

Date: 2022-04-15

Subject: 2022 Transportation Asset Management Plan

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Report Number: Corporate Support Services-2022-195

Recommendations:

1. That the report titled “**2022 Transportation Asset Management Plan**” to the Committee of Council Meeting of April 27, 2022, be received; and
2. That Council approve the proposed “**2022 Transportation Asset Management Plan**” attached as Appendix A; and
3. That the “2022 Transportation Asset Management Plan” be posted on the City’s website to comply with O. Reg. 588/17.

Overview:

- The Province of Ontario’s O.Reg. 588/17: Asset Management Planning for Municipal Infrastructure requires all municipalities to develop comprehensive Asset Management Plans for the City’s core assets by July 1st 2022, as part of a multi-phase process (2022-2025) that includes all infrastructure assets of the City.
- In 2019, Council approved the “Strategic Asset Management Policy” that sets out its commitment towards establishing sound Asset Management practices and instilling transparent evidence-based decision making processes, aligned with the City’s strategic objectives.

- The 2022 Transportation Asset Management Plan (TAMP) follows the City's Strategic Asset Management Policy and not only meets but exceeds the requirements outlined in the O.Reg. 588/17 for Transportation Assets. In addition to meeting the legislated requirements, this plan represents an important step in developing and achieving an asset management practice which allows the City's Transportation Infrastructure to be managed in a financially sustainable manner while delivering the expected Levels of Service for the community. Compliance with the legislation ensures the City's eligibility and demonstrates its strength in competing for future potential funding support from higher orders of governments.
- Based on 2019 State of Local Infrastructure (SOLI) report, the City's total replacement cost of the Transportation assets is estimated at \$2.47 billion. The majority of the assets currently owned and operated by the Transportation Service Area are considered to be in Good condition. The overall "Good" condition rating can largely be attributed to the City's Transportation infrastructure being relatively new in age combined with the sound asset management practices the City has employed to date.
- Through this plan, City staff have undertaken a comprehensive study of the Transportation Service Area and assessed an infrastructure gap that ranges from \$10.5 to \$54 Million annually over the projected 10 year period. This plan is an evolving document and as we mature our practices, future iterations of the Transportation Asset Management plan will be able to improve our data maturity and confirm the infrastructure gap.
- Staff will continue to engage and inform Council as part of the legislated requirements, and will provide updates to the TAMP with the proposed levels of services by July 1st 2025.

Background:

As the fourth largest City in the province and one of the fastest growing communities in Ontario, the City of Brampton owns and operates a substantial portfolio of Transportation assets. These assets are essential to the well-being of the community and form an integral part of the City's long term financial and service delivery planning.

With the help of GHD, a consulting firm that has played a leading role in the advancement of asset management best practices, City staff have undertaken a detailed study of the Transportation Service Area. TAMP development has been a cross-functional project involving the Corporate Asset Management Office (CAMO) and Transportation team working closely together for the past 2 years to gather and assess the information, and prepare the 2022 Transportation Asset Management Plan.

The Transportation Service Area continues to advance its asset maturity and its use of different systems to track asset data, and plan and manage lifecycle activities. This

information along with the input of Subject Matter Experts (SMEs) is the basis for the 2019 State of Local Infrastructure (SOLI) report which has been further updated to incorporate recent changes to Transportation assets to prepare the TAMP.

Based on 2019 State of Local Infrastructure (SOLI) report, the City's total replacement cost of the Transportation assets is estimated at \$2.47 billion and it accounts for 39% of the City's total asset replacement cost. The Transportation portfolio includes core assets Roads, Bridges and Culverts. It also includes other assets, namely, Gateway Features, Noise walls, Retaining walls, Fences, Guiderails, Handrails, Steps, Sidewalks, Walkways, Multi-use paths, Street Lighting, Signals, and Signs.

The Province of Ontario's O.Reg. 588/17: Asset Management Planning for Municipal Infrastructure, effective January 1, 2018 provides standard requirements for municipal asset management planning, and requires all municipalities to develop comprehensive Asset Management Plans for the City's core assets by July 1st 2022 and all other assets by July 1st 2024. As a first step towards the regulatory compliance, Council approved the "Strategic Asset Management Policy" in 2019 that sets out its commitment towards establishing sound Asset Management practices and instilling transparent evidence based decision making processes aligned with the City's strategic objectives.

The 2022 Transportation Asset Management Plan (TAMP) follows the City's Strategic Asset Management Policy and not only meets but exceeds the requirements outlined in the O.Reg. for Transportation Assets. Other than meeting the legislated requirements, this plan represents an important step in developing and achieving an asset management practice which allows the City's Transportation Infrastructure to be managed in a financially sustainable manner while delivering the expected Levels of Service for the community.

Current Situation:

The City's 2022 Transportation Asset Management Plan (TAMP) formalizes many of the asset management practices that are already implemented by the Transportation Service Area and supports the program to meet current requirements of O.Reg. 588/17 by reporting current levels of service measures. Further, this report lays the groundwork for developing the next iteration of this plan to support O.Reg. requirements for 2025 by incorporating proposed levels of service measures. The complete Transportation Asset Management Plan is attached as **Appendix A**.

The information required in a municipal Asset Management Plan established through the provincial regulation is very comprehensive, and this TAMP complies with the legislated requirements by including the following components:

- **State of the Local Infrastructure:** outlines the estimated value and condition of the City's transportation assets to provide various services;

- **Levels of Service:** describes how service is measured and how performance goals and expectations are identified and set;
- **Asset Management Strategy:** formalizes the current asset management practices and furthers its maturity by developing strategies to manage demand, risk, asset information, governance and lifecycle activities;
- **Financing Strategy:** assesses the lifecycle costs required to maintain assets over their life, the current gap in infrastructure funding and approaches to closing the gap; and
- **Future Improvements:** provides an overview of future improvements and initiatives that will improve asset maturity.

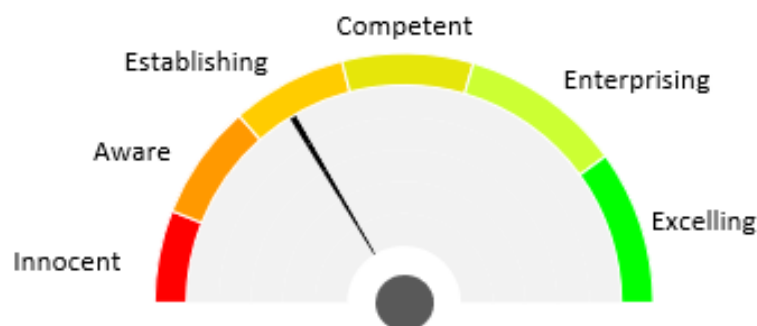
The 2022 Transportation Asset Management Plan was finalized following the discussion at the Council workshop on February 4th, 2022 (presentation slide deck provided in Appendix B). The following sections provide highlights of the 2022 Transportation Asset Management Plan (TAMP) as detailed in Appendix A of this report.

Asset Management Maturity Assessment:

An asset management maturity assessment measures and tracks the progress of the City's asset management practices and activities. The results of the assessment are intended to be used to further inform the Asset Management Roadmap and guide the City towards best practices in asset management.

As shown below in Figure 1, the Transportation Services Area has an average AM maturity rating of establishing (2.5) to competent (3). By addressing improvement initiatives outlined in section 10 (Monitoring and Improvement Plan) of the TAMP, Transportation will be able to increase the maturity of its asset management practices and could be achieving a score of "enterprising (4)" subsequent to full implementation of the regulatory requirements in July 2025.

Figure 1 - Maturity Assessment Rating Score

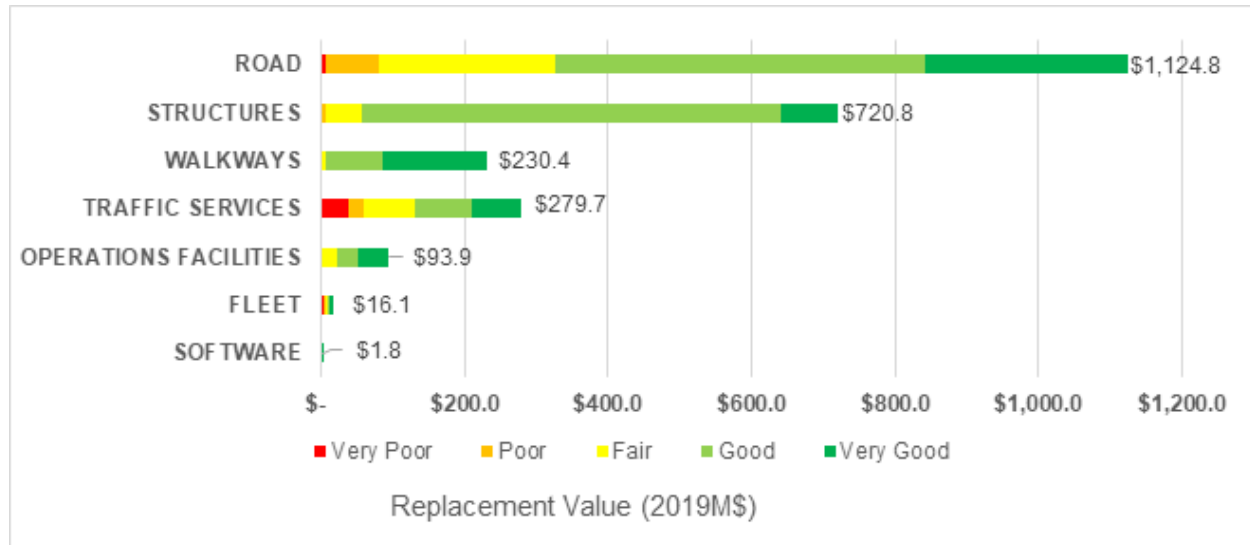


State of the Local Infrastructure:

Based on 2019 State of Local Infrastructure (SOLI) report, the City's total replacement cost of the Transportation assets is estimated at \$2.47 billion. The Asset Management

Plan identifies that the City's transportation assets are generally in **GOOD** condition, with over **94%** of the assets in fair or better condition, which is referred to as a **"state of good repair"**. The overall "Good" condition rating can largely be attributed to the City's Transportation infrastructure being relatively new in age combined with the sound asset management practices the City has employed to date. The Figure 2 illustrates the distribution of assets, by condition and by asset value.

Figure 2- Replacement Value & Condition



Note 1: Condition of the traffic services is reported based on age. Based on 2018 condition report all Traffic Services - Street Lighting assets with "Very Poor" condition have been addressed and brought to "Fair" condition by 2020.

Note 2: Chart includes Operations Facilities, Fleet and Software that help in the service delivery but are not considered part of the Transportation portfolio. They are shown in Figure 2 to be consistent with the 2019 SOLI report.

Levels of Service:

The Asset Management Plan provides the measures for current performance on customer and technical levels of service for the City's Transportation services in accordance with the O.Reg. 588/17 requirements for Asset Management Plans' current levels of service. The following table provides the technical metrics (Column 3) of Tables 4 to 5 of the regulation.

City O.Reg. 588/17 Technical Levels of Service

Asset Type	Attribute	Technical Metric	2019 Performance
Roads	Scope	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality	Arterial: 2.9 Collector: 1.9 Local: 7.3
	Quality	For paved roads in the municipality, the average pavement quality index value	PCI: 8.3
Bridges & Culverts	Scope	Percentage of bridges in the municipality with loading or dimensional restrictions	Loading: 1.5% Vertical Clearance: 2.0%
	Quality	For bridges in the municipality, the average bridge condition index value	BCI (Bridges): 78
		For structural culverts in the municipality, the average bridge condition index value.	BCI (Culverts): 75

City staff have undertaken a comprehensive review of the levels of service, their current performance, and identified and set targets which are outlined in detail in Section 3 (Levels of Service) of the TAMP. The overall asset management plan is built around providing these levels of service in a sustainable and fiscally responsible manner considering long-term infrastructure asset needs. The asset management strategies mentioned in the TAMP will help the City work towards achieving the expected levels of service.

Financing Strategy

Like many municipalities across Canada, the results of the Transportation Asset Management Plan (TAMP) indicate that the current levels of financial contributions fall short of the optimal level of capital requirements identified over the next ten years. The concern over an infrastructure gap is not so much that it exists, but how this gap changes over the long-term and if the change affects levels of service, asset conditions and the delivery of services.

Based on the total 10-year full lifecycle cost and revenue analysis that is detailed in Section 9 (Financing Strategy) of **Appendix A**, an infrastructure gap ranging from \$10.5

to \$54 Million annually is identified for existing assets. The replacement program for the Transportation assets is not fully mature and has not been formally considered in the past. Thus, the needs arising from the future replacement activities is a major contributor to the infrastructure gap. Although significant work has been conducted to develop this assessment, the Transportation Service Area acknowledges that some assumptions used to create this forecast require further investigation. The TAMP report has identified a number of opportunities for improvement which will help to refine the confidence in the numbers presented for the renewal (replacement) costs and hence the infrastructure gap.

Future Improvements:

The development of Asset Management Plans is an iterative process that includes improving data, processes, systems, staff resources, capacity building and organizational culture over time. As the City's asset management program further advances, it can be expected that the cost analysis is improved to better reflect asset risks, levels of service and a more fulsome understanding of the condition of the Transportation's infrastructure.

As the City's asset management program further advances, it can be expected that the cost analysis will be improved to better reflect asset risks, levels of service and a more fulsome understanding of the condition of the Transportation assets. Please refer to Section 10 (Monitoring and Improvement Plan) of **Appendix A** for a detailed list of improvements.

Next Steps:

Staff will continue to engage and inform Council as part of the legislated requirements, and will provide updates to the TAMP with the proposed levels of services by July 1st 2025.

Corporate Implications:

Financial Implications:

Upon completion, the TAMP will be used as a tool to help prioritize investments. This entails identifying and requesting funds for capital improvements projects to provide sustainable levels of services while balancing risk and lifecycle costs.

Current legislation requires municipalities to implement an asset management plan to ensure the City's eligibility and demonstrates its strength in competing for future funding support from other levels of governments.

Various funding options and strategies have been proposed and analyzed in the TAMP and will be further addressed in the City's Long Term Financial Plan and through other future studies and proposals to Council.

Other Implications:

The Province of Ontario's O.Reg. 588/17: Asset Management Planning for Municipal Infrastructure requires all municipalities to develop comprehensive Asset Management Plans for the City's core assets by July 1st 2022. Council approval of this plan allows the City to meet the regulatory requirements for Transportation assets.

Term of Council Priorities:

This report fulfils the Council Priority of a Well-Run City through strict adherence to effective financial management policies and supports Brampton 2040 Vision by ensuring sustainable financial operations.

Conclusion:

The City staff are seeking the approval of the 2022 Transportation Asset Management Plan prepared in accordance with O.Reg. 588/17 and post the plan on the City's website. Staff will continue to engage and inform Council as part of the legislated requirements.

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Attachments:

Appendix I: 2022 Transportation Asset Management Plan
Appendix II: Council Workshop Presentation