak	Quercus rubra	30	F		Remove due to construction
229	American Elm	Ulmus americana	24	F		Remove due to construction

230	American Elm	Ulmus americana	15	F	Co-dominant at base	Remove due to construction
231	American Elm	Ulmus americana	12	P		Remove due to construction
232	Red Oak	Quercus rubra	42	F/G		Remove due to construction
233	Sugar Maple	Acer saccharum	21	F/G		Remove due to construction
234	Red Oak	Quercus rubra	33	F	Forked leader, oak galls at twig	Remove due to construction
235	Red Oak	Quercus rubra	38	F	Forked leader, oak galls at twig	Remove due to construction
236	Pin Oak	Quercus palustris	49	F/G		Remove due to construction
237	Sugar Maple	Acer saccharum	15	F	Co-dominant at 0.6m, mechanical damage at trunk	Remove due to construction
238	American Elm	Ulmus americana	13	F/P		Remove due to construction
239	Red Oak	Quercus rubra	40	F	Oak galls at twigs	Remove due to construction
240	White Oak	Quercus alba	37	F		Remove due to construction
241	Red Oak	Quercus rubra	26	P	Rot and past failures evident	Remove due to construction
242	Red Oak	Quercus rubra	37	F	Oak galls at twigs	Remove due to construction
243	Sugar Maple	Acer saccharum	57	F/P	4 stems at 0.9m moderate/significant deadwood in canopy	Remove due to construction
244	Red Oak	Quercus rubra	50	F		Remove due to construction
245	Sugar Maple	Acer saccharum	32	F	Mechanical damage at base, evidence of rot	Remove due to construction
246	Red Oak	Quercus rubra	38	F		Remove due to construction
247	Red Oak	Quercus rubra	43	F	2 stem, co-dominant at base	Remove due to construction
248	American Elm	Ulmus americana	23	F		Remove due to construction
249	Red Oak	Quercus rubra	40	F		Remove due to construction

250	Red Oak	Quercus rubra	54	F		Remove due to construction
251	American Elm	Ulmus americana	17	F	3 Stems at 0.4m, poor form	Remove due to construction
252	Shagbark Hickory	Carya Ovata	29	F		Remove due to construction
253	Red Oak	Quercus rubra	63	F		Remove due to construction
254	Red Oak	Quercus rubra	32	F	Co-dominant at 0.9m with included bark developing	Remove due to construction
255	American Elm	Ulmus americana	33	F	3 Stem at base	Remove due to construction
256	Red Oak	Quercus rubra	50	F		Remove due to construction
257	Red Oak	Quercus rubra	23	F	Mech damage at 1.8m	Remove due to construction
258	Red Oak	Quercus rubra	34	F		Remove due to construction
259	Red Oak	Quercus rubra	56	F/P	Signs of urban stress	Remove due to construction
260	Honey Locust	Gleditsia triacanthos	11	F/G		Remove due to construction
261	Stump	#N/A	-	D		Remove due to condition
262	Little leaf Linden	Tilia cordata	10	F/G		Retain
263	Little leaf Linden	Tilia cordata	11	F		Retain
264	Fir Sp.	Abies Sp.	8	F	Broken leader	Retain
265	Fir Sp.	Abies Sp.	10	F		Retain
266	Fir Sp.	Abies Sp.	10	F		Retain
267	Little leaf Linden	Tilia cordata	13	F/G		Retain
268	Little leaf Linden	Tilia cordata	11	F	Forked Leaders	Retain
269	Little leaf Linden	Tilia cordata	13	F/G		Retain
270	Little leaf Linden	Tilia cordata	7	F		Retain
271	Little leaf Linden	Tilia cordata	12	F/G		Retain

TREE PROTECTION RECOMMENDATIONS

The following standards shall apply to any trees that are identified to be retained. Where the municipality enforces its own standards, those of the governing municipality shall supersede the recommendations contained herein. In all other instances, the following recommendations shall be treated as minimum standards for tree protection and retention.

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 recommendations are offered.

- Install tree protection hoarding as per detail 1 / TI-2.
- Allow no fill, equipment, supplies, or waste within the tree protection zone.
- Maintain the tree protection hoarding in good condition for the duration of construction.
- Tree protection hoarding is not to be removed until all construction activities have been completed.

2.0 ROOT PRUNING

Where possible, 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 centimetres 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, Woundscribers
- 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:

- Irrigate tree preservation zones during drought conditions (June through September), in an attempt to reduce the effects of drought stress.
- Inspect the site every month to ensure that all tree protection fence / hoarding is in place and in good condition, inspect the trees to monitor condition.

Post-Construction:

- Prune crowns to remove any newly developed deadwood only. Do not remove any live growth.
- Inspect the trees three times per year (May, July, and September) to monitor condition for a minimum period of 2 additional 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 preservation 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

After conducting the site investigation, we believe that trees #135-261, 265-267, and 270-271 should be removed due to their conflict with the proposed development and or state of health. All other trees identified for retention can be successfully retained if the recommendations contained herein are followed. Special care shall be taken when working within or near the tree protection zones of trees that are to be retained. Where applicable, permit applications are to be submitted to the City of Niagara Falls pursuant to the relevant Tree By-laws and permits shall be in hand prior to any removals.

Kindly direct any questions regarding this report to the undersigned.

Respectfully submitted,

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