

THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING & INFRASTRUCTURE SERVICES

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

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To: Mayor and Members of Town Council

Subject: 2021 Road Needs Study

1. <u>RECOMMENDATION:</u>

It is recommended that:

1. The 2021 Road Needs Study **BE APPROVED.**

2. <u>BACKGROUND</u>:

In 2021 the Town contracted Golder Associates Ltd. to complete the 2021 Road Needs Study. A Road Needs Study includes a condition assessment of the entire Town road network, updated traffic counts for road sections and analysis of options for rehabilitation / maintenance of the road network based on condition.

3. <u>DISCUSSION</u>:

In December 2020 the Town issued an RFP to update the Town's Road Needs Study. The RFP closed on January 22, 2021 and the Town received 5 submissions. The evaluation committee ranked Golder's proposal the highest and they were awarded the project.

Golders commenced a review of the Town's roads using electronic programs from Rival solutions and Total Pave to determine an International Roughness Index based on the type and severity of the surface distresses of each road section. This information along with visual inspections were used to create a Pavement Condition Index (PCI). The PCI is then used to determine a time of improvement and type of improvement.

The study also involved updating the traffic counts for all road sections. Unfortunately, the timing for the traffic counts coincided with the COVID lockdown in Spring 2021. It was determined that the traffic numbers were not indicative of the actual traffic numbers so the 2016 traffic data was used with some minor adjustment to address for growth.

Condition	Pavement	Length of	Percentage of	Cost of
	Condition	Road (km)	Road Network	Improvement (\$)
	Index (PCI)		(%)	
Very Poor	0-20	21.5	9.2	2,400,000
Poor	21-40	38.2	16.4	14,800,000
Fair	41-60	64.8	27.8	20,100,000
Good	61-80	72.8	31.3	8,650,000
Excellent	80-100	35.5	15.3	N/A

The study provides the following details on the current road infrastructure.

The cost of improvement in the chart above is based on completion of the recommended treatment for the road sections based on their current condition. For example, roads in the poor category could have a full reconstruction recommended while roads in the good category would have a single lift overlay recommended.

Overall, although 25.6% of the Town's roads are in the poor and very poor category the Town's overall PCI is 60 or Fair.

The study outlines two (2) different scenarios for capital improvements:

Optimizing a Fixed Budget

In this scenario, the Town budgets \$4,000,000 per year on road improvements. This budget is not spent directly on the Town's worst roads but on improving roads that have not yet reached the poor or very poor category. In this scenario no money is identified to repair or address the backlog of poor and very poor roads that are identified. These roads are left to continue to degrade while other roads are addressed. In this scenario, the number of roads in very poor condition would increase from 9% to over 20% and it is predicted that the overall PCI would improve from 60 to 70 over a 10 year span.

<u>Worst – First Methodology</u>

In this scenario the Town would address the roads based on the order of need (repair the worst roads first) instead of based on lifecycle events. This is the current methodology that is being used to prioritize capital projects in an attempt eliminate the backlog of roads that have passed their useful life. The estimated cost to address all roads in the NOW category is \$16.1m. It must be noted that this value does not include ancillary works such as catch basin repairs, curb repairs etc. that are included in most paving projects.

Although committing money to address the roads that are in poor or very poor condition is important, Administration believes that a hybrid approach that includes both addressing the worst roads systematically and completing lifecycle works such as single life asphalt overlay on roads in the 5-10 year range is a more financially sound practice for long term

planning. The updated 2022 asset management plan will provide a more detailed lifecycle scenario and recommended funding level to achieve and maintain the current level of service based on the information in this study.

4. <u>RISK ANALYSIS:</u>

There is a slight political risk involved with choosing a hybrid option of completing recommended lifecycle works over resurfacing the worst roads first. This option may result in more complaints from residents who want their roads completed sooner.

Choosing to complete all works based on a worst-first scenario will allow other roads to deteriorate and result in larger overall costs in the long term, which would have an adverse effect on the tax rate.

5. FINANCIAL MATTERS:

The 2021 Road Needs Study includes different options with respect to financial obligations. Administration believes using a hybrid approach to future capital road work that incorporates both works related to lifecycle renewal and addressing roads that are at end of life would be the best option moving forward. A comprehensive report that outlines the hybrid approach along with detailed financial implications as shown in the 2022 Asset Management Plan will be provided to Council prior to the 2023 budget.

6. <u>CONSULTATIONS</u>:

Golder Associates Ltd.

7. <u>CONCLUSION</u>:

That the 2021 Road Needs Study be approved.

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Todd Hewitt Manager of Engineering

Report Approval Details

Document Title:	2022 08 08 - 2021 Road Needs Study.docx
Attachments:	 2021 Road Needs Study Amherstburg FINAL.pdf Roads_Needs Table - Worst to Best.pdf
Final Approval Date:	Aug 3, 2022

This report and all of its attachments were approved and signed as outlined below:

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