Arborist and Tree Preservation Report

1400 Henderson Hwy
R2G 1N2, Winnipeg, Manitoba

Prepared by:

Mike Leung

ISA Board Certified Master Arborist/ Municipal Specialist (#HK – 0287BM)

ISA Tree Risk Assessment Qualification (TRAQ)

Date: 2 Dec, 2022

Table of Contents

Limitation of the Assignment 2
A. Introduction 2
B. Objectives 2
C. Summary 2
D. Methodology 3
E. Tree Protection and Removal Plan 4
F. Construction Guideline 17
G. Conclusion 19
H. Reference: 19
Appendix I Tree Inventory 20

Limitation of the Assignment

The assessment is based solely on a visual inspection of the trees during our site visit. This inspection was conducted from ground level. We did not conduct aerial inspections, soil tests or below grade root examinations to assess the condition of tree root systems unless specifically contracted to do so.

The assessment in this inventory is valid only at the time of inspection.

Only trees within the site boundaries and at the periphery were assessed. Locations of trees are plotted using GPS coordinates collected by a mobile device and are subject to satellite accuracy.

A. Introduction

Green Drop Tree Care was hired by Ms. Mani Dhaliwal of Trademark Homes to complete an Arborist/Tree Preservation report for the site at 1400 Henderson Hwy, Winnipeg, Manitoba. Our site inspection and tree assessment were conducted on Nov 29, 2022.

This report is prepared according to the requirements set by the Urban Planning & Design Division, City of Winnipeg[1].

B. Objectives

The objectives of this report are:

- To Identify trees to preserve and protect
- To propose trees to be removed and the reasons;
- To outline specific tree protection methods and treatments before, during and after construction on this site

C. Summary

All of the 29 trees surveyed are city and private trees. 16 trees are recommended to be removed due to the construction. 5 trees are recommended to be removed due to health/structure issue. 8 trees are recommended to be protected.

D. Methodology

Trunk diameter was measured using a calibrated diameter tape. The measurement was taken at 1.4 meters above ground level, generally referred to as the diameter at breast height (DBH). All standing live and dead trees with DBH larger than 6.5cm were recorded. Toppled dead trees and stumps were not included in the survey.

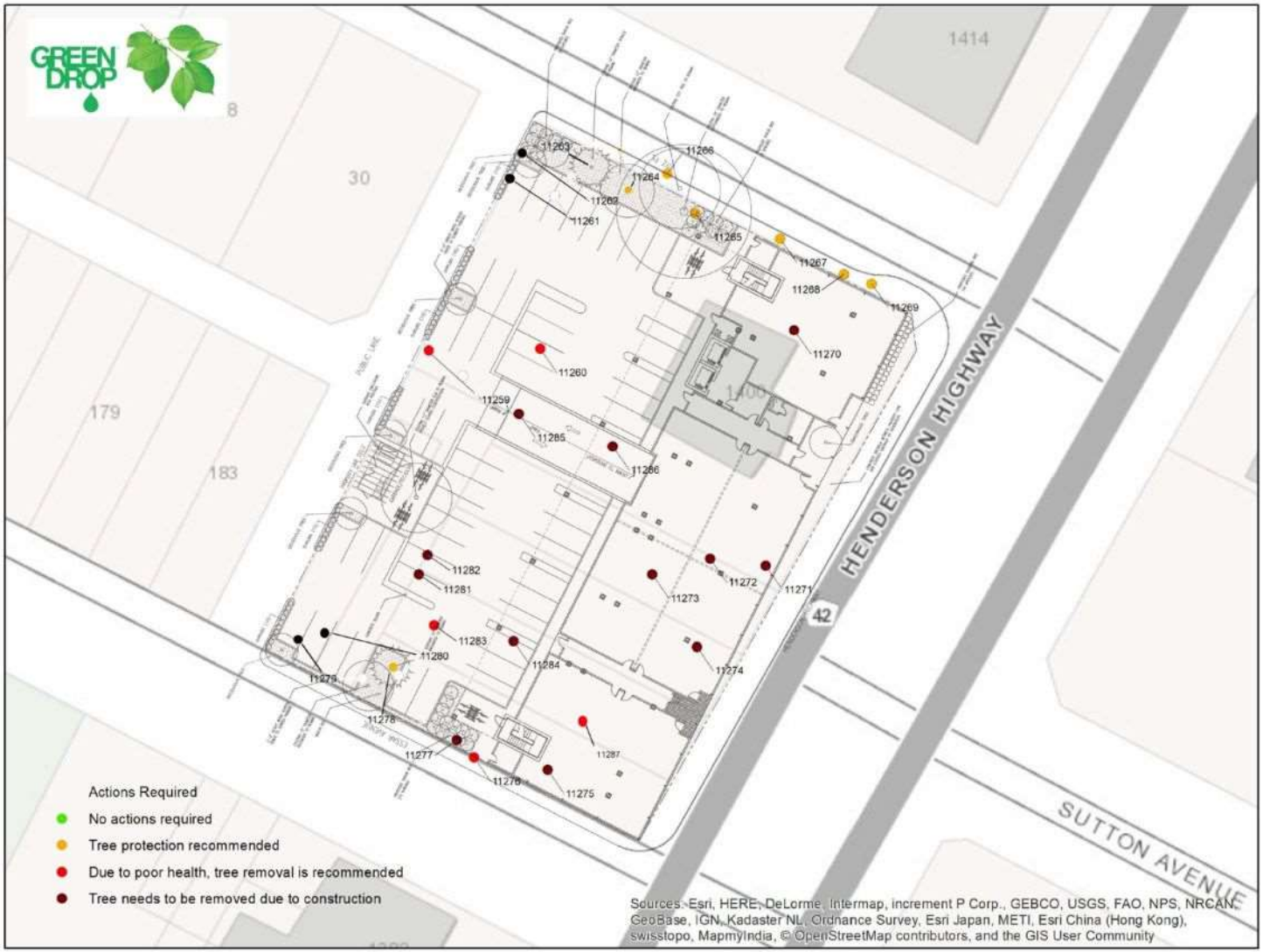
The condition rating composes the tree's health, structure and form and is based on the Guide for Plant Apprisal[3], 10th edition published by the Council of Tree and Landscape Appraiser. The structures of the trees are assessed according to the Tree Risk Assessment Manual[4], 2nd edition published by the International Society of Arboriculture.

Rating category	Condition components		
	Health	Structure	Form
Excellent	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation.	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.
Good	Vigor is normal for the species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.
Fair	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.
Very poor	Poor vigor. Appears to be dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.

Table source: Guide for Plant Appraisal 10th Edition, Council of Tree and Landscape Appraiser

E. Tree Protection and Removal Plan

According to the drawings provided and the condition of the trees recorded, our recommendations are reflected in the drawing below.

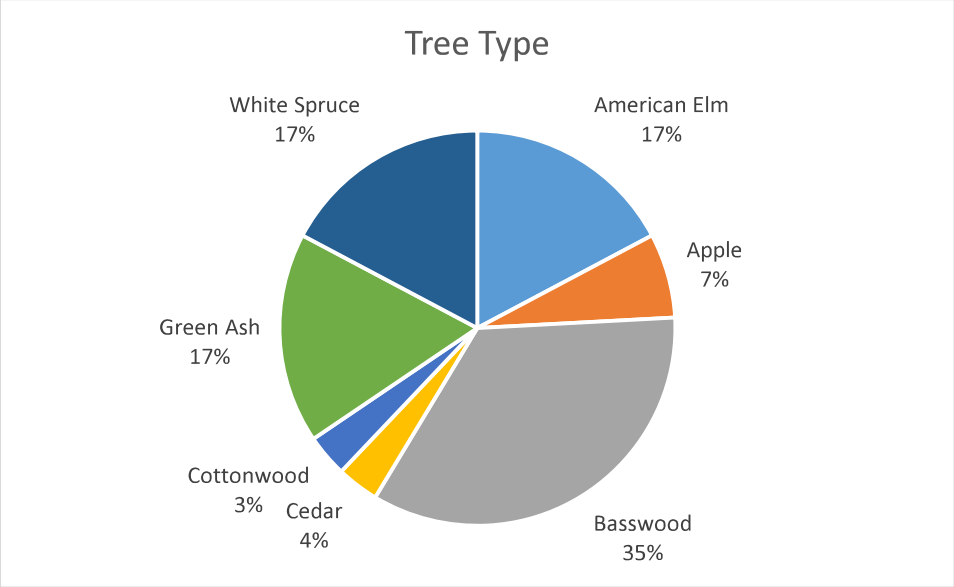


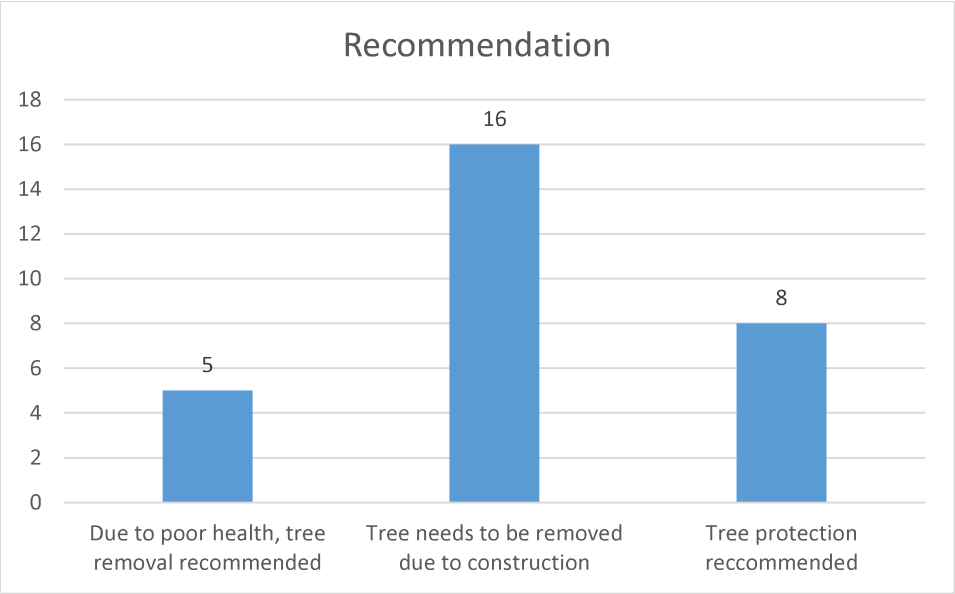
Trees to be removed

Ownership/Location	Tree #	Action/Notes
Client-owned trees 16 trees (Private)	11261,11262,11270,11271,11272,11273,11274,11275,11277,11279,11280,11281,11282,11284,11285,11286	Removal is the only option for these trees. As they fall near or within the building footprint
Client-owned trees 5 trees (Private)	11259,11260,11276,11283,11287	Due to poor health/ structure, removal is recommended.

Trees to be protected

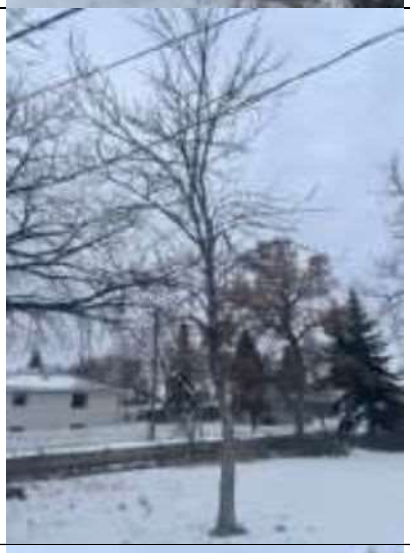
Ownership/Location	Tree #	Action/Notes
Client-owned trees 4 trees (Private)	11263,11264,11265, 11278	The root zone of these trees will be heavily impacted by excavation and compaction if unprotected.
City-owned trees 4 trees (Boulevard)	11266,11267,11268,11269	The root zone of these trees will be heavily impacted by excavation and compaction if unprotected.





Please refer to Appendix A for tree details in the tree inventory.

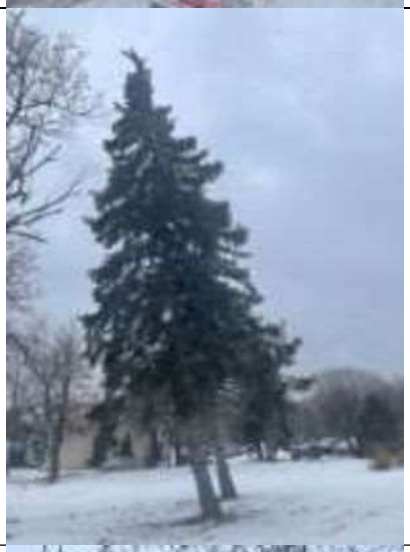
Individual Tree Photos

Tree 11259 *American Elm* The tree has a DBH 40-49.9 (cm) and the condition is Fair. Due to poor health, tree removal recommended.	
Tree 11260 *Green Ash* The tree has a DBH 20-29.9 (cm) and the condition is Dead. Due to poor health, tree removal recommended.	
Tree 11261 *Green Ash* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	

Tree 11262 *Green Ash* The tree has a DBH 20-29.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11263 *White Spruce* The tree has a DBH 30-39.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11264 *Basswood* The tree has a DBH 1-9.9 (cm) and the condition is Good. Tree protection reccommended.	

Tree 11265 *Cottonwood* The tree has a DBH 110-119.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11266 *American Elm* The tree has a DBH 20-29.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11267 *American Elm* The tree has a DBH 20-29.9 (cm) and the condition is Good. Tree protection reccommended.	

Tree 11268 *American Elm* The tree has a DBH 30-39.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11269 *Basswood* The tree has a DBH 30-39.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11270 *Green Ash* The tree has a DBH 40-49.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	

Tree 11271 *Basswood* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11272 *White Spruce* The tree has a DBH 40-49.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11273 *White Spruce* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	

Tree 11274 *Basswood* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11275 *Basswood* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11276 *Basswood* The tree has a DBH 30-39.9 (cm) and the condition is Fair. Due to poor strucure, tree removal recommended.	

Tree 11277 *White Spruce* The tree has a DBH 30-39.9 (cm) and the condition is Fair. Tree needs to be removed due to construction.	
Tree 11278 *Basswood* The tree has a DBH 50-59.9 (cm) and the condition is Good. Tree protection reccommended.	
Tree 11279 *Basswood* The tree has a DBH 60-69.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	

Tree 11280 *White Spruce* The tree has a DBH 40-49.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11281 *Basswood* The tree has a DBH 60-69.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11282 *Cedar* The tree has a DBH 10-19.9 (cm) and the condition is Poor. Tree needs to be removed due to construction.	

Tree 11283 *Apple* The tree has a DBH 50-59.9 (cm) and the condition is Poor. Due to poor health, tree removal recommended.	
Tree 11284 *American Elm* The tree has a DBH 80-89.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	
Tree 11285 *Green Ash* The tree has a DBH 30-39.9 (cm) and the condition is Good. Tree needs to be removed due to construction.	

Tree 11286 *Apple* The tree has a DBH 40-49.9 (cm) and the condition is Poor. Tree needs to be removed due to construction.	
Tree 11287 *Basswood* The tree has a DBH 30-39.9 (cm) and the condition is Dead. Due to poor health, tree removal recommended.	

F. Construction Guideline

a. Tree Protection Zone[2]

- Protective barriers should be installed around all trees to be retained prior to any construction commencing on site.
- Tree protection barriers are to be located at the outer limit of the minimum Tree Protection Zone (TPZ) and is correlated to trunk diameter (see table).

• **Trunk Diameter (DBH)**	• **Minimum Protection Distances** • **Required for Private or City Street Trees**
• < 10 cm	• 2 m
• 11 – 40cm	• 2.4 m
• 41 – 50 cm	• 3.0 m
• 51 – 60cm	• 3.6 m
• 61 – 70cm	• 4.2 m
• 71 – 80 cm	• 4.8 m
• 81 – 90cm	• 5.4 m
• 91 – 100cm+	• 6 m

- The barriers enclose the tree protection zone (TPZ), within which no construction-related activity is permitted without the permission from City of Winnipeg Urban Forestry Branch or onsite Supervisor regarding private trees. Within the TPZ there is to be,
  - No construction
  - No altering of grade due to cut and fill, surface scraping, excavating, or soil
  - disturbance
  - No storage of construction materials, soil, waste, or debris
  - No disposal of any solid or liquid
  - No parking, operation, or passage of vehicles or equipment
  - No personal access

- Unless otherwise stipulated on the Tress Protection Plan, the barriers are to be 4 feet high, and constructed of high orange plastic web snow fencing on a wood frame or as directed by the City of Winnipeg Urban Forestry Branch in accordance with City of Winnipeg Protection of Existing Tree Specifications. Supports and braces for the barriers must be installed outside the TPZ. The barrier locations can be adjusted to align with curbs and edges at clear path of travel zones.

- Tree strapping material will be installed on individual trees where work will be completed within the TPZ.

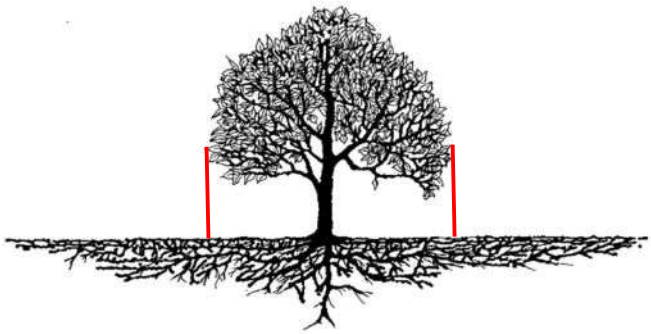
- An example of tree protection zone and sign is illustrated below





b. Watering of Trees

- It is extremely important to regularly monitor the soil moisture levels within the root zones of the trees during the months from April to November, and to ensure adequate supplemental watering is done promptly as necessary. The objective of the watering is to provide the trees with deep, thorough watering when rainfall is insufficient to keep the soil moist 2" below the surface. This can be done by applying approximately 1-3 inches of water, or 20 – 60 L of water per square metre, throughout the feeder root zone, at least to the drip line (see below).



It is strongly recommended that an individual who will be on-site for the duration of the project be assigned this responsibility and be given clear instruction on how to check moisture levels, how and where to apply the water and how much.

c. Mulching

- For well-drained sites, apply a 2 to 4 inch (5 to 10 cm) layer of bark or wood chip mulch. Coarse mulches can be applied slightly deeper without harm. Place mulch out to the edge of a tree's crown or beyond. If placed around a smaller tree, consider the mature size of the tree and expand out mulch accordingly.

d. Fertilization

- Fertilization can be completed to encourage growth and increase vigour. Fertilizers should be applied in early spring just before growth occurs.

e. Site Supervision by ISA Certified Arborist

- It is strongly recommended that the client retain a construction-phase project arborist to make routine site inspections to monitor tree protection and tree considerations and provide follow-up summary reports and/or recommendations for tree care or protection related work.
- ISA Certified Arborists can be found in the following website https://www.treesaregood.org/findanarborist/findanarborist

G. Conclusion

The tree preservation prescriptions recommended in this report for the tree to be protected on the site have been prepared following the City of Winnipeg's Tree Protection Zone Guidelines. It is anticipated that, if the minimum tree protection zones are fully heeded, the indicated trees will not be markedly affected by the proposed development. The trees identified for retention are to be protected.

Tree protection zone should be constructed prior to construction and maintained throughout construction. No encroachment into tree protection zones is to occur without arborist supervision.

H. Reference:

1. City of Winnipeg – Arborist/Tree Preservation Report https://www.winnipeg.ca/ppd/Documents/Zoning/DevelopmentApplication/InfoSheet/Arborist%20-Tree-Preservation-Report.pdf. Accessed Dec 1, 2021.

2. City of Winnipeg Tree Planting Details & Specifications Downtown Area and Regional Streets https://winnipeg.ca/publicworks/parksOpenSpace/UrbanForestry/PDF/Principles_and_Guidelines.pdf

3. Council of Tree and Landscape Appraisers. 2018. Guide for Plant Appraisal (10th ed.). International Society of Arboriculture. Champaign

4. Tree Risk Assessment Manual, (2nd ed.). International Society of Arboriculture. Champaign

Appendix I Tree Inventory

Tree Inventory
1400 Henderson Hwy

Tree Number	Tree type	DBH (cm)	Condition Rating	Action	Comments
11259	American Elm	40-49.9 (cm)	Fair	Due to poor health, tree removal recommended	DED tagged
11260	Green Ash	20-29.9 (cm)	Dead	Due to poor health, tree removal recommended	
11261	Green Ash	50-59.9 (cm)	Good	Tree needs to be removed due to construction	
11262	Green Ash	20-29.9 (cm)	Good	Tree needs to be removed due to construction	
11263	White Spruce	30-39.9 (cm)	Good	Tree protection reccommended	
11264	Basswood	1-9.9 (cm)	Good	Tree protection reccommended	Muti trunks
11265	Cottonwood	110-119.9 (cm)	Good	Tree protection reccommended	Muti trunks
11266	American Elm	20-29.9 (cm)	Good	Tree protection reccommended	
11267	American Elm	20-29.9 (cm)	Good	Tree protection reccommended	
11268	American Elm	30-39.9 (cm)	Good	Tree protection reccommended	
11269	Basswood	30-39.9 (cm)	Good	Tree protection reccommended	
11270	Green Ash	40-49.9 (cm)	Good	Tree needs to be removed due to construction	
11271	Basswood	50-59.9 (cm)	Good	Tree needs to be removed due to construction	
11272	White Spruce	40-49.9 (cm)	Good	Tree needs to be removed due to construction	
11273	White Spruce	50-59.9 (cm)	Good	Tree needs to be removed due to construction	
11274	Basswood	50-59.9 (cm)	Good	Tree needs to be removed due to construction	
11275	Basswood	50-59.9 (cm)	Good	Tree needs to be removed due to construction	
11276	Basswood	30-39.9 (cm)	Fair	Due to poor strucure, tree removal recommended	Big trunk cavity
11277	White Spruce	30-39.9 (cm)	Fair	Tree needs to be removed due to construction	
11278	Basswood	50-59.9 (cm)	Good	Tree protection reccommended	Muti trunks
11279	Basswood	60-69.9 (cm)	Good	Tree needs to be removed due to construction	
11280	White Spruce	40-49.9 (cm)	Good	Tree needs to be removed due to construction	
11281	Basswood	60-69.9 (cm)	Good	Tree needs to be removed due to construction	2 trunks
11282	Cedar	10-19.9 (cm)	Poor	Tree needs to be removed due to construction	2 trunks
11283	Apple	50-59.9 (cm)	Poor	Due to poor health, tree removal recommended	
11284	American Elm	80-89.9 (cm)	Good	Tree needs to be removed due to construction	
11285	Green Ash	30-39.9 (cm)	Good	Tree needs to be removed due to construction	
11286	Apple	40-49.9 (cm)	Poor	Tree needs to be removed due to construction	2 trunks
11287	Basswood	30-39.9 (cm)	Dead	Due to poor health, tree removal recommended	