AECOM

SAULT STE. MARIE

CITY OF SAULT STE. MARIE

FACILITY ASSET MANAGEMENT PLAN

FINAL | 60735219 | June 2025

Statement of Qualifications and Limitations

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AECOM: 2015-04-13

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List of Abbreviations

Abbreviation	Description
AM	Asset Management
AMP	Asset Management Plan
CIBI	Canadian Infrastructure Benchmarking Initiative
CMMS	Computerized Maintenance Management System
DCC	Development Cost Charge
Ea.	Each
ESL	Expected Service Life
FIPPA	Freedom of Information and Protection of Privacy Act
GIS	Geographic Information System
HVAC	Heating, Ventilation, and Air Conditioning
LoS	Level of Service
MFIPPA	Municipal Freedom of Information and Protection of Privacy Act
MH	Morrison Hershfield Limited
O&M	Operations and Maintenance
O. Reg.	Ontario Regulation
PUC	Public Utilities Commission
RSL	Remaining Service Life
SCADA	Supervisory Control and Data Acquisition
sq. ft.	Square Feet

1 Introduction

AECOM Canada ULC (AECOM) was retained by The City of Sault Ste. Marie (the "City") to update the asset management plan (AMP) developed in 2024 to comply with the third phase (Phase III) of the Ontario Regulation 588/17 (O. Reg. 588/17) requirements in respect to its core municipal infrastructure assets. The scope of work is outlined in AECOM's proposal dated September 20, 2024, and subsequent project correspondence.

1.1 Background

Sault Ste. Marie is a City located on the St. Mary's River, North of the United States of America, bordering on two of the Great Lakes with an estimated population of 73,368 (2016). The City provides a wide range of public services to their constituents with the expectation from the public that these services are expected to function efficiently at a certain level. The provision of these services requires the management of the physical assets to meet desired service levels, manage risks, and to provide long term financial sustainability. These assets include, but are not limited to roads, bridges, sidewalks, wastewater assets, stormwater management assets, landfill, fleets, buildings, and parks.

In accordance with the terms of reference for this assignment, it is understood that the City is proceeding with an AMP to comply with the third phase of the regulatory requirements in respect to its core municipal infrastructure assets, in accordance with O. Reg. 588/17, by July 1, 2025. The non-core assets to be covered in the scope, as defined by the regulation, include the City's protection services, solid waste, parks and cemetery, facilities, fleet, roadway appurtenances, and active transportation.

1.2 Scope and Objectives

In 2015, the City's first AMP was published. In 2019, by the City Council approval, the Strategic Asset Management (AM) Policy for the City came into effect. In 2022, the City published its core asset AMPs. Following that, the City developed the AMPs for its non core assets in 2024.

Organizations that implement good AM 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.

The AMPs capture the City's infrastructure assets and deliver a financial and technical roadmap for the management of the City's assets. The intent of this plan is to provide the means for the City to maximize value from its assets, at the lowest overall expense while, at the same time, enhance service levels for its residents.

The objective of Phase III is to update all the core and non-core AMPs to comply with the July 1st, 2025, deadline set by O. Reg. 588/17. Phase III will update the AMP by incorporating the latest asset information, with a focus on:

- Updating the current AMPs to integrate proposed Levels of Service (LoS).
- Defining the lifecycle activities and associated costs required to achieve those LoS.
- Identify the available funding and any funding shortfalls.
- Document the risk(s) of failing to meet the proposed LoS for all asset classes over a 10-year period.

This AMP is an update of the 2024 AMP for the City's Facility management system, as shown in **Table 1-1**. Other core and non core AMPs are presented under separate reports.

Table 1-1: In-Scope Facility Assets

Asset Category	Sub-Assets
Cemetery	• Greenwood Cemetery
Community Center	• John Rhodes Community Centre • Northern Community Centre • Sault Event Centre (GFL Memorial Centre) • SSM Museum • Ermatinger Old Stone House & Clergue Blockhouse • Main Branch Public Library • Downtown Plaza • Senior Citizens Drop-in Centre • Soo Market
Fire	• Central Fire Station #1 • Fire Station #2 • Fire Station #3 • Fire Hall #4 / EMS Complex
IT	• Copier • Dispatch System • GPS • Laptops • Misc • Monitors • PC • Plotter • Printers • Scanner • Server Storage • Servers • Surveying Camera
Marina	• Bellevue Marina • Robert Bondar Park Marina
Police	• Police Headquarters
Public Works	• Carpentry Shop Building 'B' • CCTV Building Public Works Yard • Civic Centre • Equipment Storage Garage Public Works Yard • Lab Building Public Works Yard • Public Works Administration Building • Public Works Garage Building A
Transit	• Transit Bus Depot • Transit Terminal Building

The following elements are included within the scope of this AMP:

- Asset hierarchy, a summary of the asset inventory, including the replacement cost of the assets, the average age of the assets, the condition of the assets, and data gaps analysis (**Sections 2**).
- The City's levels of service (LoS) objectives, stakeholder identification, current levels of service determined in accordance with the qualitative descriptions and technical metrics outlined in O. Reg 588/17, proposed service levels, LoS forecast, and future demand drivers (**Section 3**).
- Asset lifecycle management strategies, lifecycle activities and funding needs to achieve proposed LoS, risk of not meeting proposed LoS, available funding and funding gap, and alternative (non-financial) strategies to manage funding shortfall (**Section 4** and **Section 5**)

1.3 Asset Management Provincial Requirements

The O. Reg. 588/17 came into effect in 2018 and stipulates specific AM requirements to be in place within Ontario municipalities by certain key dates (**Table 1-2**). The development of this AMP is one of the steps to guide the City towards meeting the July 1st, 2025, deadline.

Table 1-2: O. Reg. 588/17: AM Planning for Municipal Infrastructure

Deadline Date	Regulatory Requirement
July 1st, 2019	All municipalities are required to prepare their first Strategic AM Policy.
July 1st, 2022	All municipalities are required to have an AM Plan for its entire core municipal infrastructure (i.e., water, wastewater, stormwater, roads, and bridges & culverts).
July 1st, 2024	All municipalities are required to have an AM Plan for infrastructure assets not included under their core assets.
July 1st, 2025	All AM Plans must include information about the LoS that the municipality proposes to provide, the lifecycle activities and associated costs needed to achieve those LoS, available funding, any funding shortfalls, and the risk of failing to meet the proposed LoS.

2 State of Infrastructure

The City's facilities encompass a wide and diverse range of buildings and infrastructure that are essential to the daily operations, safety, and overall vibrancy of the community. These facilities serve various critical functions and include cemetery, marinas, community centers, fire stations, library, police, public works buildings, transit infrastructure, and IT-related assets.

For this project, AECOM utilized data from the Asset Management Facility Condition Assessments 2020 Update, which serves as a comprehensive and up-to-date catalog detailing the quantity, condition, and key specifications of the City's facility assets. By analyzing this inventory and identifying any data gaps, this section supports evidence-based decision-making. It provides valuable insights into ongoing maintenance needs, lifecycle planning, and associated financial requirements, ultimately enabling the City to strategically prioritize investments and optimize resource allocation across its facility portfolio.

2.1 Asset Hierarchy

To fulfill the requirements of O. Reg. 588/17 and to support robust long-range AM planning, the City requires a logically segmented asset breakdown structure (hierarchy) within the scope of this AMP. This necessitates a sufficiently detailed classification of facilities. Striking the right balance is critical, as there is a trade-off between achieving the necessary level of granularity to inform decision-making and avoiding excessive detail that could make data collection and management disproportionately burdensome.

Figure 2-1 illustrates the asset hierarchy for the City's facilities, highlighting two main categories: Facility and IT. Each category is further subdivided into relevant subcategories. This hierarchical structure provides a logical indexing system for the City's facilities, organizing them into primary (parent) and secondary (child and grandchild) asset groupings. It serves as a foundational framework for the analysis and discussions that follow, enabling users to drill down to specific assets for the purposes of maintenance planning, cost tracking, and strategic decision-making at various levels.

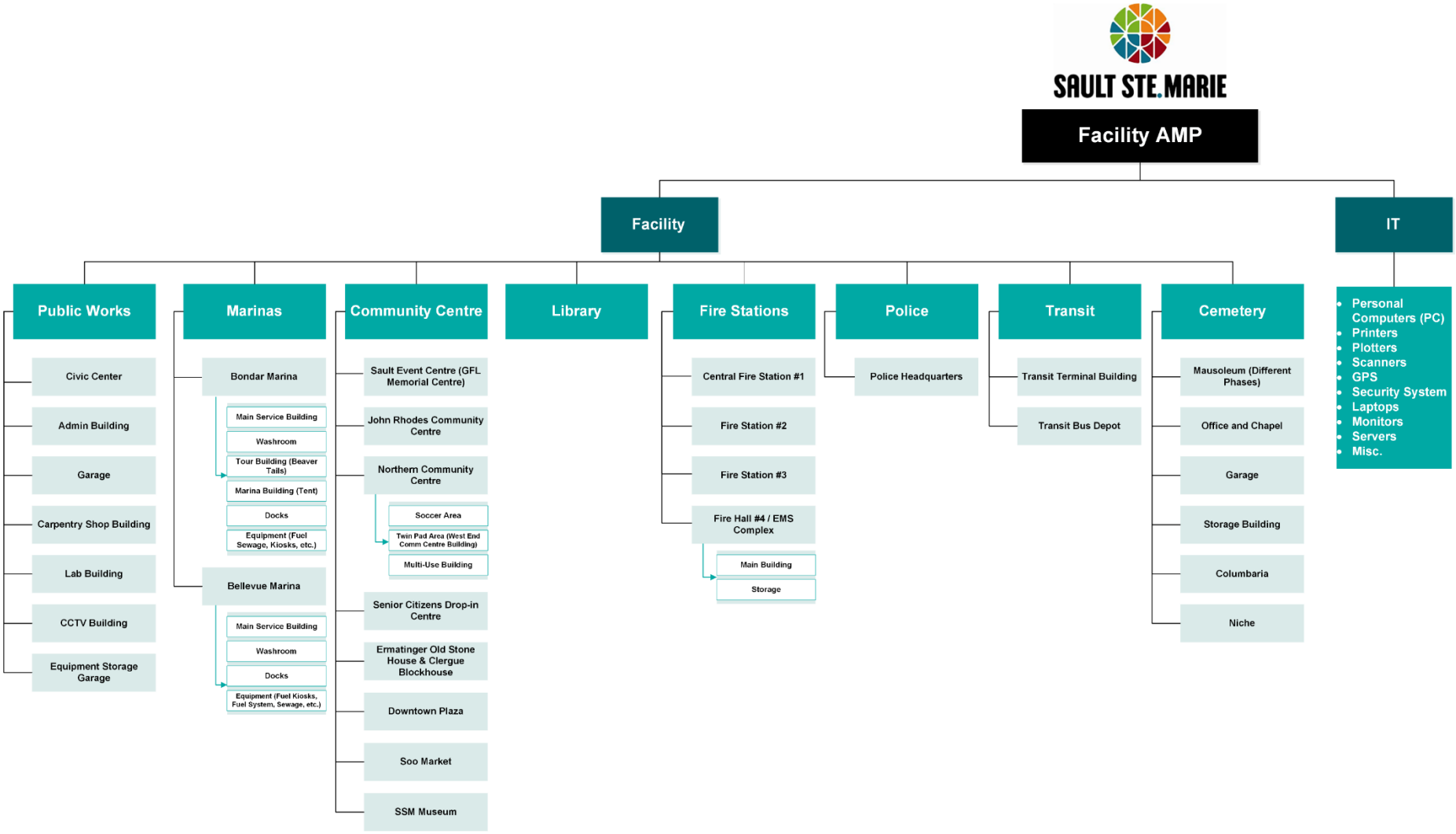

Figure 2-1: City of Sault Ste. Marie Facility Asset Hierarchy

2.2 Current State of the Assets

2.2.1 Asset Inventory

Table 2-1 presents the summary of the City's facility inventory. City's facility inventory includes a diverse range of facilities and IT assets, which have been categorized as Cemetery (1 facility), Community Center (9 facilities), Fire (4 facilities), IT, Marina (2 facilities), Police (1 facility), Public Works (7 facilities), and Transit (2 facilities), totalling 26 facilities.

Table 2-1: Facility Asset Inventory Summary

Asset Group	Asset Category	Asset Sub-Category	Count	Quantity	Unit
Facility	Cemetery	Greenwood Cemetery	1	2,410	Ea.
	Community Center	Downtown Plaza	1	2,314	sq. ft
		Ermatinger Old Stone House & Clergue Blockhouse	1	7,686	sq. ft
		John Rhodes Community Centre	1	155,000	sq. ft
		Main Branch Public Library	1	33,525	sq. ft
		Northern Community Centre	1	143,114	sq. ft
		Sault Event Centre (GFL Memorial Centre)	1	134,075	sq. ft
		Senior Citizens Drop-in Centre	1	14,470	sq. ft
		Soo Market	1	7,746	sq. ft
		SSM Museum	1	17,672	sq. ft
	Fire	Central Fire Station #1	1	18,120	sq. ft
		Fire Hall #4 / EMS Complex	1	38,460	sq. ft
		Fire Station #2	1	4,311	sq. ft
		Fire Station #3	1	4,311	sq. ft
	IT	Copier	1	1	Ea.
		Dispatch System	1	1	Ea.
		GPS	3	3	Ea.
		Laptops	84	153	Ea.
		Misc	62	269	Ea.
		Monitors	50	900	Ea.
		PC	76	1,914	Ea.

Asset Group	Asset Category	Asset Sub-Category	Count	Quantity	Unit
		Plotter	2	2	Ea.
		Printers	86	112	Ea.
		Scanner	3	3	Ea.
		Server Storage	1	1	Ea.
		Servers	76	92	Ea.
		Surveying Camera	4	4	Ea.
	Marina	Bellevue Marina	1	-	Ea.
		Robert Bondar Park Marina	1	-	Ea.
	Police	Police Headquarters	1	42,113	sq. ft
	Public Works	Carpentry Shop Building 'B'	1	4,750	sq. ft
		CCTV Building Public Works Yard	1	1,216	sq. ft
		Civic Centre	1	93,510	sq. ft
		Equipment Storage Garage Public Works Yard	1	21,804	sq. ft
		Lab Building Public Works Yard	1	1,236	sq. ft
		Public Works Administration Building	1	10,100	sq. ft
		Public Works Garage Building A	1	61,100	sq. ft
	Transit	Transit Bus Depot	1	44,000	sq. ft
		Transit Terminal Building	1	2,200	sq. ft

2.2.2 Current Asset Replacement Value

The City's Facility portfolio comprises a wide range of assets with a total replacement value of approximately $563 Million as of 2025 (**Table 2-2**). Community Centers represent the largest investment area at over $281 Million, including major sites like the John Rhodes Community Centre and Northern Community Centre (each valued at $64.2 Million). Other key assets include IT infrastructure ($20.7 Million), Public Works buildings ($92.6 Million), and the Transit system ($40.7 Million). Marinas, Fire Stations, Police Headquarter, and Cemetery also contribute significantly to the overall value, supporting essential municipal services and public amenities.

It is also worth noting that the total replacement values are presented in inflated dollars and have been marked up by 45%, out of which 15% accounts for engineering and project management cost, and 30% for contingency cost.

Table 2-2: Facility Current Replacement Value

Asset Group	Asset Category	Asset Sub-Category	Total Replacement Value (2025)
Facility	Cemetery	Greenwood Cemetery	$51,169,000
	Community Center	Downtown Plaza	$11,770,000
		Ermatinger Old Stone House & Clergue Blockhouse	$26,750,000
		John Rhodes Community Centre	$64,200,000
		Main Branch Public Library	$13,309,000
		Northern Community Centre	$64,200,000
		Sault Event Centre (GFL Memorial Centre)	$49,462,000
		Senior Citizens Drop-in Centre	$10,700,000
		Soo Market	$3,531,000
		SSM Museum	$37,450,000
	Fire	Central Fire Station #1	$6,475,000
		Fire Hall #4 / EMS Complex	$13,276,000
		Fire Station #2	$1,592,000
		Fire Station #3	$1,531,000
	IT	Copier	$181,000
		Dispatch System	$2,327,000
		GPS	$390,000
		Laptops	$821,000
		Misc	$1,095,000
		Monitors	$1,434,000
		PC	$5,718,000
		Plotter	$60,000
		Printers	$1,390,000
		Scanner	$199,000
		Server Storage	$27,000
		Servers	$6,465,000
		Surveying Camera	$640,000
	Marina	Bellevue Marina	$13,869,000
		Robert Bondar Park Marina	$24,529,000
	Police	Police Headquarters	$15,540,000
	Public Works	Carpentry Shop Building 'B'	$2,456,000
		CCTV Building Public Works Yard	$900,000
		Civic Centre	$64,200,000
		Equipment Storage Garage Public Works Yard	$5,308,000
		Lab Building Public Works Yard	$903,000
		Public Works Administration Building	$3,558,000

Asset Group	Asset Category	Asset Sub-Category	Total Replacement Value (2025)
		Public Works Garage Building A	$15,229,000
	Transit	Transit Bus Depot	$37,450,000
		Transit Terminal Building	$3,210,000
		Total	**$563,314,000**

It is noted that the replacement costs are estimated based on Class 5[1] cost estimation approach. These estimates are typically prepared with limited information, resulting in fairly wide accuracy ranges. Class 5 estimates serve various purposes, including project screening, feasibility assessment, concept evaluation, and preliminary budget approval. They are utilized for detailed strategic planning, business development, project screening at more advanced stages, alternative scheme analysis, confirmation of economic and technical feasibility, and approval to proceed to the next stage.

Typically, depending on the construction complexity of the project, relevant reference information, and other associated risks, the accuracy ranges for Class 5 estimates fall within the following bounds (could exceed based on various criteria):

- On the lower side, -20% to -50%
- On the higher side, +30% to +100%

2.2.3 Age and Remaining Service Life

In practice, various assets will deteriorate at different rates and not necessarily linearly over time. However, it is pivotal to keep in mind the level of effort required to predict failure compared with the asset value. More sophisticated deterioration modelling may be warranted for very high value assets, whilst the cost of deterioration modeling for low-value assets may very well exceed the replacement cost of the asset. The actual service life can vary significantly from the estimated service life (ESL). The latter is defined as the period over which an asset is available for use and able to provide the required LoS at an acceptable risk and serviceability (i.e., without unforeseen costs of disruption for maintenance and repair). In some instances, a variation in expected vs. actual service life is evident due to the following factors:

- **Operating conditions and demands:** Some assets are operated intermittently or even infrequently or are being operated at a lower demand than their designed capacity. Thus, the actual operating “age” of the asset is reduced.
- **Environment:** Some assets are exposed to very aggressive environmental conditions (e.g., corrosive chemicals), while other assets are in relatively benign conditions; thus, the deterioration of assets is affected differently.
- **Maintenance:** Assets are maintained through refurbishment or replacement of components, which prolongs the service life of the asset.
- **Technological Obsolescence:** Some assets can theoretically be maintained indefinitely, although considerations such as cost to maintain the asset, its energy efficiency, and the cost to upgrade to an updated technology that would result in cost savings are likely to render this approach uneconomical.

Initially, the average age was calculated based on the purchased and installation year of each individual asset. Then, based on the age of the asset and the ESL (collected from a State of Infrastructure Workshop with the City, and additional information provided by the City), the remining service life (RSL) was calculated. It should be noted that in the case that age was higher compared to ESL, RSL was considered as zero.

Table 2-3 and **Figure 2-2** present the weighted average age, weighted average ESL, and RSL for various asset sub-categories within the City’s Facility system. Among all facility sub-categories, Cemetery assets have the highest remaining service life at 68 years, reflecting their relatively young average age (23 years) compared to their long-

[1] Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R-97. Cost Estimate Classification System - As Applied In Engineering, Procurement, and Construction for the Building and General Construction Industries, 2020, Retrieved in February 2024

expected service life (91 years). All other facility types—including Community Centers, Fire, Police, Public Works, and Transit—have significantly lower remaining service lives, generally between 17 and 36 years, indicating they are closer to the end of their useful life. IT assets have fully consumed their useful life, with a remaining service life of 0 years, suggesting they are due for immediate replacement or upgrade.

Table 2-3: Facility Average Age, ESL, and Remaining Service Life

Asset Group	Asset Sub-Category	Weighted Average Age	Weighted Average ESL	Remaining Service Life
Facility	Cemetery	23	91	68
	Community Center	30	57	27
	Fire	39	56	17
	IT	16	6	0
	Marina	20	56	36
	Police*	41	58	17
	Public Works	39	58	19
	Transit	41	58	17

* The model shows 17 years of remaining useful life based on available data and assumptions from the Morrison Hershfield report. However, there are differing views on the actual condition of the building. This assumption should be revisited and refined in future updates, pending additional documentation.

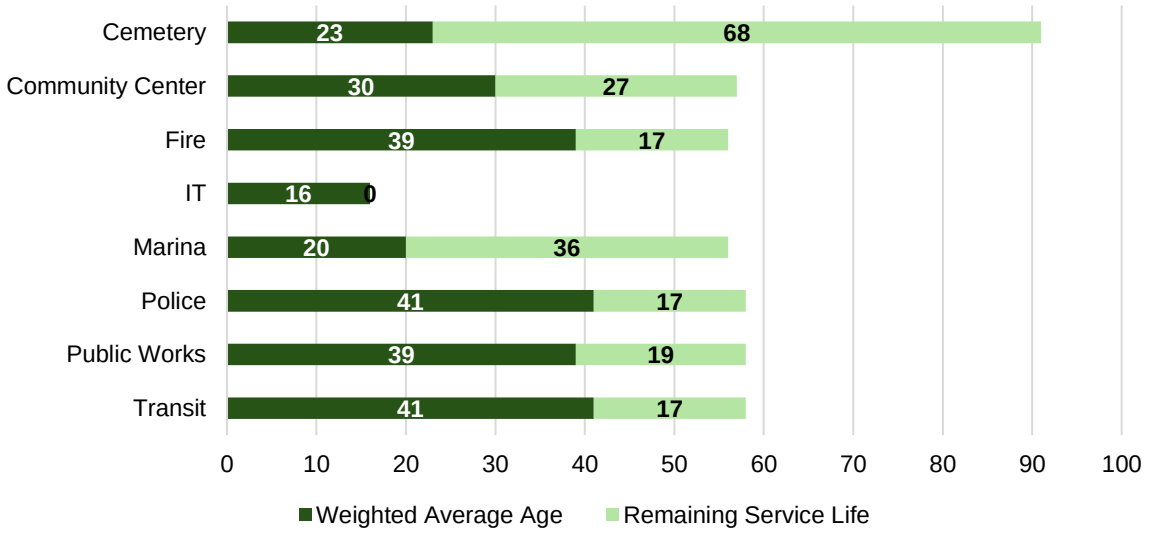

Figure 2-2: Facility System Weighted Average Age and Remaining Service Life

Figure 2-3 and **Figure 2-4** shows the installation profile of the City's facilities and IT assets according to asset sub-categories. The facility installation profile illustrates that the majority of facility investments, based on total replacement cost, occurred between 1990 and 2009. As shown in **Figure 2-3**, community centers represent the largest share of investment across the most decades, with significant spikes in the 1990–1999 and 2000–2009 periods, each exceeding $120 Million. Other facility types such as cemeteries, IT, marina, public works, and transit contributed to a lesser extent, with minimal investment observed prior to 1960 and reduced level of investment in recent decades (2010–2029). **Figure 2-4** focuses on library, fire, and police facilities and shows a similar trend, with the highest replacement costs also occurring in the 1990–1999 and 2000–2009 decades. Key installations during this time included Fire Hall #4 / EMS Complex, the Main Branch Public Library, and Police Headquarters. Overall, the data suggests that the City

experienced its most significant facility expansion during the 1990s and 2000s, with recent decades showing a reduced level of investment in new facility construction or major investments.

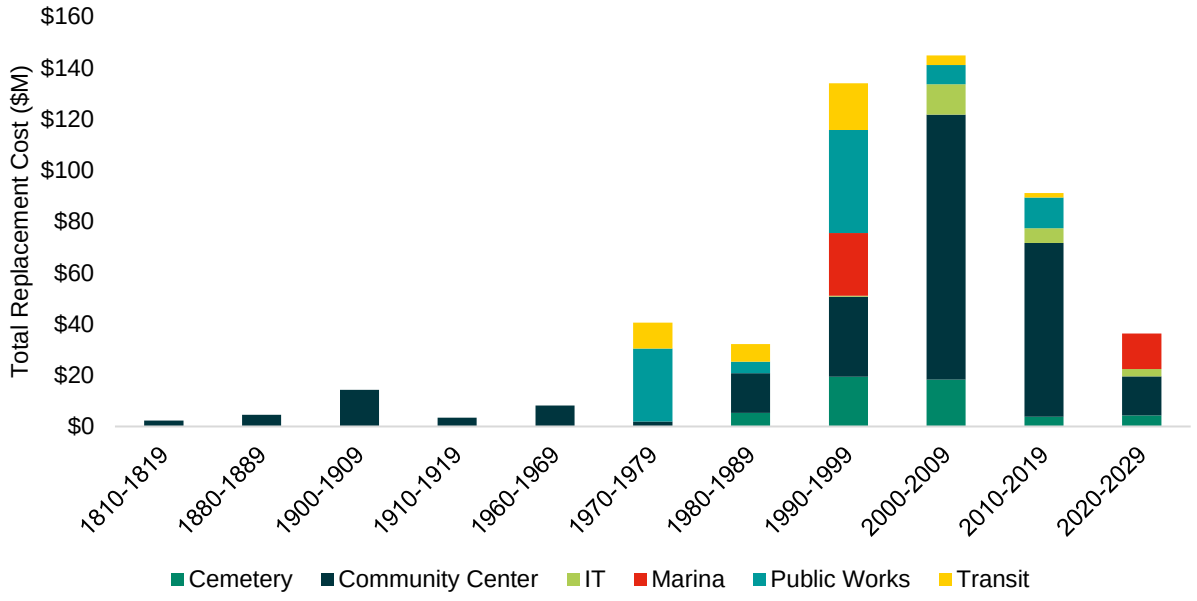

Figure 2-3: Facility Installation Profile (Excluding Library, Fire, and Police)

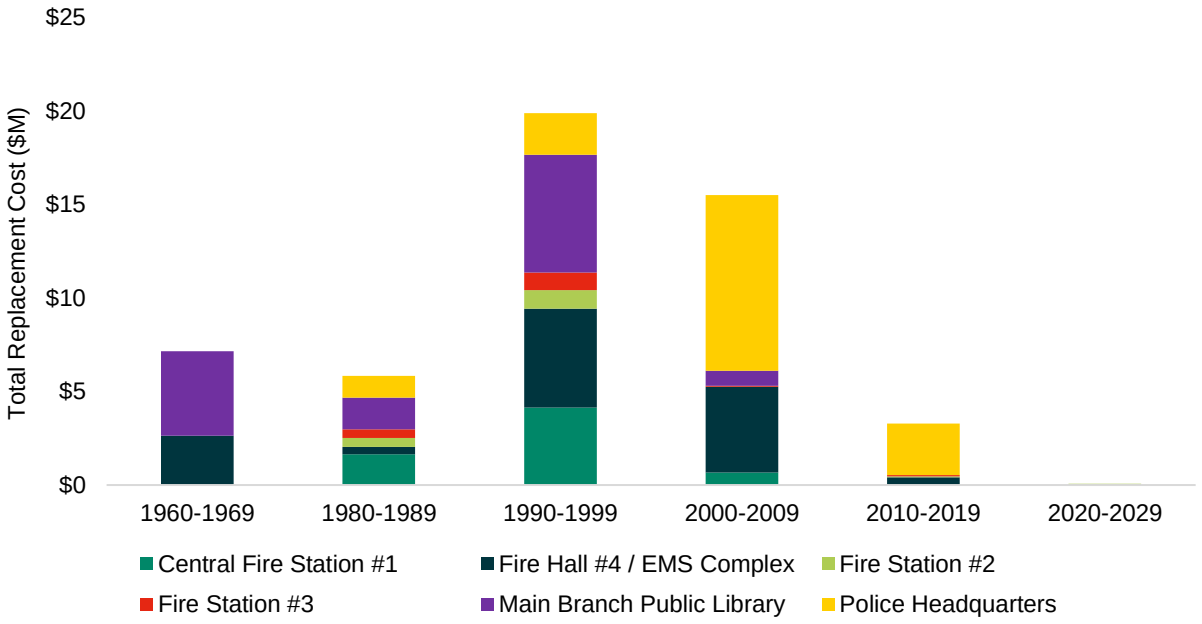

Figure 2-4: Facility Installation Profile (Library, Fire, and Police)

2.2.4 Asset Condition

All assets are expected to deteriorate over their lifetime, and their assigned condition reflects the physical state of the asset. In terms of facilities, Morrison Hershfield Limited (MH)[2] conducted a comprehensive building condition

[2] Asset Management Facility Condition Assessments 2020 Update, Prepared by Morrison Hershfield Limited (MH)

assessment for facilities in the City. AECOM utilized this information to provide a summarized overview of the condition of various facilities.

Where needed a two-parameter Weibull distribution function was used to assess the current condition of the facility assets. The Weibull distribution has been used extensively in reliability studies and lifetime prediction models in industries ranging from automotive to the oil & gas and provides a suitable distribution for this type of analysis.

The underlying premise of the Weibull-shaped deterioration is that while some assets fail prematurely due to severe conditions or improper installation, other assets are very long-lived and function well beyond their theoretical ESL. To perform a high order network-level analysis, it was assumed that assets would fail (and require replacement) within a deterioration envelope / curve approximated by a Weibull probability distribution. The two-parameter Weibull cumulative distribution has two parameters for scale and shape, as set out in Equation [1]:

$$f(x;\alpha,\beta) = e^{-\left(\frac{x}{\beta}\right)^{\alpha}} \quad [1]$$

Where: x = Age
α = Shape parameter (or slope)
β = Scale parameter

A set of Weibull cumulative distribution functions were leveraged to simulate a set of deterioration curves for assets with different ESLs as shown in **Figure 2-5**.

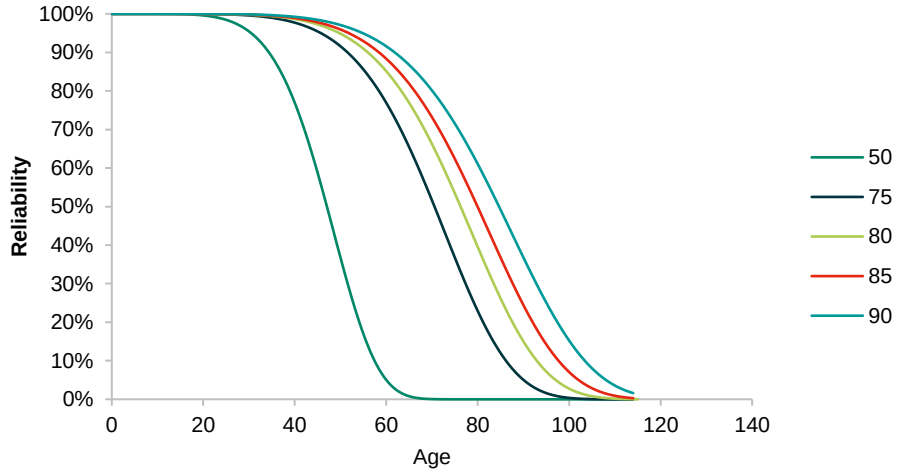

Figure 2-5: Asset Deterioration Curve Samples

Table 2-4 summarizes the condition grade of the City's facilities with associated replacement values. The condition assessment summary indicates that the majority of the City's facility assets are in Very Good or Good condition, representing 42% and 26% of the total replacement value, respectively. Assets in Fair condition account for 10%, while those in Poor and Very Poor condition represent 9% and 13%, respectively. Only a negligible portion (≈ 0%) of the asset value is associated with an unknown condition. In total, the replacement value of all facilities assessed amounts to $563 Million, highlighting that while most assets are in acceptable condition, approximately 22% require attention due to their Poor or Very Poor ratings.

Table 2-4: Facility Condition Summary

Rank	Condition Rating	Replacement Value	% of Replacement Value
1	Very Good	$234,877,000	42%
2	Good	$149,195,000	26%
3	Fair	$55,259,000	10%
4	Poor	$51,028,000	9%
5	Very Poor	$72,935,000	13%
Unknown	Unknown	$20,000	≈ 0%
	Total	**$563,314,000**	**100%**

Additionally, **Figure 2-6** and **Table 2-5** granulate the condition of the assets based on different asset sub-categories and their corresponding replacement values. The facility condition summary reveals that Community Centers account for the largest share of total replacement value among all facility asset categories, with a broad distribution across all condition ratings—most notably 19.2% in Very Good condition and smaller proportions in Fair, Poor, and Very Poor categories. Overall, 41.7% of the facility portfolio is in Very Good condition and 26.5% in Good condition, indicating that more than two-thirds of the assets are in acceptable shape. However, 31.8% of the assets are rated as Fair (9.8%), Poor (9.1%), or Very Poor (12.9%), highlighting a considerable portion that may require reinvestment or renewal. Other categories such as Public Works, Transit, and Marina also carry notable replacement values with varied condition states. It should be noted that the majority of the IT assets are in very poor condition and beyond their expected service life.

Figure 2-6 presents the replacement value of each facility asset category by condition, showing the financial scale of assets in varying states. **Table 2-5** shows the percentage distribution of assets in each condition category, providing insight into the proportion of assets by condition rather than value. For further breakdown, pleas refer to **Appendix A**.

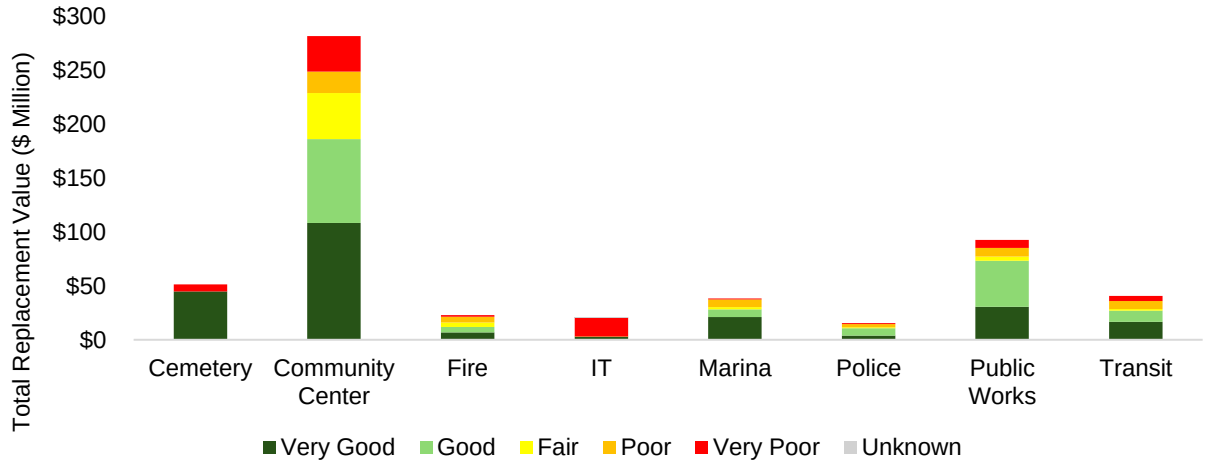

Figure 2-6: Facility Condition Summary for Asset Categories

Table 2-5: Distribution of Condition for Facility Asset Categories

Condition Rating	Very Good	Good	Fair	Poor	Very Poor	Total
Cemetery	7.9%	0.0%	0.0%	0.0%	1.1%	**9.00%**
Community	19.2%	13.8%	7.6%	3.5%	5.8%	**49.90%**
Fire	1.2%	0.9%	0.7%	1.0%	0.3%	**4.10%**

Condition Rating	Very Good	Good	Fair	Poor	Very Poor	Total
IT	0.5%	0.0%	0.0%	0.0%	3.2%	**3.70%**
Marina	3.7%	1.3%	0.4%	1.3%	0.2%	**6.90%**
Police	0.7%	1.2%	0.2%	0.5%	0.2%	**2.80%**
Public Works	5.4%	7.6%	0.7%	1.4%	1.3%	**16.40%**
Transit	2.9%	1.8%	0.2%	1.4%	0.8%	**7.10%**
Total	**41.7%**	**26.5%**	**9.8%**	**9.1%**	**12.9%**	**100.00%**

2.3 Asset Data Gap Analysis

2.3.1 Data Gap Observations

Table 2-6 provides a summary of observed data gaps in the compiled facility asset inventory across key data attributes that help to make informed decisions over the asset lifecycle for this AMP.

Table 2-6: Observations on Asset Data Completeness

Asset Group	Inventory Completeness (%)						
	Asset ID	Name / Location	Install Date	Inspection Date	Condition	Expected Service Life	Replacement Cost
Facility	0%*	100%	95%	100%	100%	100%	100%**

*No asset ID provided for facilities. (If available, asset IDs for building from GIS to be used for facilities)
** AECOM used RS Means to estimate the replacement cost for facilities.

2.3.2 Data Confidence

The quality of asset data is critical to effective AM, accurate financial forecasts, and informed decision-making. For this reason, it is important to know what the reliability of the information is for the State of Infrastructure analysis of the facility assets. **Table 2-7** provides a description for the data confidence grades used to classify the reliability of the asset data used in this data gap analysis. Through consultation with City staff during a State of Infrastructure Workshop, the asset attribute data for the in-scope facility assets were assigned the grades outlined in **Table 2-8**.

Table 2-7: Data Confidence Grading Scale

Confidence Grades	Description
A - Highly reliable	Data is based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B - Reliable	Data is based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%
C - Uncertain	Data is based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy is estimated ± 25%
D - Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E - Unknown	None or very little data held.

Table 2-8: High-Level Asset Data Confidence Grades

Asset Category	Data Confidence Average Grade		
	Inventory	Age	Condition
Facility	B	B	A

2.3.3 Data Management Practice

The asset data lifecycle is a sequence of stages that data goes through from its initial creation (i.e., data capture and entry) to its eventual archival and/or deletion at the end of its useful life[3]. A clear definition and understanding of the organization's process for acquiring, storing, utilizing, assessing, improving, archiving, and deleting data (see **Figure 2-7**) will ensure good data management practices and help to sustain levels of data quality required to support AM activities.

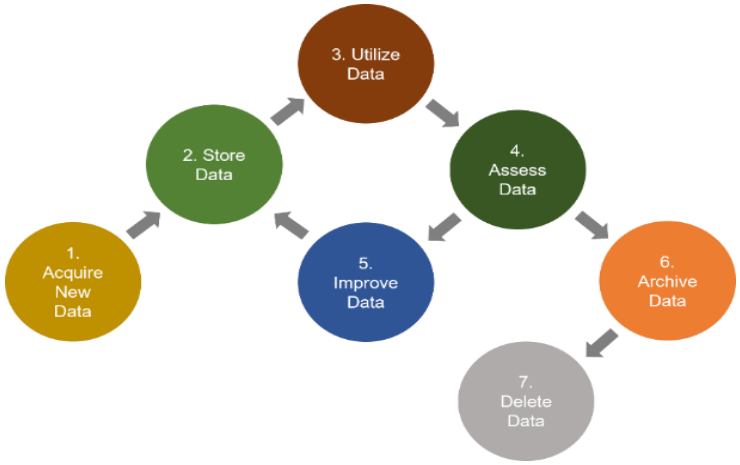

Figure 2-7: Asset Information Lifecycle

The seven key stages of the asset data lifecycle are described in more detail below:

1. **Acquiring New Data**: The majority of new asset data arises from asset creation, refurbishment and overhaul activities. New data may also come by way of inheritance or transfers from other business units, organizations, or third parties. As such, it is important to have clearly defined processes in place not only to add or update asset data, but to migrate and merge data from other sources.

2. **Storing Data**: The way asset data is stored is an important consideration for overall data quality. Having a planned approach to data storage will inevitably reduce the likelihood of duplication and inconsistencies across

[3] TechTarget Network, Definition: Data Life Cycle, 2020.

datasets within the organization. Depending on the needs of the organization, this stage may involve procuring a new software to adequately house the data, along with a data backup and recovery plan to ensure that the necessary data protection and privacy standards are met.

3. **Utilizing / Analysing Data**: This aspect of the asset information lifecycle is where users encounter the data to support data-driven activities within the organization. Data can be viewed, processed, edited, and published to allow users to access the data outside the organization. Critical data that has been modified should be fully traceable to maintain the integrity of the data. As such, it is important to communicate to the users why asset data is so important, and how it is used to inform decisions within the organization.
4. **Assessing Data**: Assessing the data quality helps to determine the level of confidence in the information and ensures that decision-makers are making informed decisions based on the quality of data available to them. Moreover, it is important to fully understand the availability and quality of the asset data before issuing information publicly. Some of the results of data degradation, due to improper or lack of assessment, may include:
    - Poor asset performance due to lack of information and understanding of asset behaviour.
    - Non-compliance with statutory regulations or safety requirements.
    - Safety incidents due to risks not being identified or reported.
    - Asset failure due to gaps in maintenance planning.
5. **Improving Data**: Improving data quality involves establishing clear targets which are intended to be communicated widely across the organization. It is imperative that the organization understands the costs, benefits, and risks associated with any data improvements since the cost of the improvement may outweigh the overall benefit. It is also important to note that *more* data does not necessarily mean *better* data. It is very possible to collect data that does not add value to the organization. As such, it is critical that the organization aligns its data improvement targets with its AM objectives and considers the data-driven decisions staff need to make at the operational and strategic level, to ensure that the *right* data is being improved upon.
6. **Archiving Data**: Archiving data is the process of storing data that is no longer active or required but is able to be retrieved in case it is needed again. Data that is archived is stored in a location where no usage or maintenance occurs. It is recommended that a data archive strategy exists within an organization in order to lay out the data archival requirements, which considers the following:
    - What data should be archived and why?
    - Are there any legal obligations for retaining data records?
    - How long should data records be retained?
    - What is the risk associated with not being able to retrieve data records?
    - Who should be able to access archived data records?
    - What is the expected timeframe to retrieve archived data records?

    Clearly communicating these requirements across the organization is key to ensuring staff are educated on why records are being archived, how they can access archived data records, and for how long archived data records can still be accessed.
7. **Deleting Data**: The deletion of data is the final component of the asset information lifecycle. Typically, within organizations there is a resistance to permanently delete data, otherwise known as data “squirrelling”, due to the overall capacity of storing data increasing and the cost decreasing. However, within the organization’s data archive strategy, a retention period should be specified to indicate when data should be deleted, along with any processes to follow, such as obtaining prior missing period.

2.3.3.1 Future Data Management State

The City will develop and implement a software strategy that helps streamline data management following this AMP. Eventually, the City plans to have a clear and efficient data management process and comprehensive and robust asset inventory to support their AM decision making. The implementation plan for data improvement is presented in **Section 6**.

3 Level of Service

3.1 Purpose

Level of Service (LoS) supports every aspect of the overall AM system. The objective of establishing clearly defined service levels is to help the City meet stakeholder values, achieve its strategic goals, make informed decisions, and implement effective asset lifecycle activities.

Documenting LoS is a proven practice that will enable the City to:

- Link corporate strategic objectives to customer expectations and technical operations.
- Balance customer needs and expectations while evaluating the effectiveness of operations and whether the right LoS is being provided at the right cost.
- Transition from an “Asset Stewardship” approach that focuses on making decisions based on maintaining assets in an acceptable condition to a “Serviceability” approach that is geared towards making decisions based on balancing the costs, risks, and goals for the LoS being provided by the City’s assets.
- Communicate the physical nature of infrastructure that the City owns and is financially responsible for while promoting the use of LoS to enable effective consultation with stakeholders regarding alternative funding options according to desired LoS outcomes.
- Make recommendations on strategies that the City can take now to minimize future renewal costs while ensuring that adequate LoS can be delivered without burdening future generations.
- Assess internal (e.g., program changes) and external (e.g., climate change) factors that have the potential to impact the City’s ability to deliver services and how these factors may impact the LoS being provided.
- Implement a corporate continuous improvement program to further optimize AM across all service areas.

The O. Reg. 588/17 requires that all AMPs include the current LoS being provided, determined in accordance with the qualitative descriptions and technical metrics provided (see **Section 1.3**).

3.2 Objectives

Defining LoS objectives is important for drawing a line of sight between the City’s corporate objectives and the tangible asset performance outcomes. To do so, the LoS objectives must take into consideration stakeholder interests to develop asset performance measures that aim to meet the needs and expectations of the community. By doing this, the City will ensure that their assets are striving towards optimal performance, not only operationally, but economically, socially, and sustainably as well. Every stakeholder has certain interests in the service being provided and in general. The City’s corporate objective is to lift up the community and build pride, and attract people (visitors, employers and employees).

The City’s Comprehensive Background Report[4] (2021) for the New Official Plan outlined the overarching themes that reflect the City’s value, as shown in **Table 3-1**. Each overarching theme is also assigned a corporate service objective.

The development of level of service targets should be aligned with these corporate objectives which will be addressed in the next iteration of the AMP.

[4] City of Sault Ste Marie. 2021. Comprehensive Background Report.

Table 3-1: The City's Overarching Themes and LoS Objectives

Overarching Themes	LoS Objective
Healthy Community	Supports healthy living, active transportation, access to passive and active recreation, social interaction and the creation of spaces that are comfortable, safe and accessible for all ages and abilities (the "8 to 80 Cities" concept).
Environmental Sustainability	Supports energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions and climate change adaptation.
Integrated Mobility	Supports accessibility and choice of a diversity of transportation modes.
Sense of Place	Fosters a welcoming place for all that establishes connection and provides a memorable experience to visitors.
Sustainable Growth	Stimulates reinvigoration of neighbourhoods to provide a complete range of housing, services, employment and recreation.
Economic Resiliency	Supports the growth and diversification of the City's economy.
Social Equity	Contributes to creating a welcoming and inclusive community, focusing on the removal of systemic barriers so that everyone has access to an acceptable standard of living and can fully participate in all aspects of community life.
Cultural Vitality	Celebrates the City's history, diverse communities and natural and cultural heritage, with the Downtown as the Sault's core destination for arts and culture.

3.3 Stakeholder Identification

A stakeholder is any person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or an activity. Stakeholder analysis is the process of understanding stakeholder needs, expectations, and perceptions relative to the stakeholder's level-of-interest and level-of-influence over the organization. The organization typically engages with their stakeholders to:

- Establish which activities or services matter most to them.
- Understand their risk appetite and risk threshold.
- Understand their willingness to pay for services.

Stakeholders can take many forms and may be internal (i.e., staff, Council) or external (i.e., the public, regulatory agencies, suppliers, neighbouring municipalities, etc.) to the organization. The following groups were identified as key stakeholders for facilities during the LoS workshop held with City staff. This is not intended to be an exhaustive list; however, the following groups provide a good starting point for the City to move forward to the next stage. The City's key stakeholder groups for facilities are identified below:

- Residential Customers.
- Regulatory Agencies.
- Industrial, Commercial & institutional (ICI) Customers.
- Regulatory Agencies.
- Neighbouring Municipalities.
- Environmental Groups.
- Internal City Departments.
- Sporting Groups.
- Heritage Buildings, Museums, and Archival Building.
- Developers.

3.3.1 Legislated and Regulatory Requirements

Facilities assets are critical to the City's ability to provide essential services to the community, and for protecting the health and safety of the public. As such, key legislative requirements exist for the City's infrastructure assets, which ensure that minimum requirements are met and standards are in place that promote a high quality of life (i.e., high quality community centres, marinas, etc.). A sample of key Federal and Provincial legislated requirements are outlined below in **Table 3-2**. Policy and guiding documents relevant to facilities are also listed.

Table 3-2: Legislated and Regulatory Requirements

Federal	Provincial
• National Building Code of Canada • National Fire Code of Canada • National Energy Code of Canada for Buildings	• Building Code Acts • Ontario Heritage Act • Accessibility for Ontarians with Disabilities Act (AODA) • Municipal Acts • Electricity Act ○ Ontario Regulation 507 – Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans • Funeral, Burial and Cremation Services Act, 2002

3.4 O. Reg. 588/17 Levels of Service Metrics

Currently, O. Reg 588/17 only identifies levels of service metrics for core assets. A number of key LoS performance measures for facilities assets have been identified in consultation with City staff through workshops, are detailed in **Section 3.5**.

3.5 Current and Proposed Levels of Service

Establishing LoS targets is an important part of continual improvement and performance management. Without targets, it is difficult to ascertain whether goals are being met, or the extent of the gap if they are not. Incorporating targets into the City's LoS Framework helps to ensure that targets are reasonable, aligned with customer expectations, and evaluated on an objective basis by considering cost-benefit trade-offs.

One of the key challenges in setting targets in a municipal environment is that they can often become biased and/or politically motivated. Therefore, it is important to review LoS targets with internal and external stakeholders, especially the customers who will be impacted the most by changes in service delivery. An important aspect of evaluating LoS targets is determining how willing the user is to pay for the service. Regulatory requirements are an exception; however, they only provide the minimum service standard. Cost is still an important parameter to consider when assessing the merits of service improvements. To deal with the financial realities, it is necessary to:

- Calculate how much the service costs based on current LoS.
- Determine the lifecycle activities and cost associated with varying the LoS.
- Assess the customers' willingness to pay.

It is important that any targets set be realistic and achievable. O. Reg. 588/17 requires AMPs to include proposed levels of service by July 1, 2025.

A summary of the City's s Facility assets service level metrics is presented in **Table 3-4**. Each metric was indicated with its current trend and proposed trend for the next 10 years, represented by legends, taking into account the nature of the measure, data availability, and whether the trend impacts positively or negatively on the proposed LoS. The LoS trend legends are described in **Table 3-3**.

Table 3-3: LoS Trend Legend

Symbol	Name	Description
	Positively Increasing	KPI is improving steadily over time, showing progress toward goals.
	Positively Stable	KPI is at a strong, desirable level and consistently maintained.
	Positively Decreasing	KPI is improving as lower values indicate better performance.
	Negatively Increasing	KPI is worsening over time, signaling a need for corrective action.
	Negatively Stable	KPI remains poor with no improvement or further decline.
	Negatively Decreasing	KPI is declining in a way that reflects worsening performance.

Table 3-4: Facility Current and Proposed Levels of Service

LoS #	Service Area	LoS Measure	Unit of Measure	LoS Category	Current Performance	Performance Trend		Lifecycle Activities to Meet Proposed LoS	Budget Impact to Meet Proposed LOS	Risk of Not Meeting Proposed LoS
						Current	Proposed			
1	Facility	Total annual electricity consumption per square foot	GJ/m2	Technical	TBD	→	↓	• Install solar panels to reduce reliance on grid electricity. • Adopt energy-efficient technologies and equipment to lower operational consumption. • Upgrade facility windows and building envelope to enhance thermal performance. • Conduct deep energy retrofit audits to identify and implement comprehensive efficiency improvements.	• Medium	• Failure to meet corporate sustainability targets can result in increased environmental impacts and higher electricity costs.
2	Facility	Total annual natural gas consumption per square foot	GJ/m2	Technical	TBD	→	↓	• Replace equipment with more energy-efficient natural gas systems. • Undertake fuel-switching projects to transition from fossil fuels to renewable energy sources.	• High	• Failure to meet corporate sustainability targets may lead to negative environmental impacts and increased electricity costs. • Risk of falling short of the 2050 net-zero emissions target.
3	Facility	# of energy efficiency retrofit projects completed	#	Technical	10	↑	↑	• Prioritize the implementation of energy and emissions reduction projects. • Apply energy efficiency measures identified through deep energy retrofit audits. • Incorporate lifecycle cost considerations when procuring new assets to ensure long-term value and sustainability.	• High	• Failure to meet corporate sustainability targets may lead to negative environmental impacts and increased electricity costs.
4	Facility	Cost of operating expenses to Fire service buildings (utilities, repairs and maintenance, exterior and property maintenance, management)	$ / year	Technical	TBD	→	↑	• Replace aging infrastructure components, such as windows and doors, to improve energy efficiency and building performance.	• High	• Asset failure or equipment damage can hinder operations and prevent the achievement of corporate objectives.
5	Facility	% of Assets in Fair or Better Condition (Community Development and Enterprise Services Facilities)	%	Technical	78%	↓	→	• Upgrade facility equipment and technology, including terminals, to improve operational efficiency and service delivery.	• High	• Disruptions can impact ongoing programs, damage equipment, and hinder the achievement of corporate objectives.
6	Facility	% of Assets in Fair or Better Condition (Public Works Facilities)	%	Technical	83%	↓	→	• Continue with replacement and retrofit initiatives to modernize infrastructure and improve efficiency.	• High	• Inadequate space limits the ability to properly store and maintain Public Works equipment. • Ongoing programs may be disrupted due to maintenance constraints and operational inefficiencies. • Equipment damage and maintenance delays can prevent the organization from meeting its corporate objectives.
7	Facility	% of Assets in Fair or Better Condition (Protective Services Facilities)	%	Technical	70%	↓	→	• Replace aging facility assets such as pavements, roofing systems, and other key structural components to maintain safety and functionality.	• High	• Disruptions may impact the delivery and effectiveness of ongoing programs. • Equipment damage can compromise operations and prevent the achievement of corporate objectives.
8	Facility	Number of Recreation Facilities per 1,000 residents	# / 1,000 residents	Technical	TBD	→	→	• Maintain existing asset conditions and continue implementing current management strategies to ensure service continuity.	• Low	• If the number of recreation facilities per 1,000 residents does not remain stable or increase as proposed, the City may fail to meet its corporate objectives related to community well-being and inclusivity. This could lead to reduced availability of programming, increased pressure on existing facilities, and fewer opportunities for residents to participate in recreational activities.
9	Facility	Total annual GHG emissions per square foot	kg CO_2e/ft^2/year	Technical	TBD	→	↓	• Increase funding allocations dedicated to emissions reduction initiatives. • Mandate the consideration of climate impacts in all capital project planning and approvals. • Integrate emissions reduction objectives into capital planning and AM practices.	• High	• Non-compliance with regulations can lead to negative environmental impacts and prevent the achievement of corporate objectives.

Performance Trend Legend:

↑ Positively Increasing	→ Positively Stable	↓ Positively Decreasing	↑ Negatively Increasing	→ Negatively Stable	↓ Negatively Decreasing

3.6 2025-2034 10-Year Levels of Service Forecast

Considering the City's characteristics, growth projections, and strategic objectives, the proposed performance trend for each LoS metric for the next 10 years is projected and outlined in **Table 3-5**. This table indicates whether each measure is expected to trend upward, downward, or remain stable, taking into account the nature of the measure, data availability, and whether the projected trend impacts positively or negatively on the proposed LoS.

Table 3-5: 2025-2034 10-Year Levels of Service Forecast

LoS #	Service Area	LoS Measure	Unit of Measure	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Proposed Trend	Basis for Forecast
1	Facility	Total annual electricity consumption per square foot	GJ/m2	Positively Decreasing – 0.5% per year										↓	City subject matter expert opinion
2	Facility	Total annual natural gas consumption per square foot	GJ/m2	Positively Decreasing – 0.5% per year										↓	City subject matter expert opinion
3	Facility	# of energy efficiency retrofit projects completed	#	Positively Increasing – 10 per year										↑	City subject matter expert opinion
4	Facility	Cost of operating expenses to Fire service buildings (utilities, repairs and maintenance, exterior and property maintenance, management)	$ / year	Positively Stable										→	City subject matter expert opinion
5	Facility	% of Assets in Fair or Better Condition (Community Development and Enterprise Services Facilities)	%	Positively Stable – 65% (current budget by 2034)										→	City subject matter expert opinion
6	Facility	% of Assets in Fair or Better Condition (Public Works Facilities)	%	Positively Stable – 59% (current budget by 2034)										→	City subject matter expert opinion
7	Facility	% of Assets in Fair or Better Condition (Protective Services Facilities)	%	Positively Stable – 51% (current budget by 2034)										→	City subject matter expert opinion
8	Facility	Number of Recreation Facilities per 1,000 residents	# / 1,000 residents	Positively Stable										→	City subject matter expert opinion
9	Facility	Total annual GHG emissions per square foot	kg CO_2e/ft^2/year	Positively Decreasing – 1% annually										↓	City subject matter expert opinion

Performance Trend Legend:

↑ Positively Increasing	→ Positively Maintain	↓ Positively Decreasing	↑ Negatively Increasing	→ Negatively Maintain	↓ Negatively Decreasing

3.7 Future Demand Drivers

Demand management is a critical component of managing the desired LoS in a sustainable manner, now and into the future. Understanding demand drivers enables the City to proactively develop effective, long-term strategies that are suitable for the City's unique political, environmental, social and technological landscape.

Factors identified during the LoS workshop that would impact facility service levels now and into the future include, but are not limited to, the following:

- Aging infrastructure (e.g., deteriorating building envelopes, outdated HVAC or electrical systems, etc.).
- Regulatory changes (e.g., building code updates, accessibility requirements, energy performance standards, etc.).
- Staff availability (e.g., facility maintenance personnel, skilled trades shortages, etc.).
- Succession management & skills transfer (e.g., plans to retain institutional knowledge for operating and maintaining complex facilities).
- Funding (e.g., having robust asset management plans to prioritize investments and minimize lifecycle costs).
- Contractor availability (e.g., access to specialized trades for large-scale renovations or emergency repairs).
- Climate change (e.g., increased weather-related damage, need for resilience upgrades, higher HVAC loads, etc.).
- Supply chain (e.g., delays or shortages in building materials and equipment for repairs or upgrades).
- Fluctuations in construction and maintenance costs.
- Population growth (e.g., increased demand for community centres, libraries, and other public facilities).

On November 2, 2021, the City's Planning Division released the Comprehensive Background Report for updating the Official Plan[5]. The City's Official Plan guides the local decision-making on land use, development and public infrastructure over the next 20 years. The City's population is expected to reach approximately 80,000 residents by 2031 and 83,300 by 2036. Employment is projected to increase by approximately 6,000 jobs, rising from about 31,000 in 2016 to 36,900 in 2036.

When additional assets to accommodate this population and employment growth are introduced to the City's portfolio, additional human resources, training and funding are required to maintain and operate and renew or replace those assets. O. Reg. 588/17 requires municipalities by July 1, 2025, to estimate capital expenditures and significant operating costs to achieve the proposed LoS and accommodate projected increases in demand caused by population and employment growth.

[5] City of Sault Ste Marie. 1996. Official Plan

4 Asset Management Strategies

4.1 Asset Lifecycle Management Introduction

Asset lifecycle management focuses on the specific activities that should be undertaken during all phases of the asset lifecycle. Considering entire asset lifecycles can ensure that the City makes sound decisions that consider present and future service delivery needs.

The overarching goal of lifecycle management is to maximize the long-term benefits and services that our assets deliver while minimizing the associated costs and risks in the long run. Every asset has a lifecycle cost, which is the total cost of all the activities undertaken throughout its service life. Part of the purpose of the asset management planning process is to fully understand and predict the long-range financial requirements for the City's infrastructure to facilitate planning and resource management in the most cost-effective manner possible. **Figure 4-1** illustrates how costs typically accumulate over an asset's life. It is worth noting that the accumulation of the ongoing operations and maintenance, renewal & replacement and disposal costs is many multiples of the initial acquisition costs. As such, it is important to fully understand the entire lifecycle costs across an asset's entire life before proceeding with asset acquisition.

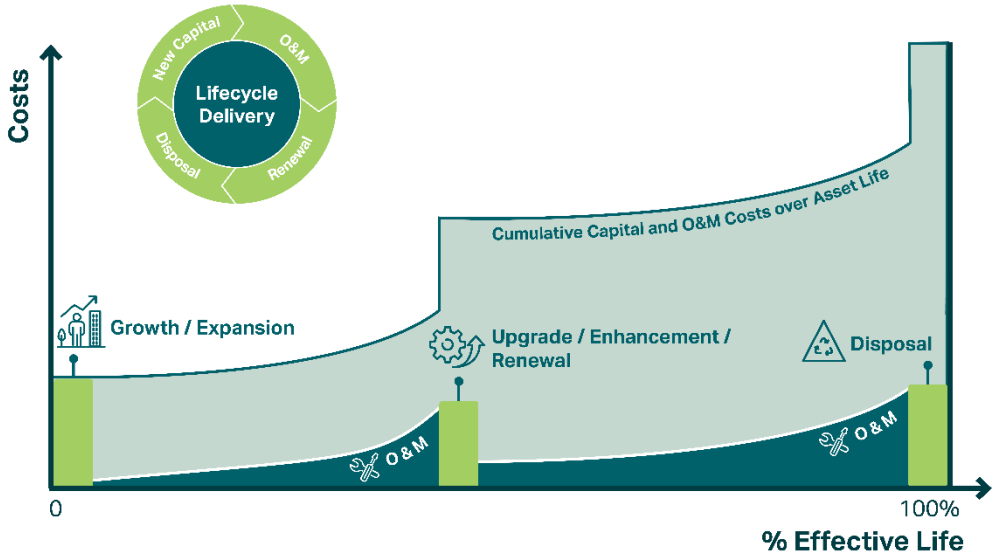

Figure 4-1: Lifecycle Cost Accumulation Over Asset Life

Asset lifecycle management strategies are typically organized into the following categories.

1. **Asset Acquisition / Procurement / Construction**: Acquisition includes expansion activities and upgrading activities to extend services to previously unserved areas or expand services to meet growth demands and to meet functional requirements. When acquiring new assets, the City should evaluate credible alternative design solutions that consider how the asset is to be managed at each of its lifecycle stages. Asset management and full life cycle considerations for the acquisition of new assets include, but are not limited to the following:

   - The asset's operability and maintainability.
   - Availability and management of spares.
   - Staff skill and availability to manage the asset.
   - The manner of the asset's eventual disposal.

2. **Asset Operations and Maintenance (O&M)**: As new infrastructure is commissioned, the City accepts the responsibility of operating and maintaining the infrastructure according to O&M standards to ensure that the infrastructure is safe and reliable. Operations staff provide the day-to-day support required to operate infrastructure. In few cases, operation costs are minor, but for most there are significant increases. For example, underground pipes require almost no operational support while a facility such as a pump station requires full-time staff to operate the facility safely and efficiently. Maintenance expenses include periodic preventive maintenance to ensure that the infrastructure can provide reliable service throughout the life of the asset and corrective maintenance that is required to repair defective assets as and when needed. Inadequate funding for O&M will have an adverse impact on the lifespan of assets. The number of O&M resources required in any period is a function of the current inventory of infrastructure and total O&M needs required for each asset. As the inventory of infrastructure grows, total O&M requirements will also grow.

3. **Renewal and Replacement (reinvestment and rehabilitation):** The third aspect of full lifecycle costing pertains to the renewal and replacement of assets that have deteriorated to the point where they no longer provide the required service. Renewal or rehabilitation costs may be incurred during the life of an asset where an investment is made to improve its condition and/or functionality, for example, roof replacement. Reconstruction activities are expected to occur once an asset has reached the end of its useful life, and renewal is no longer a viable option.

4. **Decommissioning and Disposal:** There will inevitably come a point in time when an asset must be removed from service and, depending on the type of asset, there may be significant costs associated with its decommissioning and disposal. Factors that may influence the decision to remove an asset from service include changes to legislation that cause the asset to be in non-compliance, the inability of the asset to cope with increased service levels, technology advances that render the asset obsolete, the cost of retaining the asset is greater than the benefit gained, or the current risk associated with the asset's failure is not tolerable.

Normally, major costs that may be incurred during disposal and decommissioning derive from the environmental impact of the disposal and, if required, the rehabilitation and decontamination of land. In some cases, there will be residual liabilities and risks to consider if a decision is made to partially abandon the asset as opposed to fully disposing of its components. However, some cost savings may be achieved through the residual value of the asset or by exploring alternative uses for the asset. In all cases, it is important to consider disposal and decommissioning as the strategy employed has the potential to attract significant stakeholder attention. For that reason, the costs and risks associated with disposal and decommissioning should be equally considered in the City's capital investment decision-making process.

4.2 Facility Assets Management Strategies

The asset management strategies that are employed by the City to manage the facility system throughout their lifecycle is summarized in **Table 4-1**.

Table 4-1: Lifecycle Management Strategies for Facility Assets

Asset Group	Lifecycle Activity	Description of Activities Practiced by the City	Benefit or Risk Associated with the Activities
Facilities	**Acquisition**	• Built a $32 million recreation and culture facility. • Developed a public plaza park in the downtown area. • Established recreational facilities for seniors. • Acquired transit terminal dispatch facilities. • Public engagement and stakeholder consultation.	• Increased community engagement and physical activity. • Improved community culture and wellbeing. • Supply chain disruptions or contractor issues can postpone opening, delaying benefits and increasing holding costs.
	Operations and Maintenance	**Buildings** • Condition assessment. • Mechanical and Electrical maintenance (HVAC, Electrical System, Plumbing). • Building cleaning. • Energy and utility monitoring.	• Identification of building deficiencies or areas for optimization. • Routine HVAC and plumbing maintenance reduce wear and deter costs costly replacements. • Lack of standardization in O&M practices leads to uneven performance across facilities.
		IT • Cleaning. • Updating. • Replacing components. • Security audits and assessments. • Safety inspections. • Equipment calibration. • Network performance monitoring	• Improved performance. • Potential reduction to cyber security risks. • Interruptions to service for maintenance. • Increased operating cost for inspections and assessments.
	Renewal and Replacement	**Buildings** • Renovation and rehabilitation. • Replacement at the end of life. • Unique practices for historical buildings. • Retrofits for energy efficiency or accessibility. • Seismic or structural upgrades. • Refurbishing interiors (e.g., flooring, lighting).	• Timely replacement avoids reactive, more expensive emergency repairs. • Preservation of heritage and culture. • Replacement projects can interrupt services (e.g., community programs) unless temporary accommodations are made.
		IT • Hardware upgrades • Software upgrades • Replacement at the end of life	• Improved speed, functionality, and security. • Data migration and employee adaptation risks. • New IT components may not work with existing infrastructure.

Asset Group	Lifecycle Activity	Description of Activities Practiced by the City	Benefit or Risk Associated with the Activities
	Disposal	**Buildings** • Recycling • Donation • Hazardous waste management • Post-disposal monitoring and reporting	• Recycling and proper hazardous waste handling minimizes ecological impact. • Donations of furniture or equipment can support nonprofits or underserved communities.
		IT • Reuse and refurbishment • Donation • Waste-to-energy conversion • Hazardous waste management • Secure data and information removal • Recycling of materials	• Proper data wiping or destruction prevents sensitive data leaks. • Selling refurbished equipment can partially offset replacement costs. • If disposal isn't certified, it may harm the environment or violate laws.

4.3 Risk Associated with Lifecyle Activities

In the context of AM, risk is defined as the consequence or impact of uncertainties on AM objectives. These uncertainties span a spectrum of events, including financial market fluctuations, unexpected asset failures, changes in regulatory environments, and other factors capable of influencing the performance or condition of assets. Risk management, developed to handle uncertainties in a systematic and timely manner, is a practical framework that ensures thoughtful decision-making and protects the achievement of goals. The risk management process generally follows a series of steps, as outlined in **Table 4-2**.

Table 4-2: Key Steps in the Risk Management Process

Step	Description
1. Establish the context	• Define the scope of the risk management process and the objectives that the City seeks to achieve through effective risk management. • Consider the City's internal and external factors and understand stakeholder expectations.
2. Risk identification	• Identify potential risks that could impact the City's AM objectives.
3. Risk analysis	• Utilize qualitative or quantitative analysis methods to assess risks.
4. Risk evaluation	• Evaluate the likelihood and impact of identified risks. • Prioritize risks based on their criticality.
5. Risk treatment	• Develop strategies to reduce the likelihood and impact of identified risks. • Implement preventive measures to address potential issues proactively. • Establish contingency plans for managing risks that cannot be eliminated.
6. Monitor and review	• Regularly update risk assessments to reflect evolving circumstances. • Develop KPIs and monitoring tools to track the effectiveness of risk treatment strategies. • Learn from the City's past experiences and continuously improve risk management strategies.

Over the course of an asset's service life, the accelerating rate of deterioration with age poses inherent risks, inevitably leading to a corresponding increase in maintenance costs. **Figure 4-2** illustrates a general asset deterioration curve. This trend becomes particularly pronounced in the final phase of the asset's service life, where the cost of maintenance experiences a rapid escalation, highlighting the financial risks associated with prolonged neglect. This phenomenon underscores the critical importance of preventive maintenance in the early stages of an asset's service life. By addressing risks proactively during these initial periods, the potential financial burden tied to accelerated deterioration in later stages can be effectively mitigated.

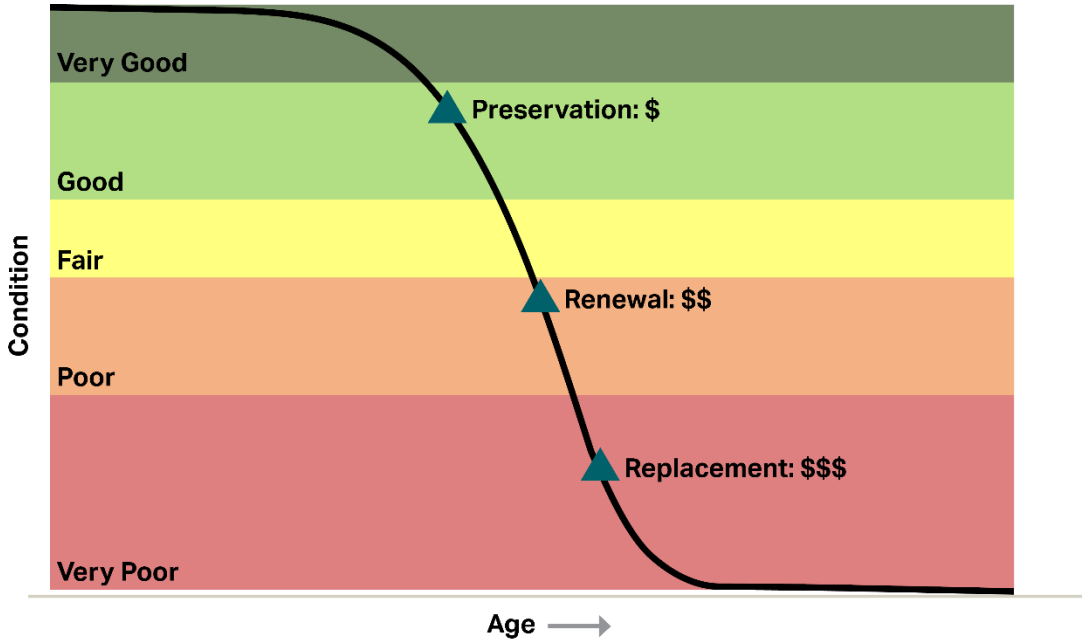

Figure 4-2: Asset Deterioration Curve and Renewal Costs

Beyond the general guidance, the City's approach to risk management should be tailored to their overarching goals, financial resources, and willingness to tolerate uncertainties. To help shape the City's risk management process, AECOM recommends taking into account the following key considerations:

1. **Cybersecurity Risks -** The interconnected nature of digital systems exposes the City to potential cyber threats, ranging from data breaches to ransomware attacks. A crucial aspect of mitigating these risks is maintaining up-to-date IT equipment. This involves not only patching and updating software but also upgrading hardware that may no longer receive security updates. Additionally, the City should consider implementing robust cybersecurity protocols, providing employee training on best practices in cybersecurity, and establishing intrusion detection systems to monitor and promptly respond to threats.
2. **Regulatory Compliance -** Stay up to date with all relevant regulations and standards to ensure compliance. Non-compliance can result in fines and other penalties. This could be Health and Safety regulations, Environmental regulations, Accessibility regulations, etc.
3. **Increased maintenance cost -** By implementing consistent and proactive maintenance schedules for infrastructure and facilities, municipalities can identify and address potential issues before they escalate. This preventive approach reduces the likelihood of major breakdowns or emergency repairs, ultimately minimizing the overall O&M expenses. Additionally, regular maintenance extends the lifespan of assets, enhances their efficiency, and ensures that they comply with safety standards, contributing to a more sustainable and cost-effective management of municipal resources.
4. **Sustainability Practices -** Implement sustainability practices, such as energy-efficient systems and waste reduction strategies, to reduce operational costs and environmental impact.
5. **Technology Integration -** Integrating technology into facility management enables municipalities to better identify and manage risks across the asset lifecycle. This includes improving infrastructure monitoring, enhancing workplace safety, supporting timely maintenance, and automating key risk management processes. These improvements contribute to more efficient operations and strengthen overall community resilience.

5 Funding Need Analysis

5.1 Capital and Operating Budget

5.1.1 Capital Budget - Historical Expenditure and Future Forecast

Historical capital expenditures for buildings and facilities have typically included maintenance and upgrades to community centres, fire stations, cemeteries, and other municipal buildings. These expenditures also cover miscellaneous capital improvements, emergency repairs, and capital planning studies to ensure regulatory compliance and to keep facilities in good working condition. Fire, Police, and Library assets are separated within the financial analysis based on the discussion during the financial workshop, as these departments budget their assets independently from other municipal facilities such as community centres, transit, and public works. **Table 5-1** presents the capital reinvestment budget forecast for these assets.

Table 5-1: Capital Reinvestment Budget Forecast for Facility & IT Assets

Asset Class	Asset Category	2025-2034 10-Year Average Reinvestment Budget Based on Historical Expenditure
Facility	All Facilities (Cemetery, Community Center, IT, Marina, Public Works, Transit)	$6,000,000
	Fire, Police, and Library	$495,000
	Total	**$6,495,000**

5.1.2 Operating Budget - Historical Expenditure and Future Forecast

The City's historical operating expenditures for buildings and facilities have focused on routine maintenance, custodial services, utilities, and the day-to-day operation of municipal buildings. These expenditures also support regulatory compliance, safety inspections, and the upkeep of building systems such as HVAC, electrical, and fire protection. In addition, they contribute to ongoing facility optimization and efficient service delivery to the community.

Table 5-2: Facility & IT Operating Budget Forecast for Facilities

Asset Class	Asset Category	2025-2034 10-Year Average O&M Budget Based on Historical Expenditure
Facility	All Facilities (Cemetery, Community Center, IT, Marina, Public Works, Transit)	$10,300,000
	Fire, Police, and Library	$1,260,000
	Total	**$11,560,000**

5.2 Capital Reinvestment Funding Needs Analysis

This section outlines the capital funding scenarios analyse approach, assumptions, and presents service level trends regarding asset condition under various budget scenarios.

5.2.1 Lifecycle Model Approach and Assumptions

The lifecycle analysis was implemented within an PowerBI Model. The analysis involves integrating key asset attribute information including asset inventory, age, expected service lives, replacement values, and condition to create a theoretical asset replacement cycle for each asset. The other relevant capital upgrade needs information was also considered in the lifecycle model. The 2020 condition assessment results of the facilities are incorporated in the analysis. A financial dashboard was developed to present the lifecycle modeling results.

The annual reinvestment needs for the facilities were determined based on their age and ESL in years (i.e., replacing assets that have exceeded their ESL, in inflated dollar values, incorporating the following assumptions on inflations:

- The base year used is 2025. Any historic asset replacement values have been inflated using the experienced inflation rate from Non-Residential Building Construction Price Index (NRBCPI).
- Inflation rate: the inflation rates adopted for the financial model are presented in **Table 5-3**. The inflation for 2025 and later is determined based on the City's input.

Table 5-3: Inflation Rate[6]

Year	Inflation Rate
2022	7%
2023	7.1%
2024	6%
2025	2%
2026	2%
2027	2%
2028	2%
2029	2%
2030 - 2034	2%

Table 5-4 presents the proposed reinvestment targets for facility infrastructure from 2025 to 2034. It outlines the intervention measures and target percentages for each asset type, along with the resulting average annual reinvestment rates over the 10-year period.

[6] Past inflation data obtained from NRBCPI using the non-residential; yearly result taken from an average of quarterly results. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810027601

Table 5-4: Facility Reinvestment Assumptions

Asset Group	Asset	Measure	Target	Resulting 10-Yr. Annual Avg. Reinvestment Rate (2025-2034)
Facility	Cemetery	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	Community Center	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	Fire	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	IT	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
	Marina	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	3.8%
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	Police	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	Public Works	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	
	Transit	Percentage of assets exceeding their expected service life, that are replaced in 2025 and thereafter	100%	
		Structural and Building Envelope are assigned with repair cost annually	1% of replacement value	

In the future, when condition assessment programs are implemented, updated conditions will be used to update the renewal and replacement forecast to better inform asset reinvestment needs.

5.2.2 Facility Assets Budget Scenarios & 10-Year Service Level Forecast

This section presents the budget scenario analysis and the 10-year service level forecast for facility assets.

5.2.2.1 Budget Scenarios Setting for Facilities (Cemetery, Community Center, IT, Marina, Public Works, Transit) – Capital

Table 5-5 budget scenarios setting for facility assets. Scenario 1 (S1) is a "Do Nothing" approach with zero expenditure; S2 assumes an ideal, unconstrained budget enabling asset replacement at end-of-life; and S3 reflects the City's defined budget at $6.0 Million annually as per **Table 5-1.**

Table 5-5: Facility Assets Budget Scenarios (Cemetery, Community Center, IT, Marina, Public Works, Transit)

Scenario		Description	Budgets
S1	Do Nothing	Spend Nothing	$0 Million
S2	Unconstrained Budget	Replace assets at end of life	Unlimited
S3	City's Planned Budget	City's Current Planned Budget	$6.0 Million annual budget

5.2.2.2 Facilities Assets Funding Need (Cemetery, Community Center, IT, Marina, Public Works, Transit) – Capital

Figure 5-1 shows the forecasted annual reinvestment needs for facilities from 2025 to 2034, broken down by asset category for scenario S2 (Unconstrained Budget). The 2025 forecast includes a one-time spike of $69.9 million, reflecting deferred needs carried forward from previous years. From 2026 onward, reinvestment levels are more stable, ranging between $1.6 Million and $36.5 Million, with expected peaks in 2028, 2029, and 2032 due to planned renewals. Community Centers represent the largest share of reinvestment in most years, followed by Public Works and Transit. On average, the City will require $19.9 Million per year (versus the City's current budget of $6 Million per year), totaling $199 Million over the 10-year period. This forecast supports a long-term, sustainable reinvestment strategy that balances backlog reduction with ongoing infrastructure renewal.

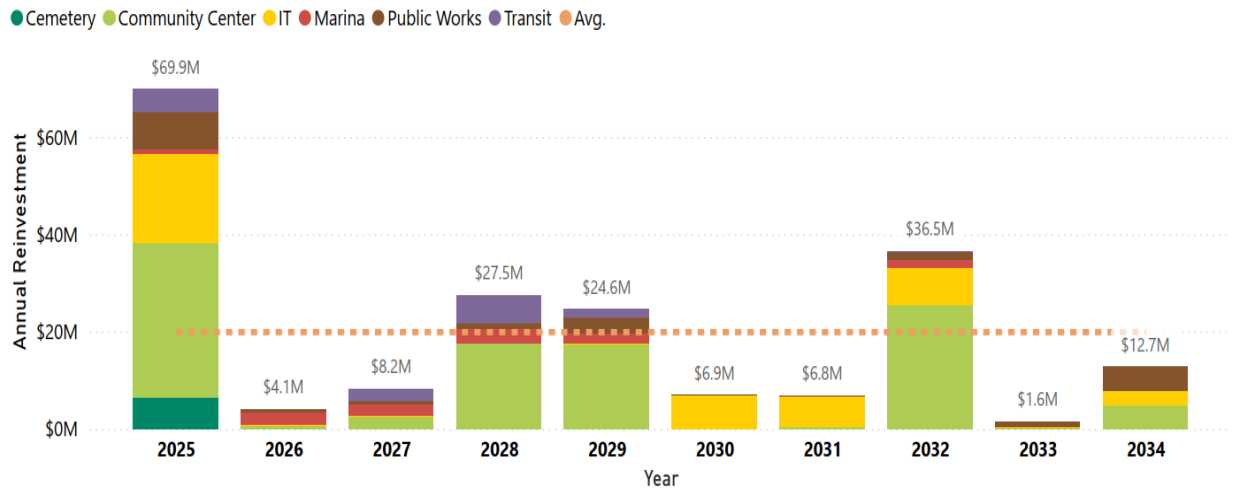

Figure 5-1: 10-Year Funding Need for Facility Assets (Cemetery, Community Center, IT, Marina, Public Works, Transit) – Unlimited Budget Scenario

The detailed 10-year reinvestment needs for facilities excluding fire, library and police are presented in **Table 5-6** in inflated dollar values.

Table 5-6: Facilities Assets 10-Year Total and Annual Average Capital Reinvestment Need – Scenario S2 (Unconstrained Budget)

Asset Type	Annual Average Need	10-Year Total
Cemetery	$650,000	$6,500,000
Community Center	$10,100,000	$101,000,000
IT	$4,300,000	$43,000,000
Marina	$1,300,000	$13,000,000
Public Works	$2,100,000	$21,000,000
Transit	$1,500,000	$15,000,000
Total	**$19,900,000**	**$199,000,000**

5.2.2.3 Facilities 10-Year Service Level Trend Forecast (Cemetery, Community Center, IT, Marina, Public Works, Transit)

Figure 5-2 presents the projected percentage of facility assets in fair or better condition from 2025 to 2034 under three reinvestment scenarios, starting from the current LoS of 78%. Scenario 2 (Unlimited Funding) shows an improvement to approximately 89% by 2026, with conditions stabilizing around 85% by 2034, demonstrating the effectiveness of sufficient funding in maintaining and improving service levels. Scenario 3 (Current Budget of $6 Million / year) offers a middle-ground outcome, with conditions declining gradually to 63% by 2034.

These projections highlight an opportunity for the City to enhance long-term facility asset performance by building on its current investment levels. The City's existing budget is inadequate to sustain the current condition level, therefore additional funding or strategic enhancements could help reduce deferred maintenance and ensure continued service reliability well into the future.

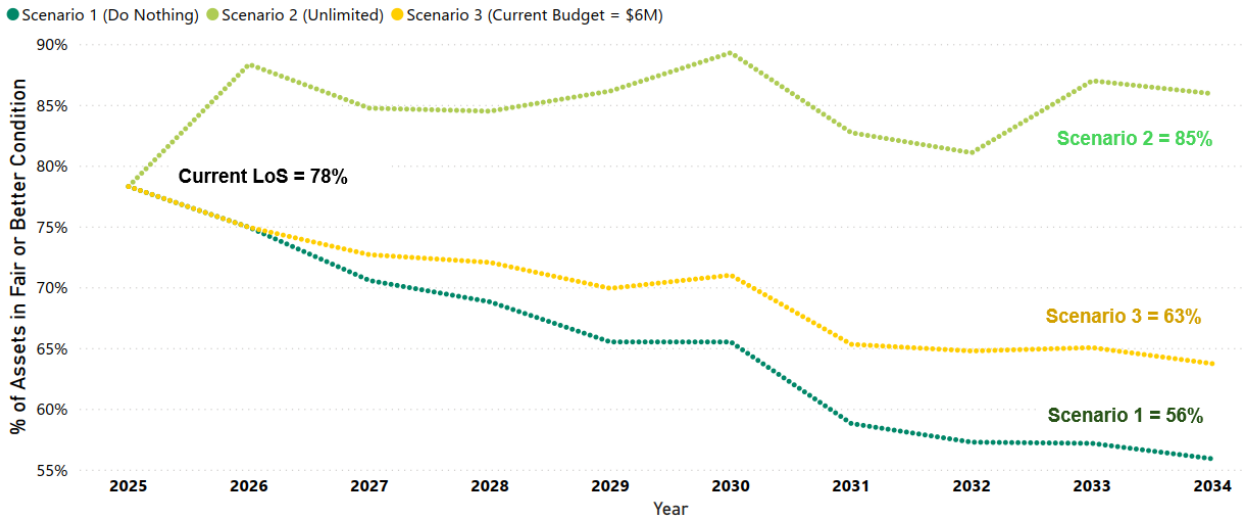

Figure 5-2: Facilities 10-Year Service Level Trend Forecast (Cemetery, Community Center, IT, Marina, Public Works, Transit) for All Budget Scenarios

Figure 5-3 illustrates the projected condition distribution of facilities (Cemetery, Community Center, IT, Marina, Public Works, Transit) from 2025 to 2034, assuming the City maintains its current annual investment of $6 Million. Currently, 78% of assets are in fair or better condition, with only a small proportion rated as poor or very poor.

Maintaining the current funding level offers only a minimal baseline and falls short of addressing long-term asset needs. Projections show that without increased investment, asset conditions will decline considerably over time. By 2030, a notable drop in overall condition is expected, with the proportion of assets in fair or better condition falling below sustainable levels. Continuing with status quo funding will lead to a growing number of assets entering poor or very poor condition, increasing risks to service delivery and long-term costs. Targeted reinvestment is therefore not just beneficial—it is necessary to prevent further deterioration. By 2034, enhancing funding could help increase the

proportion of assets in fair or better condition beyond the projected 63%, and limit the growth of those in poor or very poor condition.

Targeted investment and life-extension strategies can help offset the effects of an aging facilities and ensure more assets remain in good condition over time.

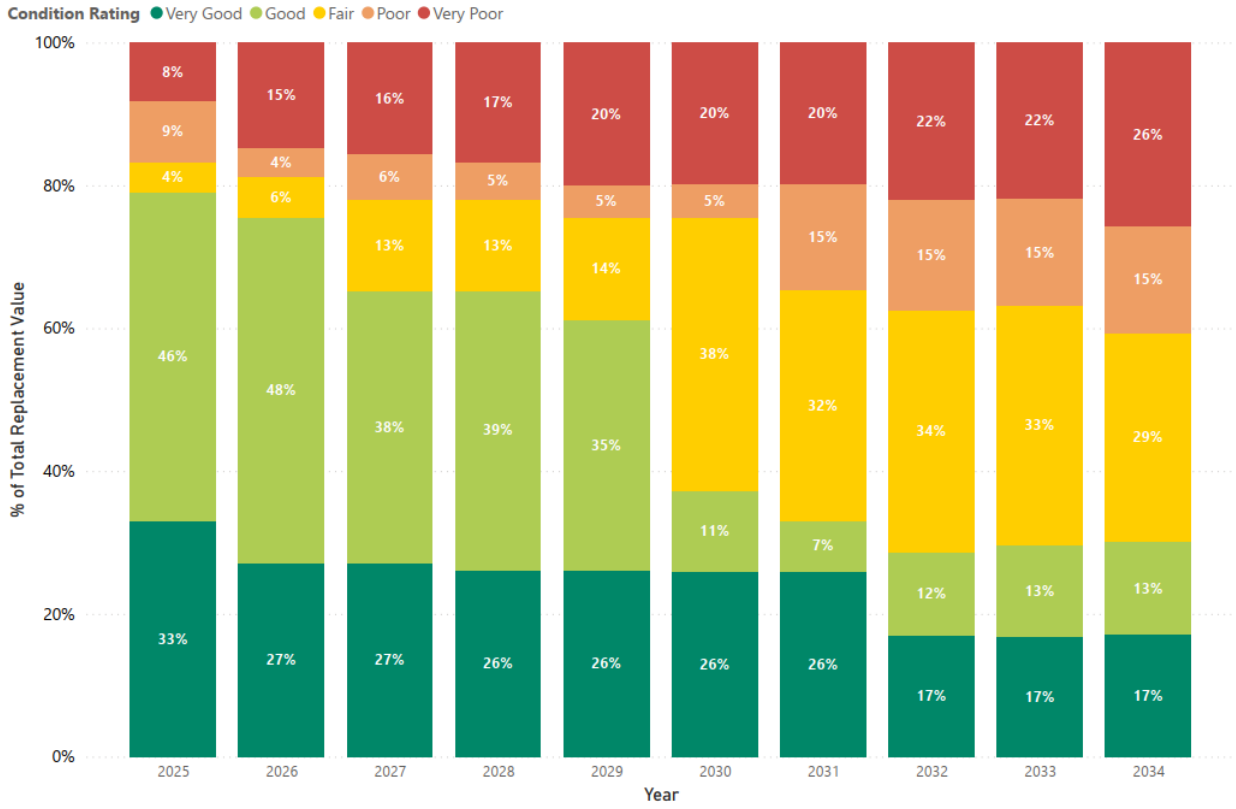

Figure 5-3: Facility Assets Condition Projection under Scenario 3 - City's Planned Budget (Cemetery, Community Center, IT, Marina, Public Works, Transit)

5.2.2.4 Budget Scenarios Setting for Facilities Assets (Fire, Police and Library) - Capital

Table 5-7 budget scenarios setting for facility assets. Scenario 1 (S1) is a "Do Nothing" approach with zero expenditure; S2 assumes an ideal, unconstrained budget enabling asset replacement at end-of-life; and S3 reflects the City's defined budget at $0.50 Million annually.

Table 5-7: Facility Assets Budget Scenarios (Fire, Police and Library)

Scenario		Description	Budgets
S1	Do Nothing	Spend Nothing	$0 Million
S2	Unconstrained Budget	Replace assets at end of life	Unlimited
S3	City's Planned Budget	City's Current Planned Budget	$0.5 Million annual budget

5.2.2.5 Facilities Assets Funding Need (Fire, Police and Library) – Capital

Figure 5-4 illustrates the annual reinvestment forecast for library (Community Center), fire, and police facilities from 2025 to 2034 for Scenario S2 (Unconstrained Budget). The total reinvestment needs fluctuate year to year, with peak requirements observed in 2028 ($4.7 Million) and 2025 ($4.0 Million), followed by 2029 ($3.5 Million) and 2026 ($3.3

Million). These peak years indicate periods of major renewal or upgrade needs, particularly for fire and police assets. In contrast, reinvestment drops significantly from 2030 onward, with minimal funding needs in 2030 ($0.12 Million), 2033 ($0.04 Million), and 2034 ($0.44 Million). The average annual reinvestment need is $1.9 Million (versus the City's current budget of $0.5 Million per year), as indicated by the red dotted line. Notably, the library (formerly labeled Community Center) sees intermittent investment across the years, while fire and police assets contribute significantly to the peak years.

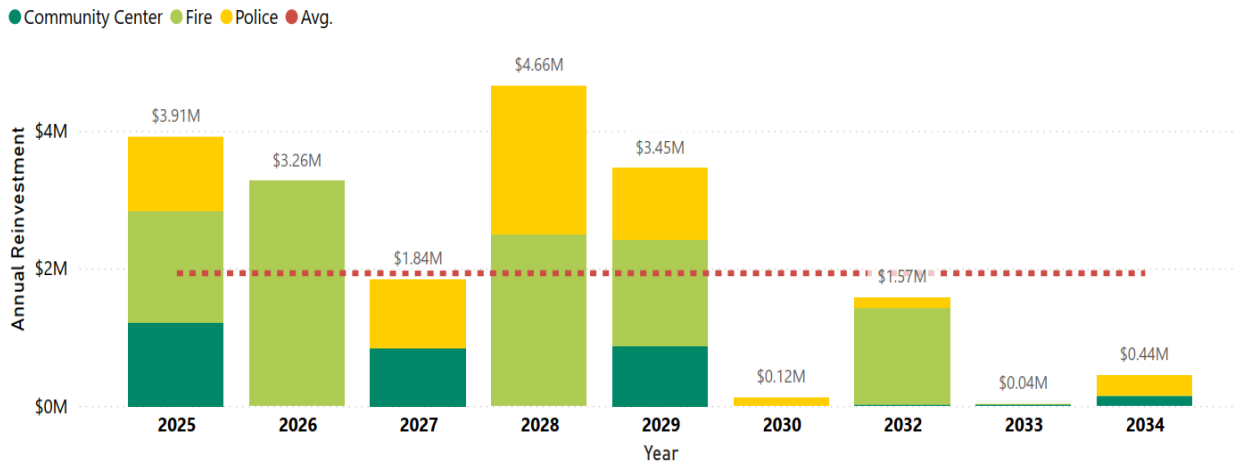

Figure 5-4: 10-Year Funding Need for Facility Assets (Fire, Police and Library) – Unlimited Budget Scenario

The detailed 10-year reinvestment needs for facilities excluding fire, library and police are presented in **Table 5-8** in inflated dollar values.

Table 5-8: Facilities Assets 10-Year Total and Annual Average Capital Reinvestment Need (Fire, Police and Library)

Asset Type	Annual Average Need	10-Year Total
Community Center (Library)	$311,000	$3,110,000
Fire	$1,000,000	$10,000,000
Police	$578,000	$5,780,000
Total	**$1,900,000**	**$19,000,000**

5.2.2.6 Facilities 10-Year Service Level Trend Forecast (Fire, Police and Library)

Figure 5-5 presents the projected percentage of facility assets in fair or better condition from 2025 to 2034 under three reinvestment scenarios, starting from the current LoS of 75%. Scenario 2 (Unlimited Funding) shows a notable improvement, with asset conditions rising to nearly 90% by 2030 and stabilizing at 85% by 2034, demonstrating that adequate reinvestment can enhance and sustain service levels. Scenario 3 (Current Budget of $0.5 Million / year) results in a severe decline, with conditions falling to 55% by 2034—a slightly better outcome than doing nothing, but still significantly below the current service level.

These projections indicate that the City’s current funding level is insufficient to maintain existing facility conditions over the long term. The deterioration under Scenario 3 reflects growing deferred maintenance and increased future risk. To sustain or improve long-term system performance, additional investment or complementary strategies will be required.

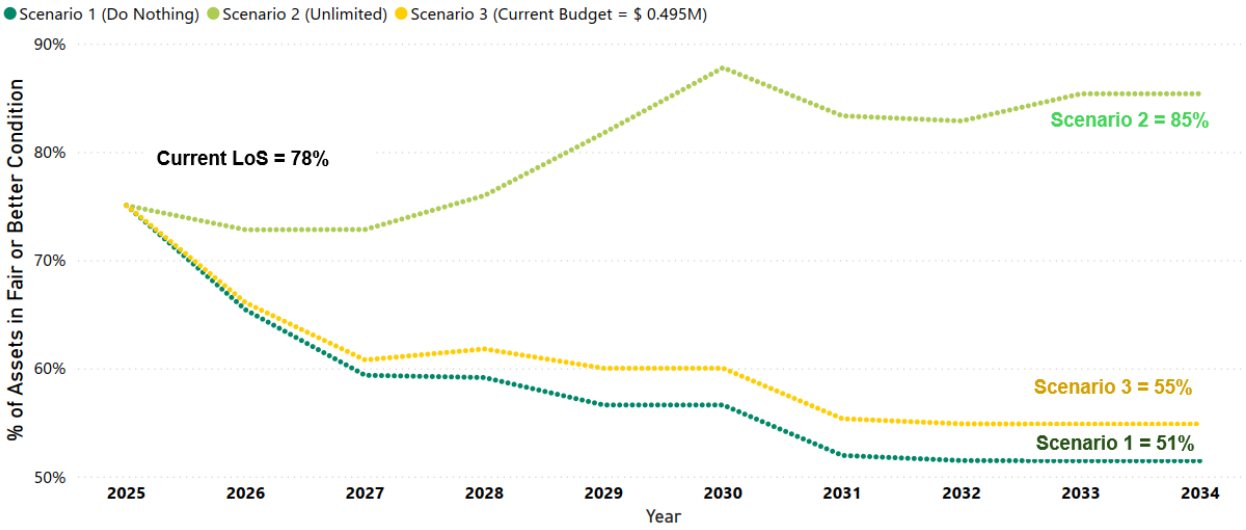

Figure 5-5: Facilities 10-Year Service Level Trend Forecast (Fire, Police and Library) for All Budget Scenarios

Figure 5-6 illustrates the projected condition distribution of fire, police and library assets from 2025 to 2034, assuming the City maintains its current annual investment of $0.5 Million. Currently, 75% of assets are in fair or better condition, with only a small proportion rated as poor or very poor. However, under continued funding at this level, the condition of the asset base is expected to decline steadily. By 2034, only 51% of assets are projected to remain in fair or better condition, while the share of assets in poor or very poor condition increases from 25% to 46%.

The gradual decline reflects the aging facilities and the impact of deferred reinvestment. Without additional investment or the implementation of life-extension strategies, a growing portion of the facilities will fall into poor to very poor condition categories.

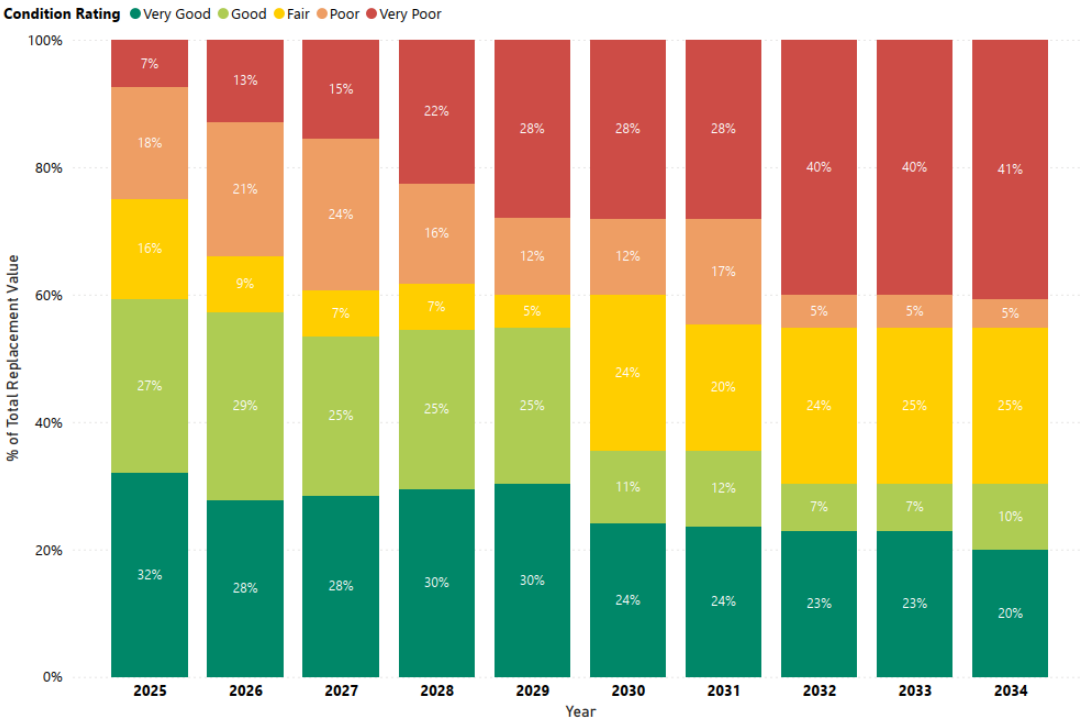

Figure 5-6: Facility Assets Condition Projection under Scenario 3 - City's Planned Budget (Fire, Police and Library)

5.3 Full Funding Profile

Figure 5-7 shows a full picture of the City's facility funding need forecast over the next 10 years, which provides the City the full funding requirements in order to perform effective financial planning activities, for all facilities excluding fire, police, and library. The total annual reinvestment cost from **Figure 5-1** has been overlaid with the City's annual average O&M cost. In addition, 1% of the annual reinvestment is used as an allocation for asset disposal costs.

The City's facility full funding requirement increases to approximately $300 Million over the next 10 years with additional funding requirement, and O&M, disposal for all these assets, equivalent to $30 Million per year in inflated dollar value.

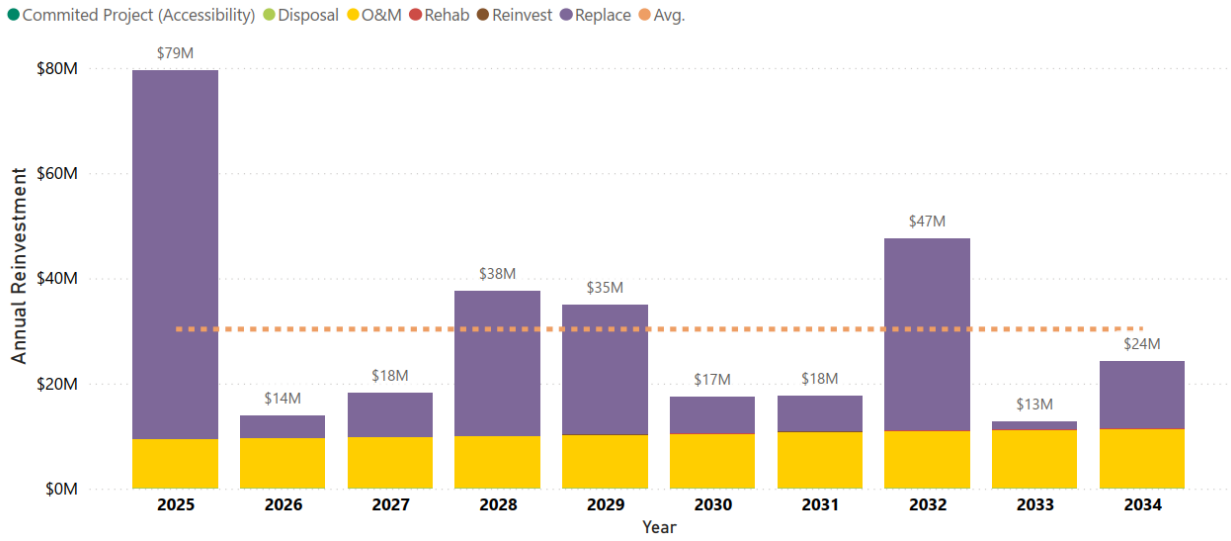

Figure 5-7: Full Funding Profile (City's Planned Capital Reinvestment Budget Scenario Included) – Facilities Excluding Fire, Library, and Police

Figure 5-8 shows a full picture of the City's facility funding need forecast over the next 10 years, which provides the City the full funding requirements in order to perform effective financial planning activities, for fire, police, and library. The total annual reinvestment cost from **Figure 5-3** has been overlaid with the City's annual average O&M cost. In addition, 1% of the annual reinvestment is used as an allocation for asset disposal costs.

The City's facility full funding requirement increases to approximately $37 Million over the next 10 years with additional funding requirement, and O&M, disposal for all these assets, equivalent to $3.7 Million per year in inflated dollar value.

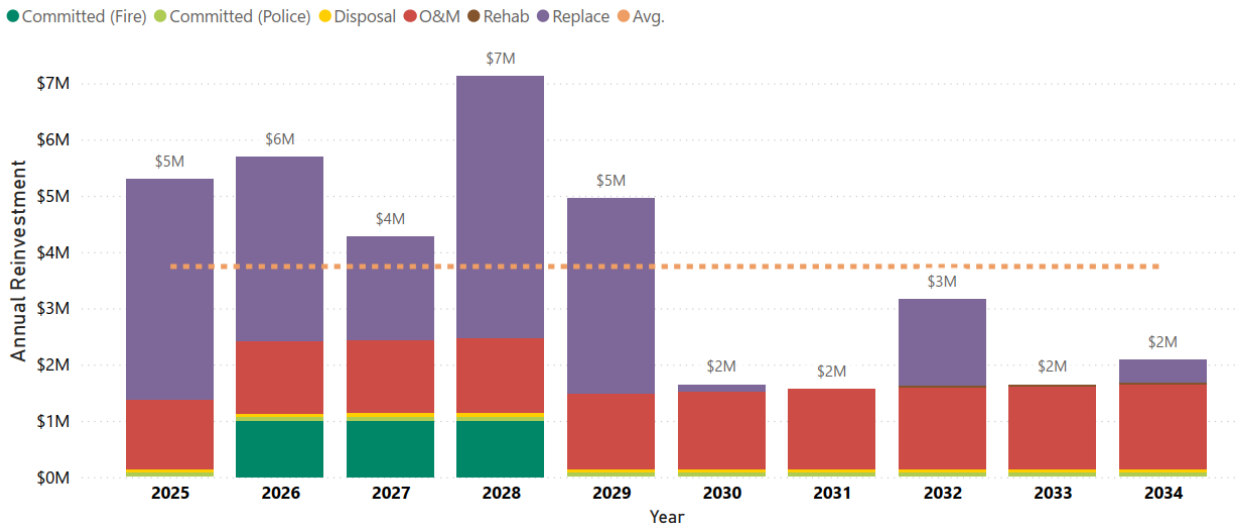

Figure 5-8: Full Funding Profile (City's Planned Capital Reinvestment Budget Scenario Included) – Facilities Fire, Library, and Police

5.4 Funding Gaps & Risk

The City intends to continue to invest in the growth and renewal of the facility assets over the next 10 years. **Table 5-9** compares the City planned capital reinvestment budget against the capital reinvestment funding needs. The shortfall between the City planned capital reinvestment budget against the capital reinvestment funding needs is referred to as the "funding gap".

Table 5-9: Funding Gap – Capital Reinvestment Funding Needs vs. Budget Forecast

Asset Class	10-Year Need Total ($Million)	10-Year City Budget Total ($Million)	10-Year Gap Total ($Million)
Facilities (Cemetery, Community Center, IT, Marina, Public Works, Transit)	$199	$60	$139
Fire, Library, and Police	$19	$5	$14

As described in **Section 3.5**, risks are identified for each service level performance measure. **Table 5-10** provides a high-level overview of the key risks associated with funding gaps, as well as the potential consequences and impacts of not meeting the proposed service levels.

Table 5-10: Risk of Delayed Intervention for Facility System

Key Risk	Asset	Potential Consequences/Impacts
Insufficient funding to keep up with population and demand increases	Library	- Increased risk of facility closure due to aging infrastructure (e.g., failing HVAC, asbestos) - Limited revenue sources due to absence of DCCs - Heritage designation restricts replacement options, requiring expensive renewal - Service disruptions impacting access to cultural and educational resources - Dependency on external grants (e.g., Northern Ontario Heritage Fund, Cultural Spaces Fund) makes long-term planning difficult
Insufficient funding for facilities asset lifecycle renewals	All Facilities	- Escalated maintenance costs (e.g., $200K/year for Police HQ) - Deferred replacements (e.g., fire station parking lot, membrane roof) - Structural issues and HVAC failures threaten building usability and safety - Heightened risk of emergency repairs and unscheduled closures - Facility-sharing (e.g., Garden River Rd.) limits options to underfund
Higher vulnerability to external economic and political factors	All Facilities	- Procurement of materials, books, and equipment from the U.S. may be impacted by tariffs, currency exchange, and political instability - Volatile costs undermine budgeting accuracy and planning - Increased delivery times and pricing pressure on capital projects and operations
Insufficient funding for operations and proactive maintenance	All Facilities	- Accelerated deterioration of aging buildings - Increased emergency maintenance diverts funds from scheduled renewals - Limited staff capacity to manage facility upkeep and compliance - Increased pressure on facility managers to deliver services with minimal resources

5.5 Funding Sources & Alternative Strategies

The City primarily secures funding for facilities and IT assets through the property tax levy, supplemented by an annual contribution to IT asset reserves and financial support from higher levels of government. Drawing insights from other municipalities, the City is keen to explore the possibility of implementing an increase in the levy designated explicitly for capital assets. Simultaneously, the City recognizes the importance of striking the right balance between maximizing the potential of the property tax levy and ensuring affordability for residents and business owners. In light of the City's financial concerns, AECOM encourages the City to actively seek alternative funding sources to address potential challenges. This section introduces the following funding options, acknowledging that the City's eligibility for these funds is contingent upon specific criteria:

- Canada Community-Building Fund (CCBF).
- Canada Cultural Spaces Fund (CCSF).
- Municipal Asset Management Program (MAMP).
- Green Municipal Fund (GMF).
- Canada Growth Fund (CGF).
- Enabling Accessibility Fund (EAF).
- Northern Ontario Heritage Fund Corporation (NOHFC).
- Care and Maintenance Trust Fund

5.5.1 Canada Community-Building Fund (CCBF)

The CCBF, previously known as the Federal Gas Tax Fund, is a permanent source of upfront funding distributed twice a year to territories and provinces. The delivery of the CCBF to municipalities varies by province or territory, with allocation following a per-capita basis for provinces, territories, and First Nations[7].

The CCBF is administered in Ontario through a bilateral agreement with the Government of Ontario, the Association of Municipalities of Ontario (AMO), and municipalities. This program allocates approximately $816 Million annually to 641 communities in Ontario, with an additional top-up of $816.5 Million provided in 2020 to expedite communities' recovery from the COVID-19 pandemic. Notably, as of 2022, the City has received over $9 Million through the CCBF, granting the City flexibility to strategically invest across 19 distinct project categories[8].

5.5.2 Canada Cultural Spaces Fund (CCSF)

The CCSF is a program administered by the Department of Canadian Heritage in Canada[9]. The fund is designed to support the improvement, renovation, and construction of cultural spaces and facilities. Its primary goal is to enhance access to, and the quality of, cultural spaces for artists and their communities. It is also worth noting that this fund is in high demand, and available program funding is very limited for the current and next fiscal years.

5.5.3 Municipal Asset Management Program (MAMP)

The MAMP is aimed at improving AM practices within municipalities[10]. Designed to assist municipalities in gaining a better understanding, planning, and efficient and sustainable management of their infrastructure assets, the program may offer funding to support the development or improvement of AM plans. This financial support is intended to incentivize municipalities to adopt and implement sustainable AM practices.

5.5.4 Green Municipal Fund (GMF)

The GMF is a financial initiative in Canada dedicated to supporting sustainability and environmental projects at the municipal level. Managed by the Federation of Canadian Municipalities (FCM), the GMF provides funding and resources to assist municipalities across the country in undertaking projects that contribute to environmental sustainability, energy efficiency, and the reduction of greenhouse gas (GHG) emissions[11]. Within the realm of facilities, municipalities can explore various opportunities provided by this fund. These opportunities may include funding for projects related to energy efficiency upgrades, renewable energy installations, green building initiatives, waste management programs, and other environmentally sustainable practices within municipal facilities. Some of the available funding opportunities are as follows:

- Capital project: Retrofit of existing municipal buildings.
- Capital project: Construction of new sustainable municipal and community buildings.
- Study: New construction of municipal and community buildings.
- Study: Retrofit pathway for municipal buildings.

[7] The Canada Community-Building Fund. (2022). Infrastructure Canada. Infrastructure Canada - The Canada Community-Building Fund. Retrieved on February 14th, 2024.

[8] Ontario's 2021–22 federal Canada Community-Building Fund allocations and top-up amounts. (2021). Infrastructure Canada. Backgrounder: Ontario's 2021–22 federal Canada Community-Building Fund allocations and top-up amounts - Canada.ca. Retrieved on February 14th, 2024.

[9] Canada Cultural Spaces Fund. (2024). Canadian Heritage. Canada Cultural Spaces Fund - Canada.ca. Retrieved on February 14th, 2024.

[10] Municipal Asset Management Program. (n.d.). Federation of Canadian Municipalities. Municipal Asset Management Program | FCM. Retrieved on February 14th, 2024.

[11] Funding opportunities. (n.d.). Green Municipal Fund. Funding opportunities | Green Municipal Fund. Retrieved on February 14th, 2024.

5.5.5 Canada Growth Fund (CGF)

The CGF is an independent and arm's length public fund with a $15 billion investment aimed at accelerating the adoption of technologies to reduce emissions and drive the transformation of Canada's economy[12]. The fund's primary objective is to catalyze substantial private sector investment in Canadian businesses and projects, fostering economic growth on the path to net-zero emissions. The fund focuses its investment activities in three primary sectors: projects utilizing less mature technologies and processes proven in pilots but not yet widely adopted; clean technology companies scaling less mature technologies in demonstration or commercialization stages; and projects and companies involved in low-carbon or climate technology value chains.

5.5.6 Enabling Accessibility Fund (EAF)

The EAF is a federal government program aimed at supporting projects that enhance accessibility for individuals with disabilities[13]. The fund provides financial assistance to eligible organizations for initiatives such as infrastructure improvements, renovations, and retrofitting to create more accessible spaces. Its goal is to contribute to a barrier-free and inclusive society by addressing physical barriers and promoting equal access in community spaces.

5.5.7 Northern Ontario Heritage Fund Corporation (NOHFC)

The NOHFC is an organization that provides financial support and promotes economic development in the northern regions of Ontario. Established to stimulate growth and sustainability, NOHFC offers funding for various projects, such as business expansion, job creation, infrastructure development, and community initiatives. Within the NOHFC, the Community Enhancement Program is an initiative aimed at supporting community-driven projects[14]. This program provides financial assistance for local initiatives that enhance community infrastructure, amenities, and services. Eligible projects may include the development or improvement of recreational facilities, community spaces, and essential services.

5.5.8 Care and Maintenance Trust Fund

A Care and Maintenance Trust Fund is a protected reserve where the principal is kept intact and only the investment income is used to support ongoing maintenance of specific municipal assets, such as cemeteries or historic facilities. In the City of Sault Ste. Marie, this fund ensures long-term care by using interest earnings—rather than tax dollars—to cover routine upkeep like landscaping, structural repairs, and preservation activities. This approach provides sustainable funding for essential asset maintenance while protecting the original capital for future generations.

[12] Canada Growth Fund. (n.d.). Department of Finance Canada. gf-fc-en.pdf (canada.ca). Retrieved on February 14th, 2024.

[13] About Enabling Accessibility Fund. (2023). Government of Canada. Enabling Accessibility Fund - Canada.ca. Retrieved on February 14th, 2024.

[14] Community Enhancement Program. (2024). Northern Ontario Heritage Fund Corporation. Community Enhancement Program | NOHFC. Retrieved on February 14th, 2024.

Recognizing the constrains of internal funding and limitations and uncertainties associated with external funding, it becomes increasingly important to explore complementary approaches that do not depend solely on financial sources. In this context, alternative or non-financial strategies play a critical role in enhancing the City's ability to manage service levels and asset performance within existing fiscal constraints. **Table 5-11** highlights the City's non-financial strategies to address the identified facility funding gap. These strategies are designed to support long-term financial sustainability through alternative delivery methods, changes in practices or policies, and system optimization, without relying solely on increased funding.

Table 5-11: Non-Financial Strategies to Address Funding Gaps for Facility Service

Category	Strategy	Description / Actions
Planning & Prioritization	Condition Assessment and Risk Framework Development	Continue enhancing facility and IT asset condition data while establishing a formalized, risk-based decision-making framework. This will improve transparency, support evidence-based planning, and optimize reinvestment timing for aging buildings and systems.
	Master Planning and Resilience Mapping	Incorporate results from facility master plans and risk mapping (e.g., HVAC, structural vulnerabilities, IT system redundancies) into capital prioritization to manage long-term operational risks and resilience needs.
	Strategic Alignment with Other Infrastructure Projects	Where applicable, align facility upgrades (e.g., underground utilities, parking lot resurfacing) with broader road or utility projects to reduce rework, cost, and disruption.
	Explore Trenchless or Modular Approaches	Consider modular upgrades, targeted retrofits, or trenchless technologies (e.g., conduit lining for IT cabling or HVAC ductwork) to extend service life without full replacement.
Operational & Engineering Solutions	Optimize Equipment Lifecycle and Reuse	Where feasible, repurpose or internally sell decommissioned equipment and furniture to other departments to reduce procurement costs and avoid waste (e.g., office equipment, IT hardware, small machinery).
	Energy and Maintenance Optimization	Improve operational efficiency by upgrading to energy-efficient systems (e.g., LED lighting, smart HVAC) and enforcing preventive maintenance schedules to minimize downtime and reactive repairs.
	Enhance Internal Coordination	Use corridor-based or department-focused capital planning to identify opportunities for bundled upgrades, maintenance, and shared-use infrastructure (e.g., IT server rooms, janitorial storage).
Regulatory & Policy	Monitoring, Compliance, and Documentation	Improve effluent monitoring to quickly detect issues, assess root causes, and prevent future violations.
	Service Level Review and Rationalization	Review current service level expectations for specialized facility functions—such as community gathering areas or backup IT infrastructure—to determine whether they align with actual usage and community needs. Where spaces are underutilized and operational risk is minimal, consider consolidating functions or scaling back services, especially if suitable alternatives (e.g., shared spaces, cloud-based backups) are available.
Redundancy & Optimization	IT and Mechanical Redundancy	Install or maintain redundancies for critical systems (e.g., data backup servers, emergency generators, HVAC for emergency shelters) to maintain service continuity during failures or emergencies.
	Bulk Purchasing and Shared Services	Leverage economies of scale by coordinating bulk procurement of common supplies (e.g., lightbulbs, janitorial products, IT peripherals) and services (e.g., snow removal, parking lot painting) across departments.

6 Implementation Plan and Continuous Improvement

Continuous improvement is an important component of any AM program and is achieved through the implementation of recommended improvement initiatives which support sustainable service delivery. AECOM has identified a set of activities that represents the next stage of AM planning and implementation within the City, as shown in **Table 6-1**.

Table 6-1: Recommended AM Improvement Initiatives

Index	Improvement Initiative	Description

1.	Refine the asset hierarchy and inventory.	• Continue to refine the asset inventory and close existing data gaps, so as to have a more accurate representation of the current state of the facility and IT assets; and, ultimately, to make more informed and defensible decisions.
		  ○ AECOM recommends the City to create a comprehensive inventory with replacement value for all facilities based on the Uniformat structure and keep updating the inventory as assets are acquired or disposed. The MH report is an appropriate reference to be used for developing the facility inventories.
		  ○ AECOM also recommends creating a clear and comprehensive IT inventory.
		• Refine the install date information of the facilities and IT assets.
		• Define unique asset IDs for IT assets. These IDs should differ from accounting numbers, as the accounting number is not unique for each asset.
		• Asset IDs for buildings to be used in the next update of the AMP

2.	Develop a formalized facility assets condition assessment process and use consistent condition grading schemes for these assets.	• The grading system should include a description directly tied to each condition grade, along with details about the asset's performance and the necessary level of corrective and preventive maintenance required for assets falling within a certain condition rating category. This process will enable the City to keep track of and better forecast asset renewal needs.
		• Record the condition of IT assets, even though they may not follow a typical physical deterioration pattern.
		• Continue performing condition assessments on the most critical assets first. This ensures that assets are assessed using the same methodology and prioritized based on their criticality. It facilitates a more defensible business case when addressing issues of asset degradation with senior management and the Council.
		  ○ Morisson Hershfield Limited (MH) implemented a thorough condition assessment for facilities in the City. While the MH report provides valuable insights, it is important to note that not every single facility within the City is covered by the report. This raises the necessity for a more comprehensive and up-to-date condition assessment program. Such a program should extend its coverage beyond the facilities included in the MH report, ensuring a thorough evaluation of all relevant structures and assets within the City. This expanded approach will enable a more holistic understanding of the overall condition of various facilities, facilitating better-informed decision-making and prioritization of maintenance or improvement initiatives
		• Continue performing condition assessments on the most critical assets first, using a consistent methodology to prioritize based on asset criticality. This approach supports a defensible business case when presenting asset degradation issues to senior management and Council.
		• To improve consistency, comparability, and strategic decision-making, AECOM recommends that the City standardizes its facility asset inventory and associated condition assessments using the UNIFORMAT II classification hierarchy. This system organizes building elements (e.g., substructure, shell, interiors, services) in a logical, hierarchical structure that supports lifecycle planning and benchmarking across facilities.
		  ○ Benefits:
		  ▪ Consistency and comparability across departments and asset types.
		  ▪ Improved data quality for condition assessments, enabling better capital planning and budgeting.
		  ▪ Streamlined integration with asset management systems and cost estimating tools.
		  ▪ Enhanced communication with consultants and stakeholders using a widely recognized standard.

Index	Improvement Initiative	Description
3.	Refine the LoS Framework.	• The AMP represents the City's Levels of Service in alignment with the requirements of O. Reg. 588/17 July 1, 2025, deadline. The City will continue its efforts to: ○ Regularly record LoS performance measures to monitor changes over time and identify emerging trends. • Review and update performance measures as needed to ensure they remain relevant and effective. • Periodically assess proposed LoS to confirm alignment with shifting community expectations, regulatory changes, City priorities, available resources, and observed performance trends—supporting adaptive and responsive service delivery. • Continuously enhance demand management by routinely evaluating future demand drivers that influence service delivery and asset use, integrating these insights into long-term capital planning to ensure LoS remains responsive to changing needs.
4.	Incorporate risk assessment for future iterations of the AM plan, and use the risk assessment results to drive future condition assessments and financial needs forecasting	• Conduct a criticality and risk assessment of assets to inform work prioritization. • Review risk attribute values periodically to ensure alignment with business objectives and risk appetite. • Overlay the risk model with the current state of the assets (i.e., condition) and the financial forecast. Using this approach, the City could focus its monitoring, maintenance, and renewal and replacement budget and activities on high-risk assets. Medium-risk infrastructure could be addressed through the mitigation of failure via regular monitoring, while the failure of low-risk assets could be accepted with caution.
5.	Establish a sustainable facility funding model that fits the needs of the community.	• The analysis of facilities assets (Cemetery, Community Center, IT, Marina, Public Works, Transit) highlights significant reinvestment challenges over the 2025–2034 planning horizon. A large backlog of $69.9 Million is identified for 2025, followed by fluctuating annual needs averaging $19.9 Million per year, driven largely by community centers and other critical facility types. Under the current funding level of $6 Million annually, the condition of facilities is projected to decline from 78% in fair or better condition to just 56% by 2034, with assets in poor or very poor condition increasing from 17% to 41%. This trend underscores the unsustainability of current funding, and the long-term risks associated with deferred reinvestment. To address these concerns, it is recommended that the City explore strategies such as gradually increasing annual capital funding, implementing targeted life-extension programs, prioritizing reinvestment based on asset criticality, and seeking external funding opportunities where available. These steps will support the preservation of service levels and reduce future risk exposure. • The reinvestment outlook for fire, police, and library facilities underscores the need for proactive planning and increased funding. While the average annual need is $1.9 Million, the current funding level of $0.5 Million per year falls significantly short, leading to a projected decline in assets in fair or better condition from 75% in 2025 to just 51% by 2034. The share of assets in poor or very poor condition is expected to rise sharply from 25% to 46%, indicating growing deferred maintenance risks. Peaks in reinvestment demand, particularly in 2025, 2026, 2028, and 2029, reflect scheduled upgrades that must be addressed to avoid deterioration of critical services. To mitigate these risks, the City should consider increasing the annual capital budget for these assets, aligning reinvestment levels more closely with actual needs. Additional recommendations include developing life-extension and preventive maintenance strategies, prioritizing investments based on risk and service criticality, and leveraging external funding sources or grants where possible. These measures will help sustain service levels, reduce long-term costs, and preserve public safety and community infrastructure.
5.	Continue to find ways to improve AM initiatives across the City by maintaining a high level of AM awareness through training, communication, and knowledge sharing.	• Develop a Knowledge Retention Strategy and Internal Communications Plan to document staff AM knowledge and experience for reporting and succession planning purposes. Communicate AM improvement initiatives and enhance AM awareness internally through internal communication. • Communicate AM improvement initiatives and enhance natural AM awareness internally through internal communication.
6	Implement a CMMS / Work Management System.	• The City will conduct an AM Software Strategy following the completion of this AM plan to identify future system requirements that may include enhancing existing software, adding-on, or replacing.

Index	Improvement Initiative	Description
7	Develop a Change Management & Communications Plan	• AM buy-in and support are needed from all levels of the City to ensure that AM standards, practices, and tools are properly adopted and incorporated into day-to-day work activities. A successful Change Management & Communications Plan will depend on the following factors: o AM buy-in from Council, senior management, staff, and departments. o AM improvement initiatives are appropriately resourced. o A network of AM champions is developed and empowered across the City.
8	Public and Council Engagement Activities.	• To ensure the Facility AMP for buildings and facilities aligns with community expectations, supports informed decision-making, and enhances transparency, the City is committed to establishing a structured and strategic approach to public and Council engagement. o Council Engagement: The City has already undertaken several engagement initiatives, including Council presentations and media events, to communicate key updates related to building and facility assets. To strengthen these efforts, it is recommended that Councillor Tool Kits be developed to provide elected officials with consistent, accessible messaging. These kits would help Councillors confidently respond to resident inquiries and communicate the value of continued investment in civic buildings. Suggested content for the tool kits includes: ▪ Overview of the City's Building and Facility Portfolio. ▪ Specialized Functions and Community Roles of Facilities (e.g., libraries, fire halls, community centers). ▪ Historical and Planned Investments in Facility Infrastructure. ▪ How the City Manages Maintenance and Renewal of Facilities. ▪ Why Ongoing Investment in Buildings and Facilities is Critical. ▪ Facility Types and Their Role in Prioritizing Investments. ▪ Asset Management Principles for Buildings. ▪ Service Levels: What Facility Users Can Expect. ▪ Impacts of Climate Change on Facility Performance and Longevity. ▪ Use of Technology to Monitor and Improve Facility Operations. ▪ Funding Sources for Facility Renewal and Expansion. ▪ How Projects are Prioritized for Maintenance or Replacement. o Public Engagement: The City has shared facility-related information through existing communication channels. To improve transparency and engagement, a dedicated project webpage is recommended to serve as a central hub for buildings and facilities planning updates. This page could include frequently asked questions, downloadable resources, project timelines, contact information, and interactive elements to encourage public input. o A targeted social media strategy—leveraging platforms such as Facebook and Instagram—could further broaden outreach. Sponsored posts can be used to highlight key milestones (e.g., facility openings or major upgrades) and promote opportunities for public engagement. ▪ Implementing these strategies will help build public trust, support data-informed service level discussions, and ensure that the Facility AMP reflects the evolving priorities of both Council and the broader community.

APPENDIX A

Facility Asset Inventory

A

Appendix A - Facility Asset Inventory

The City's Facility asset inventory is presented as a separate MS Excel file.

About AECOM

AECOM is the world's trusted infrastructure consulting firm, delivering professional services throughout the project lifecycle — from planning, design and engineering to program and construction management. On projects spanning transportation, buildings, water, new energy and the environment, our public- and private-sector clients trust us to solve their most complex challenges. Our teams are driven by a common purpose to deliver a better world through our unrivaled technical expertise and innovation, a culture of equity, diversity and inclusion, and a commitment to environmental, social and governance priorities. AECOM is a *Fortune 500* firm and its Professional Services business had revenue of $13.2 billion in fiscal year 2020. See how we are delivering sustainable legacies for generations to come at aecom.com and @AECOM.