

City of Mississauga
Corporate Report



<p>Date: 11/30/2020</p> <p>To: Mayor and Members of Council</p>	<p>Originator's files:</p>
<p>From: Gary Kent, CPA, CGA, ICD.D, Commissioner of Corporate Services and Chief Financial Officer</p>	<p>Meeting date: December 9, 2020</p>

Subject

Update on 2021 Budget Request for Corporate Asset Management Program

Recommendation

1. That the report of the Commissioner of Corporate Services and Chief Financial Officer dated November 30, 2020 entitled "Update on 2021 Budget Request for Corporate Asset Management Program" be received.
2. That funding be approved for Asset Management Program capital project (PN 21-607) in the amount of \$381,500 so that the project may proceed in Q1 2021.
3. That a staff requirement for Q1 2021 of one Full Time Equivalent (FTE) be approved.
4. That all necessary by-laws be enacted.

Report Highlights

- Provincial legislation now heavily regulates the provision of municipal Asset Management (AM) Plans, with prescriptive deadlines and content requirements. The City of Mississauga is well positioned to present the core infrastructure AM Plan for Council approval before the July 1, 2021 deadline.
- The workload associated with developing the non-core infrastructure AM Plan by July 1, 2023 is very high, and a Budget Request has been put forward requesting the approval of 21 FTEs in the 2021-2024 Business Plan and 2021 Budget. Staffing pressures would increase to 22 in 2023, but decrease to 17 in 2024.
- At Budget Committee on November 23, 2020, staff were requested to defer positions where possible, and consider whether any positions could be reduced. Council members also suggested the Province be requested to consider moving AM Plan deadlines to alleviate municipality workload and costs.
- After a careful review of all staffing requirements, and in the absence of a response from

Council	2020/11/30	2
---------	------------	---

the Province regarding deferral of due dates, a deferral of four positions is proposed from 2021 to 2022. All positions are proposed to be funded through capital up to and including 2023, at which time only necessary positions would be maintained, and would be funded through operating.

- In the event the Province were to defer AM Plan due dates, staff would delay hiring as much as possible. Savings would be realized in the capital program, and funding would be returned through future WIPs.

Background

Budget Committee reviewed Budget Request #8565 – Corporate Asset Management (AM) Program on November 23, 2020. Councillor Ras questioned whether any or all of the 21 positions requested for the Corporate Asset Management (AM) Program could be deferred to later years, and whether all positions are in fact required. This report provides a summary of the legislative requirements for Asset Management, an overview of the work required to fulfil these requirements, and a discussion on the staff required to perform this work.

The Province enacted the *Infrastructure for Jobs and Prosperity Act (IJPA), 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 asset resiliency and sustainability as part of developing future AM plans. This regulation came into force on January 1, 2018.

The provincial requirements for the Policy and AM Plans is highly prescriptive. A Corporate AM (CAM) Office has been established in the Finance Division to ensure these requirements are addressed. This CAM Office is currently staffed with one permanent Project Manager, although a manager has been temporarily assigned to oversee the entire program.

Table 1 summarizes Provincial regulation requirements up to 2025. The Corporate AM Policy was developed during 2018 and early 2019, and was approved by Council on June 5, 2019.

Staff have been working diligently during 2019 and 2020 to ensure the first AM Plan milestone, for core infrastructure, will be achieved by the legislated due date. This AM Plan must be approved by Council before July 1, 2021.

Table 1: Regulation Timelines

Implementation Date	Requirements
July 1, 2019	Strategic Asset Management (AM) Policy – Completed June 5, 2019
July 1, 2021	AM Plan for core infrastructure (roads, bridges, culverts and stormwater) assets
July 1, 2023	AM Plan covering all municipal infrastructure assets
July 1, 2024	Proposed service level targets
July 1, 2024	Five Year Strategic Asset Management (AM) Policy Review

The AM Plan for non-core infrastructure must be completed by July 1, 2023. Updated AM Plans must include proposed service level targets by July 1, 2024. Following Council approval of the 2024 AM Plan, the AM plan needs to be updated every five years. In addition, the regulation

Council	2020/11/30	3
---------	------------	---

requires Council to annually review its AM plan's progress, identify any factors impeding its progress and propose a strategy to address impediments, starting on or before July 1, 2025.

The CAM Office has developed staff guidelines and a template for the AM Plan. This template will be used for all AM Plans going forward. The CAM Office is also coordinating the work required in the Roads and Stormwater Service Areas to complete the 2021 AM Plan.

Several factors have contributed to staff's ability to prepare the AM Plan for core assets by June 2021:

- Finance responded quickly to legislation and established a CAM Office, with one project manager, through the 2018 budget. It soon became evident that additional oversight and management was required. One staff member has been temporarily reassigned to the Corporate AM Office to ensure we are able to complete the 2021 core AM Plan.
- An AM working group has been established, and AM specialists from across the City have helped establish standards and guidelines for completing the 2021 core infrastructure AM Plan.
- There are 15 roads, bridges and culverts asset classes included in the 2021 AM Plan, and these assets are supported through four existing systems. Even with systems in place, significant work has been required over the last eighteen months to deliver a Roads AM plan that meets provincial requirements. This work has been managed by existing Roads staff, although the additional workload has been significant.
- There are 10 stormwater asset classes. The Stormwater service area had already hired a consultant (WSP) to conduct an AM maturity assessment for stormwater assets, and therefore were well positioned to develop the 2021 Stormwater AM Plan using the same consultant. Staff resources were still required to ensure all work was completed.

The AM Working Group has been preparing for the 2023 non-core infrastructure AM Plan, and has already identified options for enhancing AM data by leveraging the use of existing information systems. However, the completion of the 2023 AM Plan for the City's remaining assets will be much more challenging, and existing staff resources cannot manage the additional workload. The following outlines the challenges faced by staff in preparing the 2023 AM Plan:

- There are 25 asset classes designated as "core" infrastructure included in the 2021 AM Plan. There are 230 asset classes designated as "non-core" infrastructure to be incorporated into the City's 2023 AM Plan. Roads and Stormwater were well positioned with existing systems to provide the required information for core assets. Many of the 230 remaining asset classes use various systems to collect asset information and have various maturity levels in the quality of data. Some assets are managed through the use of Excel only. Significant effort will be required to ensure data is presented in a standardized way.
- The CAM Office resourcing, with only one permanent staff member, is not sustainable. It has been a challenge to meet 2021 AM Plan requirements, even with well-established

data and good system support for Roads and Stormwater. Given that some of the non-core infrastructure areas have limited data available, and do not have systems supporting the assets, a large amount of support will be required from the CAM Office to identify what data is required, how it can be collected and how it needs to be reported. The CAM Office is also responsible for ensuring the entire Plan (similar in scope to the City's Business Plan and Budget document) is internally consistent and comprehensive. One staff person was able to manually combine information from two service areas, but it will not be possible for one person to do this for all service areas and all asset classes.

- Each service area contributing to the 2023 AM Plan, although supported by the CAM Office, will need to provide the details for each section in the Plan. This work is resource-intensive and particularly so with the July 1, 2023 deadline.
- In addition to the July 1, 2023 deadline for an AM Plan for non-core assets, there is a July 1, 2024 deadline to consider proposed service level targets. This is explained later in this report, but is another layer of work required from all service areas.

Comments

The information required in the AM Plans is very comprehensive. The following provides an overview of the type of information required for the City's AM Plans, and a summary of the resources requested to be able to deliver these plans.

AM Plan Requirements

All assets have been classified into "Asset Classes." For each asset, within each asset class:

- A **unit of measure** must be defined for each asset. This unit of measure is usually known, but sometimes requires review to ensure the most appropriate one is being used, as this will form the basis for all AM Plan reporting.
- **Inventory** counts for each asset must be confirmed. In many cases, inventory is known through our Tangible Capital Asset (TCA) database. However, for many of the smaller asset classes, the TCA database considers assets in aggregate. The AM Plan requires this information to be broken down by individual asset.
- **Asset condition rating** of each asset must be identified. The CAM Office, together with a City-wide Asset Management Working Group, has developed a common five-point rating measurement scale. Asset owners throughout the City currently use their own rating scale. There will be a significant amount of effort required to translate existing rating scales (where available) to the common five-point rating. Ratings will have to be developed for those assets where ratings are not currently developed.
- **Replacement cost** for each asset must be identified. Currently, the City estimates replacement cost based on historical acquisition costs, inflated to today's dollars. Our experience with Stormwater has shown this proxy can be significantly inaccurate. The Stormwater asset value has increased by \$3.0B to \$5.3B now that a thorough review of assets has been conducted. Current costs for all assets will have to be researched and

recorded. This can be straightforward for assets such as buses, where current prices are known. This will require significant effort for assets such as bridges and culverts constructed many years ago.

Table 2 provides a snapshot of how this information will be presented in the AM plans. The snapshots provided in this report are for one asset class (Road Pavement). The information will be required for 230 non-core Asset Classes, broken down to the asset level.

Table 2 – Detailed Asset Inventory, Asset Condition and Current Replacement Value

Service Area	Asset Class	Assets	Units	Inventory	Condition Distribution					Replacement Values
					1	2	3	4	5	
Roads	Road Pavement	Arterial Road	Lane km	793	32%	33%	28%	7%	0%	\$344,486,401
		Major Collector Road	Lane km	958	39%	20%	23%	18%	0%	\$423,345,242
		Minor Collector Road	Lane km	1,056	36%	23%	25%	16%	0%	\$485,966,655
		Local Road	Lane km	2,825	40%	24%	24%	12%	0%	\$1,315,222,326

- The **average asset age compared to expected useful life** must be identified. This information can be determined from historical data but is not readily available in all instances.
- **Customer Levels of Service (LOS)** for each asset must be included. The Province has prescribed customer LOS for core assets to be included in the AM Plan (roads and structures customer LOS are shown on the right).
- **Technical Levels of Service (LOS)** are also required. The Province has similarly prescribed technical LOS for core assets to be included in the AM Plan (roads and structures technical LOS are also shown on the right).

Customer LOS (Core Assets)

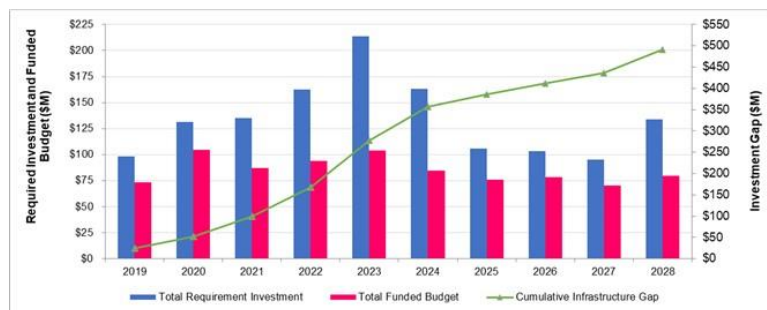
- Description or images that illustrate the different levels of road class pavement condition.
- Description or images of the condition of bridges and how this would affect use of the bridges.
- Description or images of the condition of culverts and how this would affect use of the culverts.
- Description, which may include maps, of the road network in the municipality and its level of connectivity.
- Description of the traffic that is supported by municipal bridges (e.g. heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).

- For non-core assets, each municipality must develop its own LOS measures, and ways to provide these metrics. There are, again, different levels of maturity across all asset classes in the City, and a significant amount of effort will be required to identify and measure appropriate LOS for each asset class.
- For the 2021 and 2023 AM Plans, the City is required to provide current LOS measures. The 2024 legislated deadline requires the City to identify target LOS measures.

Technical LOS (Roads / Structures)
For structural culverts in the municipality, average bridge condition index value.
For structural culverts in the municipality, average bridge condition index value.
Average surface condition (e.g. excellent, good, fair or poor etc.) for paved roads.
of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.
of lane-kilometres of collector roads as a proportion of square kilometres of land area of the municipality.
of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality.
% of bridges in the municipality with loading or dimensional restrictions.

- **Lifecycle activities to maintain Current LOS and the Infrastructure Gap** for the next 10 years must be included. This includes information such as:
 - Non-asset solutions (specific practices used to monitor and address asset requirements)
 - Operations / service (operational activities associated with the specific asset)
 - Maintenance (regularly scheduled or minor actions that ensure the longevity of an asset)
 - Renewal / rehabilitation (activities designed to extend service life)
 - Replacement, disposal and/or demolition (action taken when an asset has reached the end of its useful life)
 - Expansion / rebuild / new (planned activities to expand services)

- Operating costs for these activities are to be identified, as are capital costs for the next 10 years, broken down by growth and non-growth (replacement or expansion) projects. All of this information combines to provide total investment in our assets, by category, and projected infrastructure gap.



The information required in the AM Plans is data-intensive. The intent of the AM Plans is to develop a coordinated approach to asset management. As AM data grows and levels of service are defined, Council and staff will be better informed regarding where limited financial resources should be targeted. Benefits from AM Planning will not be evident initially but will eventually lead

Council	2020/11/30	7
---------	------------	---

to a very coordinated and prioritized approach to capital and operating planning for existing assets.

Resource Requirements

It would not be possible to provide 100% of the required data for 100% of the City's assets by July 1, 2023, unless resources were unlimited. The Province has recognized this, and there is opportunity in the AM Plans to identify areas for continuous improvement.

In preparing the 2021 Budget Request (BR) for the Corporate AM Program, staff balanced the need to complete AM Plans as regulated by the Province against budget pressures, resources and data availability. The proposed budget request assumes work would begin on higher-value assets, with the intent of providing inventories, replacement costs, and condition assessments, and some progress with respect to levels of service and lifecycle activities.

The higher-value asset classes include assets for street lighting, traffic signals, signs, sidewalks, fleet, multi-use and right-of-way trails, noise walls, retaining walls, buildings and the transit service area. Other service areas' non-core assets will be added to the 2023 plan where existing staff can absorb the work. Asset classes that cannot be incorporated into the 2023 AM Plan will be identified under the continuous improvement section of the AM Plan, to be addressed in future updates.

The budget request is staff-resource heavy, for a variety of reasons:

- There is no enterprise-wide system for Asset Management data. Information is currently captured in a variety of work-order or asset management systems. Roads, Facilities, Stormwater and other areas have robust systems for some assets, but information is not captured in a consistent way. In other areas, information is managed through Excel databases. Until the City adopts an enterprise-wide system, AM data will continue to be manipulated to complete AM Plans.
- Condition data and replacement costs for many non-core assets will have to be collected through manual intervention.
- There is one component of the budget request that would contract out for Laser Imaging Detection and Ranging (LiDAR), but this will also require staff resources to manage and manipulate the data collected through this system.
- Development of the AM Plans requires significant effort, similar to the Budget Planning process that is currently well established in the City, but is contributed to by many Service Area Leads and supported by numerous staff in the Finance Division.

In some cases, permanent FTEs are required, as AM planning will continue after the initial plans are written. Contract staff have been assumed where initial setup work is required. Some consultant funding has been allocated to support service areas as required.

One of the major initiatives for collecting the roads right-of-way asset information will be engaging a vendor with laser LIDAR technology to drive the City and map where these assets

Council	2020/11/30	8
---------	------------	---

are located. Originally, this procurement was planned for 2021, and staff to support this work was requested for 2021. This is a complex procurement, and since this data collection is best performed in the spring, when the tree canopy has a “leaf off” condition, it has been determined that the procurement and associated staffing requirements can be deferred to 2022. Data processing by the vendor is expected to take approximately eight months. This means that a complete inventory for right-of-way road assets will not be included in the 2023 AM Plan but will be reflected in the 2024 AM Plan.

Table 3 identifies the resource requirements requested in the original 2021 BR, and a revised request based on updated information. Three IT staff (2-GIS Analyst, 1-Infor Analyst) and the AM Specialist assigned to Community Services could be deferred to 2022. Furthermore, it is proposed funding for the project would continue in the capital budget until 2023. A review would be conducted in 2023 to confirm which FTEs must remain permanently, and those FTEs would be funded through operating beginning in 2024. This will shift the funding of \$2.1M from the operating budget to the capital budget in 2023 and alleviate the operating budget pressure by one year.

Table 3. RESOURCE REQUIREMENTS

Requested Position	Position Type	ORIGINAL BR				WITH DEFERRALS			
		2021 (Capital)	2022 (Capital)	2023 (Operating)	2024 (Operating)	2021 (Capital)	2022 (Capital)	2023 (Capital)	2024 (Operating)
Business Analyst	Contract	1	1	1	0	1	1	1	0
Project Manager	Contract	1	1	1	0	1	1	1	0
IT Analyst	Contract	3	3	3	0	3	3	3	0
GIS Analyst	Permanent	3	3	3	3	1	3	3	3
Infor Analyst	Permanent	2	2	2	2	1	2	2	2
IT Analyst	Permanent	1	1	1	1	1	1	1	1
Information Technology Request		11	11	11	6	8	11	11	6
Transport'n Infra. Tech/Co-ordinator	Permanent	2	2	2	2	2	2	2	2
Transport'n Infra. Tech/Co-ordinator	Permanent	0	0	1	1	0	1	1	1
AM Specialist	Permanent	1	1	1	1	1	1	1	1
Infra. Mgmt System Specialist	Permanent	2	2	2	2	2	2	2	2
Transportation and Works Request		5	5	6	6	5	6	6	6
Manager, Corporate Asset Mgmt	Permanent	1	1	1	1	1	1	1	1
Financial Analyst	Permanent	1	1	1	1	1	1	1	1
AM Specialist -CPS	Permanent	1	1	1	1	1	1	1	1
Corporate Asset Management Office Request		3	3	3	3	3	3	3	3
AM Specialist -FPM	Permanent	1	1	1	1	1	1	1	1
AM Specialist -CMS	Permanent	1	1	1	1	0	1	1	1
AM Specialists		2	2	2	2	1	2	2	2
Total AM FTE Request		21	21	22	17	17	22	22	17
CAPITAL IMPACT ALL COSTS		\$3.0M	\$4.8M	\$2.4M	\$0.0M	\$2.8M	\$4.9M	\$4.5M	\$0.0M
OPERATING IMPACT				\$2.1M	\$2.1M			\$0.0M	\$2.1M

The proposed approach will allow the City to meet Provincial regulations, while identifying in the Continuous Improvement section those areas that will require more attention in the future. While staff work to prepare the 2023 AM Plan, work will be underway to ensure 2024 AM Plan requirements will be met. The 2024 AM Plan requires the establishment of proposed LOS

Council	2020/11/30	9
---------	------------	---

targets. This will involve engaging Council and the public to gather input from councillors, residents and businesses on asset service level expectations. A financial analysis will need to be performed to provide Council with recommendations for proposed asset service level targets that are financially sustainable.

Provincial Legislation Due Dates

While considering the 2021 Business Plans and Budget at Budget Committee on November 23, 2020, Councillor Ras suggested the Mayor send a letter to the Province requesting a deferral of the timelines contained in O. Reg. 588/17. Staff have prepared a letter for the Mayor's Office making such a request. It should also be noted the Municipal Finance Officers' Association of Ontario (MFOA) provided a similar request to the Province in October 2020 (Appendix 1). MFOA has not received a response from the Province at the time of writing this report.

In the event the Province were to move deadlines by one year, it is estimated that an additional three staff could be deferred from 2021 to 2022. This would result in capital budget savings estimated at \$0.2M would be returned to the Tax-Capital reserve fund through WIP.

Financial Impact

The recommendations in this report would result in a deferral of four FTEs from 2021 to 2022, a reduction of \$0.2M in capital in 2021, and a deferral of operating impact from 2023 to 2024. In the event the Province defers AM Plan deadline dates by one year, additional savings of \$0.2M would be recognized in capital. These funds would be returned to the Tax-Capital Reserve Fund through future WIPs.

Conclusion

The Province's regulation on asset management has prescriptive requirements on the contents of a municipal AM plan. The AM Plan for core assets must be approved by Council by July 1, 2021. Work is well underway to meet this deadline.

A significant amount of human resources is required to ensure the AM Plan for non-core assets can be completed by the July 1, 2023 deadline. The original BR for this project has been adjusted to reflect a deferral of some staff from 2021 to 2022. The 2023 AM Plan will not have 100% information for 100% of the City's non-core assets. However, the Province recognizes that municipalities may have gaps in their AM Plan because not all information will be available. The "continuous improvement" section for each plan will serve as a roadmap of actions to be taken to steadily increase the level of maturity of asset management.

A robust Asset Management system will ensure infrastructure is maintained to ensure levels of service are met and risks are managed based on principles of resiliency, transparency and safety. The Corporate AM Plan will serve as a strategic, tactical and financial document ensuring the activities, resources and timeframe required for municipal infrastructure, while

Council	2020/11/30	10
---------	------------	----

balancing costs, opportunities and risks against the desired performance of assets. Funding support from senior levels of government is now often conditional on the presence of an AM Plan.

Attachments

Appendix 1: Municipal Finance Officers Association letter dated October 22, 2020 to Minister of Infrastructure, Province of Ontario.



Gary Kent, CPA, CGA, ICD.D, Commissioner of Corporate Services and Chief Financial Officer

Prepared by: Susan Cunningham, Acting Manager, Corporate Asset Management