



Staff Report

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Report To: General Government Committee

Date of Meeting: June 21, 2021

Report Number: PWD-025-21

Submitted By: Stephen Brake, Director of Public Works

Reviewed By: Andrew C. Allison, CAO

Resolution#:

File Number:

By-law Number:

Report Subject: Red Oak Tree at 21 Beech Ave

Recommendations:

1. That Report PWD-025-21 be received;
2. That Council provide direction to staff respecting the implementation of the preservation plan for the Red Oak Tree at 21 Beech Avenue in Bowmanville;
3. That if the preservation plan is approved, the Self-Insured Losses Reserve be utilized to fund the costs up to \$56,100; and
4. That all interested parties listed in Report PWD-025-21 and any delegations be advised of Council's decision.

Report Overview

This report addresses Council Resolution #C-160-21 that requested Staff report back on a cost estimate to preserve, trim and support the Red Oak Tree at 21 Beech Avenue in Bowmanville. The report also seeks Council's direction on whether to proceed with the Tree Preservation plan prepared by Richardson Tree Care and the approval of a funding source to complete the work.

1. Background

- 1.1 On June 30, 2020, a large limb from the Red Oak Tree fronting 21 Beech Avenue fractured and landed on the adjacent house. The weight of the failed branch when being craned off was 5,600 pounds after being thinned. The failure of the limb did not occur as a result of any storm conditions or other external factors.
- 1.2 Recognizing the significance of the Red Oak Tree to the Older Bowmanville Neighbourhood, staff commissioned an independent Inspection and Assessment Study with Ontario Line Clearing & Tree Experts Inc. The study was completed in September 2020 and provided Staff with in-depth results that included sonic tomography and resistance drillings to further aid in determining the overall health of the tree.
- 1.3 The findings of the study concluded that the Red Oak tree is in the mid to late ancient developmental life stage. Features of over-maturity that are present include a declining crown, heartwood decay and segmentation into distinct functional units. There are, however, also areas of very good tree health evidenced by strong rib growth and striations.
- 1.4 The inspection and assessment study identified that the two lower limbs of the tree have the highest likelihood of failure in the future and may cause significant damage. These branches are relatively weakly attached and are likely to fall due to gravity without the addition of dynamic forces such as wind, rain, wet snow or freezing rain. There are also many other smaller limbs higher up in the canopy with very similar poor branch attachments that could fail at any time.
- 1.5 The report confirms that the likelihood of the two large lower limbs that extend over the sidewalk and roadway are likely to fracture within the next five years. Consideration of reducing the limbs by more than 1.5m will likely result in the death of the limbs.

- 1.6 Management options that are outlined within the report to address the existing tree conditions are listed as follows:
 1. Removal
 2. Addition of props and pruning as necessary
 3. Do nothing
- 1.7 A copy of the Tree Inspection and Assessment Study prepared by Ontario Line Clearing & Tree Experts Inc., dated September 22, 2020, is provided as Attachment 1.
- 1.8 On March 16, 2021, Mr. Bill Humber and Mr. Rick McEachern made presentations to the Clarington Heritage Committee requesting heritage conservation and enhancements for the Red Oak Tree. The purpose of the heritage designation would ultimately require protection and preservation of the tree.
- 1.9 Concurrent with the Clarington Heritage Committee review, Public Works staff also requested comment from the Durham Municipal Insurance Pool (DMIP) respecting the findings of the Inspection and Assessment Study. The DMIP responded by recommending that “the Municipality take steps to mitigate the risk of further failure of this tree. As for the options of either removing it or pruning/adding props to secure the tree, this is the decision of the Municipality.”
- 1.10 On April 20, 2021, the Clarington Heritage sub-committee concluded that based on extensive research and the information provided to the Committee, they found insufficient cultural heritage significance to recommend support for individual designation of the tree under Part IV of the Ontario Heritage Act.
- 1.11 At the regular Council meeting of May 3, 2021, Mr. Rick McEachern made a presentation requesting a similar course of action in an effort to protect the Red Oak Tree. In response to the request, Clarington Council passed Resolution #C-160-21, that directed Staff to report back on a cost estimate of preserving, trimming and supporting the Red Oak Tree.

2. Analysis

- 2.1 Public Works staff commissioned a further study in April 2021 by Richardson Tree Care to determine the full scope of Option 2 above for Generalized Tree Preservation and Pricing.
- 2.2 The consultant’s report suggested that the Red Oak Tree at 21 Beech Avenue was estimated to be approximately 230 years old and if properly cared for could potentially live for another 50 years.

- 2.3 The primary preservation mechanism recommended for the retention of the tree and the support for the two lowest over-extended heavy limbs includes the use of wooden utility poles and wire cabling. Pruning is also required to remove existing deadwood and to reduce the overall size of the tree to encourage new interior growth. It is further recommended that the size of the tree should be further reduced over the next 20 to 50 years.
- 2.4 The tree preservation plan will require that a number of steps be implemented including a design of the maypole and cabling system, obtaining permission to install poles on private property, installation of four wooden utility poles ranging in height from 25 to 75 feet, pruning of existing deadwood, reduction of the crown and the provision of soil invigoration and mulching.
- 2.5 Generalized costs for the tree preservation program is estimated at \$56,100. It should be noted that these estimated costs do not include future fees associated with yearly monitoring and for additional pruning likely in year 8-10. A cost breakdown of the proposed workplan is provided as follows.

Workplan	Estimated Cost
Design of Support System, Create Detailed Pruning Specifications	\$1,500
Engineering of Support System	5,000
Deadwood Removal & Pruning	3,000
Supervision of Pruning	800
Purchase of Poles	23,000
Hydrovac Service for Pole Installation	3,500
Supervision of Hydrovac	500
Pole Installation	3,500
Supervision of Pole Installation	800
Cabling Equipment	7,500
Cabling installation	4,000
Supervision of Cabling Installation	1,000
Soil Invigoration & Mulching	2,000
Total	\$56,100

- 2.6 A copy of the Generalized Tree Preservation and Pricing Study prepared by Richardson Tree Care, dated April 19, 2021, is provided as Attachment 2.

3. Concurrence

This report has been reviewed by the Director of Financial Services/Treasurer who concurs with the recommendation for the source of funding if Council decides to preserve the tree.

4. Conclusion

It is respectfully recommended that Council provide direction to Staff regarding the preservation of the Red Oak Tree fronting 21 Beech Avenue in Bowmanville. Based on the condition of the tree and the safety risks that are currently present, the Red Oak Tree must either be removed or be adequately supported using a maypole and cable system.

Staff Contact: Stephen Brake, Director of Public Works, 905-623-3379 ext. 2903 or sbrake@clarington.net.

Attachments:

Attachment 1 – Tree Inspection and Assessment of Red Oak

Attachment 2 – Generalized Tree Preservation and Pricing

Interested Parties:

The following interested parties will be notified of Council's decision:

Clarington Heritage Committee

Rick McEachern