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IMPLEMENTING ONTARIO ASSET MANAGEMENT REGULATIONS AT CITY OF LONDON: A PRAGMATIC APPROACH

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Abstract: Province of Ontario passed an asset management planning regulation under the Infrastructure for Jobs and Prosperity Act in December 2017 (588/17) and came into force January 2018. City of London developed an action plan and a schedule in order to comply with the regulations and its own internal deadlines and commitments. The implementation process faced some challenges; the major ones are highlighted in this paper. Moreover, lessons learned were presented.

1 OVERVIEW

Managing municipal infrastructure assets in a good and functional condition; considering the growing communities, compliance with the changing regulations and codes, and adaptation to climate change, is the way to provide the citizens with services that are crucial to their quality of life and drive economic growth to businesses. In addition, it is essential to the sustainable development of municipalities by considering the social, economic and environmental impacts. Municipal infrastructure assets management is a challenging process; aging assets, lack of funds, climate changes, limited resources, population change, etc. are among the factors that put extra pressure on the ability to ensure the long-term sustainability of infrastructure assets. Several associations, federations, and networks have contributed to the development of asset management policies, tools and technologies which have improved the asset management practice in every province and territory such as CNAM, FCM, MFOA, etc.).

1.1 Ontario Regulations 588/17: Asset Management Planning for Municipal Infrastructure

Ontario’s municipal infrastructure strategy has focused on strengthening asset management planning since 2012. In 2015, Province of Ontario released “The Infrastructure for Jobs and Prosperity Act” in order to establish mechanisms to encourage principled, evidence-based, and strategic long-term infrastructure planning. Section 6(2) of the Act sets out principles for the provincial government to regulate asset management planning

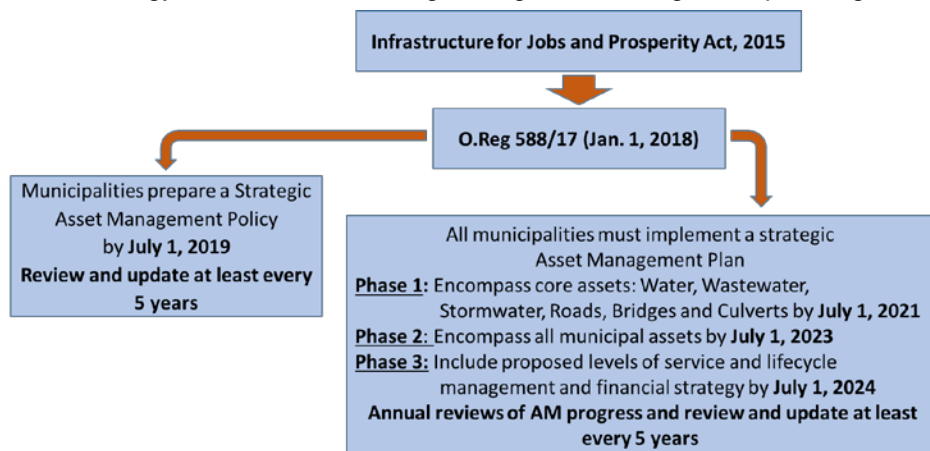


Figure 1 Asset Management Regulation O.Reg. 588/17 Timeline

for municipalities. After a series of consultations with the municipalities across Ontario, the province passed an asset management planning regulation under the Act in December 2017 (588/17). The objective of this regulation is to implement best practice asset management throughout the municipal sector and provide consistency to support collaboration between municipalities, and among municipalities and the province. Ultimately, all municipalities in Ontario will be having up-to-date, robust plans that inform long-term investment decisions. Building on the province’s 2012 Building Together: Guide for Municipal Asset Management Plans, the regulation sets out requirements for municipal asset management plans and phases of implementation. Figure 1 outlines the proposed regulation timeline as published on e-Laws December 27, 2017.

2 IMPLEMENTATION

2.1 Corporate Asset Management (CAM) at City of London

City of London, ON has recognized the importance and necessity of asset management planning by evolving set of procedures and actions intended to obtain best value from the City’s assets. In 2010 the City established the Corporate Asset Management (CAM) division; which coordinates the asset management processes across seventeen service areas at the City. The CAM developed Asset management Policy, Strategies, State of Infrastructure report, as well as a comprehensive Asset management Plan as different deliverables of a CAM program established in 2010 and intended to optimize and standardize asset management practices in City of London.

The Province of Ontario released the regulation to be implemented in a phased approach in order to help municipalities prepare Asset Management Plans as prescribed by the regulation as seen in figure 1. City of London has developed its updated Asset management Policy and approved by the Council in 2019 which is in compliance with the first requirement of the regulations. On the other hand, the City developed its first CAM Plan in 2014; and the intention was to update it every 4 years. Hence, civic administration decided to continue on its current path to update its CAM Plan in full every four years to coincide with the City’s multi-year budget process. This plan complies with the regulations deliverables based on its timeline which is ahead of phase one of the regulations. The City developed a comprehensive CAM in 2018 – scheduled to be published in summer, 2019 that comply with phase II requirements.

2.2 Corporate Asset Management Policy (CAM Policy)

Once the decision to update the Corporate Asset management Policy and Plan was made, an action plan was developed to outline the actions required to achieve some milestones. The following figure is an example that illustrates the process of updating the CAM policy.

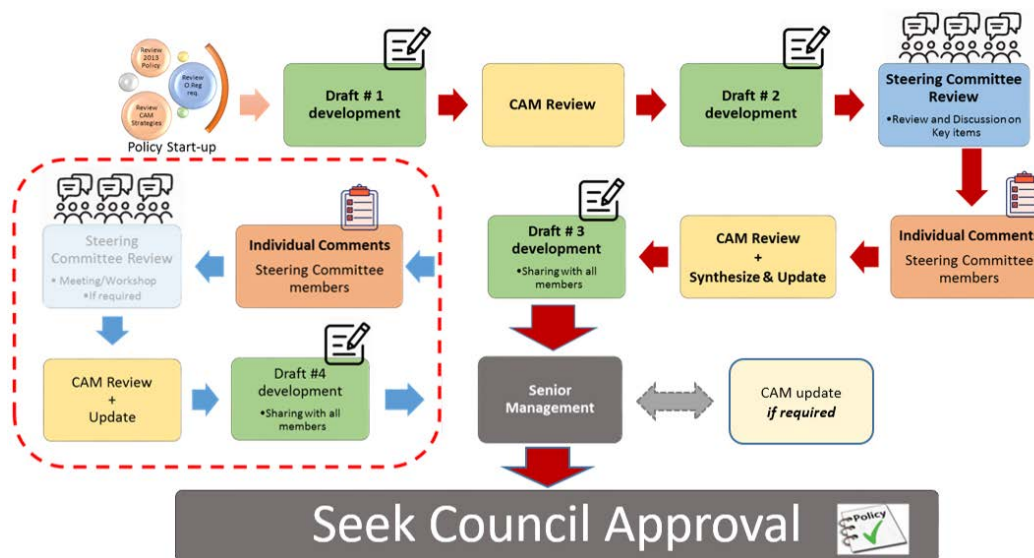


Figure 2 Corporate Asset Management Policy Development Approach

It starts with reviewing the 2013 City administrative CAM policy, the new Ontario regulations, and CAM strategies followed by brainstorming sessions and analysis to identify the key issues in order to develop the first draft. The process proceeds with a list of revisions and drafts based on the discussion, comments and individual feedbacks from the CAM steering committee and the Senior Management team. The final draft is then submitted seeking approval from the City council. The CAM Policy includes the CAM division governance structure and identifies the commitments, Principals and Processes towards the asset management planning at the City.

2.3 Corporate Asset Management Plan (CAM Plan)

The CAM Plan is the culmination of efforts from staff across the city who are involved with managing infrastructure assets, including finance and technical service areas, and operation staff. The process of developing and updating the comprehensive CAM plan is sophisticated and required multiple meetings and workshops with each service area of the seventeen included in the scope of the CAM Plan. The plan was developed through different stage as shown in Figure 3 and summarized below.

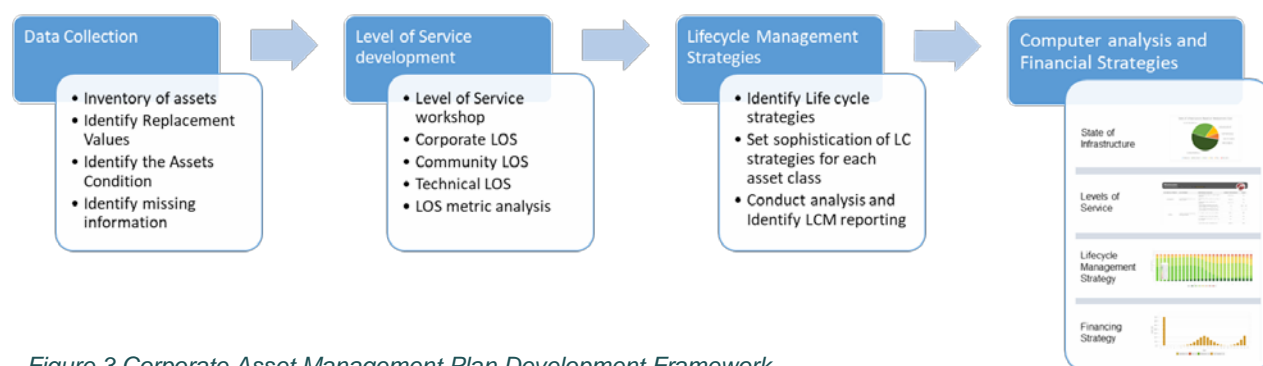


Figure 3 Corporate Asset Management Plan Development Framework

- i. **Data collection:** This was the first stage in which CAM collected all the necessary information to conduct any of the analysis; information such as the inventory, installation dates, location, service life, deterioration profiles, replacement values, condition assessment based on a standard condition index, etc.
- ii. **Level of Service:** CAM conducted workshops with each service area in order to identify the Level of Service statements at three levels; Corporate, Community, and Technical. Each statements was mapped and associated measures were developed.
- iii. **Lifecycle Management Strategies:** CAM conducted workshops with each service area in order to identify the Lifecycle strategy for each asset type and set the sophistication level based on the current practice and availability of information. During the workshops staff identified various triggers for replacement, rehabilitation, and repair activities for each asset class. Further, CAM conducted the required analysis while considering the whole life-cycle-cost of each asset and reporting the capital planning on the scope of the next 10 years and identified the infrastructure gap.
- iv. **Computer analysis and Financial Strategies:** using a predictor modelling and decision support tool CAM developed long term planning for the municipal infrastructure assets to optimize service level outcomes and capital and maintenance expenditures. Further, several financial strategies were developed in order to deal with the infrastructure gap identified in the previous stage.

3 CHALLENGES AND ADAPTATIONS APPROACHES

The following list summarize the major challenges faced by the City during implementation and provide the approaches used to address these challenges.

- i. **Timelines:** In 2016, the City of London has established a multi-year budget that is approved every four years. On the other hand, the new regulation has suggested various timelines for implementation that falls in the middle of the four years cycle. The City has elected to advance the development work of the AMP to inform the next multi-year budget ahead of the regulation suggested timelines.

- ii. **Inventory data:** key required attributes were missing for various asset classes (such as age, material, dimensions, risk, etc...). Early in AMP development, the CAM division held a series of workshops with each service area to identify the missing data and establish a set of data collection processes to close data gaps. Additionally a “Data Accuracy and Reliability” rating was assigned to each service area.
- iii. **Condition data:** Not all condition data was readily available or in the same format. The city has adopted a standard five-point condition rating scale across all service areas. The condition of the assets was determined using one of the three methods below based on data availability and accuracy:
 - (1) Existing condition rating systems (e.g. Pavement Quality Index, Facility Condition Index)
 - (2) Estimated based on age and the remaining estimated useful life of the asset
 - (3) Estimated based on expert opinion, in the absence of 1) or 2) above or where there was low confidence that age and useful life appropriately represented the asset condition.
- iv. **Budget issues:** The city budget does not match or align with the various asset classes identified in the Inventory section of the AMP. CAM has conducted a thorough review of the current approved capital budget and reserve funds to identify and select the appropriate budget line items and link them to their associated asset classes.
- v. **Address the growing Infrastructure gap:** The City has identified a growing infrastructure gap since its first CAM plan. During the 2016 Multi-year budget process, City Council approved the development infrastructure gap reserve fund. These approvals resulted in the establishment of the Capital Infrastructure Gap reserve fund which allows the City to prudently commence saving while the CAM program continues its evolution toward risk-based decision making and a standardized approach to prioritizing capital projects.

4 LESSONS LEARNED

The regulations require all municipalities to fulfill the requirements using a phased approach. On the other hand, the City had its own internal deadlines and wishes to continue on its current path to update its CAM Policy and Plan in full every five and four years respectively to coincide with the City’s multi-year budget process. City of London followed a pragmatic approach while implementing Ontario regulations; in which challenges had arisen and lessons were learned during the process. The following are the major ones.

- **Flexibility:** Managing seventeen service areas, each one has different level of asset management maturity, requires asset managers to be flexible and adopt different approach when dealing with each of them. An approach may work with an area, but might not work with another.
- **Inventory:** The quality of data varies from a service area to the other. Dealing with such an issue required the following adaptation approaches: (1) Develop a reliability/accuracy scale to inform Decision Making process about the quality of data and the magnitude of risk and uncertainties to be considered. (2) Prioritize the type of missing data and determine their significances and the various alternative solutions to address the data gap; further, develop a short and long term plans to close the data gap in each service area.
- **Asset Condition data:** It required the Asset management team to tailor Asset Condition Assessment methodology for each service area based on the different determined factors. For example, water mains condition was affected by pipe age, breakage rate, material type, pipe depth, and construction method. While Information Technology related assets were affected by the level of security controls, assets supportability, and technology standards.
- **Budget issues:** It is important for Asset managers to work collaboratively with various stakeholders to restructure the budget process and align it with the CAM best practices.
- **Addressing Infrastructure Gap:** Reserves and reserve funds stabilize the City’s funding requirements preventing spikes in rates when significant expenditures are needed for infrastructure renewal at given points in time. Reserves are also available should unanticipated emergencies arise and allocated based on the observed risks. Additionally, having discussions with all stakeholders about whether it is needed to close the infrastructure gap and the timing of addressing it; considering the understanding of the financial relationship between the cost and level of service.

