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Acknowledgement

Land Acknowledgment
We acknowledge that Museum London resides on the traditional lands of the Anishinaabeg, Haudenosaunee, Lūnaapéewak and Attawandaron. We acknowledge all the treaties that are specific to this area: the Two Row Wampum Belt Treaty of the Haudenosaunee Confederacy/Silver Covenant Chain; the Beaver Hunting Grounds of the Haudenosaunee NANFAN Treaty of 1701; the McKee Treaty of 1790, the London Township Treaty of 1796, the Huron Tract Treaty of 1827, with the Anishinaabeg, and the Dish with One Spoon Covenant Wampum of the Anishnaabek and Haudenosaunee. This land continues to be home to diverse Indigenous people (First Nations, Métis, and Inuit) whom we recognize as contemporary stewards of the land and vital contributors to society. As representatives of the people of the Museum London, we are grateful to have the opportunity to work and live in this territory.

Staff Acknowledgment
The Corporate Asset Management office would like to acknowledge the efforts of Museum London staff for the effort and support they put forth to help accumulate the data and develop the findings of this Asset Management Plan. We are also sincerely thankful to the Museum London Board of Directors and City of London Council for their support.

City of London Council (2022-2026)

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Councillors: Hadleigh McAlister (Ward 1), Shawn Lewis (Ward 2), Peter Cuddy (Ward 3), Susan Stevenson (Ward 4), Jerry Pribil (Ward 5), Sam Trosow (Ward 6), Corrine Rahman (Ward 7), Steve Lehman (Ward 8), Anna Hopkins (Ward 9), Jerry Pribil (Ward 5), Sam Trosow (Ward 6), Corrine Rahman (Ward 7), Steve Lehman (Ward 8), Anna Hopkins (Ward 9), Paul Van Meerbergen (Ward 10), Councillor Skylar Franke (Ward 11), Elizabeth Peloza (Ward 12): David Ferreira (Ward 13), and Steven Hillier (Ward 14)

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Section 1. Executive Summary

<table>
<thead>
<tr>
<th>Summary</th>
<th>Maintain Current LOS</th>
<th>Achieve Proposed LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement Value ($millions)</td>
<td>$57.6</td>
<td>$57.6</td>
</tr>
<tr>
<td>Cumulative 10-Year Infrastructure Gap ($millions)</td>
<td>$7.3</td>
<td>$11.4</td>
</tr>
<tr>
<td>Infrastructure Gap as a Percentage of Replacement Value</td>
<td>12.91%</td>
<td>20.13%</td>
</tr>
</tbody>
</table>
1.1: 2024 Museum London Asset Management Plan

Introduction

Museum London (ML) is a nationally recognized, leading art and history resource that connects and inspires communities across Southwestern Ontario through collections, exhibitions, education, public engagement, outreach activities and special events. Serving as a downtown anchor, it attracts tens of thousands of visitors yearly, boosting the local economy and contributing to city vibrancy. ML’s infrastructure systems are a crucial element in conserving and activating a collection of over 45,000 artifacts and over 5600 artworks, and delivering year-round cultural and educational services to meet the needs of diverse audiences of all ages.

This Asset Management Plan (AMP) is designed to enhance the management of ML’s infrastructure assets in a way that connects ML strategic plan, City of London, and community objectives to day-to-day and long-term infrastructure investment decisions. This is accomplished by:

- Aligning with the regulatory landscape, by meeting the requirements of Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure (O. Reg. 588/17), and positioning ML for capital grant funding applications.
- Understanding the current state of the infrastructure systems (value, quantity, age, condition, etc.).
- Measuring and monitoring levels of service (LOS) to quantify how well infrastructure systems are meeting expectations.
- Communicating asset lifecycle management activities (e.g., how infrastructure is operated, maintained, rehabilitated, replaced, and disposed).
- Determining the optimal costs and reinvestment rates of the asset lifecycle activities split between those that maintain current LOS and those that achieve proposed LOS;
- If necessary, establishing an infrastructure gap financing strategy to fund the expenditures that are required to meet Museum London Board of Directors (Board) approved LOS and associated lifecycle activities.

Based on this analysis, key findings of the 2024 ML AMP are:

- There are $57.6 million dollars of infrastructure assets under ML management, this amount excludes its art and material culture collections;
- Overall, ML assets are in Fair condition;
- The capital budget funds ML facility/internal systems renewals valued at $56.8 million; Operating budget covers ML furniture and equipment valued at $755 thousand.
- Capital budget cumulative 10-year maintain current LOS and achieve proposed LOS infrastructure gaps of $7.3 million and $11.4 million, respectively, exist;
- No infrastructure gaps have been assessed for operating budget funded assets; and
- The average planned capital budget for 2023-2032 (based on the 2023 annual budget update) represents a reinvestment rate of 0.7%, which is less than the recommended average maintain current LOS and achieve proposed LOS reinvestment rates of 2.0% and 2.7%, respectively.

A summary of these results is presented in the following tables and figures:

- Table 1.1 summarizes the infrastructure gaps and presents them as a percentage of ML’s infrastructure assets replacement value;
- Figure 1.1 summarizes the overall condition distribution of the assets;
Table 1.2 presents the reinvestment rates for planned budget, maintain current LOS, and achieve proposed LOS; and Figure 1.2 shows the optimal maintain current LOS and achieve proposed LOS expenditures compared to planned budget, and the resulting infrastructure gaps.

### Table 1.1 2024 AMP Summary Information

<table>
<thead>
<tr>
<th>Summary Information</th>
<th>Maintain Current LOS</th>
<th>Achieve Proposed LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement Value ($ Millions)</td>
<td>$57.6</td>
<td>$57.6</td>
</tr>
<tr>
<td>10-Year Infrastructure Gap ($ Millions)</td>
<td>$7.3</td>
<td>$11.4</td>
</tr>
<tr>
<td>Infrastructure Gap as a Percentage of Replacement Value</td>
<td>12.9%</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

Figure 1.1 Overall Condition

#### Table 1.2 Approved Budget, Maintain Current LOS, and Achieve Proposed LOS Annual Reinvestment Rates

<table>
<thead>
<tr>
<th>Current Annual Reinvestment Rate (Planned Budget)</th>
<th>Maintain Current LOS Recommended Annual Reinvestment Rate</th>
<th>Achieve Proposed LOS Recommended Annual Reinvestment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7%</td>
<td>2.0%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>
1.2: Summary of Asset Management Plan Structure
The AMP is designed to provide the reader with a strong functional knowledge of the basis of this report along with the process and data behind the development and results. This is achieved through the following report structure:

- **Introduction** section provides an overview of the provincial and municipal policies that govern asset management reporting requirements and the City’s Corporate Asset Management (CAM) Program as well as a summary of the various components of the AMP that culminate together to provide meaningful information that supports asset and budget decisions.

- **Detailed Asset Management Plan** section summarizes ML existing asset inventory, its replacement value, condition, age distribution, and how ML stores its asset data. This section then explores the LOS delivered by the assets, the associated lifecycle management strategies and activities, and concludes with an analysis of the identified infrastructure gaps and supporting financing strategies.

- **Conclusion and Recommendations** section outlines the findings and observations made throughout the AMP development and reporting process and establishes the
recommendations that will be used to guide future asset management activities, subject to ML Board approval.

- **Appendix A. O.Reg.588/17 Asset Management Plan Requirements** section encompasses a detailed mapping of the legislated requirements to the various sections and/or sub-sections of this AMP.

### 1.3: Executive Summary Conclusion and Recommendations

**Conclusion**

Based on input from ML staff and asset data collected, the ML AMP represents a tactical outcome of the City's CAM Program. It outlines the current strategy for ML to manage its infrastructure valued at $57.6 million and details the required investments in the asset portfolio to maintain the current LOS and achieve the proposed LOS objectives.

The 2023 maintain current LOS and achieve proposed LOS infrastructure gaps of $776 thousand and 1.2 million, respectively, compared to the $56.8 million capital funded asset base are considered well managed gaps. However, the cumulative 10-year maintain current LOS and achieve proposed LOS gaps of $7.3 million and $11.4 million, respectively, are concerning. This growth in the infrastructure gaps has the potential to escalate beyond ML’s ability to manage services effectively. There is no intent to allow this to occur. As such further action is needed to address both the understanding and forecasted growth of the gaps.

Choices are available as to how ML manages the infrastructure gaps:

- ML can continue to provide services at their current or targeted levels by committing to the necessary investments, thereby mitigating, or potentially eliminating the infrastructure gaps. This funding can originate from tax-supported or non-tax-supported sources. Non-tax-supported financing primarily relies on external factors such as earned revenue through programs, grants, donations, endowments, sponsorships, and partnerships.

- Paying for the gaps is not the only opportunity. In rare cases, ML can reduce LOS to match its ability to pay and is constantly evaluating programs and services. However, there is an imperative to honour various commitments to public funders, donors, and other partners, and meet professional Museum standards, along with a strong desire to enhance these services, particularly in light of public demand and the educational and social value they provide.

- A third opportunity for ML is to find more efficient and effective methods of delivering cultural and educational services, including altering the asset mix that facilitates service provision to the community. Whenever feasible, ML strongly endorses this approach and consistently invests in enhancements. A key component of this strategy is the ongoing effort to refine asset management practices.

Overall, ML has a long-standing practice of pursuing all possible means to achieve service delivery goals and has been reasonably successful delivering quality services. In effect ML adopts a blend of the three approaches outlined and is continuously seeking to improve these strategies.
**Recommendations**

The City’s CAM Program is founded on the principle of continuous improvement with the object of increasing line-of-sight quality of data/information and the tools and techniques that are used to inform services and asset management decision-making. This increased quality will lead to greater confidence in the analysis documented and decisions formed through the AMP and supporting processes.

Based on these objectives the Recommendations section of this AMP outlines administrative projects that will enhance the management of and reporting against ML’s $57.6 million worth of infrastructure assets. These recommendations are structured to address short- and long-term asset management objectives and are categorized according to distinct asset management knowledge areas.

Each of these recommendations will be completed with leading support from the City’s CAM staff per the approved asset management service level agreement. They will be pursued utilizing existing staff, other resources, and budgets to the fullest extent feasible.
Section 2. Introduction
2.1: Supporting Museum London Goals Through the Corporate Asset Management Program

Museum London (ML) is a leading art and history resource that connects communities, inspires change, challenges ways of thinking, and ignites creativity towards a more just world. Serving the diverse communities of Southwestern Ontario for more than 80 years, and recognized nationally for our work, ML collects, interprets, shares, and creates knowledge and opportunities through exhibitions and programs featuring local histories and material culture, as well as historical and contemporary art.

The Museum is an accessible cultural resource for Londoners, an anchor downtown, and a significant attraction that welcomes tens of thousands of visitors each year, contributing to the local economy and making our city a vibrant destination.

These service delivery outcomes are based on ML's strategic community and organizational objectives established through the ML Strategic Plan. This plan outlines the purpose, vision, mission, and values that guide ML in a manner that resonates with the core values of our community. The 2024-2027 Museum London Strategic Plan summarizes these as follows:

**Our Purpose**
Honouring and amplifying our interconnections.

**Our Vision**
A leading art and history resource that connects communities, inspires change, challenges ways of thinking, and ignites creativity towards a more just.

**Our Mission**
Museum London mobilizes art and history to build community and co-create an inspired future.

**Our Values**
- Inclusivity
- Creativity
- Collaboration
- Learning and leadership
- Respect for nature

The City’s Corporate Asset Management (CAM) Program is designed to enhance the management of the infrastructure assets (both City of London and Agencies, Boards, and Commissions assets) in a way that connects strategic objectives to day-to-day decisions related to when, why, and how investments are made into infrastructure systems that support service delivery. Like the strategic planning and budgeting processes, this is an iterative process that continuously improves through each cycle. For further information regarding the CAM Program refer to the City’s CAM Policy.

This Asset Management Plan (AMP) was developed through the City’s CAM Program based on an approved Service Level Agreement between ML and the City. By following this development process the AMP achieves the following:

- Sets out the plan for managing the infrastructure assets to ensure they can provide services at levels that meet the community and ML Board of Directors (Board) approved objectives.
- Forecasts the expected impact that the 2023 annual budget update, inclusive of 2023-2032 capital plan (hereon

---

1 CAM Policy https://london.ca/council-policies/corporate-asset-management-policy
referred to as “planned budget”), will have on the state of the infrastructure assets.

- Understanding of the changes in lifecycle strategies and associated risks if there are funding gaps between the planned budget and the expenditures required to maintain current LOS or achieve proposed LOS.
- Fulfill O. Reg. 588/17 mandated requirements and maintain eligibility for current and future other levels of government capital funding programs.

2.2: Provincial Asset Management Planning Requirements

This AMP builds upon existing ML asset management activities and leverages others that have been developing since the establishment of the City’s CAM department and CAM Program. London’s legislated asset management journey began in 2008 when Canada’s Public Sector Accounting Board (PSAB) established new requirements for municipalities to practice tangible capital asset (TCA) accounting. This accounting process resulted in the development of the first comprehensive inventory of all assets owned by the City (both directly and non-directly owned assets). In 2012, the Province then published ‘Building Together: Guide for Municipal Asset Management Plans’ to encourage and support municipalities in Ontario to develop AMPs in a consistent manner.

Building Together outlines the information and analysis that municipal asset management plans are to include and was designed to provide consistency across the province for asset management. To encourage the development of AMPs, the Provincial and Federal governments began to frequently make AMPs a prerequisite to accessing capital funding programs.

In 2015, Ontario passed the ‘Infrastructure for Jobs and Prosperity Act’, which affirmed the role that municipal infrastructure systems play in supporting the vitality of local economies. After a year-long industry review process, in January 2018, the Province created O. Reg. 588/17 under the Infrastructure for Jobs and Prosperity Act. O. Reg. 588/17 further expands on the Building Together guide, mandating specific requirements for municipal asset management policies and AMPs.

Among others, these requirements mandated:

- Municipalities to complete Council approved and publicly available AMPs for all assets presented on the consolidated financial statements, excluding Joint Water Boards. It is noted ML financial are consolidated within the City’s financial statements. The following dates are provincially required:
  - By July 1, 2024, the O. Reg. 588/17 requires an AMP that documents the current LOS being provided, the costs to maintain them, and the financing strategy to fund the expenditures necessary to maintain current LOS for all infrastructure systems in the City.
  - By July 1, 2025, the O. Reg. 588/17 requires an AMP that documents the current LOS being provided and the proposed LOS, and the costs to achieve them, and the financial strategies to fund the expenditures necessary to maintain current LOS and achieve proposed LOS for all infrastructure systems in the City.
- That these AMPs be updated annually and comprehensively reviewed and updated every 5-years.

For a complete reconciliation and mapping of how this AMP complies with all O. Reg. 588/17 requirements (both July 1, 2024, and July 1, 2025, requirements) see
2.3: Developing the Asset Management Plan

This AMP is the culmination of efforts from staff across ML who are involved with managing infrastructure assets, including staff involved with finance, technical staff involved with planning and executing the construction, acquisition, and maintenance of infrastructure assets, and staff who operate and maintain infrastructure assets. Through this collaborative development process the AMP addresses the following questions:

- What do we own and why?
- What is it worth?
- What condition is it in?
- What are its current and proposed service levels?
- What activities do we employ to manage the assets?
- What does it all cost?

A more modern asset management question is also to ask, “Is this asset providing the community the service it expects and is willing to pay for?”

To answer these questions as best as possible, the CAM Program and this AMP are structured based on several interdependent development strategies that support answering or providing insight into the responses to these questions.

These development strategies and processes (steps) are categorized as:

- State of Local Infrastructure
- Levels of Service
- Asset Lifecycle Management Strategy
- Forecasted Infrastructure Gaps and Financing Strategies
- Discussion and Conclusion

To enhance readers understanding of the data and information presented, the following explanations are provided regarding each development strategies purpose, processes, and results.

2.3.1: State of Local Infrastructure

The State of Local Infrastructure is the initial building block of the AMP and is intended to provide the following information:

- Inventory of assets – What do we own?
- Valuation of assets (replacement value) – What is it worth?
- Age and expected useful life of assets – How old is it and when does it need to be replaced?
- Condition of assets – What Condition is it in?

This information is a fundamental building block of an AMP and helps inform future management of infrastructure assets based on individual and collective needs.

It is important to note replacement values seek to utilize best available information to identify all asset costs associated with replacing assets. As such this AMP reflects capital financing pressures that go beyond what can be accommodated in the ML 2023-2032 planned budget.

A sample of the capital financing pressures captured in the AMP are:

- Inflation - the rising cost of goods and services can put additional strain on the budget for infrastructure projects to maintain current LOS,
- Climate – addressing the impact of climate change and implementing climate-related initiatives can require significant financial resources,
- Achieve Proposed LOS – meeting the desired LOS may require additional investments to improve the condition of existing infrastructure, and
• Aging Infrastructure – the need to upgrade or replace versus rehabilitating aging assets can contribute to capital financing pressures.
By acknowledging capital financing pressures and considering both current and future challenges, the AMP sets the foundation for strategic infrastructure planning and helps to prioritize and address infrastructure needs effectively.

2.3.2: Levels of Service

Asset related LOS are specific parameters that describe the extent and quality of asset related services; they are not an exhaustive presentation of all service levels provided to the community. These LOS link an asset's performance to target performance goals associated with ML’s strategic plans, budgets, and other relevant policies and reports. Additionally, in accordance with O. Reg. 588/17 requirements, these LOS are quantified and reported between the costs to maintain current LOS and achieve proposed LOS, which are defined as:

- **Maintain Current LOS** – is defined as the persistent efforts of an organization to manage its assets through comprehensive lifecycle activities and effectively allocating necessary financial resources with the aim of consistently delivering its services at the current established service levels.
- **Achieve Proposed LOS** – is defined as the strategic initiatives undertaken by an organization to modify its service levels represented in a new proposed standard of service provision. This could involve modifying the condition, scope, or accessibility of the services beyond their current levels, based on strategic goals (e.g., regulatory requirements, master plans, other ML approved targets, etc.). The achievement of these proposed service levels may require changes in quantity of assets and/or frequency and scope of asset related lifecycle activities.

LOS metrics are organized in a hierarchical manner. At the forefront are the direct LOS metrics, which serve as the primary benchmarks. From these, we can provide clear lines-of-sight to determine the cost to maintain current LOS and achieve proposed LOS. Next in line are the related LOS metrics. These are closely tied to the direct LOS metrics due to their primarily formal relationship. However, pinpointing their associated costs can be more intricate.

Overall, ML strives to provide services to the community that are accessible, cost efficient, demonstrate environmental stewardship, reliable, and safe, with suitable scope. As shown in Figure 2.1, to obtain a desired LOS, ML faces a complex trade-off challenge, which includes three parameters: Cost, LOS, and Risk.
2.3.3: Asset Lifecycle Management Strategy and Activities
The asset lifecycle management strategies are the set of planned actions that will enable the assets to provide the approved LOS in a sustainable way, while managing risk, at the lowest lifecycle cost possible.

This part of the AMP describes the asset lifecycle activities applied to the assets. This includes the typical practices and actions, and risks associated with each asset activity. From here three scenarios that forecast the condition profile of the asset portfolio based on planned budget, the required budget to maintain current LOS, and the required budget to achieve proposed LOS are provided.

2.3.4: Forecasted Infrastructure Gaps and Financing Strategies
In this part of the AMP identified infrastructure gaps are summarized and illustrated in both table and figure format. The infrastructure gaps are a dollar amount based on the difference between:

• The amount of money that needs to be spent on assets to maintain current LOS and achieve proposed LOS for the community, and
• The amount of funding presently identified in the planned budget over a 10-year period (2023-2032).

In other words, what ML plans to spend versus what the asset needs are. Ideally, the infrastructure gaps decline over time as greater investments are made to replace older infrastructure, to improve the condition of infrastructure, and to minimize the risks associated with failing assets.

Next are the infrastructure gap financing strategies, which set out the approach to ensuring that appropriate funds are available to facilitate the delivery of infrastructure dependent services. These strategies are meant to strengthen current budgeting processes by reinforcing a long-term perspective on the impact of providing various asset-related LOS and the required investments versus the affordability to the community, which is consistent with the outcomes and expected results of the 2024-2027 ML Strategic Plan and 2023-2027 City of London Strategic Plan.

2.3.5: Discussion and Conclusion
The discussion part of the AMP looks at current and future opportunities and challenges associated with addressing infrastructure gaps. This discussion includes opportunities and challenges that are both in and outside of the control of ML and ML Board. Among others, this includes consideration of the following:

• Service delivery characteristics,
• Cost pressures, and
• Growth and service improvement planning.

The final element of the detailed AMP is the conclusion section. In this section the results are summarized and to facilitate interpretation of the AMP data accuracy and data reliability ratings with supporting commentary are provided. The goal is to transparently provide the reader with knowledge of the validity and limitations of the information provided and to highlight continuous data improvement plans.

2.4: Assumptions and Limitations
As previously stated, this AMP is designed to enhance the management of ML infrastructure assets in a way that connects strategic objectives to day-to-day decisions related to when, why, and how investments are made into infrastructure systems. However, all AMPs are developed within the context of various assumptions and limitations.
The following points summarize the assumptions and limitations of this AMP:

- The scope of this AMP covers the assets directly owned by ML as of December 31, 2022, and associated planned budgets approved in the 2023 annual budget update. Thus, timing differences exist between when this AMP was developed versus current 2024-2027 MYB approvals. Based on O. Reg. 588/17 requirements these differences are permissible and are minimized through the AMP annual update process as well as the CAM Program continues to explore opportunities to limit such timing differences.
- This AMP is compliant with the July 2024 and July 2025 requirements of O. Reg. 588/17 in that it encompasses both maintain current LOS and achieve proposed LOS as well as associated forecasted infrastructure gaps and supporting financing strategies.
- The AMP addresses condition information in three ways:
  - Condition may be technically assessed and reported on in a quantifiable technique. This method is the most accurate and most expensive (e.g., facility condition);
  - Condition may be assumed based on age and estimated useful life; and
  - Finally, condition may be based on the expert opinion of staff using the asset.
- Unexpected events (e.g., severe storms attributed to climate change, etc.) will not disrupt infrastructure replacement and renewal projects over the period of analysis.
- The planned budget will occur as planned over the period of analysis.
Section 3. Detailed Asset Management Plan
3.1: State of Local Infrastructure

3.1.1: Asset Inventory and Valuation

Museum London (ML) owns and operates assets with a total replacement value of approximately $57.6 million. These assets encompass a wide array, from the museum's building infrastructure to furniture and equipment necessary for various operational needs. Each asset is managed and maintained to meet both legislated and non-legislated service requirements with the aim of providing the highest level of cultural engagement and educational value possible for the community.

Table 3.1 summarizes the assets by type, inventory/quantity, and replacement values. The asset replacement values have been identified using different ML databases including financial systems, VFA Facilities Management software, and internal expert opinion. These replacement values aim to capture current market prices for the fully replacement of identified assets. For further information regarding costing refer to State of Local Infrastructure in the Introduction section.

To further contextualize the necessity of these assets the following summarizes ML’s organizational and service delivery structures.

ML sustains its operations with a broad range of assets, including a museum facility with specialized storage areas and exhibition areas with environmental controls suitable for the protection of art and artifacts, specialized audio-visual and gallery furnishings, comprehensive office and commercial equipment, and state-of-the-art digital devices. These assets are essential for delivering educational programs, presenting exhibitions, and hosting community gatherings, propelling the museum's mission to be a hub of cultural engagement and historical preservation. The strategic deployment of these assets promotes accessibility, interactive learning, and long-term sustainability, dovetailing with the ML's Strategic Plan.

**Facility**

ML is an art and history museum located near the confluence of the Thames River, at 421 Ridout Street North in London, Ontario. The current facility was designed by Raymond Moriyama and constructed in 1980. In 2018, the museum opened an expansion known as the Centre at the Forks. The museum building is a four-story structure encompassing a gross area of 90,000 square feet. The building's current replacement value is estimated at approximately $56.8 million. The main entrance is positioned on the building's east side and the building accommodates spaces designated for the exhibition of artworks and artifacts, secure collection storage facilities with specialized racks, shelves and equipment, space for archival and document storage, retail and food service, office spaces, and areas for educational and studio programs, public gatherings, and meetings. The building is classified as an Ontario Building Code Group A Division 2 facility intended for assembly occupancies for the production or viewing of performing arts and the alike, and is designed to be up to four stories, equipped with a sprinkler system, and barrier-free. In collaboration with ML staff, City of London Facilities Division is responsible for the management and maintenance of the museum building and its internal systems. This ensures that the facility meets its functional requirements, serves as a community gathering place, and functions as an accessible cultural resource for the public, while operating in a safe and efficient manner.

**Furniture and Equipment**

Valued at $755 thousands, the 'Furniture and Equipment' asset type at ML constitutes a vital array of less financially material
assets that are integral to museum operations and the delivery of its services. This category includes various subtypes such as:

- Gallery Furniture
- Audio and Video Devices
- Heavy Equipment
- Office Furniture
- Commercial Kitchen Equipment

These assets complement the visitor experience and aesthetic and functional requirements of exhibitions, ensuring that art and historical artifacts are displayed in an accessible and informative manner. Additionally, they provide interactive displays and information provision to visitors and facilitate the administrative tasks that support the museum’s educational and cultural programs. The strategic management and maintenance of these assets are critical to the museum’s success and its service to the public.

**Collection**

ML cares for one of Canada’s most important art collections and one of the most significant historical artifact collections in the Province; the art collection includes more than 5,600 historical and contemporary artworks by regional and Canadian artists and over 45,000 artifacts reflecting the history of London. Collections are activated through exhibitions, available to researchers, and loaned to institutions across the country. A portion of the collection is available online. Currently, these assets are excluded from the AMP as they fall outside of O. Reg. 588/17 requirements. However, future AMP continuous improvement projects will assess if collections could be included.

Table 3.1 Inventory and Valuation

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Asset</th>
<th>Inventory</th>
<th>Unit</th>
<th>Replacement Value (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>Building and Site development</td>
<td>1</td>
<td>Each</td>
<td>$56,804</td>
</tr>
<tr>
<td>Furniture and Equipment</td>
<td>Furniture, AV and digital devices, commercial equipment, etc.</td>
<td>679</td>
<td>Each</td>
<td>$755</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>$57,559</td>
</tr>
</tbody>
</table>
3.1.2: Age Summary

Figure 3.1 shows ML average asset age as a proportion of the average expected useful life. This comparison provides a visual representation of how close assets are to the ends of their lifecycle, which demonstrates ML’s ability to replace such assets on-time. Overall, the data affirms that ML facility are past its expected useful life while primarily all other assets are well within their expected useful life.

Facilities
The age of the facility is calculated based on the original date of construction in 1980, recorded in the VFA Facilities Management software. The facility has exceeded its average industry standard expected useful life of 40-years. This leads to an increase in its operation and maintenance cost. It is important to note that 40-years was selected as the expected useful life based on the non-structural components of buildings which have the longest expected useful life. In practice the many components that comprise a building are slated for renewal based upon a combination of factors including age, condition, consequence of failure, likelihood of failure, etc., and the practical expected useful life is largely indefinite while the building continues to serve its intended/required purpose in its given geographic location.

Although this building has exceeded its expected useful life, it is maintained in a fair condition through regular upkeep. Its condition reflects a conservative approach to management, ensuring core functionality and operational standards of the building are upheld. Future considerations may include assessments for necessary improvements or updates to align with evolving standards and maintain its utility and relevance in a practical manner.

Furniture and Equipment
The average age of the Furniture and Equipment assets is determined through the acquisition year recorded in ML’s databases for each asset. The estimation of each asset's average expected useful life is based on internal expert assessments and historical data. This category includes various assets, each possessing its own acquisition date and expected useful life. The calculated average age is 8 years, in comparison to the average expected useful life of 13 years. It is typical for assets within this category to exhibit varying ages due to staggered acquisition timelines. Hence, the average age falling within the expected useful life indicates robust and effective asset management practices at ML.

Figure 3.1 Average Age and Expected Useful Life
3.1.3: Asset Condition
The condition of the assets was determined using one of the three methods below based on data availability and accuracy:

1. Existing condition rating systems (e.g., Facility Condition Index, etc.),
2. Estimated based on age and the remaining expected useful life of the assets, and
3. Estimated based on expert opinion, in the absence of 1 or 2 above, or where there was low confidence that age and expected useful life appropriately represented the asset condition.

Based on these methodologies, asset conditions are recorded on a ratings scale of 1 to 5. Table 3.2 provides the definitions of each condition scale used in the CAM Program and in this AMP.

Table 3.2 Condition and Scale Definitions

<table>
<thead>
<tr>
<th>Grade</th>
<th>Summary</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Good</td>
<td>The infrastructure in the system or network is generally in very good condition, typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.</td>
</tr>
<tr>
<td>2</td>
<td>Good</td>
<td>The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.</td>
</tr>
<tr>
<td>3</td>
<td>Fair</td>
<td>The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.</td>
</tr>
<tr>
<td>4</td>
<td>Poor</td>
<td>The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.</td>
</tr>
<tr>
<td>5</td>
<td>Very Poor</td>
<td>The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.</td>
</tr>
<tr>
<td>-</td>
<td>Not Assessed</td>
<td>This category is reserved for assets where data is either missing, not updated, or cannot be considered reliable. Flagging this data helps identify where gaps in information exist and may allow for the development of assessment plans to improve future data.</td>
</tr>
</tbody>
</table>
Figure 3.2 presents the condition distribution of all ML assets. It shows that approximately 99% of the assets are in Fair condition dominated by the condition of the facility itself which is in a state of fair condition.

Figure 3.3 provides a breakdown of ML condition for the Facility, and Furniture and Equipment.

**Facility**
The ML facility condition is regularly evaluated through comprehensive condition assessments, which establish and update an industry-standard Facility Condition Index (FCI) that reflects the overall condition of the facility and its sub-components (building envelope, mechanical and electrical systems, etc.). The assessment is used as a primary source in identifying the repair, rehabilitation, and/or replacement strategies for the building internal systems and components. Note, the facility condition rating presents the physical condition of the building and are not a representation of the functionality required to satisfy ML service delivery (i.e. size, location, ability to accommodate certain types of functions or equipment, etc.).

The current condition assessment identifies that the facility is overall in Fair condition. This condition score indicates investments in the short to medium term are required to maintain the facility’s ability to support operations. When a facility is in ‘Fair’ condition, it implies that while the building may not currently face critical issues, there are enough concerns regarding its condition to warrant attention in the near future. Such concerns could range from aging infrastructure and internal building systems nearing the end of their useful life, which may lead to potential interruptions in building functionality, and in the Museum’s case, pose a risk to the safety of the collections, to more superficial wear and tear that impacts both the facility’s functionality and aesthetic appeal.

**Furniture and Equipment**
Looking into the condition distribution of the Furniture and Equipment asset type, 89% of the assets are in fair or better condition. The condition of these assets are based on either asset age or internal expert opinion of ML staff.

In the lifecycle management of an asset inventory, the presence of some assets categorized as 'Poor' condition is a typical phase, indicating these assets are scheduled for replacement. The 11% of assets in the Poor condition, specifically the gallery and office furniture, as well as a portion of the commercial kitchen equipment, indicate a necessity for investment in the short-term. This investment is critical to replace these deteriorating assets promptly, which is integral to preserving the asset portfolio within an acceptable state of repair.
Figure 3.3 Asset Condition Detail

3.2: Levels of Service
Asset management Levels of Service (LOS) link strategic plans and budget service delivery objectives to corresponding asset performance metrics. As such this AMP strives for LOS performance measures linked to:

- 2024-2027 ML Strategic Plan,
- ML Standard Facility Report
- ML Annual Report
- 2023-2027 City of London Strategic Plan, and
- 2023 Annual Budget Update.

Table 3.3 lists the LOS customer value definitions created through this development process.

The selection and development of meaningful LOS linked to decision making and cost, requires a long-term continuous improvement methodology. Thus, the LOS used in the 2024 ML AMP are focused on traditional asset management metrics like reinvestment rate and condition. Continuous effort will be made towards expanding costed LOS as part of future ML AMP development processes and practices.

- Canadian Arts Data / Données sur les arts au Canada (CADAC)
- Various Industry best practices

These LOS foundations guide the establishment of customer service deliver values (herein referred to as “customer values”), which in turn guide the development of overarching AMP LOS objectives. Informed by these objectives, ML and CAM staff collaborate to formulate effective metrics that can be linked to asset performance.
Table 3.3 Customer Values Definition

<table>
<thead>
<tr>
<th>Customer Value</th>
<th>Corporate Definition and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Efficiency</td>
<td>Presents service area budgets, and where possible measures financial performance in terms of providing the maximum service outcomes (more output for less cost) out of the available operating and capital budgets. Examples include annual cost to provide the service, asset lifecycle budget as a percentage of current replacement value.</td>
</tr>
<tr>
<td>Environmental Stewardship</td>
<td>Service is provided in means that considers, controls, or reduces impacts to the environment. Includes metrics related to the assessment of service provision based on environmental stewardship and sustainability practices. Examples include annual monitoring of utility usage in relation to the square footage of the facility, or fuel consumption-based greenhouse gas emissions.</td>
</tr>
<tr>
<td>Reliability</td>
<td>Service is fit for its purpose. Includes metrics related to the reliability of services such as condition of assets.</td>
</tr>
<tr>
<td>Safety</td>
<td>As best as possible, the service safeguards against known dangers and risks. Covers performance assessments of services related to safety and compliancy with legislation, codes, and/or internal policies/practices. Includes metrics regulated/legislated by a governing body (Federal or Provincial governments, etc.) related to the specific service or asset. Examples include Percentage of interior facilities that meets security standards, percentage of facility components annually inspected, etc.</td>
</tr>
</tbody>
</table>

**Direct and Related LOS**

Selected LOS metrics are organized in a hierarchical manner. At the forefront are the direct LOS metrics, which serve as the primary benchmarks. From these, we can readily determine the cost to maintain current LOS and achieve proposed LOS. Next in line are the related LOS metrics, which are closely tied to the direct LOS metrics but in some cases cannot be readily costed. After review with ML staff, direct LOS considered most representative of asset-based services and able to be costed over a 10-year projected period (2023-2032) are documented as in Table 3.4, and the supporting related LOS are documented in Table 3.5. These LOS will be expanded upon as part of future AMPs development.

3.2.1: Direct Levels of Service

Table 3.4 Direct Levels of Service

<table>
<thead>
<tr>
<th>Customer Value</th>
<th>Focus</th>
<th>Service Performance Measure</th>
<th>2022 Performance</th>
<th>Proposed Target (2022 to 2031)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Efficiency</td>
<td>Technical</td>
<td>Overall reinvestment rate of Capital funded assets</td>
<td>0.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Environmental Stewardship</td>
<td>Technical</td>
<td>Annual electric energy consumption kilowatt-hour per square foot</td>
<td>28.68 kWH/sf</td>
<td>Positive Downwards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual natural gas consumption cubic meters per square foot</td>
<td>0.065 m3/sf</td>
<td>Positive Downwards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual water consumption cubic meters per square foot</td>
<td>0.095 m3/sf</td>
<td>Positive Downwards</td>
</tr>
<tr>
<td>Safety</td>
<td>Customer</td>
<td>Overall assets in fair or better condition</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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3.2.2: Related Levels of Service

Table 3.5 Related Levels of Service

<table>
<thead>
<tr>
<th>Customer Value</th>
<th>Focus</th>
<th>Service Performance Measure</th>
<th>2022 Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Technical</td>
<td>Humidity Facility Environmental Controls - Percentage of time relative humidity (RH) is in the target range of 45-55%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature Facility Environmental Controls - Percentage of time recommend set point temperature is in the target range of 20-22 Celsius.</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Visible Light Facility Environmental Controls - Percentage of facilities physical art display areas maintained at 50-150 LUX of visible light</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage of interior facilities that meets security standards</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentage of art and artifacts vault/storage capacity utilized</td>
<td>115%</td>
</tr>
</tbody>
</table>

3.3: Asset Lifecycle Management

3.3.1: Asset Lifecycle Management Activities

The asset lifecycle management activities are the range of actions funded through the operating and capital budgets that are practiced on the assets. Asset lifecycle activities are generally grouped into the categories shown in Table 3.6.

Table 3.6 Definitions for Lifecycle Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Infrastructure Solutions</td>
<td>Actions or policies that can lower costs or extend useful lives.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Including regularly scheduled inspection and maintenance or more significant repairs and activities associated with unexpected events.</td>
</tr>
<tr>
<td>Renewal/Rehab</td>
<td>Significant repairs designed to extend the life of the asset.</td>
</tr>
<tr>
<td>Replacement/Construction</td>
<td>Activities that are expected to occur once an asset has reached the end of its useful life and renewal/rehab is no longer an option.</td>
</tr>
<tr>
<td>Disposal</td>
<td>Activities associated with disposing of an asset once it has reached the end of its useful life or is otherwise no longer needed by the municipality.</td>
</tr>
<tr>
<td>Service Improvement</td>
<td>Planned activities to improve an asset’s capacity, quality, and system reliability.</td>
</tr>
<tr>
<td>Growth</td>
<td>Planned activities required to extend services to previously unserved areas – or expand services to meet growth demands.</td>
</tr>
</tbody>
</table>
3.3.2: Asset Lifecycle Management Strategy

ML employs a combination of lifecycle management activities to maintain current LOS while striving to optimize costs based on defined risks. This strategy includes activities for maintenance, rehabilitation, replacement, disposal, and regular investments in and business process improvements, while continuing to prepare for introducing service improvements.

When feasible, ML also strives to further optimize these lifecycle activities by coordinating and synchronizing work across multiple assets or asset categories, which can result in cost and service efficiencies. Additionally, with significant asset investments, ML seeks to optimize asset use and redundant capacity, often achieved through risk benefit cost analyses and cost effectiveness analyses.

This strategy is not static. Selected lifecycle activities are reviewed and modified based on continual industry benchmarking, staff training, professional networking, online reviews, consultant recommendations, and trial and error through scenarios and pilot programs. ML is also committed to climate change adaptation and mitigation planning, which may trigger asset investment needs.

The current ML lifecycle management activities (practices and planned actions) are presented as follows:

- Table 3.7 lists specific asset management practices or planned actions by lifecycle activity for the Facility, and Furniture and Equipment.
- Table 3.8 lists specific risks associated with asset management practices or planned actions by lifecycle activity.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Specific Asset Management Practices or Planned Actions</th>
</tr>
</thead>
</table>
| **Non-Infrastructure Solutions** | **Museum Facility**  
• The Facility is maintained and renewed through a specialized Facilities Team and their use of VFA software (supplied through Gordian) and other facilities management applications, which combined with comprehensive condition assessments and Facilities Team experience, determines the lifecycle management needs of the facility.  
• Needs include the direct care of the building envelope, mechanical and electrical systems, etc.  
**Other ML Assets**  
• Various controls and approval processes to safeguard assets.  
• Financial planning strategies to control costs.  
• Ongoing use and development of computerized maintenance management system.  
• Updating and applying design standards.  
• Ongoing search for additional funding.  
• Operational continuous improvements.  
• Improvements to employee capabilities, communications, training, etc.  
• Changes to current and proposed LOS.  
• Developing asset management program.  
• Leadership networks with peers across the country to learn from other’s experiences.  |
| **Maintenance**           | **Museum Facility**  
• Planned inspections and regular general maintenance schedules ensure the facility is fit for service.  
• A work order system and online interface exists for City of London and ML Facilities Team employees to generate and document capital works requests and completions.  
**Other ML Assets**  
• Scheduled preventative maintenance programs for most assets.  
• Scheduled inspection programs for key assets.  
• Maintenance also triggered by public/community partners feedback (when applicable).  |
| **Renewal/Rehabilitation** | **Museum Facility**  
• The Facility is regularly evaluated through comprehensive condition assessments, which establish and update an industry-standard Facility Condition Index (FCI) score that accurately reflects the overall condition of the facilities (splits into components of building envelope, mechanical and electrical systems, etc.). These condition assessments, the expertise of Facilities Team, and computer software programs used, determine the cost and timing of renewal requirements.  
**Other ML Assets**  
• Adopt advanced technologies for ML’s diverse assets, such as specialized audio-visual systems, gallery furnishings, and digital devices, to maintain the current LOS. |
<table>
<thead>
<tr>
<th>Activity</th>
<th>Specific Asset Management Practices or Planned Actions</th>
</tr>
</thead>
</table>
| **Replacement/Construction** | **Museum Facility**  
- The Facility is regularly evaluated through comprehensive condition assessments, which establish and update an industry-standard Facility Condition Index (FCI) score that accurately reflects the overall condition of the facilities (splits into components of building envelope, mechanical and electrical systems, etc.). These condition assessments, the expertise of Facilities Team, and computer software programs used, determine the cost and timing of replacement requirements.  
**Other ML Assets**  
- Adopt advanced technologies for ML’s diverse assets, such as specialized audio-visual systems, gallery furnishings, and digital devices, to maintain the current LOS.                                                                                                                                                                                                |
| **Disposal**     | **Museum Facility and other types of assets**  
- Appropriate and proper disposal occur when assets are replaced or renewed.  
- Dispose of assets under the applicable regulation and environmental standards.                                                                                                                                                                                                                                                                   |
| **Service Improvement** | **Museum Facility and other types of assets**  
- Strategic plans, and consultation with community partners and users of facilities determines service improvement needs.  
- Based on strategic service review results, implement service deliver changes that improve asset performance, cost, and risk.  
- Adopt advanced display technologies in ML to enhance or achieve the proposed LOS, leveraging contemporary solutions in museums and galleries to enrich visitor experience and engagement.                                                                                                                                 |
| **Growth**       | - Continuously monitor the impacts of growth on service delivery and participate in Assessment Growth Policy process to secure appropriate levels of growth asset funding (when applicable).                                                                                                                                                                                                                           |
Table 3.8 Risks Associated with Asset Management Practices or Planned Actions

<table>
<thead>
<tr>
<th>Activity</th>
<th>Specific Risks Associated with Asset Management Practices or Planned Actions</th>
</tr>
</thead>
</table>
| Non-Infrastructure Solutions | • Lack of a realization of the benefit from the activity (e.g., the life is not extended or the cost of managing an asset increases rather than decreases).  
• Need for revised plans, reports, and recommendations.  
• Asset management plans or proposed network solutions not followed.  
• Poor quality asset information/planning assumptions incorrect.  
• Occurrence of climate change, adverse weather/unforeseen events, and emergencies, resulting in funds being diverted to assets that were not originally planned.  
• Extending asset useful life past optimum range may increase maintenance cost and risk of critical failure.  
• Inability to mitigate malware/cyber-attacks resulting from deteriorated and non-supported asset.  
• Lack of vandalism mitigation strategy and emergency response plan increases risks, costs, and disrupts services.  
• Financial risks – economic fluctuations, inflation, expenditure type changes (e.g. change in IT industry – shift to operating licenses financed through operating budgets versus historical capital expenditure nature), etc. |
| Maintenance               | • Completing planned maintenance activities while managing the need to execute reactive maintenance activities such as those resulting from vandalism and security breaches.  
• Incorrectly planned maintenance activities can lead to premature asset failure.  
• Enough resources available to complete a series of unplanned, urgent work requests that are submitted in close succession.  
• Overscheduling preventative maintenance can lead to excessive maintenance and additional costs with no actual benefits. |
| Renewal/Rehabilitation     | • Incorrect assumptions regarding improved expected useful life after rehabilitation.                                                                                                                                                                                      |
| Replacement/Construction  | • Cost over-runs during large, complex design and construction projects.  
• Lack of knowledge regarding best practices and market offerings (e.g., new offerings and standards).  
• Minimizing service and repairs at end of life increases the chance of failures.                                                                                                                                 |
| Disposal                  | • Disposal incorrectly performed or cost overruns resulting from increase disposal requirements compared to initial estimates.  
• Timing for replacements has an operational impact. Delaying or holding inventory requires storage and can adversely affect the function and value of the retiring asset. |
| Service Improvement        | • Service improvement is either not required or incorrectly assessed.                                                                                                                                                                                                 |
| Growth                    | • Incorrect growth assessments may result in overabundance or underabundance of assets.  
• Risk of insufficient or excess funding to construct/acquire or maintain new assets.  
• Potential insufficient knowledge of and supporting policies for new asset types. |
3.3.3: Lifecycle Management Scenario Forecasts – Planned Budget, Maintain Current LOS, and Achieve Proposed LOS

**General Approach**

The type and frequency of lifecycle management strategies and activities impact both an asset’s condition and its ability to enable service delivery. Because of this relationship, the AMP presents three different lifecycle management scenarios and their associated funding requirements. To align with the categories of Asset Lifecycle Management Activities outline above, each scenario is broken down by the operating, renewal (inclusive of replacement, rehabilitation, and disposal), service improvement, and growth funding requirements.

In summary these scenarios are defined as:

1. **Planned Funding** – This scenario presents the budget constrained to the current level of expenditure approved in the 2023 annual budget update.
2. **Maintain Current LOS** – forecasts the level of investment required to maintain current LOS performance.
3. **Achieve Proposed LOS** – forecasts the level of investment required to achieve proposed LOS. The approach considers the desired level of service documented in ML strategic plan and other documents.

Each scenario is further explained in the following sections. After each scenario is presented, the Forecasted Infrastructure Gaps and Financing Strategy section provides an overview of the results along with the short- and long-term financing strategies that will be used to manage the gap and work towards long term service, financial, and infrastructure sustainability.

Aligned with the City’s Climate Emergency Action Plan (CEAP), the like-for-like lifecycle rehabilitation and renewal activities tied to each scenario will be substituted with green-for-like whenever feasible. This means that instead of simply replacing existing infrastructure with a similar one (like-for-like), there will be an increased focus on incorporating more energy efficient and greenhouse gas (GHG) emissions friendly infrastructure solutions (green-for-like). Such investments will incrementally support long term net zero targets.

**A. Scenario One: Planned Funding**

The ML average annual activity and planned funding is summarized in Table 3.9. This scenario presents the budget constrained to the current level of planned expenditures. If there is insufficient budget in any particular year to complete a rehabilitation or replacement activity on an asset that has reached its expected useful life age trigger, then the asset remains in a Poor or Very Poor condition state until there is sufficient budget in a future year to complete the lifecycle activity.

For this analysis, average annual activity for operating and capital budgets are presented as the average expenditure budget from the 2021 and 2022 fiscal years. Planned funding operating budget is equal to the 2023 fiscal year budget. Planned funding capital budgets (e.g., renewal, service improvement, and growth) are the annual average of the approved 10-year capital plan for 2023-2032. Growth activities are analyzed using the 2021 Development Charges Background Study Update. Thus, no growth projects are identified.
Table 3.9 Scenario One – Average Annual Planned Budget ($Thousands)

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Average Annual Activity for 2021 and 2022</th>
<th>Planned Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>3,409</td>
<td>3,479</td>
</tr>
<tr>
<td>Renewal, Replacement, Rehabilitation, Disposal</td>
<td>355</td>
<td>403</td>
</tr>
<tr>
<td>Service Improvement</td>
<td>None identified</td>
<td>None Identified</td>
</tr>
<tr>
<td>Growth</td>
<td>None identified</td>
<td>None Identified</td>
</tr>
</tbody>
</table>

B. Scenario Two: Maintain Current LOS

The cost to maintain current LOS are summarized in Table 3.10. This approach forecasts the lifecycle activities that are required to maintain the current performance of the LOS metrics. The analysis considers the current age and condition of assets along with the expected useful life age triggers for rehabilitation and replacement activities to forecast the funding requirements into the future. The analysis of the facility component incorporates the calculation of the reinvestment rate, which is derived from an evaluation of the facility’s current condition using the FCI. This approach ensures that the determined reinvestment rate aligns with best practices for maintaining museum-type facilities.

Furthermore, the calculation of required investments is specifically aimed at maintaining the existing condition of the museum facility, ensuring its continued state of good repair. These calculated expenditure requirements are then compared to planned funding identified in scenario one to determine if infrastructure gaps exist.

Based on this analysis, Table 3.10 identifies a cumulative 10-year infrastructure gap of $7.3 million if ML is to maintain current LOS.

Table 3.10 Scenario Two - Average Annual Cost to Maintain Current LOS ($Thousands)

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Planned Funding</th>
<th>Additional Reserve Fund Drawdown</th>
<th>Cost to Maintain Current LOS</th>
<th>Maintain Current LOS Infrastructure Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Budget</td>
<td>3,479</td>
<td>None identified</td>
<td>3,479</td>
<td>None identified</td>
</tr>
<tr>
<td>Renewal, Replacement, Rehabilitation, Disposal</td>
<td>403</td>
<td>None identified</td>
<td>1,136</td>
<td>733</td>
</tr>
<tr>
<td>Service Improvement</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
</tr>
<tr>
<td>Growth Activities</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
</tr>
</tbody>
</table>
## C. Scenario Three: Achieve Proposed LOS

The cost to achieve proposed LOS are summarized in Table 3.11. This scenario forecasts the enhanced lifecycle and service improvement activities that are required to achieve the proposed LOS based VFA facility management professional assessment, which is inclusive of the 2024-2027 MYB business Case #P-70 – Museum London Elevator Upgrades.

The business case highlights the urgent need for elevator retrofitting, as original 1978 equipment is outdated and beyond repair, with skilled service personnel increasingly hard to find.

The modernization is crucial for ensuring the reliability, safety, accessibility, and code compliance of the facility, and underscoring the indispensability of functioning elevators for core museum functions and services.

Table 3.11 forecasts a cumulative 10-year infrastructure gap of approximately $11.4 million if ML is to achieve proposed LOS. This amount is inclusive of the 10-year infrastructure gap to maintain current LOS.

### Table 3.11 Scenario Three - Average Annual Cost to Achieve Proposed LOS ($Thousands)

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Planned Funding</th>
<th>Additional Reserve Fund Drawdown</th>
<th>Cost to Maintain Current LOS</th>
<th>Incremental Cost to Achieve Proposed LOS(^2)</th>
<th>Achieve Proposed LOS Infrastructure Gap(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Budget</td>
<td>3,479</td>
<td>None identified</td>
<td>3,479</td>
<td>None identified</td>
<td>None identified</td>
</tr>
<tr>
<td>Renewal, Replacement, Rehabilitation, Disposal</td>
<td>403</td>
<td>None identified</td>
<td>1,136</td>
<td>411</td>
<td>1,144</td>
</tr>
<tr>
<td>Service Improvement</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
</tr>
<tr>
<td>Growth Activities</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
<td>None identified</td>
</tr>
</tbody>
</table>

\(^2\)Incremental investment to achieve proposed LOS considers requirements to enhance the current condition and 2024-2027 MYB business cases 70.

\(^3\)Infrastructure gap to achieve proposed LOS is inclusive of maintain current LOS infrastructure gap and incremental investment to achieve proposed LOS.
3.4: Forecasted Infrastructure Gaps and Financing Strategy

3.4.1: Forecasted Infrastructure Gaps

The infrastructure gaps are a dollar amount based on the difference between:

- the amount of money that needs to be spent on ML assets required to provide services, and
- the amount of funding presently identified in budgets and reserve funds over a 10-year period (2023-2032).

In other words, what ML plans to spend versus what the assets need. Ideally, the infrastructure gaps decline over time as greater investments are made to replace older infrastructure, to improve the condition of infrastructure and to minimize the risks associated with failing assets and insufficient asset compliments.

ML identified infrastructure gaps are summarized below in Table 3.12 and illustrated in Figure 3.4. Over the 10-year analysis period, the cumulative maintain current LOS and achieve proposed LOS infrastructure gaps are expected to be $7.3 million and $11.4 million, respectively.

The gap to maintain current LOS is 12.9% of ML’s $56.8 million infrastructure replacement value of the capital funded assets. ML facility pressures are the primary contributor to the gap. These needs include rehabilitation and replacement of existing infrastructure systems.

Rehabilitation and replacement investments are based on VFA Facilities Management software, review, and critiquing consultant assessments, and considering industry best practices to maintain the facility’s current condition.

The incremental gap to achieve proposed LOS is 7.2% of ML’s infrastructure replacement value (combined gaps represent 20.1% of replacement value). This amount represents investments to complete all identified VFA Facilities Management software rehabilitation and replacement activities, which is inclusive of the elevators’ replacements contained within ML 2024-2027 MYB business case #P-70 – Museum London Elevators Upgrade.

Table 3.12 Average Annual Budget and Gap Analysis ($Thousands)

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Planned Funding</th>
<th>Reserve Fund Availability</th>
<th>Investment to Maintain Current LOS</th>
<th>Incremental Investment to Achieve Proposed LOS</th>
<th>Infrastructure Gap to Maintain Current LOS</th>
<th>Infrastructure Gap to Achieve Proposed LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Museum London</td>
<td>403</td>
<td>None identified</td>
<td>1,136</td>
<td>411</td>
<td>733</td>
<td>1,144</td>
</tr>
</tbody>
</table>
3.4.2: Infrastructure Gap Financing Strategy

At present, Canada lacks a defined standard or guidance for assessing the acceptability of municipal infrastructure gaps. Nevertheless, the fundamental objective of asset management is that ML actions are collectively (both financial and non-financial) anticipated to tackle the growth in projected infrastructure gaps.

Typically, the infrastructure gap financing strategies support this objective by setting out the approach to ensuring that appropriate funds are available to support the delivery of infrastructure dependent services. This is done by completing the AMP well in advance of the multi-year budgeting process so that its results help inform the requested operating and capital budgets. However, due to lagging impacts of the pandemic, the AMPs for all the City’s agencies, boards, and commissions were delayed post 2024-2027 MYB development. As such this infrastructure gap financing strategy does not present alternative financing options. In replacement of alternative financing strategies, in 2025, this AMP will be updated and reported to ML Board of Directors and City Council based on the approved 2024-2027 MYB and 2025 annual budget update.
3.5: Discussion
3.5.1: Lifecycle Management Scenarios
The lifecycle management section included three scenarios – planned budget, maintain current LOS, and achieve proposed LOS.

Scenario One planned budget is identified to have constraints on ML’s capacity to effectively maintain infrastructure. This leads to a deterioration in asset condition. This decline might not be immediate but, over time, it becomes more visible to the public, causes operating problems, increases the operating and maintenance costs, and leads to higher repair or replacement costs in the future.

Scenario Two maintain current LOS funding greater than what is currently allocated, illustrating the financial strain of maintaining a healthy asset portfolio and ML services. This scenario acknowledges the need for continual investment in assets to maintain their current state, eliminating the degradation in LOS that would result from the first scenario.

Scenario Three achieve proposed LOS represents improvements aligning with facility needs. This level of funding is greater than both the planned budget and the one needed to maintain current LOS. The advantages of this approach are the continued operation of ML with enhancement of asset conditions, and potential long term cost savings.

These three scenarios result in different LOS depending on the funding provided for asset lifecycle renewal and service improvement actions. Thus, the choices made will have an implication for asset condition and ML operational effectiveness.

3.5.2: Current and Future Challenges
General
ML faces dynamic opportunities and challenges that impact service delivery and infrastructure. For example, some of these conditions and trends include:

- Economic (e.g., budget pressures/inflation, post pandemic industry recovery)
- Organizational (e.g., recruitment and retention of staff, continued quest/community engagement and partnerships)
- Technology (e.g. operational continuity, interactive technology, spatial constraints, art, and artifact security)
- Cultural and Social (e.g., Cultural representation, diversity, community engagement, ethics, education)
- Operational (e.g., Funding, staffing, visitor engagement, conservation, space management)
- Political/Legal (e.g., multi-tier governmental, regulatory compliance, intellectual property)
- Environmental (e.g., sustainability, climate change)

To help navigate these factors the ML 2023-2027 Strategic Plan provides a framework for the development of proactive, leading-edge strategies designed to ensure the changing needs of our community and supported through meaningful engagement and collaboration, investment in our people and infrastructure, and effective and efficient service delivery.

The following commentary summarizes the main current and future challenges impact infrastructure needs and costs.

Pandemic Disruption and Inflation
Pandemic disruption greatly impacted ML operations. ML was closed for much of 2020, 2021, and for part of 2022. In addition to impacting the delivery of programs and services, this impacted the Museum’s earned revenue. As we emerged from the pandemic, inflationary pressures beyond those accounted
for within the 2020-2023 MYB and associated 10-year capital plans started developing in 2021 and continued throughout 2022 and into 2023 due to COVID-19 induced supply chain disruptions and supply-demand imbalances. As of 2023, these higher input costs have been incorporated into the 2024 ML AMP and are a material component of the infrastructure replacement values and 10-year infrastructure gaps reported. These capital financing pressures represent a significant risk to the condition and LOS associated with ML infrastructure assets.

**Technology**
Adapting to the digital era, ML is integrating hybrid experiences into its offerings for exhibitions, public access to collections, for education programs, and for online registration and sales. Virtual tours and live-streamed events have been introduced to complement in-person visits, providing broader access to the museum’s collections and programs and to reach an audience beyond London. This strategic direction necessitates upgrading the museum’s infrastructure, including advanced equipment and technologies, to accommodate the new digital interfaces and to securely store digital assets. Deploying new tools to collect and analyze audience data is essential to make the museum more responsive. Enhancements to visitor experience on-site are prioritized to ensure that they are meaningful and encourage repeat visits. Furthermore, ML is creating participatory opportunities and enriching experiences, both onsite and online, reflecting its dedication to innovation, inclusivity, and the essential enhancement of engagement through digital platforms.

**Climate Change**
In 2019, London City Council declared a climate emergency at the urgent of the community.

ML has adopted ‘respect for nature’ as a core value and is proud to show that sustainability and the arts go hand-in-hand. Through ML membership in Green Economy London, ML is committed to measuring, publicly reporting, and setting reduction targets related to environmental stewardship. Future AMP analysis could include facilities energy efficiency and GHG reduction investments (i.e., green for like lifecycle renewal and green service improvement costs) and analyzing energy reduction measures identified in the 2023-2027 Strategic Plan.

**Aging Infrastructure**
Like most Canadian municipalities, City of London and ML owns and maintains aging infrastructure. In the case of ML, this is most materially representative in the facility itself which is approximately 43-years old. Facilities this age often need substantial capital investments to maintain their condition and operational functionality within the context of providing a welcoming environment and for ML, maintaining precision environmental controls to safeguard art and artifact collections in the Museum’s care, and other artworks and exhibitions borrowed from galleries and museums across the country. For example, this could include replacing many building elements such as the roof, and repairing and updating mechanical, electrical, and plumbing systems. This is illustrated in the 2024-2027 MYB business case #P-70 for elevator upgrades. ML needs to continuously monitor design aesthetics to assess if modern service delivery needs are being met.
**Sustainable Operation and Resilience**
ML is investing in operational sustainability and resilience, focusing on preserving assets, maximizing the use of our existing facility and grounds, and attracting and retaining talent. The commitment to fostering strong funder relationships and cultivating new streams of earned revenue is supported by a five-year plan to embed a philanthropic culture, reorient organizational structure, and optimize infrastructure for improved space utilization and revenue targets.

**Cultural**
ML faces cultural challenges including ensuring the relevance of its collections and programs in the context of contemporary societal issues and the changing needs and expectations of a diverse community. These challenges require an approach that highlights connections between art, history, and present cultural, social, environmental, and economic concerns. A strategic direction is in place to launch interdisciplinary initiatives to showcase these interconnections, aiming to enhance audience engagement by emphasizing the interrelationships among various cultural expressions. This strategy is supported by a commitment to developing interpretive strategies and collaborative programs aligned with the changing cultural landscape, both nationally and internationally. ML may need to invest in upgrading its building and infrastructure on the grounds, equipment, and furniture, supporting interactive and flexible exhibits with adaptable infrastructure, advanced technological tools, and modular furniture, to enhance audience engagement and diversifying exhibits.

**Growth**
London is experiencing steady to above average population and employment growth. This growth requires enhanced city-wide services and expands the capacity requirements for cultural and heritage institutions, prompting required investments in the development or improvement of cultural infrastructure. While ML is not listed in the 2021 Development Charges Background Study, the City’s ongoing expansion signals a ripe opportunity for ML to further establish itself as a key cultural destination. As such evaluating ML’s future infrastructure and programming needs inclusive of the City’s growth could identify and warrant other funding considerations.

**3.6: Conclusion**
Valued at over $57 million, ML assets are overall in Fair condition, indicating that historically there has been sufficient investment in sustaining these assets to maintain the current LOS. However, to maintain current LOS and achieve proposed LOS additional investments are required, with preliminary calculations at approximately $7.3 million and additional $4.1 million, respectively, over 10-years (2023-2032). It is also noted that if supply chain issues and rising costs continue, the timely rehabilitation, replacement, and acquisition of ML assets will be in jeopardy and could result in degradation of the services ultimately delivered, undermine the capacity of ML to earn revenue from various streams, and importantly, risks the safety of the valuable and culturally significant collections that ML holds in trust for the public. Table 3.13 presents the summary of the State of Local Infrastructure, Infrastructure Gap, and Reinvestment Rates for ML assets.
Table 3.13 Summary of the State of Local Infrastructure, Infrastructure Gap, and Reinvestment Rates (Millions)

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Replacement Value</th>
<th>Current Condition</th>
<th>Infrastructure Gap Maintain Current LOS</th>
<th>Infrastructure Gap Achieve Proposed LOS</th>
<th>Current Annual Reinvestment Rate</th>
<th>Recommended Annual Reinvestment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Museum London</td>
<td>$57.56</td>
<td>Fair</td>
<td>$7.3</td>
<td>$11.4</td>
<td>0.7%</td>
<td>2.0% - 2.7%</td>
</tr>
</tbody>
</table>

Reliability and Accuracy Commentary

Figure 3.5 visually presents ML and CAM staff assessment of this AMP’s data reliability and accuracy with supporting commentary following. In summary this assessment rates data reliability and data accuracy as moderate.

Figure 3.5 Accuracy Reliability Scale

Based on the materiality of assets, key rating considerations and conclusions are:

- Facilities valuation and needs is based on VFA information and corroborated with Altus Group standard costing. However, full implementation of VFA Facilities Management software within operations is undergoing a phased approach, which was not complete at the point of AMP completion.

- Furniture and Equipment inventories are an amalgamation of data sources. Majority of valuation, condition, and investment actuals and forecasts are primarily based on expert opinion. Further processes, systems, and controls are required to improve these data sets.

These ratings are consistent with many City of London service areas. To improve these ratings, a review of systems and processes that support ML asset registries is recommended over the 2024-2027 MYB and beyond. Such investments will raise the reliability and accuracy of the data, noting the long-term goal is to have all asset registries within advanced asset management focused software applications.

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4 Source: Reinvestment rates based on investment to maintain current LOS and achieve proposed LOS (net of select assets funded from operating budget).
Section 4. Conclusion and Recommendations
4.1: Conclusions

4.1.1: Key Findings

ML infrastructure systems are integral to the Museum’s ability to serve the community through cultural and educational programs, and its ability to preserve, interpret, and activate its expansive art and history collections. ML infrastructure systems play a key role in achieving ML 2023-2027 Strategic Plan objectives and goals.

This AMP is a strategic document that describes the state of ML’s infrastructure and the approach to managing assets over their lifecycle to maintain current LOS and achieve approved LOS at the lowest lifecycle cost possible. It was produced through extensive efforts of ML and City CAM staff leveraging the City’s CAM Policy and Program as well as knowledge gained from the City’s 2014, 2019, 2023 AMPs. Over time, each successive AMP will play a larger role in informing infrastructure and service decision-making.

The key findings of the AMP are:

- There is $57.6 million worth of infrastructure under the direct ownership and control of ML. This infrastructure represents a diverse array of assets including the museum facility, furniture, and equipment.
- The overall condition of ML assets is rated as Fair, primarily due to the fair condition of the museum facility. In contrast, the condition of ML furniture and equipment is overall rated as Good.
- Fair condition indicates that the infrastructure shows general signs of deterioration and requires attention, some elements exhibit significant deficiencies. In the context of ML, who must maintain precision control over temperature and relative humidity to safeguard collections and exhibitions, this poses a risk.
- Asset lifecycle renewal is financed through Capital ($56.8 million for facility and systems) and Operating budgets ($755,000 for furniture and equipment).
- Based on the existing ML planned funding, the 10-year maintain current LOS infrastructure gap is approximately $7.3 million and the 10-year achieve proposed LOS infrastructure gap is approximately $11.4 million.
- Through the 2024-2027 MYB a portion of this gap has been approved for funding by the ML Board, however, at the time of writing this AMP this budget is currently being deliberated by City of London Council.
- Future AMPs will be brought forward to align with the development of MYBs and will present financing strategies to mitigate remaining infrastructure gaps annual growth while balancing the impact of tax and non-tax affordability on the community.

4.1.2: Ontario Regulations 588/17 Compliance

O. Reg 588/17 has a phased approach with two timelines of July 1, 2024, and July 1, 2025, that are applicable to the City’s agencies, boards, and commissions (ABCs). The July 1, 2024, timeline is where all City infrastructure assets, including those of ABCs, will have an AMP documenting maintain current LOS and financial strategies to fund these expenditures. The final deadline of July 1, 2025, builds on the July 1, 2024, deadline with the additional requirement to document achieve proposed LOS and financial strategies to fund these expenditures for all types of municipal infrastructure assets.

This AMP is compliant with the July 1, 2024, and July 1, 2025, O.Reg. 588/17 requirements. A detailed reconciliation of this AMP’s compliance with the O. Reg. 588/17 requirements is
4.2: Recommendations

The City’s CAM Program is founded on the principle of continuous improvement with the object of increasing line-of-sight quality of data/information and the tools and techniques that are used to inform services and asset management decision-making. This increased quality will lead to greater confidence in the analysis documented and decisions formed through the AMP.

Based on these objectives, Table 4.1 recommendations will ensure that this process and AMP continues to help ML manage its $57.6 million asset portfolio to provide affordable and sustainable service delivery and keep compliant with the regulatory requirements. These recommendations are structured to address short- and long-term objectives and are categorized according to distinct asset management knowledge areas, considering the current state, future needs, and overall ML strategic objectives and goals.

Short term objectives are those that are recommended for completion over the 2024-2027 MYB period. Long term objectives are those that are recommended for completion beyond the 2024-2027 MYB period. Each of these recommendations will be completed with leading support from the City’s CAM staff per the approved asset management service level agreement. They will be pursued utilizing existing staff, other resources, and budgets to the fullest extent feasible.

Table 4.1 2024 ML AMP Recommendations

<table>
<thead>
<tr>
<th>Category</th>
<th>Improvement Initiative details</th>
<th>Key Benefits</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Inventory/ Knowledge</td>
<td>Enhance data attributes and data accuracy of existing asset registries (asset inventory databases).</td>
<td>• Provides a sound basis for decision making on the asset base and enables more efficient reporting.</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>By asset type, develop a standardized methodology for determining asset conditions.</td>
<td>• Enables consistency of asset management practices across ML assets and improves decision-making.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Level of Service</td>
<td>Develop more asset related LOS metrics and their performance targets.</td>
<td>• Ensuring the consistent delivery of services at expected standards, thereby aligning operational performance with customer expectations and strategic objectives.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Lifecycle Management and Decision</td>
<td>Develop and implement investment strategies for ML infrastructure based on asset registries and strategic plans.</td>
<td>• Lifecycle cost saving, better focused investment planning and more informed decision-making.</td>
<td>Short Term</td>
</tr>
<tr>
<td>Category</td>
<td>Improvement Initiative details</td>
<td>Key Benefits</td>
<td>Time Period</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Making</td>
<td>Incorporate and align the AMP into ML strategic planning exercises to better reflect asset and service delivery capability.</td>
<td>• Strategic plans developed on a sound basis reflecting the actual capability of the asset base and required capital investments to achieve desired LOS.</td>
<td>Long Term</td>
</tr>
<tr>
<td></td>
<td>Develop and implement a Maintenance Management Strategy incorporating enhanced maintenance practices.</td>
<td>• Lifecycle cost savings, and productivity and LOS improvements.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Risk Management</td>
<td>Enhance ML asset risk framework in line with the City’s CAM Risk Management Strategy.</td>
<td>• Better targeted asset interventions. • Increased ability to sustain service levels.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Improve infrastructure funding through appropriate alignment of operating and capital budgets.</td>
<td>• Clarity in financial planning and reporting. • Enhanced investment strategies.</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Explore opportunities to address the infrastructure gap through various financing strategies.</td>
<td>• Achieve service and financial sustainability.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Systems and Technology</td>
<td>Leveraging either City or ML software solutions, implement centralized asset registry technology.</td>
<td>• Implementation will streamline asset management, enhancing operational efficiency, decision-making accuracy, and compliance.</td>
<td>Long Term</td>
</tr>
<tr>
<td>People and Staff</td>
<td>Enhance asset management governance within each ML service area.</td>
<td>• Enhances oversight of asset interventions and reporting.</td>
<td>Long Term</td>
</tr>
<tr>
<td></td>
<td>Add asset management duties in relevant positions job description.</td>
<td>• Proactive identification of staff, skills, and qualifications. • Improved asset management.</td>
<td>Long Term</td>
</tr>
<tr>
<td>Monitoring and Reporting</td>
<td>Develop a comprehensive AMP every 4-years aligned with the City’s multi-year budget process.</td>
<td>• Informed budget decision-making. • Regulatory compliance.</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Annually review the progress of this AMP. The annual progress review will address implementation of the recommendations and any factors impeding completion progress.</td>
<td>• Regulatory compliance.</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>With the support of City CAM staff, when possible, incorporate infrastructure related data and public feedback opportunities in existing ML public engagement practices.</td>
<td>• Enhanced adaptability to changing operational environments and community needs. • Improved customer satisfaction and engagement. • Increased efficiency and effectiveness in asset management operations.</td>
<td>Short Term</td>
</tr>
</tbody>
</table>
Appendix A. O.Reg.588/17 Asset Management Plan Requirements
## A1. O.Reg.588/17 Asset Management Plan Compliance Reconciliation

### Table A1.1 O.Reg.588/17 July 1, 2024, Requirements

<table>
<thead>
<tr>
<th>O.Reg.588/17 Section</th>
<th>Requirement</th>
<th>Mapping to AMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Summary of assets in each category</td>
<td>Sections - #3.1.1</td>
</tr>
<tr>
<td>5.(2) 3.</td>
<td>Replacement cost of assets in each category</td>
<td>Sections - #3.1.1</td>
</tr>
<tr>
<td>5.(2) 3.</td>
<td>Average age of assets in each category</td>
<td>Sections - #3.1.2</td>
</tr>
<tr>
<td>5.(2) 3.</td>
<td>Condition of assets in each category</td>
<td>Sections - #3.1.3</td>
</tr>
<tr>
<td>5.(2) 3.</td>
<td>Description of municipality's approach to assessing condition of assets in each category</td>
<td>Sections - #3.1.3</td>
</tr>
<tr>
<td>5.(2) 1.</td>
<td>Current levels of service</td>
<td>Sections - #3.2.1 and #3.2.2</td>
</tr>
<tr>
<td>5.(2) 2.</td>
<td>Current performance measures of assets in each category based on established metrics</td>
<td>Sections - #3.2.1 and #3.2.2</td>
</tr>
<tr>
<td>5.(2) 4.</td>
<td>Lifecycle activities needed to maintain current levels of service for 10 years</td>
<td>Sections - #3.3.2</td>
</tr>
<tr>
<td>5.(2) 4.</td>
<td>Costs of providing lifecycle activities needed to maintain current LOS, based on assessment of lifecycle, options, risks, lower cost</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>5.(2) 4.</td>
<td>Link or description of assessment of current LOS lifecycle, options, risks, lower cost</td>
<td>Sections - #3.3.2</td>
</tr>
<tr>
<td>5.(2) 5.</td>
<td>For population &lt;25K, description of population or economic forecast assumptions, and how these connect to lifecycle cost projections for current LOS</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5.(2) 6.i.</td>
<td>For population 25K or more, population and employment forecasts</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5.(2) 6.ii.</td>
<td>For population 25K or more, lower tier in Greater Golden Horseshoe (GGH), Sched 7 or portion of upper tier growth plan forecast, or assumptions</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5.(2) 6.iii.</td>
<td>For population 25K or more, upper/single tier outside GGH, population and employment forecasts, or assumptions</td>
<td>See City of London 2023 CAM Plan[^5]</td>
</tr>
<tr>
<td>5.(2) 6.iv.</td>
<td>For population 25K or more, lower tier outside GGH, portion of upper tier growth plan forecast</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>5.(2) 6.vi.</td>
<td>For population 25K or more, capital, and significant operating costs for each of 10 years, to maintain LOS to accommodate increase in demand cause by growth</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>7.(1)</td>
<td>Date of review and update of AMP - within 5 years</td>
<td>Include once finalized</td>
</tr>
<tr>
<td>8.</td>
<td>Endorsement of AMP by executive lead</td>
<td>Include once finalized</td>
</tr>
<tr>
<td>8.</td>
<td>Approval of AMP by municipal Council resolution</td>
<td>Include once finalized</td>
</tr>
<tr>
<td>9.(1)</td>
<td>Date of municipal Council review of AM progress - before July 1, every year</td>
<td>Include once finalized</td>
</tr>
<tr>
<td>9.(2)</td>
<td>Annual municipal Council review includes progress, factors impeding implementation, strategy to address factors</td>
<td>Include once finalized</td>
</tr>
<tr>
<td>10</td>
<td>Website availability of policy and AMP, copy provided if requested</td>
<td>Include once finalized</td>
</tr>
</tbody>
</table>

Table A1.2 O.Reg.588/17 July 1, 2025, Requirements

<table>
<thead>
<tr>
<th>O.Reg.588/17 Section</th>
<th>Requirement</th>
<th>Mapping to AMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.(1) 1.</td>
<td>Proposed levels of service for each of 10 years</td>
<td>Sections - #3.2.1</td>
</tr>
<tr>
<td>6.(1) 2.</td>
<td>Explanation of why proposed LOS are appropriate, based on options, delta, achievability, affordability</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 2.</td>
<td>Link or description of assessment of proposed LOS options, delta, achievability, affordability</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 3.</td>
<td>Proposed performance measures of assets based on metrics established by the municipality (e.g., measures for energy usage, operating efficiency, etc.)</td>
<td>Sections - #3.2</td>
</tr>
<tr>
<td>6.(1) 4.</td>
<td>Lifecycle management strategy: Identification of lifecycle activities needed to provide proposed levels of service for a 10-year period, based on assessment of full lifecycle, options, risks, lowest cost</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 4. i.</td>
<td>Link or description of assessment of proposed LOS lifecycle, options, risks, lower cost</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 4. ii.</td>
<td>An estimate of annual costs for undertaking identified lifecycle activities over a 10-year period.</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 4. iii.</td>
<td>Projections for annual funding to be available to undertake identified lifecycle activities over a 10-year period</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 4. iii.</td>
<td>Explanation of the options examined to maximize the funding projected to be available</td>
<td>Sections - #3.3.3, #3.4.1</td>
</tr>
<tr>
<td>6.(1) 4. iv.</td>
<td>Identification of funding shortfalls for lifecycle activities over a 10-year period</td>
<td>Sections - #3.4.1</td>
</tr>
<tr>
<td>6.(1) 4. iv.</td>
<td>Identification of lifecycle activities that will be undertaken if there is a shortfall</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 4. iv.</td>
<td>Explanation of how risks associated with not undertaking any of the lifecycle activities will be managed.</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 5.</td>
<td>For population &lt;25K, description of population or economic forecast assumptions, and how these connect to lifecycle cost projections for proposed LOS</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>6.(1) 6.</td>
<td>For population 25K or more, capital, and significant operating costs for each of 10 years, to achieve proposed LOS to accommodate increase in demand caused by growth</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 6. ii.</td>
<td>For population 25K or more, funding projected to be available, by source, due to growth</td>
<td>Sections - #3.3.3</td>
</tr>
<tr>
<td>6.(1) 6. iii.</td>
<td>For population 25K or more, overview of the risks associated with implementation of the AMP</td>
<td>Sections - #3.5</td>
</tr>
<tr>
<td>6.(1) 7.</td>
<td>Explanation of other key assumptions</td>
<td>Sections - #2.4</td>
</tr>
</tbody>
</table>
Glossary

Definitions

Achieve Proposed Levels of Service: is defined as the strategic initiatives undertaken by an organization to modify its service levels represented in a new proposed standard of service provision. This could involve modifying the condition, scope, or accessibility of the services beyond their current levels, based on strategic goals (e.g., Regulation Requirements, Master Plans or Strategic Plan Targets). The achievement of these proposed service levels may require changes in frequency and/or scope of asset lifecycle activities.

Asset: Non-financial assets having physical substance that are acquired, constructed, or developed and:

- are held for use in the production or supply of goods and services for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other tangible assets;
- have useful economic lives extending beyond an accounting period of one year;
- are to be used on a continuing basis; and
- are not for resale in the ordinary course of operations.

For the ML, capital assets have the following characteristics:

- Beneficial ownership and control clearly rests with ML, and
- The asset is utilized to achieve ML plans, objectives, and services with the intention of being used on a continuous basis and is not intended for sale in the ordinary course of business.

Asset Management: is an integrated approach, involving all organization departments, to effectively manage existing and new assets to deliver services to customers. The intent is to maximize benefits, reduce risks and provide satisfactory levels of service to the community in a sustainable manner.

AMP: ML Asset Management Plan which combines multi-disciplinary management techniques (technical and financial) over the life cycle of infrastructure assets to provide a specific level of service in the most cost effective manner and manage risks associated with municipal infrastructure assets. This typically includes plans to invest, design, construct, acquire, operate, maintain, renew, replace, and decommission assets.

CAM Program: A set of interrelated or interacting components of the City and its agencies, boards, and commissions that establishes asset management policies and objectives and the processes needed to achieve those objectives. An asset management program also includes the organization structure, roles, responsibilities, business processes, plans, and operations of asset management practices.

Capitalization Threshold: The threshold represents the minimum cost an individual asset must have before it is to be recorded as a capital asset on the statement of financial position.

City: The Corporation of the City of London.

Consequence of Failure: A measure of the direct and indirect impacts on the city in the event of an asset failure.

Core Municipal Infrastructure Asset: Defined by O.Reg 588/17, any municipal infrastructure asset that is a, Water asset that relates to the collection, production, treatment, storage, supply or distribution of drinking water; Wastewater asset that relates to the collection, transmission, treatment or disposal of
wastewater, including any wastewater asset that from time to time manages stormwater; Stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater; Road; or Bridge or culvert.

**Critical Asset:** An asset for which the financial, business, or service level consequences of failure are sufficiently severe to justify proactive inspection, rehabilitation, or replacement, and is considered a municipal infrastructure asset.

**Customer:** Any person or entity who from the municipal infrastructure asset or service, is affected by it or has an interest in it either now or in the future.

**Direct Levels of Service:** Levels of service that are most representative of a municipal service and can be costed over a 10-year projected period.

**Green Infrastructure Asset:** Defined by O.Reg. 588/17, means an infrastructure asset consisting of natural or human-made elements that provide ecological and hydrological functions and processes and includes natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs.

**Infrastructure Asset:** All or part of physical structures and associated facilities that form the foundation of development, and by or through which a public service is provided to the city, such as highways, bridges, bicycle paths, drinking water systems, social housing, hospitals, courthouses, and schools, as well as any other thing by or through which a public service is provided to the city.

**Maintain Current Levels of Service:** is defined as the persistent efforts of an organization to manage its assets through comprehensive lifecycle activities and effectively allocating necessary financial resources with the aim of consistently delivering its services at the current established service levels.

**Metrics:** Information than supplements levels of service (whether direct, related, or required under Ontario Regulation 588/17). Considered useful but a lagging indicator, meaning they do not readily provide strategic insight or can be easily costed to a municipal service.

**Municipal Infrastructure Asset:** An infrastructure asset (core and non-core municipal infrastructure assets), including a green infrastructure asset, directly owned by a municipality, or included on the consolidated financial statements of a municipality, but does not include an infrastructure asset that is managed by a joint municipal water board.

**Public:** Residential, commercial, industrial, and institutional partners, and any other party that rely on municipal infrastructure assets.

**Related Levels of Service:** Levels of service that have a causal relationship with direct levels of service but cannot be easily costed over 10-year projected period.

**Replacement Value:** The cost ML would incur to completely replace a municipal infrastructure asset, at a selected point in time, at which a similar level of service would be provided. This definition can also be referred to as ‘Replacement Cost’.

**Tangible Capital Assets (TCA):** A legislative reporting requirement specified by Section PS 3150 in the Public Sector Accounting Board Handbook to identify asset inventories, additions, disposals, and amortization on an annual basis.
Acronyms
ABC: Agencies, Boards, and Commissions
AMP: Asset Management Plan
AODA: Accessibility for Ontarians with Disabilities Act
Board: Museum London Board of Directors
CAM: Corporate Asset Management
CAM Plan: Corporate Asset Management Plan
CEAP: Climate Emergency Action Plan
DC: Development Charges
FCI: Facilities Condition Index
GHG: Green House Gases
IT: Information Technology
kWH/sf: Kilowatt hours per square foot
LCR: Lifecycle Renewal
LOS: Levels of Service
MESL: Maintain Existing Service Levels
m3/sf: Cubic Meters per Square Foot
ML: Museum London
MYB: Multi-Year Budget
O. Reg.: Ontario Regulation
RF: Reserve Fund
RV: Replacement Value
TCA: Tangible Capital Asset
VFA: Facilities Management Software