

Committee of the Whole (2) Report

DATE: Tuesday, May 14, 2024

WARD(S): ALL

**TITLE: 2023 ASSET MANAGEMENT STATE OF INFRASTRUCTURE
UPDATE**

FROM:

Vince Musacchio, Deputy City Manager, Infrastructure Development

ACTION: FOR INFORMATION

Purpose

The Asset Management State of Infrastructure Update summarizes the state of the City's infrastructure assets that are essential to providing vital community services. This is the first update on the state of the City's infrastructure since the 2021 and 2022 completion of the Asset Management Plans for Core and Non-Core Assets respectively.

Report Highlights

- The Asset Management Program for City infrastructure is in alignment with the Term of Council Strategic Priority of Service Excellence and Accountability under the Objective to Ensure Financial Sustainability and an Effective and Efficient Administration.
- Information from the Asset Management State of Infrastructure Update has directly informed the “2023 Delivery Report – Infrastructure Development” as well as updates to the Core and Non-Core Asset Management Plans.
- City staff are now internally completing all in-kind future updates to Asset Management Plans building on prior work from external consultants. Net new additions to the Plans required by O. Reg. 588/17 on July 1, 2025 will be facilitated with further work from external consultants.
- 98% of Core assets (such as water, wastewater, stormwater, road and bridge infrastructure) and 91% of Non-Core assets (such as facilities, parks, forestry, fleet, fire and other transportation infrastructure) are in fair or better condition with replacement values of \$6.8B and \$1.6B respectively.

Recommendations

1. THAT the 2023 Asset Management State of Infrastructure updates, as outlined in this report, be received for information.

Background

Assets are essential to provide the necessary services that contribute to the high quality of life enjoyed by City of Vaughan residents. It is imperative to ensure services are delivered in a safe, reliable, and efficient manner, while sustaining a growing community.

Infrastructure assets are built, owned, operated and maintained by the City.

Overall responsibility of asset management is shared across City departments to effectively and continuously assess, evaluate and improve asset management programs to deliver services balanced against considerations of costs and risks.

The City is committed to sustainable asset management practices.

The City has continued to grow its asset base and advance asset management programs to manage its assets. Examples of initiatives implemented through proactive asset management include assessing the condition of buildings like community centers, modeling the deterioration of buried pipes in the water distribution system, and evaluating the remaining life on playground equipment to better inform decisions about maintenance, rehabilitation, replacement, and disposal.

Asset Management Planning for Municipal Infrastructure Regulation came into effect in January 2018.

In May 2017, the Province issued the “Proposed Municipal Asset Management Planning Regulation” to implement best practices throughout the municipal sector. The Regulation is intended to provide certainty around future provincial asset management planning requirements and support resilience and sustainability as key aspects of municipal asset management planning. [Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure](#) came into effect in January 2018.

O. Reg. 588/17 is targeted at the issue of many Ontario municipalities having existing infrastructure assets that are degrading faster than they are being repaired or replaced, putting infrastructure services at risk.

O. Reg. 588/17 stipulates that Asset Management Program elements be in place within Ontario municipalities by specific key dates.

O. Reg 588/17 Requirement	O. Reg 588/17 Requirement Date	City Status for Requirement
Asset Management Policy approved by Council and available on the City's website.	July 1, 2019	Complete
Asset Management Plans for Core Assets approved by Council and available on the City's website.	July 1, 2022	Complete
Asset Management Plans for other assets approved by Council and available on the City's website.	July 1, 2024	Complete
Asset Management Plans augmented with affordability of forecasted Levels of Service.	July 1, 2025	In Progress

The City's first Asset Management Policy, Core Asset Management Plans and Non-Core Asset Management Plans were approved by Council in March 2019, June 2021 and December 2022 respectively.

The City's first Asset Management Policy was presented at Finance, Administration and Audit Committee on March 4, 2019. The Policy provides a framework to ensure long-term asset sustainability and demonstrates fiscal stewardship for the City's growing and aging asset base. Additionally, the policy outlines roles and responsibilities across the corporation, which are critical to successful implementation of the City's asset management programs.

To empower focused conversations around local and legislated requirements, the policy was divided into six components with the following content:

1. Administrative Requirements
 - Strategic alignment
 - Guiding principles
 - Governance and continuous improvement
2. Critical Assets and Business Risks
 - Potential risks and vulnerabilities
 - Climate change

3. Land-use Planning
 - Community planning
4. Infrastructure Financial Management
 - Budgeting and financial planning
 - Capitalization thresholds
5. Levels of Service
 - Customer expectations
 - Regulatory requirements
 - Organizational objectives
6. Implementation and Communication Procedures
 - Asset management planning inputs
 - Asset management planning outputs

Building on the Asset Management Policy, City Staff proceeded with the preparation of Asset Management Plans for Core Assets (Water, Wastewater, Stormwater, Roads, Bridges, Major Culverts) and presented them at Committee of the Whole (Working Session) on June 2, 2021. Subsequently, City Staff took next steps to develop Asset Management Plans for Non-Core Assets (Facilities, Parks, Active Transportation, Traffic Control & Streetlights, Fleet, Fire) and presented them at Committee of the Whole (Working Session) on December 7, 2022.

The purpose of Asset Management Plans is to capture new infrastructure assets and any updates in the City's asset data, so as to provide the City with comprehensive Asset Management Plans. The objective is to deliver a financial and technical roadmap for the management of the City's core infrastructure assets, and to provide the means for the City to maximize value from its assets, at the lowest overall expense while, at the same time, providing enhanced service levels for its residents and promoting green initiatives.

Essential elements of the Asset Management Plans include:

1. State of Infrastructure
 - Inventory of assets
 - Condition of assets
 - Remaining service life of assets

2. Level of Service
 - Performance measures
 - Future demand drivers
3. Asset Lifecycle Costs
 - Operations and maintenance
 - Capital renewal and replacement
4. Financial Needs and Funding Forecasts
 - 20-Year reinvestment forecast

Development of the Asset Management Plans for Core and Non-Core Assets is in alignment with the Term of Council Strategic Priority of Service Excellence and Accountability under the Objective to Ensure Financial Sustainability and an Effective and Efficient Administration.

City staff are now internally completing all in-kind future updates to Asset Management Plans building on prior work from external consultants. Net new additions to the Plans required by O. Reg. 588/17 on July 1, 2025 will be facilitated with further work from external consultants funded with an already approved project budget.

Organizations that implement good Asset Management practices will benefit from improved business and financial performance, effective investment decisions, and better risk management. Stakeholders can expect lower total asset life cycle costs, higher asset performance, and confidence in sustained future performance.

Previous Reports/Authority

[Item 2, Report No. 5, of the Finance, Administration and Audit Committee, which was adopted without amendment by the Council of the City of Vaughan on March 19, 2019](#)

[The Council-approved Asset Management Policy](#)

[Item 2, Report No. 31, of the Committee of the Whole \(Working Session\), which was adopted without amendment by the Council of the City of Vaughan on June 22, 2021](#)

[The Council-approved Asset Management Plans for Core Assets](#)

[Item 1, Report No. 45, of the Committee of the Whole \(Working Session\), which was adopted without amendment by the Council of the City of Vaughan on December 13, 2022](#)

The Council-approved Asset Management Plans for Non-Core Assets

Analysis and Options

Fiscally sustainable asset management over the long-term is imperative considering the sizeable valuation of the City's infrastructure and the multiple decades over which the lifecycle of these assets will span.

The replacement value of the City's assets in Water, Wastewater, Stormwater, Roads, Bridges and Major Culverts is sizable at a collective \$6.8 billion.

Service Area	Replacement Valuation	Share of Core Assets Valuation
Water Distribution	\$1.5 B	22.2%
Wastewater Collection	\$1.1 B	16.6%
Stormwater Management	\$2.4 B	35.0%
Road Pavement	\$1.5 B	22.2%
Bridges & Major Culverts	\$270 M	4.0%
Total	\$6.8 B	100%

98% of Water, Wastewater, Stormwater, Road, Bridge and Major Culvert assets are in fair or better condition.

Service Area	Asset Condition			
	Very Good	Good	Fair	Poor
Water Distribution	85.6%	4.4%	3.3%	6.7%
Wastewater Collection	99.4%	0.4%	0.1%	0.1%
Stormwater Management	99.7%	0.3%	0.0%	0.0%
Road Pavement	95.0%	4.3%	0.7%	0.0%
Bridges and Major Culverts	11.6%	84.0%	4.4%	0.0%

The replacement value of the City's assets in Facilities, Parks, Urban Forestry, Active Transportation, Traffic Control & Streetlights, Fleet and Fire is significant at a collective \$1.6 billion.

Service Area	Replacement Valuation	Share of Non-Core Assets Valuation
Facilities	\$680 M	41.6%
Parks	\$273 M	16.7%
Urban Forestry	\$117 M	7.2%
Active Transportation	\$228 M	13.9%
Traffic Control & Streetlights	\$227 M	13.8%
Fleet	\$59 M	3.6%
Fire	\$53 M	3.2%
Total	\$1.34 B	100%

91% of all Facilities, Parks, Urban Forestry, Active Transportation, Traffic Control & Streetlights, Fleet and Fire assets are fair or better condition.

Service Area	Asset Condition			
	Very Good	Good	Fair	Poor
Facilities	43.4%	34.5%	21.9%	0.2%
Parks	17.6%	62.9%	13.0%	6.5%
Urban Forestry	65.0%	8.0%	4.0%	23.0%
Active Transportation	70.4%	17.8%	6.1%	5.7%
Traffic Control & Streetlights	60.8%	4.6%	11.6%	23.0%
Fleet	32.9%	5.7%	10.8%	50.6%
Fire	53.0%	14.0%	16.0%	17.0%

Financial Impact

There are no immediate financial impacts anticipated as a result of the report recommendations.

Information from the Asset Management State of Infrastructure Update directly informs updates to the Core and Non-Core Asset Management Plans. City staff are now internally completing all in-kind future updates to Asset Management Plans building on prior work from external consultants. Net new additions to the Plans required by O. Reg. 588/17 on July 1, 2025 will be facilitated with further work from external consultants

funded with an already approved project budget. These additions to the Plans include determinations of operating and capital affordability for forecasted Levels of Service for all asset service areas. The determination of affordability will intersect with the City's Long-Range Fiscal Plan (LRFP) and will also consider the City's financial reserves to verify which asset service areas are positioned with a funding surplus or shortfall financial outlook.

Operational Impact

There are no immediate operational impacts anticipated as a result of the report recommendations.

Information from the Asset Management State of Infrastructure Update directly informs updates to the Core and Non-Core Asset Management Plans. The Asset Management Plans themselves provide input into annual budget processes through facilitating and informing evidence-based decision-making in how the City's assets are operated, maintained, renewed and replaced toward optimizing costs and mitigating risks over their asset lifecycles while overseeing the levels of service they provide to residents. The Asset Management Plans also provide formal input into capital project management processes at the City.

Broader Regional Impacts/Considerations

There are no Regional impacts anticipated as a result of the report recommendations.

Conclusion

The City is in the advantageous position of having most of its infrastructure being relatively young, which is reflected in the fact that 98% of Core assets (such as water, wastewater, stormwater, road and bridge infrastructure) and 91% of Non-Core assets (such as facilities, parks, forestry, fleet, fire and other transportation infrastructure) are in fair or better condition.

However, management of asset lifecycles with suitable operational and capital activities in addition to ongoing long-term planning with appropriate funding of infrastructure reserves are paramount to ensuring asset service levels are maintained over the approaching decades on a fiscally responsible and sustainable foundation. Upcoming work to meet the final requirements of O. Reg. 588/17 that are due on July 1, 2025 will undertake a detailed analysis of the future affordability of the City's asset service areas and verify which areas are positioned with a funding surplus or shortfall financial outlook.

For more information, please contact: Selma Hubjer, Director, Infrastructure Planning & Corporate Asset Management, Ext. 8674.

Attachments

1. 2023 Asset Management State of Infrastructure Update by Service Area, Infrastructure Planning & Corporate Asset Management, April 2024

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