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| Date: July 9, 2021 | Originator's files: |
| To: Chair and Members of General Committee | |
| From: Shari Lichterman, CPA, CMA, Commissioner of Corporate Services and Chief Financial Officer | Meeting date: September 22, 2021 |

Subject

2021 Corporate Asset Management Plan – Core Infrastructure

Recommendation

1. That the report dated July 9, 2021 entitled “2021 Corporate Asset Management Plan – Core Infrastructure” from the Commissioner of Corporate Services and Chief Financial Officer be received.
2. That Appendix 1, “2021 Corporate Asset Management Plan” be approved.
3. That the “2021 Corporate Asset Management Plan” be posted on the City’s website to comply with *O. Reg. 588/17*.

Executive Summary

- Council approved a Strategic Asset Management Policy in June 2019 that sets out its commitment to integrating asset management (AM) practices in its business processes. Adopting AM practices ensures assets will be effectively managed and provide a level of service in alignment with the communities’ expectations in both the long-term and short-term.
- *O. Reg. 588/17 – Asset Management Planning for Municipal Infrastructure* requires municipalities to prepare AM Plans for core assets (roads, structures [bridges & culverts] and stormwater management system).
- The City’s 2021 Corporate Asset Management Plan (Appendix 1) has been prepared through extensive collaboration with staff responsible for managing the City’s core assets.
- Overall, the City’s core infrastructure is in “Good” condition and has an estimated replacement value of \$9.2 billion.
- As the City continues to grow and mature, our existing infrastructure will age and deteriorate. Maintaining local infrastructure in a state of good repair is a fundamental principle of the City’s business planning and budget process.

- Similar to other municipalities, the City has identified an infrastructure gap for its core assets. It is estimated in the 2021 Corporate AM Plan there is an average annual gap from 2019-2028 of \$20-30 million for road pavement rehabilitation. The average annual gap for stormwater assets from 2019-2028 is estimated at \$2.1 million.
- A strategy to manage the infrastructure gap will be incorporated into future phases of the asset management program that aligns with provincial deadlines for Council to approve a proposed/target community levels of service (July 2025) for its assets.

Background

The Province enacted the *Infrastructure for Jobs and Prosperity Act (IIPA), 2015* and its accompanying *O. Reg. 588/17 – Asset Management Planning for Municipal Infrastructure*. The Regulation provides standard requirements for municipal asset management planning and supports infrastructure resiliency and sustainability through developing Asset Management (AM) plans. This regulation came into effect on January 1, 2018.

In the regulation, the Province prescribed timelines for the delivery of municipal AM Plans for core infrastructure, non-core infrastructure, current and proposed community service levels, strategic AM policy review (every five years) and annual reporting to Council on AM Plan advancements. The information required in a municipal AM Plan established through the provincial regulation is very comprehensive, and must include the following components:

- State of infrastructure
 - Inventory of assets
 - Replacement cost
 - Average asset age
 - Asset condition
 - Asset risk
- Current community levels of service
 - Customer – qualitative measures
 - Technical metrics
- Future demand
 - Alignment with municipal strategic plans and *Growth Plan for the Greater Golden Horseshoe, 2017*
 - Climate change impacts on assets and mitigation
- Lifecycle management strategy to maintain current community levels of service
 - Lifecycle management activities 10-year forecast
 - Significant lifecycle management costs
- Financing strategy including identification of any infrastructure gap
- Continuous improvement and monitoring

The 2021 Corporate AM Plan has been prepared based on the best available asset information for the City's core infrastructure. Asset data, budget and forecast information (2019-2028) contained in this plan is as of December 31, 2019. The City's 2021 Corporate Asset Management Plan is compliant with provincial requirements.

Comments

In 2019, the City of Mississauga's combined assets had a replacement value of \$13.2 billion. Core assets (roads, structures [bridges & culverts] and stormwater management system) are estimated at \$9.2 billion and non-core assets (all other assets) at \$4 billion. These assets support the delivery of essential services to Mississauga residents, businesses and visitors.

The following sections provide highlights of the 2021 Corporate Asset Management Plan for the City's core assets as detailed in Appendix 1 of this report.

State of City's Core Infrastructure

The average state of the City's core infrastructure is identified as "**Good**". The condition of individual core infrastructure asset classes ranges from "**Fair**" to "**Very Good**".

While bridge and culvert structures are aging, they are in "**Good**" condition. These assets are well managed with regular inspections that follow provincial standards. The detailed AM Plan section for Roads and Structures identifies structures as critical assets and related projects receive priority funding. Sufficient resources and continuous improvement plans are in place to manage these assets over the next ten-years.

Road pavement assets are currently well managed but aging at a faster rate than the other core assets. Although the overall road network condition is rated between "**Fair**" and "**Good**", long range modeling projections indicate that the overall road network condition is in decline and additional investment is needed over the next 20 years.

Stormwater assets in the AM Plan include storm sewers, stormwater management facilities (SWMF) and watercourses. The condition of storm sewers ("**Good**") and SWMF ("**Very Good**") is primarily based on the age and expected useful life of these assets. However, long-term forecasts identify a future pressure in replacing the existing storm sewer network, as the assets reach the end of their useful life. Inspection and assessment programs will continue to be leveraged to provide more reliable condition data in future asset management plans. The condition of watercourse assets ("**Good**") is based on field assessments, which will be refined in future plans as a more comprehensive watercourse asset inventory is developed.

Financing Strategy

The City's existing four year business plan, budget and 10-year capital forecast provides for the funding of operational and capital investments for all city assets. Through prudent asset management practices, service areas ensure that available funds are applied in a prioritized

manner. There continues to be, however, an infrastructure gap – the gap between how much is required to maintain our assets and how much funding is currently available.

In 2019, the average annual infrastructure funding gap for the roadway rehabilitation program is estimated at \$20-30 million. Contributing to the gap are cost pressures from construction pricing. In recent years, construction pricing has increased between 10% and 20% annually resulting in delays delivering timely pavement renewal for some roads.

Without an increase in the annual investment for roads, the impact of the deteriorating road system will result in higher operating and maintenance costs, lower levels of customer satisfaction, lower levels of road safety, increased liability and insurance claims, longer times to commute to work and school, and ultimately a lower level of service that residents have come to expect.

The 2019-2028 (10-year) stormwater funding gap was estimated as \$20.7 million (\$2.1 million/year), based on the analysis of the Stormwater Charge revenue anticipated over this period, and an annual stormwater charge increase estimated at 2%. The 2019-2118 (100-year) storm sewer funding gap was estimated as \$2.94 billion (\$29.4 million/year), based on the pipe reserve contribution forecasts and storm sewer renewal costs. Long term funding gaps for the Stormwater Management Facility and Watercourse assets have not yet been developed. Without an increase in the annual Pipe Reserve contributions, it is expected that there will be a significant funding gap starting in the 2050s.

As part of municipal asset management planning, O. Reg. 588/17, municipalities are required to document the current community level of service in the core and non-core AM Plans due in 2022 and 2024, respectively. The focus of the 2025 AM Plan update is to establish a council approved proposed/target community levels of service and develop financing strategies to manage the affordability of the proposed/target community levels of service.

It is important to note that the City continues to leverage allocations received from federal and provincial funding programs for road infrastructure, transit and active transportation projects to control the size of the infrastructure gap and minimize the impact to ratepayers.

Continuous Improvement

One of the goals of the asset management plan is to establish a baseline of current asset management practices to inform work plans for continuous improvement. Since 2018, the City's asset management teams have been rapidly maturing. Some of the advancements made to date include:

- Development of the City's first Strategic AM Policy
- Establishment of an AM governance structure and core working team
- Establishment of an AM reporting framework
- Expansion of overall awareness and knowledge about AM

- Initial development of dashboard tools for core assets to automate reporting
- Development of a business case to engage a vendor using mobile laser imaging, detection and ranging (LiDAR) to scan, map and collect roadway right-of-way assets in the City
- Development of community levels of service (LOS) metrics for all core asset classes and developing knowledge to define proposed/target LOS for all core and non-core asset classes
- Development of a stormwater risk management framework
- Completion of inventory and condition assessments for roads, bridges, culverts and stormwater assets
- Successful certification of 15 staff in asset management since 2018

Performing regular asset management maturity assessments is used to demonstrate continuous improvement of an organizations asset management business practices. Standardized maturity assessments have been conducted for core assets, establishing a base-line measurement for comparison against future maturity assessments. Implementation of AM improvement activities for core assets identified in the 2021 AM Plan will increase the overall AM maturity level for core assets.

Financial Impact

The 2021 AM Plan has identified that funding needs compared to available funding has resulted in an infrastructure gap for specific core assets. As asset management plans are further developed and funding gaps are quantified, these pressures will be brought forward through the annual budgeting process for Budget Committee to consider. In addition, City staff will continue to explore additional opportunities to obtain infrastructure funding from senior levels of government.

Conclusion

City staff are seeking approval of the 2021 Corporate Asset Management Plan for core infrastructure prepared in accordance with O. Reg. 588/17. The 2021 Corporate AM plan estimates the replacement cost of the City's core assets is \$9.2 billion and the overall state of its core infrastructure is in "**Good**" condition.

Attachments

Appendix 1: 2021 Corporate Asset Management Plan (Core Infrastructure)



Shari Lichterman, CPA, CMA, Commissioner of Corporate Services and Chief Financial Officer

Prepared by: Susan Cunningham, Manager, Corporate Asset Management