

TECHNICAL NOTE

RECIPIENT: Ryan MacDougall, Uniform Urban Developments Ltd.

SENDER: Casey Little, Biologist, CIMA+

DATE: December 7, 2022

SUBJECT: Tree Conservation Report – 4386 Rideau Valley Drive, Ottawa, ON K4M 0E2

CIMA+ file number: A001244C

1. Introduction

1.1 Objective

CIMA+ has been retained by Uniform Urban Developments Ltd. to prepare a Tree Conservation Report (TCR) for the planned development located at 4386 Rideau Valley Drive, Ottawa, ON K4M 0E2. This report follows the *City of Ottawa Tree Conservation Report Guidelines* (City of Ottawa, 2021). The field work was completed by Casey Little who has an Ecosystems Management Diploma and has 16 years of experience completing natural environment assessments, including tree inventories. Ms. Little is also a certified Butternut Health Assessor (#530) and is trained and certified in Ecological Land Classification (ELC) for Southern Ontario, and Ontario Wetland Evaluation System (OWES). CIMA+ was also retained to complete an Environmental Impact Statement (EIS) for this project and this memo will form part of that report. The EIS was completed by Michelle Lavictoire who has a M.Sc. in Natural Resource Sciences, a B.Sc. in Wildlife Biology and over 25 years of experience in completing natural environment assessments.

Uniform Urban Developments Ltd. is proposing to build a residential subdivision at the corner of Rideau Valley Drive and Bankfield Road. The subdivision would be bordered by Mud Creek, Wilson Cowan Municipal Drain, Rideau Valley Drive and Bankfield Road. The EIS being completed by CIMA+ for this project will confirm the appropriate setback from the two watercourse features and address any other natural heritage features (including species at risk). The proposed subdivision will consist of a combination of single, semi and town units and it will be fully serviced.

The intention of this TCR is to determine what woody vegetation should be retained and protected on the site. In the paragraphs below, we have outlined the background and project description, field methodology and findings and recommendations. With respect to natural elements, these will be included solely within the EIS (i.e., Rural Natural Features, Significant Woodlands, Species at Risk and their Habitat). Any mitigation measures included herein are specifically with respect to individual trees to be retained and or injured, and these will also be included in the main body of the EIS.

2. Limitations

The assessment presented in this report has been made using accepted standard arboriculture techniques as outlined in the Council of Tree and Landscape Appraisers Guide for Plant Appraisal, 10th Edition, Second Printing (2019). These techniques include visual examination of above-ground parts of each tree or trees in each group. The trees observed were not climbed, cored, or dissected, and excavation for detailed root crown inspection was not performed. Since some symptoms may only be present seasonally, the extent of observations that can be made may be limited by the time of year in which the inspection took place.

Since trees are living organisms, their health and vigour continually change over time due to seasonal variations, changes in site conditions, and other factors. For this reason, the assessment presented in this report is valid at the time of inspection, and no guarantee is made about the continued health of trees that are deemed to be in good condition. It is recommended that the trees be reassessed periodically to identify changes in condition. While every standing tree has the potential for failure and therefore poses some risk, a tree assessment is a good indication of present health and potential problems that could arise in the future.

CIMA+ has prepared this report for the sole use of the client. Any use of this report by a third party, as any decision based on this report, is the singular responsibility of the third party. CIMA+ will not be held responsible for eventual damages towards a third party resulting from decisions taken, or based, on this report.

3. Methodology

The tree inventory was undertaken on June 8, and August 18, 2022. Trees were numbered, identified, measured, and assessed for condition. Information collected on the individual trees included:

- Their location (GPS coordinates, NAD83);
- Identified to species for native specimens;
- Diameter at breast height (DBH);
- Height; and
- Health.

The assessment methodology is outlined in the sections below. The tree inventory tables containing this information are included in **Appendix A** along with the locations of the individual trees are shown on Maps 1 and 2.

Nomenclature used in this report follows the Southern Ontario Plant List (Bradley, 2007) for both common and scientific names which are based on Newmaster et al. (1998). Authorities for scientific names are given in Newmaster et al. (1998).

3.1 Tree Size

Size refers to trunk diameter at breast height (DBH or caliper) measured in centimetres at 1.4 m above the ground. Where trees had more than one trunk from the base, the size of each trunk



was recorded. Where trees forked to codominant trunks, each trunk was measured, or the diameter was measured at the narrowest point below the fork.

3.2 Observations

Several structural defects and health problems are included in the Tree Inventory and Assessment Table (**Appendix A**). The following is an explanation of the short forms used in the table:

- DB Dieback
- SMD Small dead branches
- CA Cavity
- FC Frost cracking
- EXR Exposed surface roots
- GR Girdling roots
- EAB Emerald Ash Borer
- MEC Mechanical Damage
- SUP Suppressed trees

These observations as well as other notable observations are defined in **Appendix B**.

3.3 Tree Condition

Each tree was given a subjective rating for trunk integrity, canopy structure, crown vigour, and an overall health condition rating of: Excellent, Good, Fair, Poor, or Dead. The following is a summary of how the ratings are determined:

• EXCELLENT (E): no apparent health problems; good structural form

• GOOD (G): minor problems with health and/or structural form

• FAIR(F): more serious problems with health and/or structural form

POOR (P): major problems with health and structural form

DEAD (D): dead

3.4 Tree Protection

The minimum Critical Root Zone (CRZ) was determined using the *City of Ottawa's Tree Conservation Report Guidelines*. The CRZ is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk DBH measured in a radius around the tree. The CRZ is calculated as DBH x 10 cm.



Tree Impact (retain, injury, or removal) has been determined and is included in the Tree Inventory and Assessment Table in **Appendix A**.

4. Results

The dates, timing, and environmental conditions at the time of the assessments are presented below in **Table 1**.

Table 1: Site Investigation Details

Date	Start/End Time	Field Surveys	Weather Conditions
2022/06/08	1330 ~ 1800hrs	Visual assessment of all	Temperature: 20°C Cloud cover / Precip: mixed sun/clouds, moderate wind.
2022/08/18	0900 ~ 1530hrs	trees ≥10 cm dbh on-site	Temperature: 21°C Cloud cover / Precip: overcast, moderate wind.

The approximate 30-acre site is currently comprised mostly of cropland (planted with corn) with a residential property, including three (3) barns, situated at the southeastern extent of the site. Mature trees surround the residential property and line the margins of the corn field to the west, north and portions east of the site. The Wilson Cowen Municipal Drain flows along the western edge of the site conveying flow into Mud Creek. A mature deciduous swamp is located north of the site where the Wilson Cowen Municipal Drain connects with Mud Creek and continues to flow eastwards into the West Branch Rideau River, east of the site. An oxbow of Mud Creek borders the site along its eastern edge for approximately 150 m and flows east under Rideau Valley Drive where it drains into the Rideau River. South of the oxbow is a small parcel of land which contains the Manotick Wastewater Pumping Station where a cedar hedge borders the building to the south. A 1.82-acre parcel of parkland east of Rideau Valley Drive is also included in the site boundaries which is comprised mainly of a mixed meadow with a riparian strip containing mature deciduous trees along the margins of the Rideau River. The overall topography of the residential property and the cropland is flat. The adjacent lands to the west and to the south are fully developed (residential), with naturalized, undeveloped lands to the north and east. Most of the trees were situated in the southeast corner of the site within the private residential lands, with scattered trees along the margins of the cropland.

A total of 409 trees were assessed as part of this inventory within the site boundaries. There were 229 individual trees assessed on the main site with a DBH of 10 cm or greater. Of these, 176 were alive, and 53 were dead. The most common species were White Elm (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*), Manitoba Maple (*Acer negundo*), and American Basswood (*Tilia americana*). There were 180 individual trees assessed on the parkland adjacent to the river, with a DBH of 10 cm or greater. Of these, 131 were alive, and 49 were dead. The most common species were White Elm, Green Ash, and Manitoba Maple.

A summary of the trees surveyed on the main site and the parkland is provided in **Table 2** and **Table 3** respectively.



Table 2: Summary of Tree Inventory within the Main Site

Species	Count	Size Range (DBH cm)	Height Range (m)	Crown Spread (m)
American Basswood	6	16-63	4-20	2-9
Bur Oak	10	12-126	8-21+	2-11
Green Ash	29	10-21	4-15	1-5
Manitoba Maple	22	11-68	4-21+	2-18
Eastern White Cedar	16	10-41	4-15	2-20
Willow Species	1	123	21+	11
Siberian Elm	1	13	4-7	1
Sugar Maple	4	13-62	8-20	2-5
White Elm	65	10-57	4-21+	1-6
White Spruce	16	12-42	4-20	2-4
Deciduous	6	10-58	4-11	2-5
Total	176	10-126	4-21+	1-20

Table 3: Summary of Tree Inventory within the Parkland

Species	Count	Size Range (DBH cm)	Height Range (m)	Crown Spread (m)
American Basswood	31	11-68	4-21+	3-14
Bur Oak	9	9-52	4-20	2-9
Green Ash	42	10-47	4-20	1-6
Manitoba Maple	17	13-42	4-20	3-14
Norway Maple	5	16-33	8-15	5-8
Eastern White Cedar	1	12	8-11	3
Black Cherry	3	38-43	16-21+	7-11
Black Walnut	2	10-11	4-11	4-5
Sugar Maple	5	18-46	8-20	6-10
White Elm	9	10-34	4-20	2-7
Butternut	5	17-37	4-20	2-5
Scots Pine	2	33-42	16-20	4-7
Total	131	9-68	4-21+	1-14

5. Impact Assessment

An impact assessment was undertaken to determine impacts to the trees within the site because of the proposed project construction. Trees recommended for removal include trees within or outside the limit of work that would not be able to withstand construction-related impacts. Trees identified as being injured require work within the minimum CRZ; however, impacts to these trees are anticipated to be minor and it is likely that these trees will survive post construction. Trees identified as being retained are expected to be minimally damaged by the project and are proposed to be protected through mitigation measures outlined below.



The results of the impact assessment are summarized below in **Table 4**. These details are also included in the Tree Inventory and Assessment Table and Figure 2 included in **Appendix A**.

Trees to be Removed	Trees to be Injured	Trees to be Retained
	Main Site	
40	3	133
	Parkland	
0	0	180

6. Mitigation Measures and Construction Management

6.1 Tree Protection Measures

As noted above, avoidance and mitigation measures associated with other natural heritage features including the birds and SAR are in the EIS. The EIS must be referred to when planning the timing of tree removal.

The most typical construction damage to trees is a root damage from compaction and severance. While the drip line of a tree's canopy is typically thought to be associated with the root area, the root zones can extend significantly beyond the drip line of the tree, sometimes up to 2 or 3 times the height of the tree. Some of the trees inventoried are growing close to the edge of the proposed construction and will be at risk of contact with, and damage from, heavy equipment. Generally, to protect trees, grade changes and construction activities that could cause soil compaction should be kept away from trees as much as possible.

In order to successfully preserve trees that are recommended for on-site retention, as well as those identified as being impacted, the following series of mitigation measures is recommended. These recommended measures largely center on the minimum CRZ of trees, as defined by the City's Tree Conservation Report Guidelines. The following measures are being recommended to protect the CRZ of all trees slated for retention and/or impact:

- Delineation of the disturbance limits within work areas will be clearly defined on drawings and on the site prior to construction.
- Install Tree Protection Fencing prior to commencement of construction activities, and retain fencing until construction activities have been completed, as per City of Ottawa's Tree Protection (By-law No. 2020-340), Part VI:
 - Tree protection fencing shall be at least 1.2 metres in height and installed in such a way that the fence cannot be altered.
- Do not place any material or equipment within the CRZ of a tree.
- Do not raise or lower the existing grade within the CRZ of a tree.



- Do not extend any hard surface or significantly change landscaping.
- If the construction will have to encroach into a tree's minimum CRZ, installing a temporary layer of 150 mm deep partially composed wood chips mulch over the root zone can help to protect roots from compaction damage, and conserve soil moisture levels.
- Equipment and materials should not be stored near trees
- Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.
- Do not attach any signs, notices, or posters to trees.
- Ensure that site clearing is carried out only in areas where it is specifically required, and that the areas to be cleared are carefully and clearly delineated.

6.2 Tree and Root Pruning

- Do not damage the root system, trunk, or branches of any tree; if any roots are
 encountered during excavation while working outside the CRZ, they should be cut off
 cleanly with sharp pruning tools rather than allow them to be torn by large equipment;
 clean cuts will help to minimize decay and entry points for disease.
- All exposed roots of trees to be retained should be covered in a minimum of 5 cm of firm soil within 24 hours of exposure.
- If root pruning is implemented, the crown of the tree should be reduced proportionately
 under the direction of a Certified Arborist or Registered Forester, to decrease wind sail.
 Pruning should be kept to thinning cuts (no major limb removal), and crowns should be
 monitored, and maintenance carried out for two (2) years after root pruning to remove
 any dieback under the direction of a Certified Arborist or Registered Forester.
- If branches are likely to hang in the way of passing equipment, the branches should be pruned by a Certified Arborist or Registered Forester to avoid tearing and undue injury to the tree.
- All pruning work must be performed under the supervision and guidance of a qualified tree professional in accordance with the latest ANSI A300 Pruning Standards and best management practices identified by the International Society of Arboriculture.

7. Permits and Approvals

The City of Ottawa's Tree Protection By-law No. 2020-340 describes the rules that govern tree ownership in Ottawa and the responsibility of tree maintenance, including administration and enforcement. As per Part IV: Sections 42 – 44 Prohibition, No person shall injure or destroy a tree without a permit. Sections 45 to 48 - Application for tree permit stipulates the process to apply for a permit under this by-law.



Therefore, it is recommended that consultation should be undertaken with the City prior to construction to confirm the requirements for tree removal permits associated with the municipal tree protection by-law. Where required, tree removal permits must be obtained from the City prior to the start of construction.

No other tree by-laws to protect trees on private properties are available from the City.

8. Certification and Closure

We certify that all the statements of fact in this assessment are true, complete, and correct to the best of our knowledge and belief, and that they are made in good faith.





Appendix A
Tree Inventory and Assessment Table and Figures







APPENDIX A: 4386 Rideau Valley Drive Tree Inventory and Assessment Table

Tree	Common Name	DBH	No.	Crown Spread				Struc	ctural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	Common Nume	(cm)	Stems	(m)	DB	SMD	5	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
								Ma	in Site In	ventory		· · ·						
1	Green Ash / Fraxinus pennsylvanica	14;15	2	2	✓	V								Fair		Ownership	1.5	Remove
								+	<u> </u>									_
2	Green Ash / Fraxinus pennsylvanica	12;15	2	3	V									Fair		Uniform Developments	1.5	Remove
3	Green Ash / Fraxinus pennsylvanica	10;11;9;9	4	3	 ✓						V			Fair		City	1.1	Remove
4	Eastern White-Cedar / Thuja occidentalis	11	1	20										Excellent	Clump of approx 70 stems, largest 11 Cm	City	1.1	Remove
12	Manitoba Maple / Acer negundo	28;45;36;25	4	7	 ✓									Fair	largest 11 Cili	Uniform	4.5	Retain
	, , , , , , , , , , , , , , , , , , ,											_	_			Developments		
13	Manitoba Maple / Acer negundo	32	1	4										Good		Uniform	3.2	Retain
1.4	Manitoba Maple / Acer negundo	22,20,26	3	0				-					-	Fair		Developments	3.2	Dotain
14	Manitoba Mapie / Acer negundo	32;28;26	3	9	√									Fair		Uniform Developments	3.2	Retain
15	Basswood/ Tilia americana	63	1	9	 ✓			V						Fair		Uniform	6.3	Retain
																Developments		
16	Basswood/ Tilia americana	42;58	2	9	V									Good		Uniform	5.8	Retain
18	Basswood/ Tilia americana	46;45;38	3	8	 ✓									Good		Developments Uniform	4.6	Retain
	basswood, riid americana	40,43,30			<u>v</u>							"		Good		Developments	4.0	Retuin
19	Basswood/ Tilia americana	21;24	2	6										Good		Uniform	2.4	Retain
																Developments		
20	Basswood/ Tilia americana	35;37	2	7	V									Good		Uniform Developments	3.7	Retain
22	Bur Oak / Quercus macrocarpa	45	1	5	 ✓	V		 						Fair		Uniform	4.5	Retain
	, i															Developments		
24	Eastern White-Cedar / Thuja occidentalis	14;22	2	2										Good		Uniform	2.2	Retain
26	Eastern White-Cedar / Thuja occidentalis	13;16	2	2										Good		Developments Uniform	1.6	Retain
20	Lastern Wille-Cedary Thaja occidentalis	13,10		2	Ш		"							Good		Developments	1.0	Netaili
31	Manitoba Maple / Acer negundo	37	1	6										Good		Uniform	3.7	Retain
								+	<u> </u>				<u> </u>			Developments		
34	Eastern White-Cedar / Thuja occidentalis	13	1	3										Good	Clump of 7, largest at 13 Cm	Uniform Developments	1.3	Retain
40	White Elm / Ulmus americana	23;25	2	5				+						Good	CIII	Uniform	2.5	Retain
	·	ĺ														Developments		
41	Green Ash / Fraxinus pennsylvanica	12	1	2										Good		Uniform	1.2	Retain
42	Green Ash / Fraxinus pennsylvanica		1	2										Good		Developments Uniform	1	Retain
42	Green Asity Fraxillus pelliisylvallica		1											Good		Developments	1	Ketaiii
43	Green Ash / Fraxinus pennsylvanica	12	1	2										Good		Uniform	1.2	Retain
																Developments		_
44	Green Ash / Fraxinus pennsylvanica	14	1	2										Good		Uniform Developments	1.4	Retain
45	Green Ash / Fraxinus pennsylvanica	14	1	2										Good		Uniform	1.4	Retain
	,															Developments		
46	Green Ash / Fraxinus pennsylvanica	13	1	2										Good		Uniform	1.3	Retain
																Developments		



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	Common Name	(cm)	Stems	(m)	DB	SMD	CA	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
48	Green Ash / Fraxinus pennsylvanica	13	1	2										Good		Uniform Developments	1.3	Retain
50	Green Ash / Fraxinus pennsylvanica	14	1	2										Good		Uniform Developments	1.4	Retain
51	Green Ash / Fraxinus pennsylvanica	12	1	2										Good		Uniform Developments	1.2	Retain
56	Manitoba Maple / Acer negundo	64	1	13										Fair		Uniform Developments	6.4	Retain
57	Manitoba Maple / Acer negundo	14	1	2	V	V								Fair		Uniform Developments	1.4	Retain
63	Willow species	123	1	11	V	✓	V	Ø					☑	Fair	Wild grape	Uniform Developments	0.13	Retain
64	Manitoba Maple / Acer negundo	64	1	9	Ø		V							Fair		Uniform Developments	6.4	Retain
65	Green Ash / Fraxinus pennsylvanica	15	1	3										Good		Uniform Developments	1.5	Retain
66	Green Ash / Fraxinus pennsylvanica	12	1	2										Good		Uniform Developments	1.2	Retain
67	Green Ash / Fraxinus pennsylvanica	11	1	2										Good		Uniform Developments	1.1	Retain
68	Green Ash / Fraxinus pennsylvanica	13	1	2										Good		Uniform Developments	1.3	Retain
69	Green Ash / Fraxinus pennsylvanica	13	1	3										Good		Uniform Developments	1.3	Retain
70	Green Ash / Fraxinus pennsylvanica	21	1	5										Excellent		Uniform Developments	2.1	Retain
71	Green Ash / Fraxinus pennsylvanica	11	1	1	V									Good		Uniform Developments	1.1	Retain
76	Green Ash / Fraxinus pennsylvanica	10	1	1										Good		Uniform Developments	1	Retain
77	Green Ash / Fraxinus pennsylvanica	10	1	2		V								Good		Uniform Developments	1	Retain
78	Green Ash / Fraxinus pennsylvanica	13	1	3		V								Fair	Metal and a	Uniform Developments	1.3	Retain
82	Green Ash / Fraxinus pennsylvanica	10	1	2										Fair	Wild grape	Uniform Developments	1	Retain
83	White Elm / Ulmus americana	15	1	3	V	V								Fair		Uniform Developments	1.5	Retain
84	Green Ash / Fraxinus pennsylvanica	12	1	2							Ø			Fair		Uniform Developments	1.2	Retain
85	Green Ash / Fraxinus pennsylvanica	14	1	2	V									Poor		Uniform Developments	1.4	Retain
87	Green Ash / Fraxinus pennsylvanica	11	1	2										Fair		Uniform Developments	1.1	Retain
89	White Elm / Ulmus americana	19	1	2										Good		Uniform Developments	1.9	Retain
93	White Elm / Ulmus americana	18	1	2										Fair		Uniform Developments	1.8	Retain
94	Green Ash / Fraxinus pennsylvanica	13	1	3										Good		Uniform Developments	1.3	Retain
95	White Elm / Ulmus americana	22	1	3										Good		Uniform Developments	2.2	Retain
96	White Elm / Ulmus americana	18	1	3	V	V								Poor		Uniform Developments	1.8	Retain



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	Common Name	(cm)	Stems	(m)	DB	SMD	CA	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
97	White Elm / Ulmus americana	14	1	2										Good		Uniform Developments	1.4	Retain
98	White Elm / Ulmus americana	13	1	2										Good		Uniform Developments	1.3	Retain
99	White Elm / Ulmus americana	30	1	5		V								Good		Uniform Developments	3	Retain
100	White Elm / Ulmus americana	10	1	2										Good		Uniform Developments	1	Retain
101	White Elm / Ulmus americana	18	1	3	V	V							V	Fair	Wild grape	Uniform Developments	1.8	Retain
102	White Elm / Ulmus americana	13	1	2		V								Good		Uniform Developments	1.3	Retain
103	White Elm / Ulmus americana	12;18	2	3	V	V								Fair		Uniform Developments	1.8	Retain
104	White Elm / Ulmus americana	14	1	2		V								Good		Uniform Developments	1.4	Retain
105	White Elm / Ulmus americana	21	1	3		V								Good		Uniform Developments	2.1	Retain
106	White Elm / Ulmus americana	23	1	3										Good		Uniform Developments	2.3	Retain
107	White Elm / Ulmus americana	22	1	4		V								Good		Uniform Developments	2.2	Retain
110	White Elm / Ulmus americana	10;20	2	3	V	V								Fair		Uniform Developments	2	Retain
111	White Elm / Ulmus americana	20	1	4	V	V								Fair		Uniform Developments	2	Retain
112	White Elm / Ulmus americana	10	1	2		V								Fair		Uniform Developments	1	Retain
113	Green Ash / Fraxinus pennsylvanica	11	1	2										Good		Uniform Developments	1.1	Retain
114	White Elm / Ulmus americana	16	1	3	V	V								Good		Uniform Developments	1.6	Retain
115	White Elm / Ulmus americana	13	1	2	V	V								Fair		Uniform Developments	1.3	Retain
116	White Elm / Ulmus americana	10	1	2	V	V								Fair		Uniform Developments	1	Retain
117	White Elm / Ulmus americana	23	1	4	V	V								Fair		Uniform Developments	2.3	Retain
118	White Elm / Ulmus americana	21	1	3		V								Good		Uniform Developments	2.1	Retain
119	White Elm / Ulmus americana	21	1	3		V								Good		Uniform Developments	2.1	Retain
120	White Elm / Ulmus americana	29	1	5		V								Good		Uniform Developments	2.9	Retain
121	White Elm / Ulmus americana	12	1	2		V								Good		Uniform Developments	1.2	Retain
122	White Elm / Ulmus americana	14;13	2	4										Good		Uniform Developments	1.4	Retain
123	White Elm / Ulmus americana	10	1	2										Good		Uniform Developments	1	Retain
124	White Elm / Ulmus americana	18	1	4		V								Good		Uniform Developments	1.8	Retain
125	White Elm / Ulmus americana	15	1	3	V									Good		Uniform Developments	1.5	Retain



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	Common Name	(cm)	Stems	(m)	DB	SMD	CA	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
126	White Elm / Ulmus americana	10	1	1										Good		Uniform Developments	1	Retain
127	White Elm / Ulmus americana	11	1	1										Good		Uniform Developments	1.1	Retain
128	White Elm / Ulmus americana	23	1	3	V	V								Good		Uniform Developments	2.3	Retain
129	White Elm / Ulmus americana	11	1	2										Good		Uniform Developments	1.1	Retain
130	White Elm / Ulmus americana	11	1	2		V								Fair		Uniform Developments	1.1	Retain
134	Green Ash / Fraxinus pennsylvanica	11	1	2	V									Fair		Uniform Developments	1.1	Retain
135	White Elm / Ulmus americana	11	1	1	V									Poor		Uniform Developments	1.1	Retain
136	White Elm / Ulmus americana	23	1	1	V									Poor		Uniform Developments	2.3	Retain
137	White Elm / Ulmus americana	10;10;11;9	4	4		V								Good		Uniform Developments	1.1	Retain
138	White Elm / Ulmus americana	18	1	3		V								Good		Uniform Developments	1.8	Retain
139	White Elm / Ulmus americana	10	1	2		V								Good		Uniform Developments	1	Retain
140	White Elm / Ulmus americana	28	1	4		V								Good		Uniform Developments	2.8	Retain
141	White Elm / Ulmus americana	13	1	3		V								Good		Uniform Developments	1.3	Retain
142	White Elm / Ulmus americana	27	1	4	V	V								Good		Uniform Developments	2.7	Retain
143	White Elm / Ulmus americana	16	1	4	V	V							V	Fair	Wild grape	Uniform Developments	1.6	Retain
144	White Elm / Ulmus americana	13	1	2	V	V								Fair		Uniform Developments	1.3	Retain
145	White Elm / Ulmus americana	13	1	3		V								Fair		Uniform Developments	1.3	Retain
146	White Elm / Ulmus americana	11	1	2		V								Good		Uniform Developments	1.1	Retain
147	White Elm / Ulmus americana	18	1	3		V								Good		Uniform Developments	1.8	Retain
148	White Elm / Ulmus americana	21	1	3		V								Good		Uniform Developments	2.1	Retain
149	White Elm / Ulmus americana	17	1	3	V	V								Good		Uniform Developments	1.7	Retain
150	White Elm / Ulmus americana	20;17	2	5		V							V	Good	Grape vine	Uniform Developments	2	Retain
151	White Elm / Ulmus americana	22	1	4		V								Good		Uniform Developments	2.2	Retain
152	White Elm / Ulmus americana	18	1	3		V								Good		Uniform Developments	1.8	Retain
153	White Elm / Ulmus americana	21;11	2	4		V								Good		Uniform Developments	2.1	Retain
154	Sugar Maple / Acer saccharum	14	1	3	V			V						Fair		Uniform Developments	1.4	Retain
155	Sugar Maple / Acer saccharum	13	1	2										Good		Uniform Developments	1.3	Retain



Tree	Common Name	DBH	No.	Crown				Struc	tural De	fects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	Common Name	(cm)	Stems	Spread (m)	DB	SMD	S	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
156	White Elm / Ulmus americana	23	1	4		V								Good		Uniform Developments	2.3	Retain
157	White Elm / Ulmus americana	17	1	3		V								Good		Uniform Developments	1.7	Retain
158	White Elm / Ulmus americana	12;10	2	3	V	V								Fair		Uniform Developments	1.2	Retain
160	White Elm / Ulmus americana	16	1	2	V	V								Fair		Uniform Developments	1.6	Retain
161	Siberian Elm / Ulmus pumila	13	1	1	V									Poor		Uniform Developments	1.3	Retain
162	Deciduous Species	10;12	2	2	V								V	Fair	Covered in wild grape	Uniform Developments	1.2	Remove
165	Manitoba Maple / Acer negundo	68;59	2	13	V									Poor	Trunks cracked, along ground	City	6.8	Remove
166	Manitoba Maple / Acer negundo	12	1	10										Good	Clump of 10 stems, largest 12 cm	Uniform Developments	1.2	Remove
167	Manitoba Maple / Acer negundo	11	1	4										Good	Clump of 12 stems, largest 11cm	Uniform Developments	1.1	Remove
168	Manitoba Maple / Acer negundo	11	1	2		Ø								Good		Uniform Developments	1.1	Remove
169	Eastern White-Cedar / Thuja occidentalis	22	1	12										Good	Clump of 13 stems, largest 22cm	City	2.2	Remove
170	White Elm / Ulmus americana	23	1	2										Good		City	2.3	Remove
171	White Spruce / Picea glauca	34	1	4		V								Good		City	3.4	Remove
172	White Spruce / Picea glauca	23	1	4		☑								Fair		City	2.3	Remove
173	White Spruce / Picea glauca	15	1	3		V								Fair		City	1.5	Remove
174	White Spruce / Picea glauca	29	1	3		V								Fair		City	2.9	Remove
175	White Spruce / Picea glauca White Spruce / Picea glauca	18	1	2										Fair Fair		City	3.3	Remove
176	White Spruce / Picea glauca White Spruce / Picea glauca	38	1	3		<u> </u>								Fair		City	3.8	Remove Remove
178	White Spruce / Picea glauca	36	1	3	<u> </u>	<u>V</u>								Fair		City	3.6	Remove
179	Manitoba Maple / Acer negundo	68;57	2	8	<u> </u>	V								Poor		City	6.8	Remove
180	White Spruce / Picea glauca	12	1	2		 ✓								Good		City	1.2	Remove
181	White Spruce / Picea glauca		1	2		V								Good		City	1	Remove
182	Eastern White-Cedar / Thuja occidentalis	22	1	14	V									Good	Large clump along road, 14	City	2.2	Remove
183	Eastern White-Cedar / Thuja occidentalis	19	1	3										Excellent	m wide, approx 40 stems Clump of 7, largest 19 Cm	City	1.9	Remove
184	Sugar Maple / Acer saccharum	62;16	2	5	V		V	V						Poor	Half tree broken off	Uniform Developments	6.2	Retain
185	Basswood/ Tilia americana		1	2	V		V	V						Poor		Uniform Developments	1	Remove
186	White Spruce / Picea glauca	34	1	3	V									Good		Uniform Developments	3.4	Remove



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	fects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.		(cm)	Stems	(m)	DB	SMD	S	FC	EXR	GR	EAB	MEC	SUP	Condition		Синскир	trunk)	1000111110110011
187	White Spruce / Picea glauca	37	1	4	V									Good		Uniform Developments	3.7	Remove
188	Manitoba Maple / Acer negundo	44	1	5	V	Ø		V						Poor	Rotten trunk	Uniform Developments	4.4	Remove
189	Deciduous Species	38	1	4		V	V	V						Poor	Entire trunk rotten	Uniform Developments	3.8	Remove
190	White Spruce / Picea glauca	18;7;7	3	3										Excellent		Uniform Developments	1.8	Remove
191	Sugar Maple / Acer saccharum	42	1	5		☑								Excellent		Uniform Developments	4.2	Remove
192	Deciduous Species	12;36;19	3	4	V	V	V							Fair		Uniform Developments	3.6	Remove
193	Deciduous Species	58	1	5	☑	V								Poor		Uniform Developments	5.8	Remove
194	Manitoba Maple / Acer negundo	38;46	2	12	☑									Poor	Root ball out of ground	Uniform Developments	4.6	Remove
195	Manitoba Maple / Acer negundo	38;42	2	10	☑									Poor	Root ball out of ground	Uniform Developments	3.8	Injure
196	Manitoba Maple / Acer negundo Manitoba Maple / Acer negundo	38	1	7			V							Poor	Cracked trunk	Uniform Developments Uniform	3.8	Injure Retain
197	White Elm / Ulmus americana	57	1	6	☑ 									Fair		Developments Uniform	5.7	Retain
199	Manitoba Maple / Acer negundo	26;33	2	14										Fair		Developments Uniform	3.3	Retain
200	Manitoba Maple / Acer negundo	44	1	13	<u>✓</u>									Fair		Developments Uniform	4.4	Retain
201	Manitoba Maple / Acer negundo	48	1	4										Fair		Developments Uniform	4.8	Retain
202	Manitoba Maple / Acer negundo	24;30;33	3	18	<u></u> ✓	V								Fair	One stem along ground	Developments Uniform	3.3	Retain
203	Deciduous Species	34;13;18	3	4	✓	V	V							Poor		Developments Uniform	3.4	Retain
204	Eastern White-Cedar / Thuja occidentalis	21	1	4	V		Z							Fair	Clump of 5; largest 21cm	Developments Uniform	2.1	Retain
205	Eastern White-Cedar / Thuja occidentalis	41;35	2	5	<u> </u>		V							Fair		Uniform Developments	4.1	Retain
206	Eastern White-Cedar / Thuja occidentalis	33;15	2	4	V			V				V		Fair		Uniform Developments	3.3	Remove
207	Eastern White-Cedar / Thuja occidentalis	33	1	5	V									Good	Clump of 4; largest 33 Cm	Uniform Developments	3.3	Remove
208	Eastern White-Cedar / Thuja occidentalis	35	1	6	V		Ø							Good	5 clump, largest 35 Cm	Uniform Developments	3.5	Remove
209	Eastern White-Cedar / Thuja occidentalis	40	1	3										Excellent	7 stem clump, biggest stem is 40 cm	Uniform Developments	4	Remove
210	Eastern White-Cedar / Thuja occidentalis	10	1	5										Excellent	Clump of cedars, multiple stem, some >10 cm	Uniform Developments	1	Injure
211	Bur Oak / Quercus macrocarpa	78	1	11	V	V								Good		Uniform Developments	7.8	Retain
212	Bur Oak / Quercus macrocarpa	32	1	4		☑								Good		City	3.2	Retain
213	Bur Oak / Quercus macrocarpa	16	1	5	V	V								Good		City	1.6	Retain



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.		(cm)	Stems	(m)	DB	SMD	Ç	FC	EXR	GR	EAB	MEC	SUP	Condition			trunk)	
214	Bur Oak / Quercus macrocarpa	27	1	4	V	V								Good		City	2.7	Retain
215	Bur Oak / Quercus macrocarpa	16	1	4	V	✓								Good		City	1.6	Retain
216	White Elm / Ulmus americana	18	1	3	Ø	Ø								Good		City	1.8	Retain
217	Bur Oak / Quercus macrocarpa	12	1	3	Ø	Ø								Fair		City	1.2	Retain
218	Bur Oak / Quercus macrocarpa	42	1	6	V	V								Good		City	4.2	Retain
219	Bur Oak / Quercus macrocarpa	126	1	8	V	V								Good		City	1.23	Retain
220	White Elm / Ulmus americana	22	1	2	V									Fair		City	2.2	Retain
221	White Elm / Ulmus americana	12	1	1	V									Fair		City	1.2	Retain
222	Bur Oak / Quercus macrocarpa	19	1	2	V									Fair		City	1.9	Retain
223	Manitoba Maple / Acer negundo	35;13;42;38	4	10	V	V								Fair		Uniform Developments	3.8	Retain
224	White Spruce / Picea glauca	33	1	4		V								Excellent		City	3.3	Remove
225	Eastern White-Cedar / Thuja occidentalis	14;15	2	2										Excellent		Uniform Developments	1.5	Remove
226	White Spruce / Picea glauca	42	1	4		V								Excellent		Uniform Developments	4.2	Remove
227	White Spruce / Picea glauca	36	1	3		V								Excellent		Uniform Developments	3.6	Remove
228	Eastern White-Cedar / Thuja occidentalis	20;10	2	3										Excellent		Uniform Developments	2	Remove
229	Deciduous Species	54	1		V		Ø							Fair	Large scar >40% of trunk	Uniform Developments	5.4	Remove
								Par	kland Inv	ventory								
262	White Elm / Ulmus americana	28	1	6					V					Good		Uniform Developments	2.8	Retain
266	White Elm / Ulmus americana	21	1	5	V									Good		Uniform Developments	2.1	Retain
268	Bur Oak / Quercus macrocarpa	9;18	2	6									V	Good	Wild grape	Uniform Developments	1.8	Retain
269	Manitoba Maple / Acer negundo	42	1	7	V		V		V					Fair		Uniform Developments	4.2	Retain
271	Manitoba Maple / Acer negundo	32	1	9	V		V		V					Good		Uniform Developments	3.2	Retain
273	Eastern White-Cedar / Thuja occidentalis	13;10	2	3										Good		Uniform Developments	1.3	Retain
274	Green Ash / Fraxinus pennsylvanica	11;13	2	5	V	V					V			Fair		Uniform	1.3	Retain
275	Green Ash / Fraxinus pennsylvanica	28	1	3	V						V			Fair		Uniform Developments	2.8	Retain
279	Manitoba Maple / Acer negundo	21;33	2	6	V	V								Fair		Developments Uniform	3.3	Retain
280	Manitoba Maple / Acer negundo	28	1	4	V	V	V		V					Fair		Uniform Developments	2.8	Retain
283	Manitoba Maple / Acer negundo	15	1	3			Ø		✓					Fair		Developments Uniform Developments	1.5	Retain



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	efects				Overall	Comments	Ownership	CRZ (m from	Recommendation
No.	common vanic	(cm)	Stems	(m)	DB	SMD	CA	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
285	Bur Oak / Quercus macrocarpa	21	1	5		V								Good		Uniform Developments	2.1	Retain
286	Bur Oak / Quercus macrocarpa	31	1	3	V		Ø							Poor		Uniform Developments	3.1	Retain
287	Bur Oak / Quercus macrocarpa	35	1	6	V	V								Good		Uniform Developments	3.5	Retain
288	Bur Oak / Quercus macrocarpa	38	1	8	V	V	Ø		V					Good		Uniform Developments	3.8	Retain
289	Bur Oak / Quercus macrocarpa	35	1	5	V				V					Fair		Uniform Developments	3.5	Retain
290	Manitoba Maple / Acer negundo	23	1	3	V		V		V					Fair		Uniform Developments	2.3	Retain
291	Sugar Maple / Acer saccharum	24;36	2	6	V				V					Fair		Uniform Developments	3.6	Retain
293	Bur Oak / Quercus macrocarpa	24	1	5	V									Good		Uniform Developments	2.4	Retain
295	Manitoba Maple / Acer negundo	19;23	2	7	V	V	V		V					Poor		Uniform Developments	2.3	Retain
296	Bur Oak / Quercus macrocarpa	52;33	2	9	V	V			V					Good		Uniform Developments	5.2	Retain
297	Green Ash / Fraxinus pennsylvanica	25	1	1							V			Poor		Uniform Developments	2.5	Retain
298	Manitoba Maple / Acer negundo	24	1	7	V	V	Ø		V					Fair		Uniform Developments	2.4	Retain
301	Basswood/ Tilia americana	33;35	2	7	V	V								Fair		Uniform Developments	3.5	Retain
302	Manitoba Maple / Acer negundo	29	1	3	V	V								Fair		Uniform Developments	2.9	Retain
304	Manitoba Maple / Acer negundo	28;9;11	3	5	V	V								Fair		Uniform Developments	2.8	Retain
305	Manitoba Maple / Acer negundo	27	1	9	V	V			V					Fair		Uniform Developments	2.7	Retain
308	White Elm / Ulmus americana	34	1	7	V	V								Good		Uniform Developments	3.4	Retain
309	Manitoba Maple / Acer negundo	23	1	9	V	V								Fair		Uniform Developments	2.3	Retain
312	Green Ash / Fraxinus pennsylvanica	13	1	2										Good		Uniform Developments	1.3	Retain
313	Black Cherry / Prunus serotina	42	1	11	V	V	Ø		V					Fair		Uniform Developments	4.2	Retain
314	Butternut / Juglans cinerea	17	1	3	V									Poor	20% live crown	Uniform Developments	1.7	Retain
316	Butternut / Juglans cinerea	23	1	4	Ø									Poor	40% live crown	Uniform Developments	2.3	Retain
318	Butternut / Juglans cinerea	31	1	5										Fair	75% live crown	Uniform Developments	3.1	Retain
321	Basswood/ Tilia americana	10;26	2	9		V			Ø					Good		Uniform Developments	2.6	Retain
323	Basswood/ Tilia americana	25	1	6		V			V					Good		Uniform Developments	2.5	Retain
325	White Elm / Ulmus americana	15	1	6	V	V								Good		Uniform Developments	1.5	Retain
328	Manitoba Maple / Acer negundo	33;23;22;30	4	14	V		V	V	V					Fair		Uniform Developments	3.3	Retain



Tree	Common Name	DBH	No.	Crown				Struc	tural De	fects				Overall	Comments	Ownership	CRZ (m from trunk)	Recommendation
No.		(cm)	Stems	Spread (m)	DB	SMD	ÇA	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership		Recommendation
329	Manitoba Maple / Acer negundo	15	1	5	V	V								Fair		Uniform Developments	1.5	Retain
330	Green Ash / Fraxinus pennsylvanica	14	1	4	V						V			Fair		Uniform Developments	1.4	Retain
331	Green Ash / Fraxinus pennsylvanica	11	1	4							V			Fair		Uniform Developments	1.1	Retain
332	Green Ash / Fraxinus pennsylvanica	10	1	3							V			Fair		Uniform Developments	1	Retain
333	Green Ash / Fraxinus pennsylvanica	18	1	5							V			Fair		Uniform Developments	1.8	Retain
335	Green Ash / Fraxinus pennsylvanica	23	1	6							V			Poor		Uniform Developments	2.3	Retain
336	Green Ash / Fraxinus pennsylvanica	14	1	3							V			Poor		Uniform Developments	1.4	Retain
337	Green Ash / Fraxinus pennsylvanica	11	1	2							V			Fair		Uniform Developments	1.1	Retain
341	Green Ash / Fraxinus pennsylvanica	8;12	2	4							V			Fair		Uniform Developments	1.2	Retain
342	Green Ash / Fraxinus pennsylvanica	13	1	4							V			Good		Uniform Developments	1.3	Retain
343	Green Ash / Fraxinus pennsylvanica	10	1	3							V			Good		Uniform Developments	1	Retain
344	Green Ash / Fraxinus pennsylvanica	11	1	2							V			Fair		Uniform Developments	1.1	Retain
345	Green Ash / Fraxinus pennsylvanica	11	1	2							V			Fair		Uniform Developments	1.1	Retain
346	Green Ash / Fraxinus pennsylvanica	14;4	2	3							V			Fair		Uniform Developments	1.4	Retain
347	Manitoba Maple / Acer negundo	13	1	4										Fair		Uniform Developments	1.3	Retain
348	Black Cherry / Prunus serotina	43	1	7	V	V		V						Poor		Uniform Developments	4.3	Retain
349	Black Cherry / Prunus serotina	38	1	7	V				V					Fair		Uniform Developments	3.8	Retain
350	Sugar Maple / Acer saccharum	43	1	10		V			V					Good		Uniform Developments	4.3	Retain
351	Butternut / Juglans cinerea	20	1	4	Ø									Poor	50% live crown	Uniform Developments	2	Retain
352	Green Ash / Fraxinus pennsylvanica	11	1	2							V			Fair		Uniform Developments	1.1	Retain
353	Basswood/ Tilia americana	12	1	3										Good		Uniform Developments	1.2	Retain
354	Green Ash / Fraxinus pennsylvanica	33	1	1							V			Poor		Uniform Developments	3.3	Retain
356	White Elm / Ulmus americana	12	1	2										Good		Uniform Developments	1.2	Retain
357	Basswood/ Tilia americana	13	1	4	V									Good		Uniform Developments	1.3	Retain
358	Green Ash / Fraxinus pennsylvanica	47	1	6							V			Fair		Uniform Developments	4.7	Retain
359	Basswood/ Tilia americana	13	1	4										Good		Uniform Developments	1.3	Retain



Tree	Common Name	DBH	No.	Crown										Overall	Comments	Ownership	CRZ (m from	Recommendation
No.		(cm)	Stems	Spread (m)	DB	SMD	S	FC	EXR	GR	EAB	MEC	SUP	Condition	Comments	Ownership	trunk)	Recommendation
360	Butternut / Juglans cinerea	37	1	2										Poor	30% live crown	Uniform Developments	3.7	Retain
361	Sugar Maple / Acer saccharum	18	1	6								V		Good		Uniform Developments	1.8	Retain
362	Basswood/ Tilia americana	22	1	6	V	V			V					Good		Uniform Developments	2.2	Retain
363	Green Ash / Fraxinus pennsylvanica	26;9	2	5							V			Fair		Uniform Developments	2.6	Retain
364	Basswood/ Tilia americana	18	1	4	V	V								Good		Uniform Developments	1.8	Retain
365	Basswood/ Tilia americana	15	1	5	V	V			V					Good		Uniform Developments	1.5	Retain
366	Basswood/ Tilia americana	15	1	5	V	V								Good		Uniform Developments	1.5	Retain
367	Basswood/ Tilia americana	33;10;9	3	9	V	V	V							Fair		Uniform Developments	3.3	Retain
368	White Elm / Ulmus americana	18	1	3										Fair		Uniform Developments	1.8	Retain
373	Sugar Maple / Acer saccharum	46	1	9		✓			V					Good		Uniform Developments	4.6	Retain
374	Basswood/ Tilia americana	14	1	4		V	V							Fair		Uniform Developments	1.4	Retain
375	Green Ash / Fraxinus pennsylvanica	13	1	2							V			Fair		Uniform Developments	1.3	Retain
376	White Elm / Ulmus americana	10	1	2										Good		Uniform Developments	1	Retain
377	Green Ash / Fraxinus pennsylvanica	13	1	3							V			Fair		Uniform Developments	1.3	Retain
378	Basswood/ Tilia americana	11	1	3	V									Good		Uniform Developments	1.1	Retain
379	Basswood/ Tilia americana	19	1	5		✓			V					Good		Uniform Developments	1.9	Retain
380	Basswood/ Tilia americana	11	1	3		V			V					Good		Uniform Developments	1.1	Retain
381	Basswood/ Tilia americana	13	1	4	V									Good		Uniform Developments	1.3	Retain
382	Basswood/ Tilia americana	12	1	4	V	V								Good		Uniform Developments	1.2	Retain
385	Green Ash / Fraxinus pennsylvanica	15	1	3							V			Fair		Uniform Developments	1.5	Retain
386	White Elm / Ulmus americana	10	1	2	V	V								Fair		Uniform Developments	1	Retain
387	Green Ash / Fraxinus pennsylvanica	16	1	1							V			Poor		Uniform Developments	1.6	Retain
388	Green Ash / Fraxinus pennsylvanica	15	1	2	V						V			Fair		Uniform Developments	1.5	Retain
389	Green Ash / Fraxinus pennsylvanica	11	1	3							V			Fair		Uniform Developments	1.1	Retain
390	Sugar Maple / Acer saccharum	38	1	8	V	V			V					Good		Uniform Developments	3.8	Retain
391	Basswood/ Tilia americana	68;24;19;35;33;35	6	14	V	V	V							Fair		Uniform Developments	6.8	Retain



Tree	Common Name	DBH	No. Stems	Crown Spread				Struc	tural De	efects				Overall	Comments Owr	Ownership	CRZ (m from	Recommendation
No.		(cm)		(m)	DB	SMD	CA	FC	EXR	GR	EAB	MEC	SUP	Condition		Ownersnip	trunk)	Recommendation
392	Basswood/ <i>Tilia americana</i>	29	1	6	V	V	V							Fair		Uniform Developments	2.9	Retain
393	Basswood/ Tilia americana	33;34;34	3	8	V	V								Good		Uniform Developments	3.4	Retain
394	Green Ash / Fraxinus pennsylvanica	10	1	3							V			Fair		Uniform Developments	1	Retain
396	Green Ash / Fraxinus pennsylvanica	23	1	5							V			Good		Uniform Developments	2.3	Retain
397	Basswood/ Tilia americana	14	1	5	V	V								Good		Uniform Developments	1.4	Retain
398	Basswood/ Tilia americana	12	1	4		V								Fair		Uniform Developments	1.2	Retain
399	Green Ash / Fraxinus pennsylvanica	25	1	5							Ø			Fair		Uniform Developments	2.5	Retain
400	Basswood/ Tilia americana	6;12;12	3	6										Good		Uniform Developments	1.2	Retain
401	Green Ash / Fraxinus pennsylvanica	12	1	3							Ø			Good		Uniform Developments	1.2	Retain
402	Bur Oak / Quercus macrocarpa	14	1	2										Fair		Uniform Developments	1.4	Retain
403	Norway Maple / Acer platanoides	23	1	6		V								Good		Uniform Developments	2.3	Retain
404	Basswood/ Tilia americana	24	1	6	V	V								Good		Uniform Developments	2.4	Retain
405	Norway Maple / Acer platanoides	18	1	5										Good		Uniform Developments	1.8	Retain
406	Norway Maple / Acer platanoides	25	1	6										Good		Uniform Developments	2.5	Retain
407	Norway Maple / Acer platanoides	16	1	5		V	Ø		V					Fair		Uniform Developments	1.6	Retain
408	Basswood/ Tilia americana	38	1	6					V					Fair		Uniform Developments	3.8	Retain
409	Green Ash / Fraxinus pennsylvanica	42	1	3							V			Poor		Uniform Developments	4.2	Retain
412	Basswood/ Tilia americana	67	1	10	V	V	Ø		Ø					Fair		Uniform Developments	6.7	Retain
413	Basswood/ Tilia americana	18;18	2	8	V	V								Good		Uniform Developments	1.8	Retain
414	Basswood/ Tilia americana	16	1	5	V	V								Good		Uniform Developments	1.6	Retain
416	Basswood/ Tilia americana	19;33	2	9	V									Good		Uniform Developments	3.3	Retain
417	Basswood/ Tilia americana	33	1	7	V				V					Good		Uniform Developments	3.3	Retain
418	Green Ash / Fraxinus pennsylvanica	13	1	4	V									Good		Uniform Developments	1.3	Retain
419	Green Ash / Fraxinus pennsylvanica	13	1	3	V									Good		Uniform Developments	1.3	Retain
420	Manitoba Maple / Acer negundo	25	1	9	V				V					Fair		Uniform Developments	2.5	Retain
421	Green Ash / Fraxinus pennsylvanica	13	1	4							V			Fair		Uniform Developments	1.3	Retain
422	Manitoba Maple / Acer negundo	13;13	2	10	Ø									Fair		Uniform Developments	1.3	Retain



Tree	Common Name	DBH	No.	Crown Spread				Struc	tural De	fects				Overall	Comments	Ownership	CRZ (m from trunk)	Recommendation
No.		(cm)	Stems	(m)	DB	SMD	CA	F	EXR	GR	EAB	MEC	SUP	Condition				
423	Green Ash / Fraxinus pennsylvanica	14	1	4							V			Fair		Uniform Developments	1.4	Retain
424	Green Ash / Fraxinus pennsylvanica	10	1	4	V									Good		Neighbour	1	Retain
425	Scots pine / Pinus sylvestris	42	1	7	V									Fair		Neighbour	4.2	Retain
426	Green Ash / Fraxinus pennsylvanica	10	1	3	V									Good		Neighbour	1	Retain
427	Green Ash / Fraxinus pennsylvanica	11	1	3	☑									Good		Neighbour	1.1	Retain
429	Scots pine / Pinus sylvestris	33	1	4	Ø									Fair		Neighbour	3.3	Retain
430	White Elm / Ulmus americana	33	1	5	Ø				Ø					Good		Neighbour	3.3	Retain
431	Green Ash / Fraxinus pennsylvanica	13;14	2	6	V						V			Fair		Uniform Developments	1.4	Retain
432	Green Ash / Fraxinus pennsylvanica	16	1	5	V						V			Fair		Uniform Developments	1.6	Retain
433	Green Ash / Fraxinus pennsylvanica	10	1	3	V									Good		Uniform Developments	1	Retain
434	Norway Maple / Acer platanoides	33	1	8	V				V					Good		Uniform Developments	3.3	Retain
435	Basswood/ Tilia americana	36	1	7	V									Good		Uniform Developments	3.6	Retain
437	Black Walnut / Juglans nigra	11	1	4	V	V								Good		Uniform Developments	1.1	Retain
438	Black Walnut / Juglans nigra	7;8;10;10;13	5	5	V									Good		City	1.3	Retain



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Figure 1 - Current Vegetation & Tree Locations

General Notes:

Mud Creek

Dead

Wilson Cowan Municipal Drain

*CRZs with small diameters may not be visible at this scale. Dimensions on the plan should be read and not measured. Any errors or omissions should be reported to CIMA +. The boundaries, areas, and title deeds must be verified by a surveyor.

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Survey by : C. Little Figure by : J. Scott Concept by : C. Little Verified by : M. Lavictoire





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B

Appendix B Structural Defect Definitions





Definitions of Structural Defects and Tree Health Problems

Structural defects are often insignificant when a tree is small but can pose problems when the tree grows larger, and the weight of branches put added stress on defects that can cause weakness. Larger trees also have the potential to cause more damage should they fail. The following is an explanation of some of the observations included in the inventory and assessment table, and how they can affect trees over time.

Crown Defects

- BNL Broken / No Leader occurs if the central leader is broken, damaged or very weak, or has a dead terminal bud
- CRB Crossing branches are often associated with narrow branch angles. Branches that cross over each other often rub, causing damage and therefore weakness to one or both branches, and crossing branches can eventually girdle each other.
- DB Dieback refers to the ends of branches dying, which is often associated with root problems.
- HSS Heavy seed set, or an abundance of seed production, can be the result of a stressed tree putting energy reserves into seed production in an effort to reproduce while it is still able.
- HP Hydro-Prunning occurs when the Hydro companies undertake pruning of trees away from hydro wires to prevent contact between the trees and wires which could result in power outages. Pruning in these situations is often not in the best interest of the tree.
- LC Leaf chlorosis is yellowing of interveinal leaf tissue that can be caused by nutrient deficiencies, pH imbalance, poor drainage, or root damage.
- LT Lion-tailing refers to branches that have a tuft of foliage at the end like a lion's tail, due to pruning of the inner branches. Branches that have been pruned in this way are end-heavy and more likely to fail.
- LLCR Low live crown ratio is the ratio of the live crown to the overall height of the tree. A low live crown ratio can develop when trees are growing close together in stands or can be created by pruning or dieback. Low live crown ratio is associated with increased likelihood of failure, depending on the cause and site factors.
- MBR When a tree has multiple branches from the same point of attachment, the branches usually have characteristics of weakly attached branches.
- NA Narrow branch angles, especially where there is included bark, can be a problem as trees grow larger because the inner wood is poorly attached.
- SMD Small dead branches are an indicator of crown dieback and can be an early sign of stress.
- SE Staghorn effect refers to dead branches protruding through the crown of a tree, and often indicates a state of significant decline.
- SBR Sunken areas under scaffold branches is often an indication of internal decay.

- T Topping is the cutting of branches to reduce canopy size, leaving stubs that cannot assume the terminal role. Topping leads to trees being stressed, disfigured, and susceptible to decay. Structural issues caused by topping typically require corrective pruning and can lead to unacceptable risk.
- UC Unbalanced Crown is a tree's crown that is much more extensive in one direction than another, often due to competition from the crown of a nearby tree or exposure

Trunk Defects

- ADV Adventitious shoots are vigorous growth of shoots from pruning cuts, inner branches, or along the trunk that usually occur in response to stress.
- AD Apical dominance refers to a tree maintaining a strong central leader with upright growth (excurrent form). When lateral shoots outgrow the original terminal shoot (leader), the tree's form becomes rounded, or decurrent, which in some cases can make a tree more likely to have weak branching that can limit longevity potential.
- AT An asymmetrical trunk cross-section can indicate internal decay.
- CA Cavity are often the result of an injury followed by decay. Decay can begin by injury to the trunk, the loss of a large limb, topping or improper pruning. The inner dead wood begins to decay but living wood is protected by a barrier zone that compartmentalizes damage
- COD Codominant leaders (2 trunks or branches of approximately equal size) often have narrow branch angles and are associated with weak branch attachment. Strong branch attachments occur between 2 limbs of unequal size with enough space for branch enlargement and formation of a branch bark ridge.
- FC Frost cracking is a winter injury caused by temperature fluctuations on bark and inner wood when the sun warms a tree trunk and then temperatures drop quickly, causing splitting of the bark that can extend into the wood below. Frost cracking can be associated with snow reflection and southwest-facing trunk exposures, and particularly affects young trees and species with thin bark.
- RB Ring-Barking, is the complete removal of the bark (consisting of cork cambium or "phellogen", phloem, cambium and sometimes going into the xylem) from around the entire circumference of either a branch or trunk of a woody plant. Girdling results in the death of the area above the girdle over time.
- INC Included bark is bark that has become embedded in a crotch where limbs join and causes weakened branch attachments. As the trunk and branch increase in diameter, the bark of each stem in the tight crotch begin to push apart, increasing the likelihood of failure.
- LE A tree with a lean can be more susceptible to windthrow and soil failure. Self-correcting lean refers to a natural correction of the lean by development of new growth that counteracts the lean of the trunk to provide a more balanced form.
- RAS Ribs and seams are often associated with included bark but can also indicate internal defects or decay that cause irregular growth.

Root Defects

- BS Basal Shoots are the growth of branches and leaves found growing at the bottom or base of a dead tree, or the stump from a tree that has been cut down. This may indicate that the tree is stressed.
- BRF Bulging root flare can occur on trees growing in soils with poor drainage.
- EXR Exposed surface roots can be a result of erosion and soil compaction combined with increasing root diameter. It is important to protect exposed roots from pedestrian and vehicular traffic, and lawn mowers. Damage to roots can cause stress and can result in canopy dieback.
- GR Girdling roots are roots that cross over each other or around the trunk of the tree. As these roots grow larger, they can restrict the uptake of nutrients and water, and inhibit structural anchorage.
- NRF No root flare refers to the base of the trunk where it widens as it transitions to the root system.

Insects / Disease / Damage

- BLK Blackknot is a fungal disease of Prunus species (Cherry, Plum, Chokecherry) that causes swelling and discolouration of branches, resulting in girdling and dieback, and sometimes death of the tree.
- BU A burl is a localized area of swelling on the trunk or branches made up of deformed growth, generally not considered a defect.
- C A canker is an area of dead tissue, often shrunken and discoloured.
- CAT Some Caterpillars, such as the European Gypsy Moth, may cause considerable damage to a tree while others are more of a nuisance than a treat to overall tree health.
- DPR Decay at pruning wounds can occur when pruning (or other bark-penetrating abrasions) expose a tree's heartwood, which can then be affected by a rot-causing fungi. The decay can lead to cavities and internal decay, and potentially affect the structural integrity of the tree.
- DED Dutch Elm Disease. The leaves on the elm tree begin to wilt, curl, shrivel and turn brown on one or more branches. The foliage throughout the entire crown wilts and the tree dies.
- EAB Emerald Ash Borer refers to a species of beetle native to East Asia that feeds on all species ash trees (Fraxinus spp.) during its larval stage. Typical symptoms of infection include heavy seed set, dieback, splitting bark, and adventitious shoots. Almost all infected ash trees will die within a few years of infection.
- FRA Frass is the excrement of insect larvae, with an appearance similar to sawdust or small wood chips that can be seen at the base of a tree where wood boring insects are feeding. Frass can be an indicator of internal decay.
- FB Fruiting bodies are often recognized as mushrooms or conks on trees. Presence of fruiting bodies is a positive indicator of wood decay, but depending on the species of the fruiting body,

the decay can be of little significance or an indicator of imminent failure. It is important to observe decay fungi during the season in which it is growing to accurately identify the species and consider the potential associated indications of the extent of decay.

- MEC Mechanical Damage is a generalized term to describe damage to vegetation from using equipment and from weather related events. Damage to vegetation from equipment can be simple carelessness or incorrect use of the equipment.
- PM Powdery Mildew is a fungal leaf disease where white powdery spots or patches may cover the entire leaf surface. Leaves that are heavily infected may become chlorotic and senesce early. Although unsightly, the disease does not cause serious damage to established trees.
- SAH Sapsucker holes refers to holes in the trunk or branches made by birds in search of insects. This damage is a sign of insects in the tree and can make trees more susceptible to other infection.
- ST Staking can provide support to newly planted, but if left in place too long can actually damaged trees and is not always necessary. Stem attachment materials should be wide and flexible to prevent damage to the tree.
- SUP Suppressed trees are growing under the canopies of neighbouring trees, which can diminish vigour and affect structural form.
- TS Tar spot is a fungal disease also known as rhytisma acerinum, does not usually have an adverse effect on trees and is generally a cosmetic problem.
- WBE Witches' broom effect is a dense proliferation of shoots with short internodes, and the resulting growth appears stunted. Witches' broom can have several different causes, including fungi such as powdery mildew, insect infestation, genetic mutation, and adverse environmental conditions.
- W Woundwood is the thickened tissue growing around the edges of a wound. The rate of its development can be a sign of the tree's vigour.

Understorey Species of Concern

- BUC Buckthorn is a thorny, invasive exotic shrub species that out-competes native vegetation.
- CUV Cucumber vine, grapevines and dog-strangling vine growing over the canopy of trees suppress vigour and eventually kill trees by blocking sunlight and restricting growth. They also add weight that can make trees more susceptible to breakage during storms.
- GM Garlic mustard is an invasive exotic vegetative species.
- JKN Japanese knotweed is a non-native semi-woody perennial plant with aggressive growth. It out-competes native vegetation, degrades wildlife habitat, and its roots can damage pavements and underground structures.