



**MNP**

## City of Markham

### Report of the Auditor General Asset Management Audit

**Presented to:** General Committee of Council, City of Markham

**Date:** October 7, 2019

# AGENDA

- Background
- Audit Objective
- Audit Approach
- Scope
- Strengths
- Summary of Observations and Recommendations
- Acknowledgement

## BACKGROUND

In 2012, the Ontario Ministry of Infrastructure (“MOI”) declared that any municipal requests for infrastructure funding must be supported by an Asset Management Plan. The development of the City’s Asset Management Plan was completed in 2016.

Assets range from right of way infrastructure (roads, stormwater infrastructure, bridges, streetlights, water, wastewater), parks, facilities, information technology (“IT”) infrastructure, and fleet. After its formation in 2017, the Sustainability & Asset Management Department was tasked with setting the policy direction for Asset Management, with City Departments responsible for maintaining and monitoring assets under their custody.

Since the development of the Asset Management Plan in 2016, the Asset Management landscape has changed with the introduction of Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure in 2018. Most recently, the City has implemented an Asset Management Policy, which was approved by Council in May 2019, and has selected a vendor to provide an Enterprise Asset Management (“EAM”) solution, with full implementation of the solution anticipated to be completed by 2021.

## AUDIT OBJECTIVE

The objective of the audit was to evaluate the processes and controls in place relating to Asset Management, to identify strengths and/or weaknesses, and to provide recommendations for improvement to leading practices.

## AUDIT APPROACH

### 1. Planning

- Define objectives and scope.
- Confirm project duration and schedule.
- Assign team members and develop team structure.
- Describe deliverables.
- Create Audit Planning Memo and distribute to stakeholders.



### 2. Execution

- Obtain existing policies, process descriptions and relevant documentation.
- Conduct interviews / discussions.
- Understand current state.
- Evaluate current state.



### 3. Reporting

- Identify improvement opportunities.
- Prepare draft report with observations and recommendations.
- Validate and present recommendations.
- Issue final report.

## SCOPE

The scope of the audit concentrated on Asset Management activities, covering the period from January 1, 2017 to May 31, 2019. Specifically, the scope of the audit focused on the following:

- Obtaining and understanding applicable by-laws, policies, procedures, processes and existing controls through interview of key personnel in Sustainability & Asset Management, Environmental Services, Operations, and Finance Departments;
- Reviewing documentation related to the City's Asset Management Plan and related activities, including:
  - Departmental Asset Management practices (such as Environmental Services, Operations, Sustainability & Asset Management);
  - Asset Management Framework; and,
  - Performance measures and metrics used for Asset Management planning and monitoring levels of service.
- Assessing the current state and progress of the City's Asset Management Strategy; and,
- Assessing the City's Asset Management activities and practices against leading practices.

## OUTSIDE OF SCOPE

- Assessment of the results of the Life Cycle Reserve Studies;
- Adequacy of capital reserves needed to fund the Asset Management Plan recommendations;
- Implementation of the Enterprise Wide Asset Management System; and,
- Information technology general controls (“ITGCs”) within capital databases.

## Audit Observations – Strengths:

### Asset Management System

The City has all four foundational elements of an Asset Management System, which include:

1. Policy
2. Framework
3. Strategy
4. Governance Structure

These four foundational elements place the City in a strong position to effectively carry out its Asset Management activities.

## Strengths Continued:

### Capital Budgeting Process

Throughout the fiscal year, City Departments complete a standardized tracking sheet with the cash-flow requirements for rehabilitation and maintenance activities of their assets for a rolling 25-year period (Life Cycle Replacement and Capital Reserve Study). There are annual Budget Committee meetings to review life cycle reserve funding, forecast updates and investment amounts. The results of the study are a requirement for obtaining annual capital budget approval from the Finance Department and Council.

## CONCLUSION

### Observation Rating Scale

Rating	Rating Description
<b>L = Low</b>	The observation is not critical but should be addressed in the longer term to either improve internal controls or efficiency of the process (i.e. 6 to 12 months).
<b>M = Medium</b>	The observation should be addressed in the short to intermediate term to either improve internal controls or efficiency of the process (i.e. 3 to 6 months).
<b>H = High</b>	The observation should be given immediate attention due to the existence of either a potentially significant internal control weakness or operational improvement opportunity (i.e. 0 to 3 months).

- Overall 2 **Medium** and 1 **Low** priority observations were identified.

## OBSERVATION #1:

MEDIUM

### Asset Management Strategy

As part of the 2016 Asset Management Plan, the Asset Management Strategy consists of two phases:

- Phase I: Preparation of an Asset Management Plan
- Phase II: Further refinement of the City's Asset Management Strategy

As part of Phase II, the City has selected a vendor to provide customized software for both enterprise Asset Management and Asset Management planning. In addition, the Finance Department has worked collaboratively with City Departments to continuously improve its Life Cycle Reserve planning/forecasting process.

However, at the time of the audit, several components of Phase II have not been completed in accordance with timelines set out in the Asset Management Plan, which were planned to be completed during the years 2017 and 2018. These include the completion and development of:

- Outcome-based levels of service (LOS);
- Performance management framework; and,
- Risk management framework.

## OBSERVATION #1 CONTINUED:

MEDIUM

### Auditor General Recommendations

The following items not completed as planned within the 2016 Asset Management Plan should be reassessed:

- Outcome-based levels of service;
- Performance management framework; and,
- Risk management framework.

Completion timelines should be established and compared against the requirements and deadlines set out in in Ontario Regulation 588/17 to ensure the City's regulatory obligations are met in a timely manner.

As dictated by Ontario Regulation 588/17, the Corporate Asset Management Steering Committee should develop a formal annual review process to discuss and document the progress of the Asset Management Plan and Strategy. The results of the annual review should be reported to the Corporate Asset Management Steering Committee and to Council.

## OBSERVATION #1 CONTINUED:

MEDIUM

### Management Response

Management supports the Auditor General's recommendation.

**Asset Management Plan Update:** The City is currently in compliance with Ontario Regulation 588/17. The new regulation came into effect after Council's approval of the City's 2016 Asset Management Plan and included new timelines for completion of Phase II tasks (Development of the Asset Management Strategy). Accordingly, the 2016 Asset Management Plan will be updated by the Asset Management Steering Committee (AMSC) to align with the O. Reg. 588/17 requirements and timelines (July 1, 2021 for core assets and July 1, 2023 for all assets).

A staff position request for a Manager, Corporate Asset Management has been included as part of the 2020 Budget. If the request is not approved, some existing staff working to maintain current assets will need to be reallocated to address legislative requirements and the implementation of the audit recommendations. This could present a risk to ensuring all assets continue to be maintained in a good state of repair.

***Timeline for Completion:*** Work will begin by Q1 2020 and will be completed and approved by Council to meet the regulated timelines:

- Q2: 2021 - Core Assets (water, wastewater, storm water management, bridges and culverts and roads).
- Q2: 2023 – All Assets (the above plus facilities and parks).

## OBSERVATION #1 CONTINUED:

MEDIUM

### Management Response

**Formal Annual Review:** Council approved the Asset Management Policy dated May 14, 2019, and established the AMSC, which will ensure organization-wide accountability for achieving and reviewing corporate asset management goals and objectives, including annual reporting to Council. The AMSC will provide a formal annual progress report to Council on the Asset Management Plan, Strategy and O.Reg. 588/17 compliance.

**Timeline for Completion:** Annually in Q2, beginning in 2020.

## OBSERVATION #2:

MEDIUM

### Documentation of Asset Management Business Process Activities

During the audit, we observed that although business process documentation and standard operating procedures are available for some City Departments, the linkage back to the specific activities, as outlined in the Asset Management Plan, is unclear. There are also no formal process documents outlining the specific process steps, procedures and requirements that must be followed for maintenance, rehabilitation, replacement, and conditional assessments.

Without such documentation of complex processes, there is a risk that in the case of staff turnover, knowledge transfer will become difficult and institutional knowledge will be lost.

## OBSERVATION #2 CONTINUED:

MEDIUM

### Auditor General Recommendations

An Asset Management process manual encompassing all Departmental processes and procedures should be developed. The manual should encompass all Asset Management activities including maintenance, rehabilitation, replacement, conditional assessments/audits and service levels.

Within the manual, for each asset category, the following components should exist:

- Custodian for each asset type;
- Procedures on how to perform associated Asset Management activities;
- Applicable tools and templates;
- Appropriate referencing to other City policies and standard operating procedures, as applicable; and,
- Direct linkage of Asset Management activities outlined in the Asset Management Plan.

The manual should be regularly reviewed and updated as needed, and training provided to staff.

Once the EAM solution has been implemented, the manual should be aligned with any new EAM solution workflow/business processes.

## OBSERVATION #2 CONTINUED:

MEDIUM

### Management Response

Management supports the Auditor General's recommendation.

Asset Management business process activities are carried out by staff across the organization on a daily, monthly and annual basis. These activities meet legislated requirements and are aligned to industry standards and guidelines. Documentation describing this work exists but are not standardized enterprise wide. Currently, pre-work/internal consultation on the Enterprise Asset Management (EAM) project is ongoing and data/process mapping/opportunities are being identified.

EAM scope of work includes the following tasks related to an Asset Management Process Manual:

- Documentation of current business processes;
- Current and recommended data governance protocol by asset type; and,
- Recommended future business processes.

The software will create a standard data collection framework that will consolidate the asset management work of all departments into one document with reporting and analytical functions that create a corporate wide view. The manual will also include training materials for each asset type.

**Timeline for Completion:** The Asset Management Manual will be updated within six months of the last phase of EAM implementation by all departments.

## OBSERVATION #3:

LOW

### Performance Monitoring and Reporting

One of the four major elements of the City's Asset Management Framework is to ensure regular monitoring and reporting of Asset Management activities are taking place.

During the audit, we observed that there are strong monitoring and reporting mechanisms for the financial aspects of Asset Management. For example, there are annual Budget Committee meetings to review life cycle reserve funding, forecast updates and investment amounts. The City also monitors the following Asset Management activities outlined in the Asset Management Plan:

- Actual results versus targets;
- Results based benchmarking;
- Gap assessments;
- Performance against business drivers; and,
- Levels of service.

While the City conducts performance monitoring and reporting at the Department level, the City does not track and report on the above at an enterprise-wide level. Without enterprise-wide level monitoring and reporting in place, the City may be challenged to determine how well the Asset Management Plan and Asset Management Strategy are performing and progressing against its goals. As a result, improvement opportunities to the Asset Management process and practices may not be identified in a timely manner.

## OBSERVATION #3 CONTINUED:

LOW

### Auditor General Recommendations

Reporting metrics for key Asset Management activities and deliverables should be reported to the Corporate Asset Steering Committee and to Council at an enterprise-wide level.

As well, the roles and responsibilities for reporting and monitoring on Asset Management should be clearly documented within the Asset Management Policy.

In addition, once the EAM solution has been implemented, opportunities should be explored to leverage its enhanced data management capabilities through creation of performance dashboards and other analytical tools.

## OBSERVATION #3 CONTINUED:

LOW

### Management Response

Management supports the Auditor General's recommendation.

Currently, Asset Management performance monitoring and reporting is taking place at departmental level and corporate data is reported to Council annually as part of Life Cycle updates and the Capital Budget process. The Asset Management Steering Committee is responsible for enterprise level performance monitoring and reporting as per section 7.C.g of the Asset Management Policy (dated May 14, 2019).

#### ***Timeline for Completion:***

The City's first enterprise level Asset Management Performance Monitoring and Reporting to Council will be completed by Q2 2021 (after completion of Asset Management Plan updates).

The 2021 Asset Management Plan update will include the performance reporting matrix.

Departmental and enterprise level performance dashboards will be developed following EAM implementation.

## OVERALL RECOMMENDATION

The Auditor General recommends that:

- 1) The Asset Management Audit Presentation be received.

## ACKNOWLEDGEMENT

MNP extends our appreciation to the staff and management of the City for their co-operation and assistance throughout the engagement.

