

Committee of the Whole (Working Session) Report

DATE: Wednesday, June 2, 2021

WARD(S): ALL

TITLE: ASSET MANAGEMENT PLAN – CORE ASSETS

FROM:

Nick Spensieri, Deputy City Manager, Infrastructure Development

ACTION: DECISION

Purpose

Seek Council endorsement of the Asset Management Plans for Core Assets (Water, Wastewater, Stormwater, Roads and Bridges).

Report Highlights

- O. Reg. 588/17 requires the City prepare Asset Management Plans for Core Assets and post them to its website, so they are available to the public.
- Development of the Asset Management Plans for Core Assets is in alignment with the Term of Council Strategic Priority of Good Governance under the Objective of Financial Stewardship and Sustainability.
- Over 90% of all Water, Wastewater, Stormwater, Road and Bridge assets are either in good or very good condition.
- The City's capital reinvestment into its Core Assets is currently sufficient exceeding forecasted capital needs by an estimated 15% across Core Assets.

Recommendations

1. That Council endorse the Asset Management Plans for Core Assets and approve making them accessible to the public on the City's website (as specified by O. Reg. 588/17) from the Infrastructure Planning and Corporate Asset Management webpage.

Background

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

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.

The City is committed to sustainable asset management practices

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 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 resiliency 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 Ontario municipalities to ensure existing infrastructure assets do not degrade faster than they are repaired or replaced, thereby not putting infrastructure services at risk

O. Reg. 588/17 stipulates that certain Asset Management 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	In Progress
Asset Management Plans for other assets approved by Council and available on the City’s website.	July 1, 2024	In Progress

The City’s first Asset Management Policy was approved by Council in March 2019

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. The policy also 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
 - coordination at boundaries and public input

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
- performance measurement

6. Implementation and Communication Procedures

- asset management planning inputs
- asset management planning outputs

Building on the Asset Management Policy, City Staff have proceeded with the preparation of Asset Management Plans for Core Assets (Water, Wastewater, Stormwater, Roads, Bridges) ahead of the July 1, 2022 requirement date in O. Reg. 588/17.

Development of the Asset Management Plans for Core Assets (Water, Wastewater, Stormwater, Roads, Bridges) is in alignment with the Term of Council Strategic Priority of Good Governance under the Objective of Financial Stewardship and Sustainability

The City retained the consulting services of AECOM Canada to complete the review and development of the Asset Management Plans for Core Assets. The purpose of Asset Management Plans (AMP) is to capture new core infrastructure assets and any updates in the City's asset data, so as to provide the City with a comprehensive asset overview. 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. Core Assets are defined as:

- Water distribution assets
- Wastewater collection assets
- Stormwater management assets
- Road pavement assets
- Bridge and major culvert assets

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.

Essential elements of an Asset Management Plan includes:

1. Current state of assets
 - a. Inventory assets
 - b. Asset condition
 - c. Asset residual life
2. Level of service
3. Criticality of assets
4. Risk of asset failure
5. Operation, maintenance, and capital improvement strategies
 - a. Optimized investment decision making process
 - b. Optimized operations and maintenance program
 - c. Optimized capital investment strategy
6. Life cycle costs

Previous investments in an Asset Management Planning tool have allowed the City to optimize capital investments across the core assets. The Asset Management Plans have been developed utilizing this decision support software, which formalizes a comprehensive approach to a risk-based optimization of capital funding allocations across Road, Water, Wastewater and Stormwater asset classes. Furthermore, the decision support software leverages geo-coordination across these asset classes to yield up to 20% in cost savings in addition to the environmental and social benefits of reducing the impacts of capital project construction activities in the community.

Previous Reports/Authority

For reference, the Report of the Finance, Administration and Audit Committee presented to Council on March 19, 2019 pertaining to the approval of Asset Management Policy may be found at the following address.

<https://pub-vaughan.escribemeetings.com/FileStream.ashx?DocumentId=12601>

The Council approved Asset Management Policy may be found at the following address.

<https://www.vaughan.ca/cityhall/departments/IPCAM/policies/Pages/default.aspx>

Analysis and Options

The replacement value of the City’s assets in Water, Wastewater, Stormwater, Roads and Bridges is sizable at a collective \$6.3 billion

Asset Class	Replacement Valuation	Share of Core Assets Valuation
Water Distribution	\$1.51 B	23.9%
Wastewater Collection	\$1.03 B	16.3%
Stormwater Management	\$2.04 B	32.2%
Road Pavement	\$1.53 B	24.2%
Bridges and Major Culverts	\$214 M	3.4%
Total	\$6.32 B	100%

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.

Over 90% of all Water, Wastewater, Stormwater, Road and Bridge assets are either in good or very good condition

Asset Class	Asset Condition			
	Very Good	Good	Fair	Poor
Water Distribution	91%	3%	2%	4%
Wastewater Collection	99.6%	0.3%	0.1%	0%
Stormwater Management	99.9%	0.1%	0.0%	0%
Road Pavement	93.8%	6.0%	0.1%	0.1%
Bridges and Major Culverts	12.8%	83.6%	3.3%	0.3%

The City is in the advantageous position of having the vast majority of its infrastructure being relatively young, which is reflected in the fact that over 90% of all Water, Wastewater, Stormwater, Road and Bridge assets are either in good or very good 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.

The City's capital reinvestment into its Core Assets is currently sufficient exceeding forecasted capital needs by an estimated 15% across Core Assets

The Asset Management Plans have produced 20-year forecasts of capital needs for Water, Wastewater, Stormwater, Road and Bridge assets. The City's capital reinvestment into its Core Assets is currently sufficient (the 5-year approved Budget Book average exceeds the forecasted capital needs by an estimated 15% across Core Assets).

Financial Impact

There is no direct financial impact as a result of this report, however, the Asset Management (AM) Plans will be an input into the City's future annual budget processes and long-term financial strategy and plan. The AM Plans will facilitate and inform evidence-based decision-making on how the City's assets are operated, maintained, renewed and replaced thereby optimizing costs and mitigating risk over their asset lifecycles while overseeing the levels of service they provide to residents.

The Asset Management Plans will also serve as a formal input into the capital project management process within Infrastructure Development.

Broader Regional Impacts/Considerations

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

Conclusion

Council endorsement of the Asset Management Plans for Core Assets and approval to make them accessible to the public on the City's website from the Infrastructure Planning and Corporate Asset Management webpage are required to ensure compliance with O. Reg. 588/17.

The Asset Management Plans for Core Assets (Water, Wastewater, Stormwater, Roads and Bridges) will be used to inform future operations and capital expenditure decision-making towards fiscally responsible and sustainable asset lifecycle management.

For more information, please contact:

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Attachments

1. Asset Management Plans for Core Assets, AECOM (consultant), April 2021
(to be provided prior to the meeting)

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