Asset Management Plan

Town of Caledon

2025

TOWN OF CALEDON

Acronyms

AM	Asset Management
AMP	Asset Management Plan
AODA	*Accessibility for Ontarians with Disabilities Act*
BCI	Bridge Condition Index
CCTV	Closed Circuit Television
CLI ECA	Consolidated Linear Infrastructure Environmental Compliance Approval
DC	Development Charge
EAM	Enterprise Asset Management
EUL	Estimated Useful Life
FCI	Facility Condition Index
GHG	Greenhouse Gas
HVAC	Heating Ventilation Air Conditioning
IIMM	International Infrastructure Management Manual
IT	Information Technology
LID	Low Impact Developments
LOS	Levels of Service
MACP	Manhole Assessment Certification Program
MMS	*Minimum Maintenance Standards for Municipal Highways (O. Reg. 239)*
MTO	Ministry of Transportation Ontario
MTD	Manufactured Treatment Device
NFPA	National Fire Protection Association
NRBCPI	Non-Residential Building Construction Price Index
OCI	Overall Condition Index
OCIF	Ontario Community Infrastructure Fund
O. Reg. 588/17	*Ontario Regulation 588/17*, under the *Infrastructure for Jobs and Prosperity Act (2015)*
OSIM	Ontario Structure Inspection Manual
PACP	Pipeline Assessment Certification Program
PCI	Pavement Condition Index
PM	Preventive Maintenance
RI	Roughness Index
SOGR	State of Good Repair
TCA	Tangible Capital Asset

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For reference, a list of Figures is provided in **Appendix H**, and a list of Tables is provided in **Appendix I**.

Executive Summary

The Town's infrastructure provides the foundation for the economic, social, and environmental health and growth of our community, through the delivery of critical services. The goal of asset management is to deliver services through assets at adequate levels in the most cost-effective manner, while managing risks. This involves the development and implementation of asset management strategies and long-term financial planning.

All municipalities in Ontario are legislatively required to show our asset management planning by publishing and maintaining an asset management plan. Our plan defines:

- The Levels of Service we propose to provide and currently provide,
- The assets we need, the proposed levels of service, and the assets we own now,
- The proposed and current asset lifecycle strategies,
- The costs of doing that work, and
- Recommendations to improve our asset management planning.

This Asset Management Plan covers the assets used for all Town services, categorized into five Service Areas:

- Administration Services,
- Emergency Services,
- Recreation and Culture Services,
- Stormwater Management Services, and
- Transportation Services.

Town assets enable the Town to provide safe, reliable, available, and sustainable services, and specific Levels of Service measures for each Service Area are provided in this Asset Management Plan. The Levels of Service we strive to provide set the strategy on how we manage and plan for assets.

Key asset portfolio facts:

- The total replacement cost of our Town's asset portfolio is $2.69 billion. The distribution of portfolio in terms of replacement values is shown in Figure 1,
- Our Town's current re-investment rate[1] is 1.0%,
- 92.0% of all assets are currently in a State of Good Repair.

1 The re-investment rate is the average annual capital renewal planned in the 2025-2034 Capital Forecast, divided by the total current replacement value of the assets. This is a common industry metric.

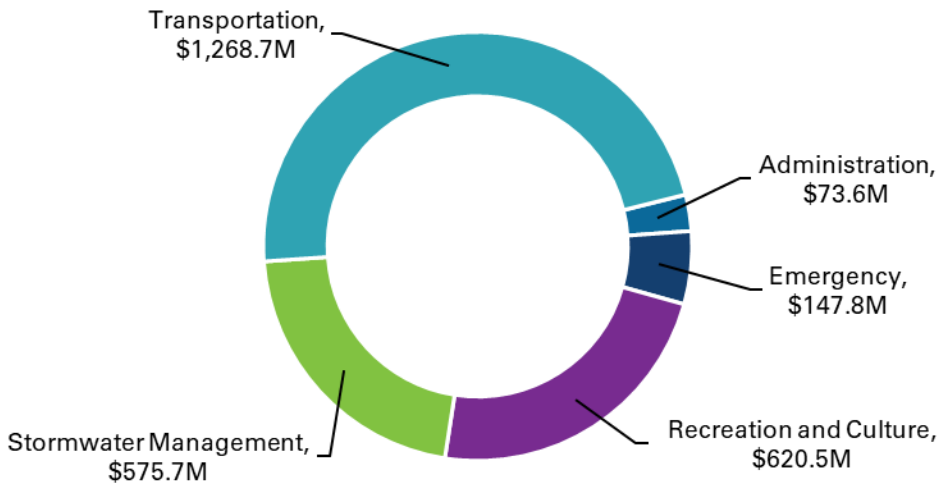


Figure 1 Replacement Values of Assets by Service Area

The range of current condition of all assets is shown in Figure 2.

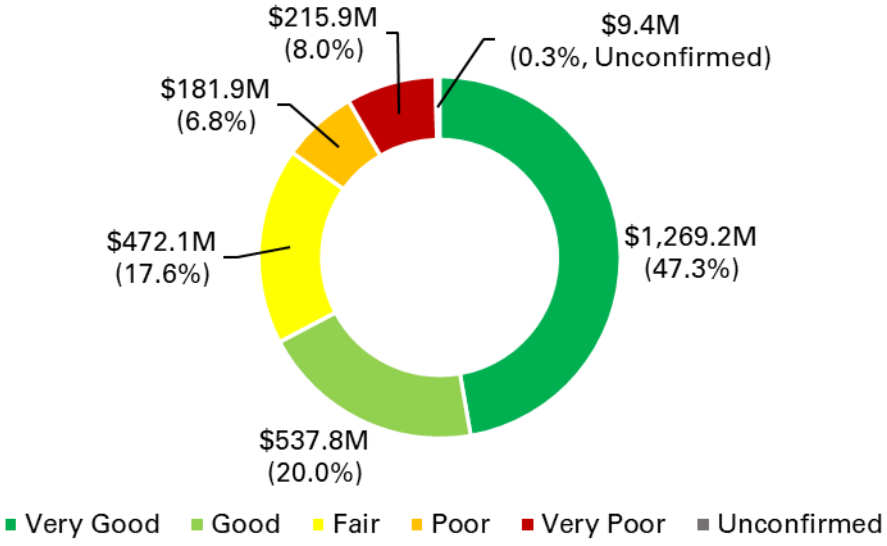


Figure 2 Current Range of Condition of All Town Assets

Overall, to provide the proposed Levels of Service while accommodating for growth, the Town's average annual capital requirement totals $135.6 million. This is required every year for the next ten years to reach the **proposed** Levels of Service while expanding for growth. The Service Area Plans provide details on the capital and operating requirements for the respective assets used in those areas.

Based on the Town's Capital Forecast[2], the Town is likely to spend approximately $93.69 million towards capital projects or reserves per year. As a result, there is currently an annual funding gap of $41.89 million across all Service Areas, to provide the proposed Levels of Service. The breakdown of the needs and gaps is shown in Table 1.

Table 1 Summary of Annual Asset Capital Needs Vs Plans, 2025-2034

Service Area	Investment Need to Provide Proposed LOS	Planned Spend	Gap
Administration	$2.11 M	$1.71 M	$0.40 M
Emergency	$13.88 M	$11.06 M	$2.82 M
Recreation and Culture	$31.18 M	$13.70 M	$17.49 M
Stormwater Management	$3.01 M	$1.48 M	$1.53 M
Transportation	$85.40 M	$65.74 M	$19.66 M
Total	$135.58 M	$93.69 M	$41.89 M

For comparison, the equivalent annual funding gap reported in the 2024 Asset Management Plan was $22.7M, based on a portfolio of $2.65B, and similarly in the 2020 Asset Management Plan was $14.7M, for a portfolio nearly half the current size at $1.34B. The change in valuation is partially due to extensive growth, inflation, and significantly inflated valuations for assets (the cost to replace assets has grown substantially).

The Town has made commendable efforts to maintain and expand asset infrastructure in response to growth, plus the 1% infrastructure levy implemented in 2025 as one method to help address the annual funding gap.

Several options exist to continue to address this gap, including improving accuracy of input data, changing Levels of Service (and subsequent risk), moving budget envelopes between Service Areas, or financial strategies, which are all further described in this report. Full and partial funding options are explored, and the sources of financing and funding assessed are:

- Reserve funds,
- External Funding Sources (e.g. Gas Tax, OCIF),
- Debt, and
- Tax Levy Contributions.

This Asset Management Plan represents a snapshot in time, and a forecast for the next ten years. It is based on the best available processes, data, and information at the Town. We have made significant effort in asset management in the past several years, resulting in a positive culture, growing understanding, synergy between groups, and

2 The 10-year Capital Forecast, 2025-2034, from the approved 2024 Capital Budget which is based on the 2024 proposed 10-year forecast.

improvements in asset data and processes. To build on this success, and based on observations and current state, recommendations have been developed to guide the continuous refinement of our Town's asset management program, focusing on enhancing our understanding of asset management requirements, developing strategies, and implementing enablers. Recommendations are included related to:

- Levels of Service,
- Financial Management,
- Risk Management,
- Lifecycle Management,
- Policy,
- Continuous Improvement,
- Public Engagement,
- Asset Data, and
- Implementation.

Implementation of these recommendations will be prioritized in a systematic way.

The *Asset Management Planning for Municipal Infrastructure* Regulation (*O. Reg. 588/17*) under the *Infrastructure for Jobs and Prosperity Act (2015)*, is the legislation applicable to municipalities that requires asset management policies and plans. With the development of this plan, we have achieved compliance with requirements of *O. Reg. 588/17* that must be completed by July 1, 2025.

For reference:

- Acronyms are listed on Page ii,
- A list of Figures is provided in **Appendix H,**
- A list of Tables is provided in **Appendix I**

Asset ID #45367
Road Segment, Innis Lake Rd.
Road Restoration Project

Introduction

1 Introduction

The Town of Caledon's infrastructure assets provide the foundation upon which we deliver services to enable our residents, businesses, and visitors to live, work, and play in our Town. This 2025 Asset Management Plan (AMP) represents our plan to responsibly manage these and future assets so that we may continue to deliver sustainable services as we grow.

This document was a collaborative effort amongst staff in numerous departments. It describes the rationale used to deliver programs to design, construct, maintain, operate, and renew our Town's assets, striving to strike a balance between:

- Performance / Levels of Service,
- Costs associated with asset ownership, and
- The risks inherent in owning large critical networks of infrastructure.

Significant pressures exist that requires us to be agile, adaptive, resilient, and ensure our assets are reliable, all while being responsive to changing pressures. The pressures are brought on by climate change, evolving regulatory change, increasing service expectations, and growing population and employment demands. It is paramount that every dollar is spent in a manner that derives the best outcome. This can only occur over the longer term if there is a comprehensive and thoughtful plan that contemplates the future as well as guides the present in a disciplined and focused way.

This Asset Management Plan updates and replaces the Town's 2024 Asset Management Plan and is the culmination of efforts from staff involved with multiple aspects of the infrastructure lifecycle, including:

- Corporate Asset Management staff who support and enable the asset management program amongst departments,
- Technical staff who help plan and execute the construction of infrastructure assets,
- Front-line staff who operate and maintain infrastructure assets,
- Finance staff involved with overseeing the capital and operating budget programs, and
- Council and Senior Leadership who authorize key investments and planning at the Town.

The *Asset Management Planning for Municipal Infrastructure* Regulation (*O. Reg. 588/17*) under the *Infrastructure for Jobs and Prosperity Act (2015)*, is the legislation applicable to municipalities that requires asset management policies and plans. With the development of this plan, we have achieved compliance with requirements of *O. Reg. 588/17* that must be completed by July 1, 2025.

This Asset Management Plan is also in alignment with the Town of Caledon Strategic Asset Management Policy (Schedule A to Report 2025-0191).

The Asset Management Plan structure is as follows:

Section 1	Introduction
Section 2	A description of the Town's Asset Management Plan, including scope, public engagement, alignment with key requirements, and plan maintenance.
Section 3	Principles and methods used to prepare this Asset Management Plan.
Section 4	The general overview of inventory and current state of Town assets.
Section 5	Options for financial strategies for the next ten years.
Section 6	An overall discussion of growth and future demand.
Section 7	Maturity assessment and recommendations.
Sections 8-12	Service Area Plans
Appendix	Supporting information for reference or more detail, including definitions and assumptions.

1.1 Purpose

The purpose of this Asset Management Plan is to:

- Conform asset management practices to the Town's Asset Management Policy.
- Describe current and proposed services and service levels achieved through assets, and corresponding asset lifecycle activities.
- Describe the current asset inventory, and the assets that are in a State of Good Repair (SOGR).
- Forecast investments required to provide proposed Levels of Service for the next 10 years, and beyond, as well as to maintain current Levels of Service.
- Quantify gaps between planned spending and forecasted investment needs.
- Provide recommendations regarding enhanced AM Practices.
- Respond to current legislative requirements for asset management and maintain eligibility for funding.

The focus of the Asset Management Plan is not simply about identifying the resources required to meet asset needs, it is also about identifying the processes and strategies that are and can be implemented to improve decision-making outcomes.

1.2 An Overview of Asset Management

Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value taxpayers receive from the asset portfolio.

An AM Policy and Plan are critical to planning and optimizing lifecycle costs, while providing proposed Levels of Service and managing risk.

The AM Policy, which has been updated in 2025 and submitted to Council for approval as part of staff report 2025-0191, describes the rationale to asset management of our Town's municipal infrastructure assets in a way that ensures sound stewardship of public resources while delivering effective customer service. The Policy also identifies the roles and responsibilities of staff who make infrastructure-related decisions to provide a clear governance structure to strive towards implementation of an asset management program at the Town. The AM Policy is a legislated requirement under *O. Reg. 588/17*.

The Asset Management Plan provides a snapshot in time of the current state of municipal infrastructure assets as well as the current strategies in place to assist with planning and decision-making.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% comes from stages along the asset lifecycle, depicted in Figure 3.

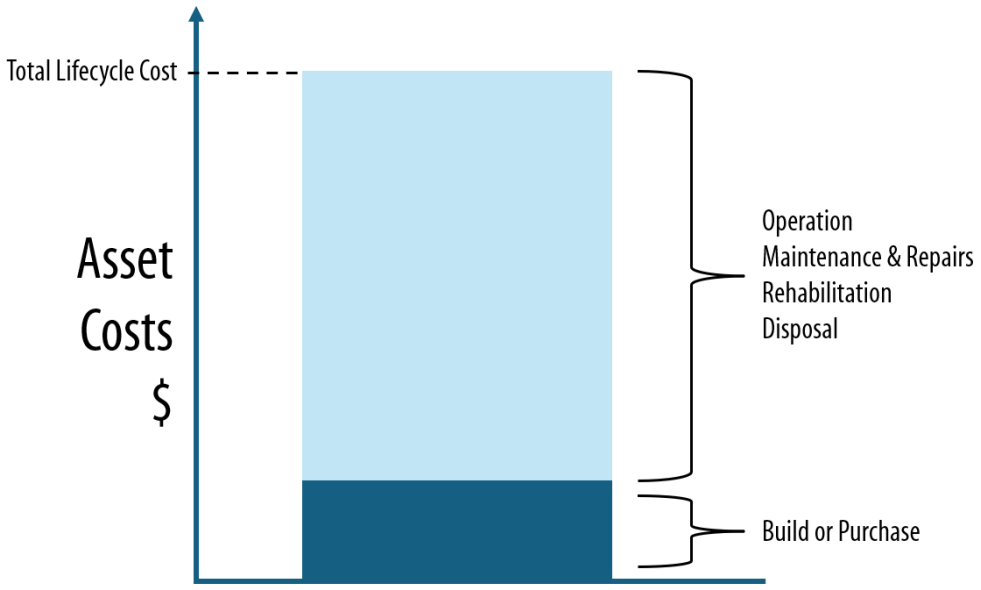


Figure 3 Total Lifecycle Costs

This Asset Management Plan considers all lifecycle costs and focuses detailed analysis on the capital costs to renew existing municipal infrastructure assets. These costs can span decades, requiring planning and foresight to ensure financial responsibility into the future.

1.3 Legislation

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, the Ontario government introduced *O. Reg 588/17*. The regulation continues to be a key driver of asset management planning and reporting, placing substantial emphasis on current and proposed Levels of Service and the lifecycle costs incurred in delivering them. The regulation was adopted by the provincial government to promote standardization and consistency in municipal asset management[3].

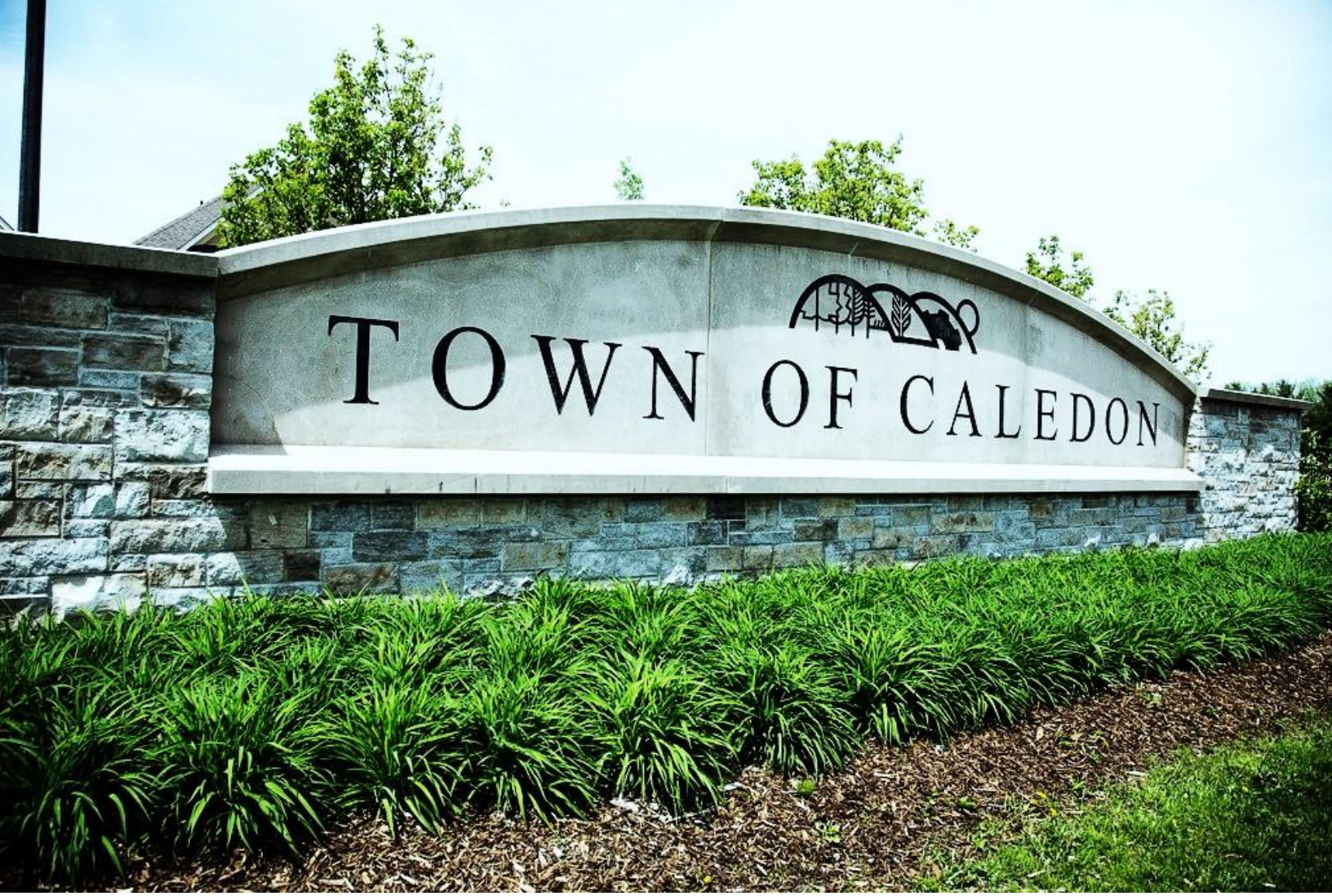
As of January 2018, this regulation required any municipality that is seeking provincial funding for projects to demonstrate how projects fit within an asset management plan in order to ensure that resources are allocated to projects that are of critical importance to the long-term planning of the municipality. This also ensures that provincial infrastructure funding will be conditional on if municipalities have already explored all available financing and revenue generation options and that municipal infrastructure is following all relevant legislative requirements.

See **Appendix C** for the reconciliation of the Town Asset Management Plan against the legislative requirements.

1.4 Limitations

Several limitations related to the preparation of this Asset Management Plan are noted. As available, field condition assessment data was used to determine both the state of assets and develop the financial strategies. However, in the absence of observed data, age of assets was used to estimate their physical condition. Inflation measures are not included except when considering historical costs. While a reasonable approximation, the use of such multipliers may not be reflective of market prices and may over or understate the value of a Town's infrastructure portfolio and the resulting capital requirements. Calculations and recommendations will reflect the best available data at the time this Asset Management Plan was developed. Asset data is based on inventory data from 2023, consultation with Town staff, and other Town publications. Supporting documents and reports that were approved at the initiation of the project.

3 https://www.torontomu.ca/content/dam/bruce-fellowship/policybriefs/Andre_Setoodeh_Policy_Brief_Dec21.pdf



The Caledon Approach

2 The Caledon Approach

2.1 Key Insights

This section describes the scope and context of the Asset Management Plan at the Town.

This Asset Management Plan covers the assets used for all Town services, categorized into five Service Areas:

- Administration Services,
- Emergency Services,
- Recreation and Culture Services,
- Stormwater Management Services, and
- Transportation Services.

The Asset Management Plan builds on the 2024 Asset Management Plan and is structured to align with the AM Policy and asset management legislation.

Public input is considered in the Town's asset management.

2.2 Scope

This Asset Management Plan covers the assets used for all of the Town's services, categorized into five Service Areas:

- Administration Services,
- Emergency Services,
- Recreation and Culture Services,
- Stormwater Management Services, and
- Transportation Services.

It provides a summary of the services we provide, the assets needed, and the activities and financial needs for these assets for the next ten years, 2025-2034.

Asset data is based on inventory data from 2023, consultation with Town staff, and other Town publications. For consistency and comparability, asset information is organized by asset class. The classes of assets used across the Service Areas are:

- Amenities,
- Bridges & Culverts,
- (Small culverts (to which OSIM is not applicable) are not included in this Asset Management Plan, and Town staff are working to continue developing inventory information for non-OSIM culverts),
- Collections – Library,
- Buildings,
- Equipment,
- Fleet,
- Information Technology & Communications,
- Linear & ROW Infrastructure,
- Parks & Other Land, and
- Stormwater Management Facilities.

This Asset Management Plan complies with requirements prescribed by *O. Reg. 588/17* and aligns with our Town's Strategic Asset Management Policy. The plan:

- Incorporates all infrastructure assets owned and operated by the Town of Caledon.
- Includes categories and municipal infrastructure assets that are used to provide municipal services. This may include assets that fall below their respective capitalization thresholds as outlined in our Town's Tangible Capital Asset (TCA) Procedure.

2.3 Alignment with Corporate Initiatives

This Asset Management Plan aligns with the guidelines and commitments outlined in the Town of Caledon Strategic Asset Management Policy. As part of its asset management planning for municipal infrastructure, we are committed to considering the principles and commitments made in the Corporate Policy in its infrastructure decisions.

This Asset Management Plan also aligns with the Town of Caledon Strategic Plan 2023-2035. Specifically related to the priority area of service excellence and accountability, the Asset Management Plan is a tool to communicate information about our assets, and works to provide transparency, build trust, and demonstrate the good work done to date by all Town staff. Furthermore, the Asset Management Plan takes into account the Strategic Plan Priorities:

- Enhanced Transportation and Mobility,
- Environmental Leadership, and
- Community Vitality and Liveability.

This Asset Management Plan also resides among our Town's other significant planning documents, including master plans and Council initiatives, and provides input into Capital and Operating budgets, Capital Forecast, and TCA Reporting.

An important point of clarification is the role the Asset Management Plan plays in our capital and operating budget development process – which is to identify the cost associated with completing all the work required on assets to deliver a defined Levels of Service. While AM practices are rooted in financial efficiency and achieving the lowest cost of asset ownership, the Asset Management Plan (unlike the capital and operating budget process) is not constrained in its financial analysis. It identifies all asset costs associated with all asset needs, not just those we can afford to address. The purpose of this type of analysis is to demonstrate that we are aware of the gap between what is needed in terms of asset investment and what is currently budgeted.

Asset Managers, across Service Areas provide their expertise on asset and service requirements and, in collaboration with staff in Finance and Council, are committed to finding solutions that will enable us to continue to sustainably provide valuable services to the community.

2.4 Update from 2024 Asset Management

Much work continues since the approval of the 2024 Asset Management Plan. The Town is continually seeking innovations to improve the balance of costs, Levels of Service, and risk, which are demonstrated in the description of processes and results in this Asset Management Plan.

Several of the recommendations have been acted upon, including:

- Infrastructure levy of 1% approved in the 2025 Town budget.
- Funding allocation process improvements, including tagging and training for Business Cases to delineate projects as SOGR, growth, or new/increased services.
- Preliminary AM Roadmap was created to advance AM at the Town across Service Areas.

Outstanding and new recommendations are provided in **Section 7**.

2.5 Public Engagement

There are two directions for public engagement – receiving public input on asset management issues, and communicating information outward about asset management issues, including service levels, options, decisions, and strategies.

Public consultation is an active exercise for many Town initiatives, and the results provide input and insights into asset management. Consultation results are fruitful and positive and provide much insight into current and proposed Levels of Service, and preferences of the community.

Relevant public engagement exercises were reviewed in the preparation of this Asset Management Plan and are provided throughout. These summaries are provided to asset managers as consultation exercises are carried out and help Town staff regularly make decisions about assets. Inputs from consultation for the 2025 Budget are included in this summary. The proposed levels of service align with some of the relevant messages derived from this consultation.

The Asset Management Plan and Policy are available on the Town's website, and a copy is provided if requested. Background information, including reports from which Asset Management Plan content is developed, are made available to the public through the Corporate Asset Management team, or others.

2.6 Approval and Maintenance of the Plan

The Asset Management Plan is a living document that should be updated regularly, as additional asset and financial data becomes available. As required in *O. Reg. 588/17*, at a minimum we should review and update our Asset Management Plan at least every five years. The updated Asset Management Plan should remain in compliance to the requirements from *O. Reg. 588/17*.

Regular reviews will allow us to re-evaluate the state of infrastructure and identify how our asset management and financial strategies are progressing.

The plan reflects the current activities, data, and planning principles at the Town. In practice, lifecycle strategies sometimes aren't executed as planned, not all of the capital projects in the Capital Forecast can be executed, sometimes due to funding shortfalls. As such, there is financial risk in the Town actually executing on all of the lifecycle strategies as defined. There may also be operational challenges in delivering the capital projects required to act out the lifecycle strategies as defined. We manage these risks through our capital delivery planning, and through our budget processes.

Asset Management Plan Approval

This Asset Management Plan, and updated future plans, must be endorsed by the executive lead for asset management, defined as the CAO, as per *O. Reg. 588/17*.

This is achieved through the approval of the Asset Management Plan and accompanying staff report in the Committee and Council meeting process. Approval of the Asset Management Plan is by Council resolution.

Risks Associated with Implementation of the Plan

Successful implementation of this Asset Management Plan (AMP) relies on sustained commitment, resourcing, and integration into corporate decision-making. We face several risks that could affect the full realization of the AMP, including:

- **Resource Constraints**: Financial, staff, and technical capacity is finite. Availability of resources may delay or restrict asset management activities, such as data collection, condition assessments, and lifecycle analysis.
- **Data Gaps and Quality**: Although the Town continues its data quality improvement efforts, gaps still exist. Incomplete or inconsistent asset data can affect the accuracy of forecasts and the prioritization of investments.
- **Integration with Other Processes**: If asset management practices are not fully aligned with budgeting, capital planning, and service delivery processes, this can reduce their impact. The introduction of the dedicated infrastructure levy in the 2025 budget was an excellent example of alignment between budgeting and asset management, and this coordination and collaboration is anticipated to continue.
- **Change Management**: Shifts in corporate culture, staff turnover, changing Council (election) or competing priorities can affect the momentum of asset management initiatives.
- **External Factors**: Unforeseen events such as regulatory changes, economic shifts, available external funding, or climate-related impacts may also affect implementation timelines or funding needs.

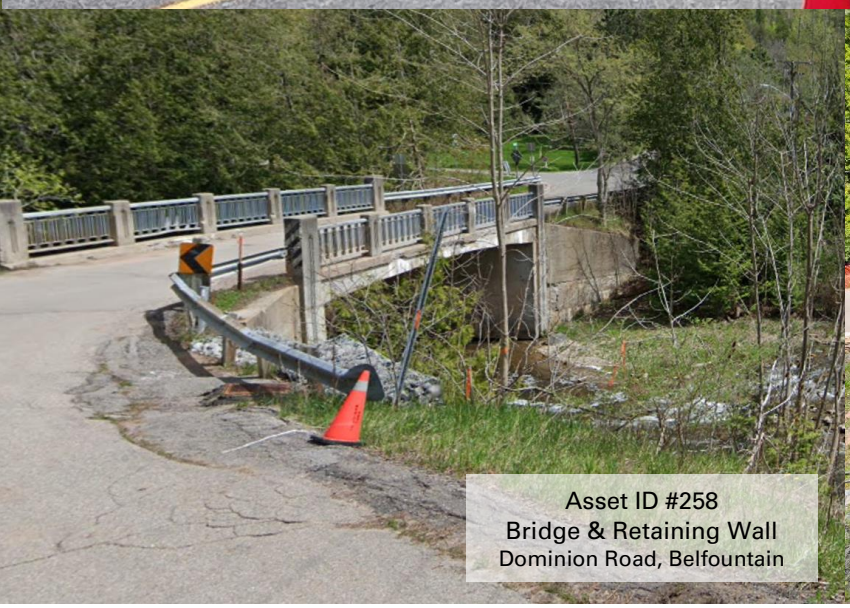
The Town continues to monitor these risks as part of ongoing asset management reviews and will adapt implementation approaches as needed to ensure continued progress toward the Town's goals.

Asset Management Progress Review

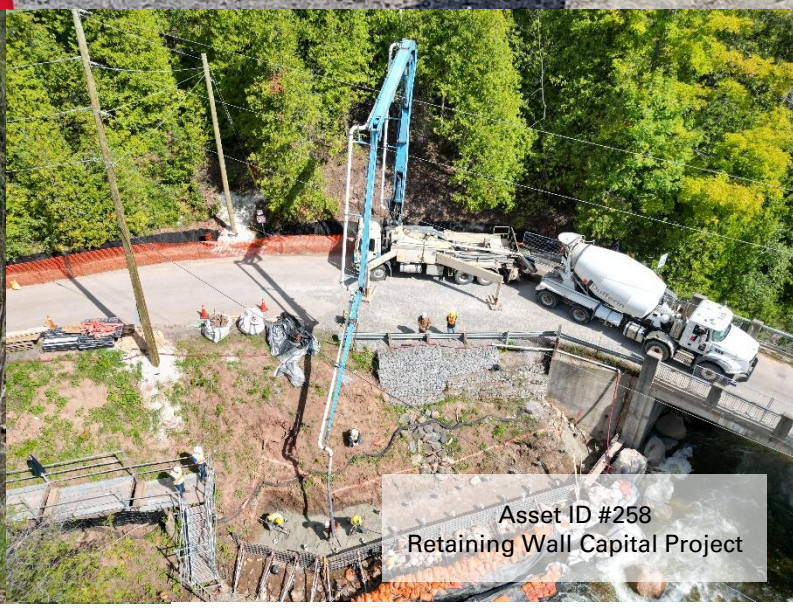
Asset management progress should be reviewed every year through Corporate Asset Management to Council, every year before July 1. *As per O. Reg. 588/17*, evaluation of our asset management progress should include a review of:

- Progress of asset management (such as degree of implementation of recommendations from the Asset Management Plan),
- Factors impeding implementation of asset management recommendations and processes, and
- The strategy to address challenges and factors.

Asset ID #54153
Road Segment, Saint Andrews Rd.
Maintenance by Town Staff (Operations)



Asset ID #258
Bridge & Retaining Wall
Dominion Road, Belfountain



Asset ID #258
Retaining Wall Capital Project

Principles & Methods

3 Principles & Methods

3.1 Key Insights

This section describes the principles and methods applied in the preparation of this Asset Management Plan.

- This Asset Management Plan is based on providing the proposed Levels of Service for the next 10 years, as required by *O. Reg. 588/17*.
- The methods applied were selected based on industry leading practice and the maturity of the current Town data.
- Asset condition is one indicator of asset performance and is used as a measure in this Asset Management Plan.
- Asset condition is based on the most recent inspection results. When this isn't available, asset age and estimated useful life is used instead.

There are many methods involved in planning for asset investments in the municipal realm. Methods adopted in the Town of Caledon for preparation of this Asset Management Plan are described below. This Asset Management Plan was developed based on the best available information, where some assumptions using professional judgement were made to address gaps.

- Unless otherwise noted, percentages of assets are reported by replacement value in this Asset Management Plan.
- All fiscal values are presented in current day dollars (end of 2024), and no inflation has been added to the forecasts.

Assumptions are listed in **Appendix A**.

3.2 Method – Developing Inventories

To prepare the asset data for analysis, a single source of data for each individualized asset was developed into an asset hierarchy and register, based on data provided by staff, workshop input, and discussions/review. The asset hierarchy is provided in **Appendix D**.

Required asset information was derived from the most recent asset data (as of December 2023). Changes in asset status or condition in 2024 have not been included in this report, as information was not finalized through Finance at the time of analysis. Asset information used to develop inventories incudes:

- Asset Identifier,
- Install Date,
- Current Replacement Value,
- Estimated Useful Life,
- Condition, and
- Asset type specific information.

The resulting register, or inventory, provides the basis for the analysis completed for the Asset Management Plan, including Current State of Assets, Levels of Service, and Lifecycle Management Strategies.

3.2.1 Current Replacement Value

Current Replacement Value is the all-in cost to replace an asset in dollars as of December 2024. The following should be noted:

- All replacement costs are based on the cost to replace the asset with the exact same asset, and
- There is no growth, technology change, or enhancement assumptions included in those costs (unless identified).

Variables including growth/service enhancement possibilities such as expansion of roads, change in material used, inclusion of bike lanes and other factors are considered service enhancements and/or growth, which are included in budget forecasting initiatives where available, but are not considered in replacement costs of current assets.

Replacement values reflect the total costs associated with the full replacement or reconstruction of an asset, including the combined cost of design, materials, labour, engineering, and administrative costs. This Asset Management Plan relies on two methods to determine asset replacement values:

- Unit Cost: A unit-based cost (e.g. per metre) determined through a review of recent contracts, reports and/or staff estimates.
- Historical Cost Inflation: Inflation of the asset cost recorded at the time it was initially acquired to today's value (December 2024) using an index (e.g. CPI or NRBCPI).

Historical cost inflation is typically used in the absence of reliable unit cost data. It is a fairly reliable method for recently purchased and/or constructed assets where the cost is reflective of the total capital costs that we incurred. As assets age, and new products and technologies impact procurement costs and construction methods, cost inflation becomes a less reliable technique to determine replacement value.

3.2.2 Estimated Useful Life

Estimated Useful Life (EUL) in asset management planning refers to the anticipated duration over which an asset is expected to remain operational and provide its intended function. This estimate may be based on a variety of factors such as design specifications, historical performance data, maintenance practices, environmental condition, and technological advancements. The purpose of estimating useful life for asset management planning is to enable organizations to allocate resources for maintenance, repairs, replacements, and new acquisitions over the asset's lifecycle. It allows for budgeting long-term capital expenditures through replacement planning, risk management, optimizing maintenance and performance evaluation.

For the purposes of this Asset Management Plan, staff reviewed and assessed EUL for all assets to ensure appropriate values were used to ensure accurate forecasting for infrastructure spending needs.

The EUL for each asset in this Asset Management Plan was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary.

3.2.3 Asset Condition

Assigning condition ratings to assets across each asset category using a consistent rating scale is a crucial step in asset management. By using standardized scales, we can facilitate benchmarking with other Canadian municipalities and gain insights into the overall condition of its assets regardless of asset category. Condition ratings scale consists of a numerical or categorical value that represents the condition of the assets.

Within this Asset Management Plan, condition ratings were assigned based on numerous methods and then mapped to a common condition rating scale.

Where assessed condition was not available, condition of an asset was determined based on its remaining life compared to its age and EUL. This assessment involves categorizing the percentage of remaining life into different condition categories, as outlined in Table 2.

Table 2 General Categories of Condition

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well-maintained, good condition, new or recently rehabilitated	75-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	50-75
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	25-75
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	0-25
Very Poor	Unfit for sustained service	Beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	<=0

The goal of collecting asset condition data is to ensure that data is available to inform maintenance and renewal programs required to meet the desired Levels of Service. Accurate and reliable condition data allows us to determine the remaining useful life of assets and helps us to identify the most cost-effective approach to lifecycle management. For example, cost-effective considerations may involve more PM, extending the life of the asset through remedial efforts, or determining that replacement is required to avoid asset failure.

This Asset Management Plan relies on assessed condition data for 71% of assets; for the remaining portfolio, age is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it is one measure to reflect an asset's ability to perform its intended functions. Table 3 below identifies the source of condition data used throughout this Asset Management Plan.

Table 3 Sources of Condition Data

Asset Class	% of Assets with Assessed Condition	Source of Condition Data
Amenities	0%	Age
Bridges & Culverts (OSIM)	99%	OSIM, BCI
Buildings	100%	BCA
Collections - Library	0%	Age
Equipment	0%	Age
Fleet	0%	Age
IT & Communications	0%	Age
Linear & ROW Infrastructure	64%	-
Roads	99%	OCI
Stormwater Main	31%	CCTV, Age
Other	0%	Age
Parks & Other Open Land	0%	Age
Storm Facilities	58%	Age, Inspections

Accurate and reliable condition data allows staff to determine the remaining useful life of assets and identify the most cost-effective approach to managing and maintaining assets more confidently. The current condition of the assets is central to all asset management planning.

Age-Based Condition

The default indicator of an asset's condition is age. Since age is known for most assets, it serves as a baseline indicator of the current condition of assets. However, since the actual condition of each asset is influenced by construction method, the surrounding environment, operating & maintenance practices, and other factors, methods to specifically determine the current condition of an asset are adopted where practical.

Over recent decades, we have advanced condition assessment methods for some, but not all, of our assets. For many assets, age continues to be the best indicator of condition at this time, but we are continuing to work on maturing our condition assessment methods for assets.

To calculate condition from age, the asset age is converted into the asset's remaining useful life, based on its EUL, by using the formula shown below:

$$Remaining\ Useful\ Life = \left(1 - \frac{Age}{Estimated\ Useful\ Life}\right) x\ 100\%$$

Table 4 below shows how age is assumed to be associated with asset condition for all assets that don't have specific condition assessment methods in place. Condition can be indicated by the text description (e.g. Fair), or by the corresponding numerical rating on a consistent scale across all assets of 1-100, depending on the data available.

Table 4 Age-Based Condition Rating Scale

Remaining Useful Life (%)	Condition	Age-Based Condition Rating
75-100	Very Good	75-100
50-75	Good	50-75
25-75	Fair	25-50
0-25	Poor	0-25
<=0	Very Poor	<=0

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life. This helps us make wise investment decisions, as we better utilize funds. A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across our asset portfolio.

Other Condition Methods

Other assets described below have established means of determining condition that are more accurate than using age. Assets other than those described below default to age as a basis for condition.

Roads

- Network-wide condition assessments are completed for all paved roads every 2 years and are carried out by an external contractor to ensure consistency and standardization.
- Each road receives a Pavement Condition Index (PCI) rating which considers the quantity and severity of road surface distresses, and an Overall Condition Index (OCI) rating which combines the PCI rating with a Roughness Index (RI) to provide a more complete picture of the driving quality associated with each road surface.
- PCI and OCI ratings are critical in determining the overall condition of the road network, appropriate maintenance, and rehabilitation strategies, and developing capital plans.

In this Asset Management Plan, we use the OCI rating to determine the current condition of road segments and forecast future capital requirements using the rating criteria shown in Table 5.

Table 5 Roads Condition Rating Scale

OCI Rating	Condition Rating
85-100	Very Good
70-85	Good
55-70	Fair
40-55	Poor
0-40	Very Poor

Bridges & Culverts

- All municipally owned bridges and structural culverts with a span greater than or equal to 3 metres are required to be inspected every 2 years according to the Ontario Structure Inspection Manual (OSIM).
- All structures receive a Bridge Condition Index (BCI) Rating between 0-100.
- Small culverts (to which OSIM is not applicable) are not included in this Asset Management Plan, and Town staff are working to continue developing inventory information for non-OSIM culverts.

In this Asset Management Plan, we use the BCI rating to determine the current condition of structures and forecast future capital requirements. The BCI rating is adapted from International Infrastructure Management Manual (IIMM) standards & from the Ministry of Transportation (MTO). This Asset Management Plan uses the rating criteria shown in Table 6.

Table 6 Bridges & Culverts Condition Rating Scale

BCI Rating	Condition Rating
80-100	Very Good
70-80	Good
60-70	Fair
40-60	Poor
0-40	Very Poor

Stormwater Assets

The following describes our current approach to condition assessment of stormwater management infrastructure:

- Staff have undertaken a multi-year program to assess the condition of all the Town's stormwater sewers, access holes, catch basins and outfalls.
- Condition assessment completed in 2024 for Storm ponds.
- Some stormwater sewers and access holes and catch basins have been fully inspected using the National Association of Sewer Services Companies Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP), an industry standard for sewer and access hole inspection providing a standard system for the identification, classification and reporting of the type, severity, and extent of structural and operational defects.

As shown in Table 7, we use an 'Urgency Rating' to indicate condition derived from the PACP Structural Quick Rating provided during recent CCTV inspections. For the portion of assets that have not yet been inspected, age is used as a proxy for condition as shown in Table 8.

Table 7 Stormwater Condition Rating Scale for Assets with Inspection Data

Urgency Rating	Condition Rating
0-2	Very Good
3-4	Good
5-6	Fair
7-8	Poor
9-10	Very Poor

Table 8 Age-Based Stormwater Condition Rating Scale (for Assets without Inspection Data)

Remaining Useful Life (%)	Condition Rating
75-100	Very Good
50-75	Good
25-50	Fair
0-25	Poor
0	Very Poor

Buildings

Buildings are complex assets, comprised of collections of assets, such as roofs, ventilation systems, and foundations, each with separate lifecycle needs. As such, and in line with leading asset management practices, building condition in this Asset Management Plan is calculated based on the detailed component information, rather than a broad single rating across the entire building.

Facility Condition Index (FCI) is an industry measure that indicates the condition of a building overall, based on inspection of individual building components. The FCI data for the Town buildings have been assessed as part of the Building Condition Assessment (BCA) project and have been incorporated into the Asset Management Plan.

To calculate building condition from FCI data, the total cost of building repairs and renewals is divided by the current cost of replacing the building, and is calculated as follows:

$$FCI = \frac{\sum Renewal\ needs\ and\ repairs}{\sum Current\ Repacement\ Value\ (CRV)} X100\%$$

The FCI is the total cost of needed building repairs and renewal divided by the current cost of replacing the building. Each building's FCI score reflects the current condition of the building from good to critical. We have used a 5-year projection of maintenance and renewal needs to project the Town's building condition. The condition scale is shown in Table 9.

Table 9 Buildings Condition Rating Scale

Facility Condition Index	Condition Rating
0-10%	Good
10-25%	Fair
25-60%	Poor
60% and beyond	Very Poor

To calculate the condition of the building components, which was used to forecast building needs we used updated inspection data for building components, which is a more exact indication of condition.

3.2.4 State of Good Repair

The term SOGR refers to the condition where our assets are maintained at a level for safe, reliable, quality performance, in good working order without excessive spending or service disruption.

- SOGR is inclusive of assets categorized within the Poor category, since the asset is still within its EUL.
- Assets in a SOGR are not in the condition categorization of Very Poor.

Assets in a SOGR are assumed to still be following the defined lifecycle strategies, to remain in working order. This is shown in Table 10.

Table 10 SOGR Related to Condition Rating Scale

Asset Condition	Condition Rating
SOGR	Very Good
	Good
	Fair
	Poor
Not in SOGR	Very Poor

Key aspects of maintaining a SOGR include maintenance, timely repairs, renewal, monitoring, and establishing adequate budgets to perform these lifecycle activities.

At a minimum, condition and performance indicate whether an asset is in a SOGR, which is the basis of defining SOGR status for Town assets in this Asset Management Plan. Safety, compliance, aesthetics, user satisfaction, and adaptability are other indicators that the Town may move towards exploring in the future.

For the purposes of reporting in this Asset Management Plan, a Town asset is reported to be in a SOGR when the asset has not exceeded its service life, and/or when its condition is not Very Poor.

Assets in a Very Poor state of repair are a reality - in the municipal environment, renewal projects may not always be carried out as intended – for example, available budget, maturity of data, and staff capacity may constrain the rehabilitation and replacement strategy from being executed. Assets in a very poor state of repair have unreliable condition and performance, lifecycle costs escalate, and we take on considerable additional risk.

3.3 Method – Defining Levels of Service

Levels of Service form the foundation of asset management, linking the Town's strategic goals and service objectives (e.g. Council approved Master Plans and Strategies) with the assets responsible for delivering those services. While the minimum acceptable level of performance for some assets is influenced by legislation, some are derived from internal policy and strategy approved and directed by Council.

A Level of Service states what we need that asset to do, thus Levels of Service provide the platform for all lifecycle decision-making. Defining Levels of Service establishes the baseline for rationalizing the infrastructure we own, the lifecycle activities required for that infrastructure, and the costs of those activities, while managing risk, shown in Figure 4. Discussions in the Asset Management Plan are based on providing proposed Levels of Service for the next 10 years, with reference to current Levels of Service, as required by legislation.

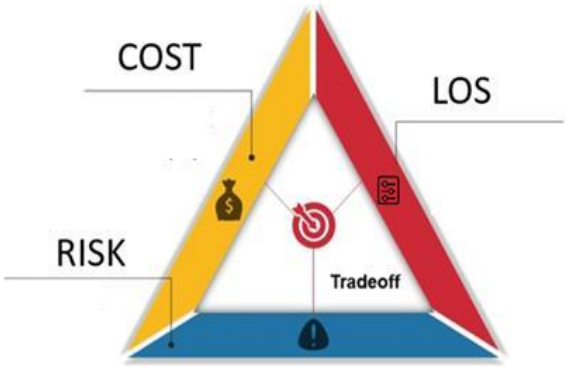


Figure 4 The Balancing of Cost, Levels of Service, and Risk

The Levels of Service described in this Asset Management Plan have been prepared to reflect the key measures related to safety, reliability, sustainability, and cost-effectiveness in alignment with legislation. Within each Service Area Plan in this Asset Management Plan, we describe Levels of Service we propose to provide, current levels of service, and the corresponding measures we rely upon to indicate this service using available data.

We are constantly adapting to its changing community expectations, financial position, risk conditions, changing legislation, growth, technological innovations, industry practices, and other factors. All of these factors may affect service levels being provided into the future. While most Levels of Service are proposed to stay constant in the short-term horizon, some will have to change to accommodate priority factors. Our Capital Forecast lays out the predicted capital investments to continue providing services to the community while modifying certain service levels where required. These are identified as new or increased service levels.

Service level changes are not ad hoc, but rather are investigated to consider options, costs, affordability, and risk. Staff are continually exploring service level options through:

- Trending and observations of asset performance,
- Considerations of the current and changing conditions within which assets must perform, such as climate, demand, ways assets are used,
- Considerations of public input,
- Industry networking,
- Master planning and strategic planning,
- Monitoring and trending of lifecycle costs,
- Recommendations from consultants, audits, Council, or other sources, and
- Assessment of risks.

New Levels of Service are approved by Council only after considering these issues presented through staff reports, studies, plans, and/or recommendations. Proposed levels of service presented in this Asset Management Plan were compiled from:

- All Council-approved initiatives that introduced varying levels of service,
- Capital projects with new levels of service already planned within the capital forecast,
- Growth-driven projects, and
- State of good repair analyses and forecasts.

To define the proposed levels of service, workshops were conducted with Service Areas, Asset Management, and Finance staff to discuss the proposed levels of service options, the delta to current levels of service, achievability, and affordability were discussed at length. Records of these workshops are available from the Asset Management group. In future asset management activities, the Town will strive for a greater degree of direct SLT and Council involvement in these workshop discussions.

Metrics to measure level of service are based on both legislated metrics and other Town measures that best indicate the service level being provided. These measures are continually being developed, and the Town will continue to develop these measures to be more reflective of the services, while the practice of AM gets adopted throughout the Town.

3.3.1 Levels of Service Descriptions

Within each Service Area Plan, the following information is provided.

Background

A qualitative description of the service we propose provide to the community is described in plain language. For example, for Emergency Services, this is described as providing reliable prevention, preparedness, and response services, and assets in a SOGR are required to provide those Levels of Service.

Areas Serviced

For some Service Areas, the legislation requires that we report the areas that are serviced and connected. Maps may also be used for this purpose.

Proposed Levels of Service

The levels of services and measures for quantifying the proposed and current Levels of Service are provided along with the 2024 performance. These measures are based on our best and most recent data, generally from 2023-2024.

An example of a proposed Level of Service for Recreation & Culture is to implement all of the recommendations that are applicable to Recreation & Culture assets in the next ten years from the Parks Plan, Library Growth Plan, Corporate Greenhouse Gas Reduction Framework, Green Fleet Strategy, and the Resilient Community Climate Change Plan.

Other Monitoring

Additional and important measures that provide information about assets and services are also listed. Though not directly indicative of Levels of Service, these are measures that are important to note.

3.4 Method – Defining Risk

In accordance with the service levels discussed above, we manage a variety of risks associated with the services delivered through our assets. Asset risk pertains to the performance of our assets, which can be gauged through physical condition, capacity, quality, and financial efficiency.

Examples of the types of risk the Town manages include:

- Corporate Risk and Liability – Subjecting the Town to liability,
- Environmental – Adverse impacts to land, water, air, and greenhouse gas emissions,
- Financial – Financial loss or inefficient spending,
- Legislative – Non-compliance to legislation,
- Levels of Service – Not maintaining a service commitment to the community,
- Operational – Disrupting operations or introducing operational inefficiencies,
- Public & Staff Health – Impacting the health of our community and staff,
- Public & Staff Safety – Impacting the safety of our community and staff,
- Reputational – Negative impact on the way the community or other jurisdictions view the Town, or loss of trust in the Town.

We continually make efforts to stay aware of, accept, mitigate, and/or adapt to risk related to assets that could fail in performance. Where we have the tools and resources, performance is monitored, and lifecycle activities described in the next section are prescribed to ensure the asset achieves the designed life cycle, and where possible even extend the life of some assets.

Based on this awareness of potential risk, while considering costs and Levels of Service, lifecycle activities are selected and applied to assets when there is sufficient budget and staff capacity to do the planned work.

For each Service Area, the lifecycle strategies being applied to provide proposed levels of service, and the related risks being managed, are detailed in the Service Area Plans.

Should there be a funding shortfall for providing proposed levels of service, prioritization decisions in lifecycle investments are made case by case, and the Town manages resulting risks. That risk management is also described further in the Service Area chapters.

Criticality

The criticality is inherently and qualitatively considered in our asset decisions. For example, risks to the community from asset failures can be as minor as traffic delays from roads deficiencies, and as severe as harm to public health from an unavailable fire truck.

Many municipalities generally take a 'worst-first' approach to infrastructure spending. Rather than prioritizing assets based on their importance to service delivery, assets in the worst condition are fixed first regardless of their criticality. However, not all assets are created equal, and some assets pose a greater risk to service delivery if they were to fail. For example, a deteriorating fire truck may pose a higher risk to public safety than a deteriorating administrative vehicle. This is because fire trucks are assets used to respond to public safety and health emergencies. A broken-down fire truck may lead to death and public safety impacts, where a broken-down administrative vehicle likely doesn't pose such significant risks.

Asset risk and criticality is a key component of both short- and long-term planning. Criticality has been explored and will continue to be developed in future Asset Management Plans.

3.5 Method – Defining Lifecycle Strategies

The condition or performance of most assets will deteriorate over time. To ensure that each municipal asset is performing as expected and meeting the needs of customers, throughout its lifetime, while provide proposed Levels of Service, the Town has established lifecycle management strategies to proactively manage asset deterioration.

3.5.1 Background

Asset deterioration has a negative effect on the ability of an asset to fulfil its intended function, and may be characterized by increased cost, risk and even service disruptions to the community as deteriorations occurs. Figure 5 provides an example of typical asset deterioration over time with, key lifecycle management and SOGR references.

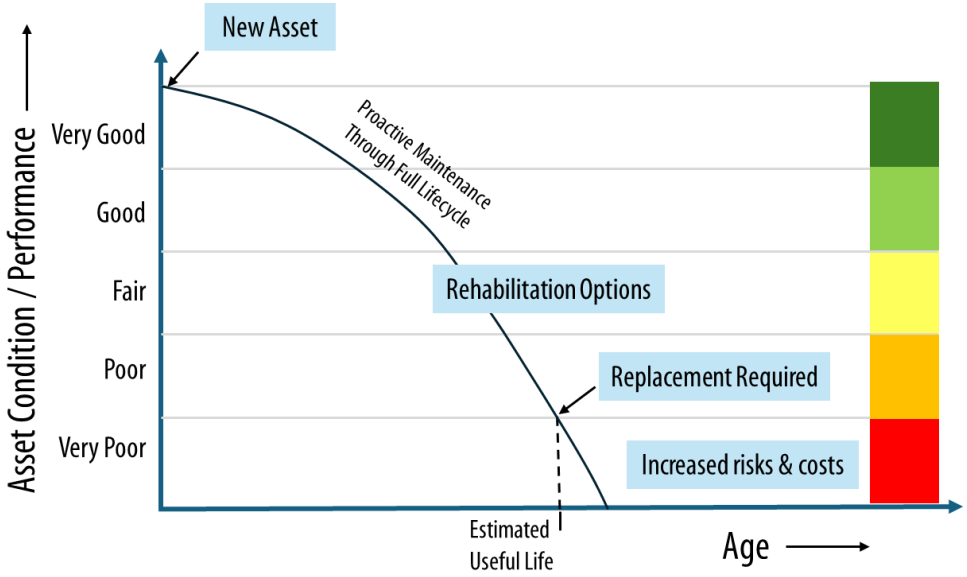


Figure 5 Typical Asset Deterioration Stages

Understanding and planning for the deterioration process by determining the most cost-effective investment approach is a foundational function of managing our assets.

Cost effective lifecycle planning requires several key inputs:

- Asset characteristics (such as designed function and expected life, material, or size).
- Environment in which they are installed or exposed (such as soil type, water table, effect on climate change).
- Lifecycle Operations and Maintenance expenditures, work history and ongoing asset condition and performance to monitor and maintain original design service life (from users, operators, maintainers, and engineering).

3.5.2 Types of Lifecycle Activities

To ensure that municipal assets are performing as originally designed and are meeting the needs of the community, it is important to establish a lifecycle management strategy to proactively reduce and manage asset deterioration.

Lifecycle activities can be generally placed into one of four main categories: Policy and Planning, SOGR - Operation and Maintenance, SOGR – Renewal, and Decommissioning, each with operating and/or capital costs. Table 11 provides a description of each type of activity and shows the categories of life cycle activities.

Table 11 Categories of Lifecycle Activities

Activity	Description
Policy and Planning	This begins before any assets are purchased or built, by planning long term needs based on forecasted demands, and extends through purchase, use, and then to the end of asset life when assets become obsolete or are no longer effective for providing a service. During this lifecycle, activities are required to ensure the most cost-effective approach is used to achieve the design life for service delivery. Includes actions, initiatives, planning studies, programs, or policies that can lower costs, reduce wasted capacity/redundancy, extend useful lives, ensure appropriate sizing/suitability of needed assets. Activities also include strategic plans, modelling, demand analysis, demand management programs, conservations programs, usage restriction policies, coordinated/shared capital projects, etc.
SOGR – Operation & Maintenance	Activities related to operating, maintaining, and monitoring the assets. Includes regularly scheduled inspection and maintenance or more significant repair and activities associated with unexpected events (e.g. planned and unplanned maintenance on a facility heating or air conditioning system, or vehicle).

Activity	Description
SOGR – Renewal (Rehabilitation & Replacement)	Larger capital project work may be carried out to extend an assets life beyond its original design life, once asset deterioration occurs below a required service level. Examples may include stormwater main relining, road re-surfacing, and bridge reinforcement. These major projects rebuild a component of an asset that will result in extending the life of the asset as a whole and continue to maintain the asset in a SOGR (e.g. replacing a roof in a building).
	Ultimately, full reconstruction or replacement of the asset may occur at the end of its lifetime. Includes replacing an asset with a similar asset, once it has reached the end of its useful life and renewal/rehab is no longer an option, as part of an overall effort to maintain assets in a SOGR. (e.g. replacing a storm sewer).
Decommissioning	Decommission of an asset once it has reached the end of its useful, the technology is obsolete, repair cost exceeds a threshold or are otherwise no longer needed by the Town. Disposal activities are typically limited to equipment and vehicles under the different service areas but can include other asset types if it is determined that there isn't any ongoing need to provide that asset to the community.

3.5.3 Defining Lifecycle Strategies

Within each lifecycle category, there are a wide range of options to choose from, which may yield different results in the management of providing proposed service levels over an asset's deterioration process. Our proposed approach to lifecycle management is described within each asset category outlined in this Asset Management Plan. Should funding to provide proposed levels of service not be available, the alternative lifecycle strategies to maintain current levels of service are also described. Continuing to develop and implement proactive lifecycle strategies helps staff determine which activities to perform on what assets and when, to maximize useful life at the lowest total cost of ownership.

We employ a combination of lifecycle activities to provide Levels of Service while striving to balance costs based on defined risk tolerance. This strategy includes activities to operate and maintain assets in a SOGR, planning activities, and more rare decommissioning activities, while continuing to build for growth.

When feasible, we also strive to further balance these lifecycle activities by coordinating and synchronizing work across multiple assets or asset categories, which can result in cost and service efficiencies. With significant projects, we also strive to balance asset use and redundant capacity often achieved through risk benefit cost analyses and cost effectiveness analyses.

The lifecycle strategies described in the Service Area plans represent the proposed and current approaches and will continue to evolve and improve. Strategies are selected, reviewed, and continually modified based on our understanding of a wide variety of factors, including:

- **Climate**: The changing climate and its potential impacts on the municipal assets and services,
- **Industry Pulse**: Continual industry benchmarking, staff training, professional networking, online reviews, of other lifecycle options,
- **Recommendations**: From consultants, audits, or other sources,
- **Testing**: Trial and error through scenarios and pilot programs,
- **Lifecycle**: The full lifecycle of the assets, and
- **Risks**: Associated with options, as described earlier in this section.

It should be noted that as part of being innovative, we are continually looking to find and consider viable alternatives – in acquiring, constructing, maintaining, renewing, and decommissioning its assets. For example, opportunities to partner or share assets with other agencies are often explored, such as sharing artificial turf sports surfaces with the school board or sharing playgrounds and sports fields on Conservation Authority lands.

3.6 Method – Calculating Investment Needs

This is a renewal-based Asset Management Plan. Renewal lifecycle activities (rehabilitation and replacement) can be the most challenging for the Town to forecast and plan for and are therefore explored and forecasted in more detail. Investment needs for renewal of assets are complex to predict, thus a deterioration model was applied to the current portfolio, to simulate our intended replacement strategies described. The model provides the forecasted renewal investment using computer scripts and applying a series of logic to our asset register data. This includes the following three elements:

1. Lifecycle logic:
    - Asset deterioration models that forecast the performance of assets over time.
    - Major intervention activities such as replacements, including the timing of these activities, costs associated with the work, and improvements that are expected to occur to assets when the activities are completed. Rehabilitation interventions were also considered, but only stormwater management ponds utilized this lifecycle management strategy in the Asset Management Plan results.
2. Prioritization logic, including methods to prioritize which interventions should be applied to assets under given constraints (such as funding constraints).
3. Budget forecasts including the planned and realistic budget amounts that are anticipated to be spent over a forecast period.

Using this logic, various scenarios were run to analyse the interaction between asset performance and planned spending over a forecast period (for example, 10 or 25 years). The model identifies the effects of planned spending on asset performance, or the amount of spending required to achieve certain performance states.

Other investment needs are also included in this Asset Management Plan for consideration. These include:

- Other lifecycle investment needs – including **policy, planning**, **SOGR maintenance, and decommissioning,** derived from multi-year Capital Forecast.
- Investment needs for **growth** are derived from our Capital Forecast, as the planned projects are assumed to provide proposed Levels of Service while accommodating growth, based on the Development Charges (DC) Background Study. Growth is assumed to be fully funded in this Asset Management Plan.

Planned spending, categorized into investment types, were broadly assigned based on the analysis of projects in the Town's multi-year Capital Forecast. These allocations may not fully represent the intended use of the budget, due to limited information, but the whole budget plans are included in this Asset Management Plan. For example, SOGR-Renewal projects may be larger in value that those identified through the budget analysis, but as these projects were attributed to one asset class, and portions of that project may go towards maintenance, some minor discrepancies in investment needs may arise.

3.6.1 Reinvestment Rate Formula

As assets age and deteriorate they require additional investment to provide proposed levels of service. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain adequate Levels of Service. The reinvestment rate is a measurement of available or required funding relative to the total replacement value. By comparing the actual vs. target reinvestment rate, we can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

$$Target\ Reinvestment\ Rate = \frac{Annual\ Capital\ Requirement}{Total\ Replacement\ Cost}$$

$$Actual\ Reinvestment\ Rate = \frac{Annual\ Capital\ Funding}{Total\ Replacement\ Cost}$$

Asset ID #57736
Bridge

Asset ID # 45582
Road Segment, Innis Lake Rd.

Current State of Assets

4 Current State of Assets

4.1 Key Insights

This section describes the overall current state of the Town assets.

- The total replacement cost of our Town's asset portfolio is $2.69 billion.
- Our Town's current re-investment rate is 1.0% (based on Town's 10-year Capital Forecast).
- 92.0% of all assets are currently in a SOGR.

Our Town's portfolio includes 10 asset classes that are used to provide services in five main Service Areas – Administration, Emergency, Recreation & Culture, Stormwater Management, and Transportation.

4.2 Asset Inventory and Condition

The current state of the assets used to provide Administration, Emergency, Recreation & Culture, Stormwater Management, and Transportation Services is summarized in Table 12. Comparative replacement values are plotted in Figure 6.

Table 12 Overview of All Asset Classes, by Service Area

Service Area	Replacement Value
Administration	$73.6M
Emergency	$147.8M
Recreation and Culture	$620.5M
Stormwater Management	$575.7M
Transportation	$1.27B
Total	**$2.686B**

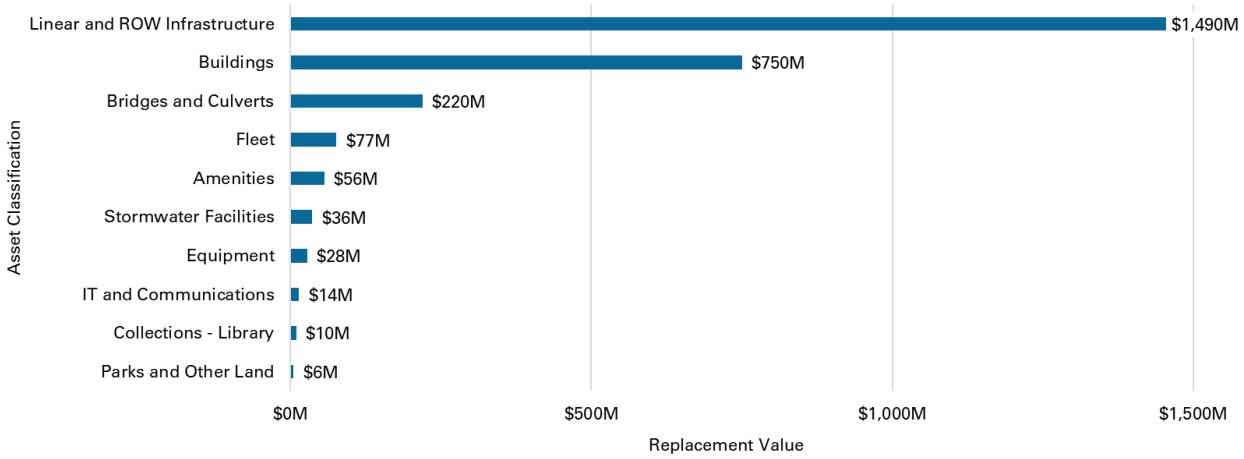


Figure 6 Total Replacement Values of All Asset Classes

Parks and Other Land includes parks and associated siteworks, detached parking lots (not associated with a Town building), and natural space. Valuation of other municipal land is not included in the reported replacement values, but a place holder is included to justify Operation & Maintenance costs that are related. Linear and ROW infrastructure, which includes roads and stormwater main, is valued the most at $1.46 billion, followed by buildings and bridges.

4.2.1 Asset Age

Figure 7 shows the history of when the Town's assets were purchased, built, or assumed, shown by current replacement value. Table 13 lists the condition and age of asset classes.

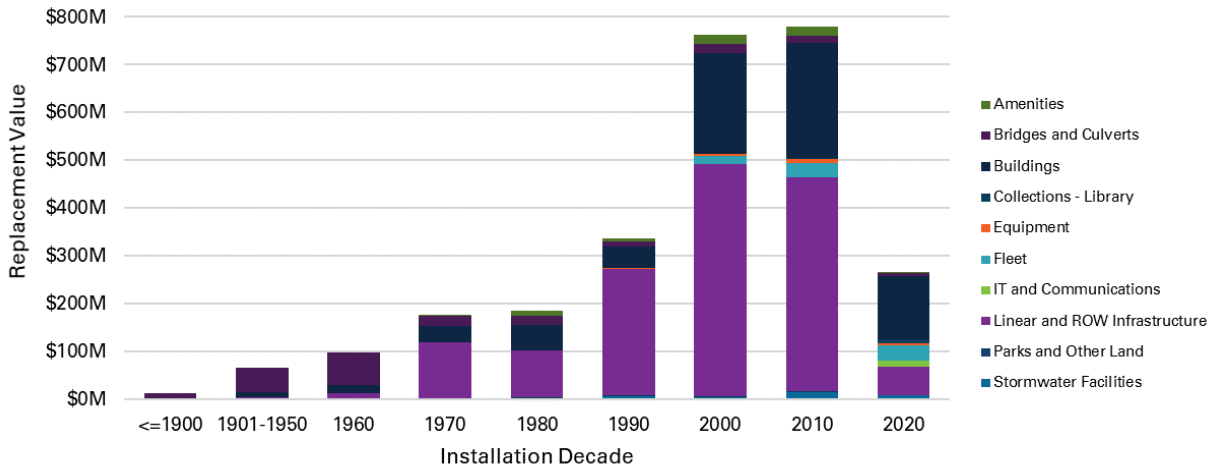


Figure 7 Installation History of Asset Classes, by Replacement Value

Table 13 Current Overall Condition and Average Age of Asset Classes

Asset Class	Average Condition	Average Age (Years)
Amenities	Poor	16
Bridges & Culverts	Fair	54
Buildings	Very Good	20
Collections - Library	Very Good	TBD
Equipment	Poor	TBD
Fleet	Good	8
IT & Communications	Very Good	1
Linear & ROW Infrastructure	Good	23
Roads	Fair	19
Stormwater Main	Good	26
Other	Fair	23
Parks & Other Land	Poor	24
Stormwater Facilities	Fair	22

4.2.2 Overall Condition

Overall, 92.0% of Town assets, by replacement value, are in a SOGR. This estimate relies on both age-based and assessed condition data. The overall condition of our Town's asset portfolio is shown in Figure 8.

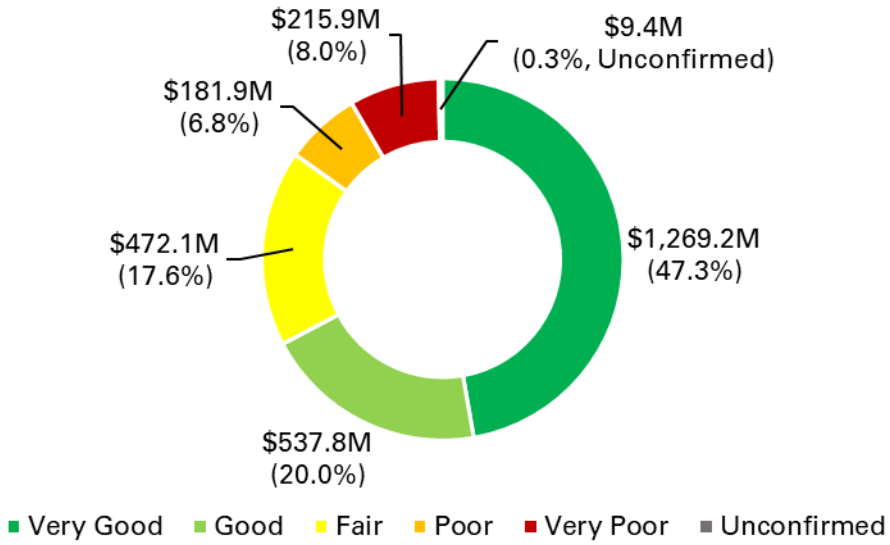


Figure 8 Overall Condition of Town Assets

The condition of our Town's asset portfolio, by Service Area, is shown in Figure 9.

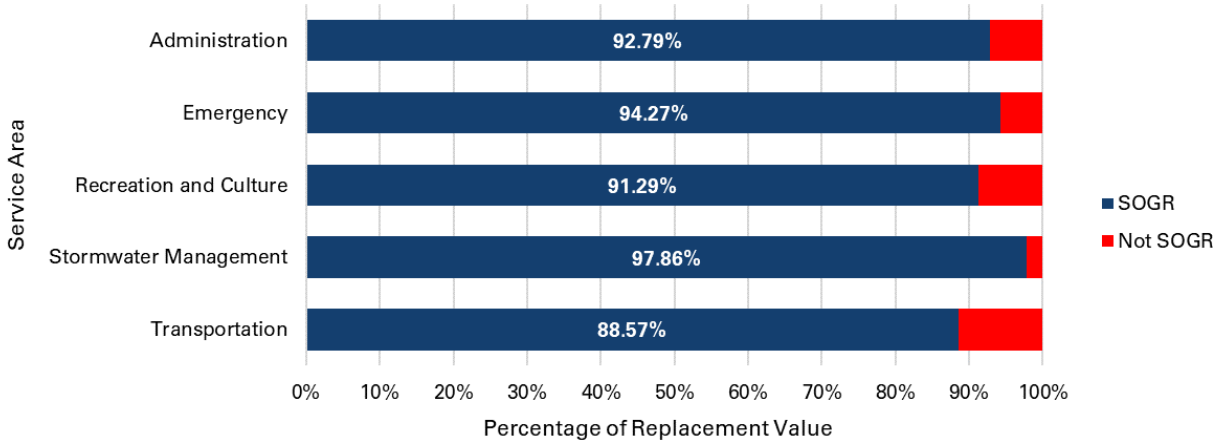


Figure 9 Assets in a SOGR, by Service Area

4.3 Reinvestment Rates

The Town reinvestment rates are shown in Table 14. This is the rate that the Town plans to invest in its infrastructure renewal, based on our Capital Forecast.

Table 14 Town Reinvestment Rates

Service Area	Reinvestment Rate
Administration	2.1%
Emergency	0.8%
Recreation and Culture	0.6%
Stormwater Management	0.3%
Transportation	1.5%
Average (weighted by replacement value)	**1.0%**

It is helpful to monitor this rate, but also to compare to other municipalities or to industry leading practices. Within the municipal asset management realm, the Canadian Infrastructure Report Card, prepared by the Federation of Canadian Municipalities and seven partner organizations, examines and reports on the state of Canada's public infrastructure, including reinvestment rates. The 2016 Report Card, the last one published with comparable metrics, reports the target reinvestment rate for Canadian municipalities to be 1.8% for an asset portfolio that is comparable in range to that of the Town.

Financial Strategy

5 Financial Strategy

5.1 Key Insights

This section describes the options for financial strategies related to investment needs for the infrastructure for the next ten years, and beyond.

Over the next ten years:

- According to the Town's Capital Forecast, the Town is planning to spend an average of **$93.69** million in capital per year, including investments in growth, policy & planning, maintenance, renewal, and new services.
- Forecasted capital investment needs for assets is **$135.58** million per year, including investments in growth, policy & planning, maintenance, renewal, and new services.
- This results in an average annual funding gap of **$41.89** million, over the next ten years.
- This gap relates to capital renewal of assets, new or increased services, and other investment categories. Growth is assumed to be fully funded in this Asset Management Plan.
- Several funding considerations are provided for the Town to consider, including three financial options.

5.2 Financial Strategy Overview

This report is a plan – a path for planning and managing our infrastructure into the future. Like any plan, challenges arise with staying on the planned route. Staff make every effort to apply the defined lifecycle strategies to assets. However, constraints can arise that do not enable us to execute the strategies as planned. These constraints typically include:

- Lack of approved capital budget for the required projects, or
- Little remaining capacity of staff resources to administer projects or programs.

For this reason, it is important to include a comparison of investment needs identified in this Asset Management Plan against what we plan to invest in the next ten years, as outlined in the Capital Forecast.

The financing strategy is an essential component of the Town's Asset Management Plan. It provides the framework for funding the future asset management needs in a sustainable fashion over time. The strategy presented is a high-level analysis of financing and funding options available to the Town to close the funding gaps identified in this report. The strategy considers the use of available funding sources and provides several options for consideration by the Town. The funding sources include:

- Tax revenues,
- Capital reserves,
- External funding sources (i.e., gas tax funding, DCs),
- Provincial and federal grants, and
- Debt financing.

For preparation of this section, input financial information included the Town’s 2025 Capital Budget, and Capital Forecast from the approved 2024 Capital Budget.

5.3 Funding Gap

The Town's capital forecast anticipates an annual spending of approximately $93.69 million over the next 10 years to address asset management needs. The average annual asset need developed through this Asset Management Plan is estimated at $135.58 million, indicating that there is an annual funding gap of approximately $41.89 million (29% shortfall) to provide proposed Levels of Service. This equates to $419 million over 10 years.

Table 15 shows the planned average annual expenditures versus the average annual needs for each Service Area, and the overall funding gap. This indicates that all Service Areas have asset funding gaps to provide proposed Levels of Service.

Table 15 Annual Capital Asset Needs vs. Planned Expenditures, 2025-2034

Service Area	Investment Need to Provide Proposed LOS	Planned Expenditures	Gap
Administration	$2.11 M	$1.71 M	$0.40 M
Emergency	$13.88 M	$11.06 M	$2.82 M
Recreation and Culture	$31.18 M	$13.70 M	$17.49 M
Stormwater Management	$3.01 M	$1.48 M	$1.53 M
Transportation	$85.40 M	$65.74 M	$19.66 M
Total	**$135.58 M**	**$93.69 M**	**$41.89 M**

For comparison, the equivalent annual funding gap reported in the 2024 Asset Management Plan was $22.7M, based on a portfolio of $2.65B, and similarly in the 2020 Asset Management Plan was $14.7M, for a portfolio nearly half the current size at $1.34B. The change in valuation is partially due to extensive growth, inflation, and significantly inflated valuations for assets (the cost to replace assets has grown substantially).

5.4 Potential Actions to Close the Funding Gap

There are various actions that may be considered related to the capital funding gap, including:

- Not taking action (and acknowledging risk),
- Changing the Levels of Service (and acknowledging risk), and/or
- Financing and funding strategies.

These are further discussed below.

5.4.1 Not Taking Action

There are asset management improvement activities that the Town may implement, before or while starting to address the capital funding gap. We may opt to not take action on the funding gap, and focus on these other improvement activities, but potential advantages and disadvantages that may result should be considered.

On the positive side, avoiding a strategy to reserve or apply funds towards the gap might provide short-term budget relief. This can prevent immediate tax increases or the need to reallocate funds from other Town services, an approach that could be politically and economically advantageous. Additionally, it allows us the flexibility to redirect those funds toward other pressing or politically sensitive priorities, which might address what is perceived to be more immediate community needs, or unforeseen crises.

However, the cons of ignoring the capital gap should not be ignored. Infrastructure will continue to deteriorate, especially if not properly maintained or rehabilitated, leading to lost renewal opportunities, and more severe and costly repairs or replacements in the future. This could eventually devolve into a more serious financial situation, or cause disruptions in service. Furthermore, the safety and efficiency of Town services could be compromised, increasing risks described in **Section 3.4**, including:

- Corporate risk and liability,
- Environmental risk,
- Financial risk,
- Legislative risk,
- Levels of Service risk,
- Operational risk,
- Public & staff health risk,
- Public & staff safety risk, and
- Reputational risk.

Long-term costs are likely to increase as emergency repairs and replacements usually exceed the costs of regular maintenance, perpetuating a cycle of underfunding and infrastructure failure.

Therefore, while the short-term financial relief might seem beneficial, the long-term consequences could include substantial financial burdens, safety issues, and a decrease in the quality of life for the community.

5.4.2 Levels of Service Action

This Asset Management Plan and financial investment forecast are based on providing proposed Levels of Service.

We may explore different Levels of Service scenarios to potentially 'free up' budget, to fund shortfalls, or to meet community expectations, but this needs to be discussed and evaluated with full consideration of risk impacts.

The Town faces fiscal constraints, revenue shortages and limited resources, at the same time, deteriorating and failing infrastructure requires proper investment, management, and response. To address infrastructure challenges and meet legislated requirements, service objectives and financial targets, we strive to balance three intrinsically connected elements: Levels of Service, cost, and risk, shown in Figure 10.

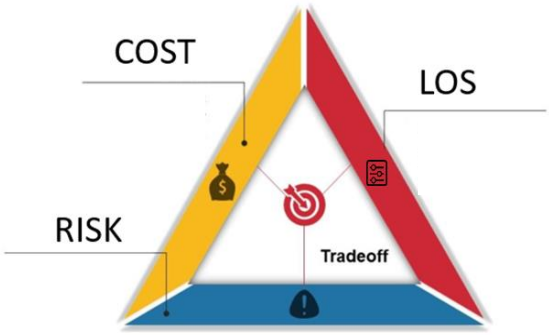


Figure 10 Balancing Levels of Service, Costs and Risk

The tension between these elements typically results in impacts and trade-offs. For example, by allowing one element to decline or conversely by enhancing another, an organization can be pushed off balance and away from the optimum centre point.

When the tension between Levels of Service and cost is not balanced, it exposes the organization to sustainability risks. To respond, we develop plans to establish balance over time by recommending the organization lower or find more cost-effective methods of delivering the Levels of Service. Both recommendations will have a risk reaction and the role of asset management is to weigh these options and find the optimum balance.

5.4.3 Financial Action

The objective of the financial strategy is to identify, assess and leverage the available sources of financing and funding to close the funding gap and provide high level options for consideration by the Town for the 10-year period 2025 to 2034.

The sources of financing and funding assessed are:

- Reserves funds,
- External funding sources (i.e., Gas Tax, OCIF),
- Debt, and
- Tax levy contributions.

The strategy is premised on the following:

- The current level of funding from the sources currently used would not decline over the 10-year period.
- The 2025 capital budget and funding sources have already been established.
- Apart from consistent annual funding sources (OCIF, Gas Tax), other grants and third-party funding that may be available over the 10-year period are not reliable funding sources, and therefore not considered in the financial strategy. However, these can be used as they become available to reduce the need from other sources.
- Providing options that utilize debt financing with the constraint that the Provincial limit is 25%, and the debt servicing capacity ratio would not exceed the 10% self-imposed policy limit established by Council.
- An annual infrastructure tax levy of 1% was applied in 2025 and will be explored to continue in future years. This levy is dedicated to asset renewal needs and closing the SOGR funding gap. These new tax funds could be prioritized and used to service the current year's SOGR asset renewal debt repayment first. Any remaining annual amount could fund the SOGR asset renewal capital and reduce new debt requirements.
- Available reserve fund balances would be used at the Town's discretion to reduce the amount of debt required in any given year.

Reserve Funds

The Town currently has numerous reserve funds that are used for a variety of purposes, ranging from offsetting operating contingencies to funding growth-related capital expenditures. Some of the Town's reserve funds are intended for specific assets and others are more inclusive. There are currently no established reserve level or contribution targets. These reserve funds are presented in **Appendix F**.

Reserve Funds can be separated between those that are considered discretionary and those that are considered obligatory. Obligatory reserve funds can only be used for their intended purpose, which is established either by legislation or agreement. The discretionary reserve funds are eligible for funding SOGR asset renewal and providing proposed Levels of Service.

The Town's planned funding includes amounts to be drawn from the discretionary reserves to support its current level of funding to 2034. These total approximately $24.4 million over the next 10 years. At present there are approximately $85.6 million in reserve funds available to the municipality based on the projected balance outlined in the 2025 budget. $59.3 million of this balance is for obligatory purposes, with the remaining $26.3 million available for discretionary purposes, or purposes established by Council. Assuming most ($24.4 million) of the discretionary balance would be utilized to fund the current level of asset renewal, the remaining amount is insufficient to close the SOGR funding gap given the need of $358 million over 10 years. However, any remaining discretionary balances could be used to offset debt financing in any given year.

A full review of the purpose of the existing reserves should be undertaken to determine:

- The reserves that can be combined,
- Contribution and balance targets, and
- The amounts that can be made available for asset renewal needs.

Once this is determined the available reserve funds (after deducting the planned funding amounts) may be used to offset debt requirements.

Debt Financing

Debt is a source of financing that allows capital projects to be undertaken sooner rather than later and reduces the immediate financial impacts through repayment over time. Debt financing can help the Town reduce an immediate risk, or rehabilitate an asset instead of replacing it later, to extend service life. In a full cost consideration, the interest on the debt may be less than the increased cost of replacement, or the cost of the risk.

The Town's overall annual debt repayment based on current planned financing needs across all departments is projected to be between $5.3 million and $6.8 million over the next 10 years.

The current debt servicing capacity ratio is approximately 2.5% of net revenues and projected to rise to approximately 3.77% by 2034 as debt is taken on to help fund various projects. This is well below the Province's maximum debt servicing capacity ratio of 25% and the Town's approved debt policy of 10%. Accordingly, there is room to utilize debt financing to address the funding gap over the next 10 years in a fiscally responsible manner.

Although interest rates have increased in recent years, it is not anticipated that these rates will remain elevated, and long-term debentures with low interest rates are an excellent option to pay for large capital with a longer lifecycle.

Tax Levy Contributions

Taxes are the Town's main source of annual revenues. A portion is used to fund capital investments and related costs. The 2025 tax levy is estimated at approximately $102 million. Raising an additional $41.89 million annually to close the funding gap would mean an increase of approximately 41%, which would be considered unaffordable and not feasible. The financing strategy includes options with a 1% and 3.5% dedicated tax levy.

Other Considerations

Although not factored into the financing strategy that follows, other options may also be considered to assist us in funding infrastructure gaps.

Stormwater Management Funding

We may opt to establish a stormwater user rate. Historically, funding for the stormwater management program has come through property taxes, resulting in stormwater management needs competing with other essential municipal services for the limited resources of tax levy funding. Many municipalities in Ontario and Canada have adopted a designated stormwater user rate to help address this funding challenge, allowing for a sustainable funding level based on actual needs.

User Rates and Fees

We may opt to review user fees. Many services we provide are funded in part through user fees, particularly in Recreation. Under a User Fee Policy or By-law, the full cost of providing each user fee service can be determined as the starting point for setting the rate, regardless of whether the full cost is to be recovered. This includes the full cost associated with asset lifecycle costing to support rehabilitation and replacement of the assets used to provide the service.

Sponsorship Strategy

We may consider sponsorship strategies for select buildings or facilities. The Town may explore a sponsorship strategy, which may result in a new policy around accepting sponsorship of facilities. The policy could also determine what the funds generated would be used for and may include or even be solely devoted towards sustainability of those facilities. This would reduce our infrastructure funding deficit in those areas, particularly recreation.

Public-Private Partnerships

We may consider public-private strategies for eligible capital projects. A public-private partnership is a cooperative arrangement between the public and private sector. Under this model, we could work with a third party to have them expand privately-owned infrastructure that would supply certain municipal services which otherwise we would have to provide. Such a partnership could reduce our capital needs.

Community Benefits Charge

We may consider a community benefits charge. Part of the provincial government's More Homes, More Choice Act, 2019, allows municipalities to charge for community benefits to fund a range of capital infrastructure for community services that would benefit new development. Certain services formerly part of the Development Charges Act, as well as parkland dedication and benefits derived from "density bonusing" under the Planning Act, would effectively be replaced by the community benefits charge under this legislation. Based on information provided by the province, it is anticipated that the changes would be revenue neutral for municipalities. funding deficit.

5.5 Financing Strategy Options

The gap to achieve proposed Levels of Service of approximately $41.89 million is undoubtedly a significant amount to be funded annually and may not be feasible. It is acknowledged that the Town may decide to fund a lesser amount that it believes would be more attainable and carry a funding gap albeit reduced. The financing strategy options discussed in this section are intended to provide an indication of how the $41.89 annual shortfall might be wholly or partially funded. There are three primary options that are based on a combination of dedicated capital levy funding and debt financing. It is assumed that all three (3) financing strategy options would begin in 2026.

5.5.1 Degree of Funding

The Town may opt to explore full or partial funding options, described below.

Full Funding

The Town's current debt financing is based on a 10-year term. Our analyses indicate that maintaining a 10-year term to fully fund the gap of $41.89 million would require a 5.6% annual SOGR capital levy to remain within the self-imposed 10% debt policy limit and would exceed the preferred 1%-2% target levy increase. Except for smaller assets such as vehicles and equipment, most assets considered in this Asset Management Plan would have a life expectancy greater than 20 years.

Therefore, Option 1 considers debt financing over a 20-year term instead of a 10-year term along with a 3.5% dedicated capital levy to fully fund the gap.

Option 1: **A 3.5% dedicated capital tax levy and debt financing assuming a 20-year term with a 4.5% interest rate to fully fund the $41.89 million gap.**

Partial Funding

The Town currently targets a 5% debt servicing capacity ratio although the policy allows 10%. Given the magnitude of the gap, there may be a decision to arrange for partial rather than full funding of the gap, to maintain current debt levels. This would mean continuing to carry a funding gap. An assessment of the risks of not funding the required renewal work at the appropriate time and/or the potential reduction in the Levels of Services and their associated impacts would be required.

Options 2 and 3 are partial funding options that would make funding envelopes available to the Town to partially close the SOGR funding gap recognizing that the unfunded amounts would be carried into the future along with the associated risks. The constraints for these options are limiting the capital levy tax to 1% and maintaining the debt capacity within the 10% policy limit.

Option 2: A 1% dedicated capital tax levy and debt financing assuming a 20-year term with a 4.5% interest rate to partially fund the gap.

Option 3: A 1% dedicated capital tax levy and debt financing assuming a 10-year term with a 4% interest rate to partially fund the gap.

All options are also premised on the following:

- The current level of funding from the sources currently used would not decline over the 10-year period.
- Grants and other third-party funding (apart from OCIF, Gas Tax) that may be available over the 10-year period are not reliable funding sources to close the gap. Therefore, these are not considered in the financial strategy. However, grants that become available during the period can be used to reduce the need from debt.
- Maintaining a debt servicing capacity ratio that would not exceed the 10% self-imposed policy limit established by Council.
- Using the annual tax levy amounts to service the new SOGR annual debt repayments. Any remaining amounts would fund capital and reduce debt requirements.
- Available reserve fund balances that may become available would be used at the Town's discretion to reduce the amount of debt required in any given year.

The strategy also includes a full review of the existing reserves.

5.5.2 Funding Options

Financing Strategy Option 1 - Full Funding

Option 1 financing strategy considers, starting in 2025, the use of debt financing to fully close the annual $41.89 million asset funding gap to provide proposed Levels of Service. Under this option the term of the debt is 20 years at a borrowing rate of 4.5%. (It is anticipated that this is a suitable and representative borrowing rate).

Also starting in 2026 the SOGR infrastructure levy would increase to 3.5%. Table 16 shows the annual capital levy increases and cumulative annual capital levy funds over the 2025-2035 period. As shown, the 3.5% capital levy *increases* may be discontinued after 2034 as the cumulative annual funds generated will have exceeded the annual capital needs by that time. The amount raised annually from the tax levy would remain constant at approximately $40 million to continue to fund the funding gap beyond 2034.

Table 16 Option 1 – Projected Capital Levy at 3.5% ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Project Tax Levy[1]	$ 107,610	$ 113,529	$ 119,773	$ 126,360	$ 133,310	$ 140,642	$ 148,377	$ 156,538	$ 165,148
Capital Levy @ 3.5% of prior years tax levy	$ 3,570	$ 3,766	$ 3,973	$ 4,192	$ 4,423	$ 4,666	$ 4,922	$ 5,193	$ 5,479
Cumulative Capital Levy	**$ 3,570**	**$ 7,336**	**$ 11,310**	**$ 15,502**	**$ 19,924**	**$ 24,590**	**$ 29,513**	**$ 34,706**	**$ 40,185**

[1] assumes 2% inflationary pressures and 3.5% capital levy increases

Table 17 shows the projected capital levy revenues, debt requirements and debt servicing for the period 2026-2034 to address the asset funding gap to provide proposed Levels of Service under Option 1. Each year the new tax funds raised through the capital levy will first be used to service debt repayment on any asset renewal debt. The remaining capital levy funds will reduce the level of debt needed to close that year's asset renewal funding gap. As shown, a 3.5% SOGR capital levy on the proposed 2025 tax levy of $102 million would raise approximately $3.6 million in 2026 that will be available to reduce the level of debt required to finance the $41.89 million asset capital.

As noted in Table 17, $35.0 million in new debt would be required in 2025. Repayment of the 2025 debt would commence in 2026 (the year after debt issuance). Annual debt servicing on the $38.3 million amounts to approximately $3.6 million per year. The same approach applies to each year over the period.

Table 17 Option 1 – Projected Capital Funding Envelope ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Annual Proposed LOS Renewal Shortfall	**$ 41,890**	**41,890**	**41,890**	**41,890**	**41,890**	**41,890**	**41,890**	**41,890**	**41,890**
Cumulative Capital Levy	$ 3,570	$ 7,336	$ 11,310	$ 15,502	$ 19,924	$ 24,590	$ 29,513	$ 34,706	$ 40,185
Annual Proposed LOS Debt Servicing	0	$ 2,946	$ 5,829	$ 8,628	$ 11,320	$ 13,878	$ 16,275	$ 18,478	$ 20,451
Available Funds to Reduce Required Debt	$ 3,570	$ 4,390	$ 5,481	$ 6,874	$ 8,605	$ 10,712	$ 13,238	$ 16,228	$ 19,734
Required Debt to Fund Proposed LOS Shortfall	$ 38,320	$ 37,500	$ 36,409	$ 35,016	$ 33,285	$ 31,178	$ 28,652	$ 25,662	$ 22,156
Annual Proposed LOS Funding	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**	**$ 41,890**

Table 18 indicates that the funding strategy under Option 1 will not cause the Town to exceed its self-imposed debt servicing capacity limit of 10% of net revenues. The debt servicing capacity ratio peaks at just over 9% of net revenues between 2032 and 2034, which complies with the Town's debt policy.

Table 18 Option 1 – Projected Debt Servicing Capacity Ratio ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Debt Servicing on Exisiting Debt	$ 6,808	$ 6,362	$ 6,302	$ 5,439	$ 5,015	$ 4,959	$ 4,103	$ 3,727	$ 2,467
Debt Servicing Proposed LOS Debt	$ -	$ 2,946	$ 5,829	$ 8,628	$ 11,320	$ 13,878	$ 16,275	$ 18,478	$ 20,451
Total Municipal Debt Servicing	**$ 6,808**	**$ 9,308**	**$ 12,131**	**$ 14,067**	**$ 16,335**	**$ 18,837**	**$ 20,378**	**$ 22,205**	**$ 22,918**
Town's Net Revenue	$ 161,813	$ 167,731	$ 196,236	$ 202,823	$ 209,773	$ 217,105	$ 224,840	$ 233,001	$ 241,611
Debt Servicing Capacity Ratio	**4.2%**	**5.5%**	**6.2%**	**6.9%**	**7.8%**	**8.7%**	**9.1%**	**9.5%**	**9.5%**
Outstanding Balance of Proposed LOS Debt	**$ 38,320**	**$ 74,598**	**$ 108,535**	**$ 139,807**	**$ 168,064**	**$ 192,927**	**$ 213,986**	**$ 230,799**	**$ 242,890**

There would be some room (approximately 1%) for other debt needs as current unrelated debt is repaid if the 10% policy limit were to be maintained. An increase to the policy limit would likely be required to facilitate any new non-related debt.

The outstanding balance on new debt at the end of 2034 is estimated to be approximately $242.9 million. This debt balance would continue to be serviced by future funds of at least $40 million raised annually from the capital levy if annual increases to the dedicated tax levy were to be discontinued after 2034.

Financing Strategy Option 2 - Partial Funding

The Option 2 financing strategy is intended to generate an annual funding envelope-based debt financing and a 1% capital levy to partially close the annual asset renewal funding gap. The debt financing over 20 years at a borrowing rate of 4.5% and the 1% annual capital levy would be implemented in 2025. This option is estimated to provide approximately $23 million in annual funding that would be applied to partially address the funding gap. Approximately $18.8 million of the annual gap would remain unfunded.

Table 19 shows the annual capital levy increases and cumulative annual capital levy over the 2026-2034 period. Annual funding from the capital levy would be approximately $1.0 million in 2025 increasing to approximately $10.4 million by 2034.

Table 19 Option 2 – Projected Capital Levy at 1% ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Project Tax Levy[1]	$ 105,060	$ 108,212	$ 111,458	$ 114,802	$ 118,246	$ 121,793	$ 125,447	$ 129,211	$ 133,087
Capital Levy @ 1% of prior years tax levy	$ 1,020	$ 1,051	$ 1,082	$ 1,115	$ 1,148	$ 1,182	$ 1,218	$ 1,254	$ 1,292
Cumulative Capital Levy	**$ 1,020**	**$ 2,071**	**$ 3,153**	**$ 4,267**	**$ 5,415**	**$ 6,598**	**$ 7,816**	**$ 9,070**	**$ 10,362**

[1] assumes 2% inflationary pressures and 1% capital levy increases

Table 20 shows the projected capital levy revenues, debt amounts and debt servicing for the period 2026-2034 to address the asset renewal funding gap. Similar to Option 1 the new tax levy funds raised through the capital levy will first be used to service debt repayment on any asset renewal debt with remaining funds going to reduce the level of debt requirements.

Table 20 Option 2 – Projected Annual Funding Envelope ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Annual SOGR Renewal Shortfall	**$ 17,000**	**17,000**	**17,000**	**17,000**	**17,000**	**17,000**	**17,000**	**17,000**	**17,000**
Cumulative Capital Levy	$ 1,020	$ 2,071	$ 3,153	$ 4,267	$ 5,415	$ 6,598	$ 7,816	$ 9,070	$ 10,362
Annual SOGR Debt Servicing	0	$ 1,228	$ 2,471	$ 3,725	$ 4,990	$ 6,265	$ 7,546	$ 8,832	$ 10,121
Available Funds to Reduce Required Debt	$ 1,020	$ 842	$ 682	$ 542	$ 425	$ 333	$ 270	$ 238	$ 242
Required Debt to Fund SOGR Shortfall	$ 15,980	$ 16,158	$ 16,318	$ 16,458	$ 16,575	$ 16,667	$ 16,730	$ 16,762	$ 16,758
Annual SOGR Funding	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**	**$ 17,000**

The tax levy amount of $1.0 million raised in 2025 would be available to directly fund work. Approximately $16 million in debt financing would be required in 2025 to fund the $17 million envelope. Repayment of the 2025 debt would commence in 2026 (the year after debt issuance). Annual debt servicing on the $16 million would be approximately $1.2 million per year. The same approach would apply each year to 2034.

Table 21 shows that the partial SOGR funding strategy under Option 2 will result in a maximum debt capacity ratio of 6.6% in 2033. This is below the self-imposed debt serving capacity limit of 10% of net revenues and leaves approximately 3% room for other non-SOGR debt needs.

Table 21 Option 2 – Projected Debt Servicing Capacity Ration ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Debt Servicing on Exisiting Debt	$ 6,808	$ 6,362	$ 6,302	$ 5,439	$ 5,015	$ 4,959	$ 4,103	$ 3,727	$ 2,467
Debt Servicing SOGR Debt	$ -	$ 1,228	$ 2,471	$ 3,725	$ 4,990	$ 6,265	$ 7,546	$ 8,832	$ 10,121
Total Municipal Debt Servicing	**$ 6,808**	**$ 7,590**	**$ 8,773**	**$ 9,164**	**$ 10,005**	**$ 11,224**	**$ 11,649**	**$ 12,559**	**$ 12,588**
Town's Net Revenue	$ 159,263	$ 163,499	$ 167,851	$ 172,322	$ 176,917	$ 181,638	$ 186,488	$ 191,473	$ 196,594
Debt Servicing Capacity Ratio	**4.3%**	**4.6%**	**5.2%**	**5.3%**	**5.7%**	**6.2%**	**6.2%**	**6.6%**	**6.4%**
Outstanding Balance of SOGR Debt	**$ 15,980**	**$ 31,629**	**$ 46,899**	**$ 61,742**	**$ 76,105**	**$ 89,932**	**$ 103,164**	**$ 115,736**	**$ 127,581**

In this case the annual increases to the capital levy would be required beyond 2034 to service the debt estimated at $128 million by 2034.

Financing Strategy Option 3 - Partial Funding

The Option 3 financing strategy is similar to Option 2 but intended to generate an annual funding envelope of approximately $10.5 million to partially address the funding gap. Approximately $29 million of the annual gap would remain unfunded. The annual funding from the capital levy would be the same as Option 2 at approximately $1.0 million in 2025 increasing to approximately $10.4 million by 2034 as noted in Table 19.

Table 22 shows the projected capital levy revenues, debt amounts and debt servicing for the period 2025-2034 to address the asset renewal funding gap. Similar to Options 1 and 2 the new tax levy funds raised through the capital levy will first be used to service debt repayment on any asset renewal debt with remaining funds going to reduce the level of debt requirements.

Table 22 Option 3 - Projected Annual Funding Envelope ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Annual SOGR Renewal Shortfall	**$ 10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**	**10,500**
Cumulative Capital Levy	$ 1,020	$ 2,071	$ 3,153	$ 4,267	$ 5,415	$ 6,598	$ 7,816	$ 9,070	$ 10,362
Annual SOGR Debt Servicing	0	$ 1,169	$ 2,352	$ 3,548	$ 4,754	$ 5,967	$ 7,184	$ 8,400	$ 9,612
Available Funds to Reduce Required Debt	$ 1,020	$ 902	$ 801	$ 719	$ 661	$ 631	$ 632	$ 670	$ 750
Required Debt to Fund SOGR Shortfall	$ 9,480	$ 9,598	$ 9,699	$ 9,781	$ 9,839	$ 9,869	$ 9,868	$ 9,830	$ 9,750
Annual SOGR Funding	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**	**$ 10,500**

The tax levy amount of $1.0 million raised in 2026 would be available to directly fund work. Approximately $9.5 million in debt financing would be required in 2026 to fund the $10.5 million envelope. Repayment of the 2026 debt would commence in 2027 (the year after debt issuance). Annual debt servicing on the $9.5 million would be approximately $1.2 million per year. The same approach would apply each year to 2034.

Table 23 shows that the partial funding strategy under Option 3 will result in a maximum debt capacity ratio of 6.3% in 2033.

Table 23 Option 3 – Projected Debt Servicing Capacity Ratio ($1000)

Year	2026	2027	2028	2029	2030	2031	2032	2033	2034
Debt Servicing on Exisiting Debt	$ 6,808	$ 6,362	$ 6,302	$ 5,439	$ 5,015	$ 4,959	$ 4,103	$ 3,727	$ 2,467
Debt Servicing SOGR Debt	$ -	$ 1,169	$ 2,352	$ 3,548	$ 4,754	$ 5,967	$ 7,184	$ 8,400	$ 9,612
Total Municipal Debt Servicing	**$ 6,808**	**$ 7,531**	**$ 8,654**	**$ 8,987**	**$ 9,769**	**$ 10,926**	**$ 11,287**	**$ 12,127**	**$ 12,079**
Town's Net Revenue	$ 159,263	$ 163,499	$ 167,851	$ 172,322	$ 176,917	$ 181,638	$ 186,488	$ 191,473	$ 196,594
Debt Servicing Capacity Ratio	**4.3%**	**4.6%**	**5.2%**	**5.2%**	**5.5%**	**6.0%**	**6.1%**	**6.3%**	**6.1%**
Outstanding Balance of SOGR Debt	**$ 9,480**	**$ 18,289**	**$ 26,367**	**$ 33,655**	**$ 40,086**	**$ 45,591**	**$ 50,099**	**$ 53,533**	**$ 55,812**

This is similar to the maximum ratio under Option 2 and below the self-imposed debt serving capacity limit of 10% of net revenues.

Similar to Option 2 there would be approximately 3% room for other non-SOGR debt needs. Depending on the unrelated repair debt requirements between 2026 and 2034, an increase to the Council-adopted debt policy limit of 10% may be necessary at that time. In this case the annual increases to the capital levy would be required beyond 2034 to service the debt estimated at $56 million by 2034, compared to $127 million under Option 2.

Summary of Options

Table 24 summarizes the options to highlight the main differences and similarities. Option 1 provides full funding of the annual SOGR gap of approximately $41.89 million. Options 2 and 3 offer only partial funding but the Town may be considered these to be appropriate strategies for the next few years as the $41.89 annual funding gap is further refined in the future. In this case the Town must accept the associated risks of underfunding the SOGR funding gap.

Table 24 Financial Strategy Options Summary

Item	Option 1	Option 2	Option 3
Capital Levy*	3.50%	1.0%	1.0%
Annual Capital Levy Funding by 2034	$40.18M	$10.36M	$10.36M
Debt Term (In Years)	20	20	10
Interest Rate	4.50%	4.50%	4%
Maximum Debt Capacity Ratio	9.53%	6.56%	6.33%
Outstanding Debt in 2034	$242.89M	$127.58M	$55.81M
Annual Funding Generated	$41.89M	$17.00M	$10.50M
Annual Remaining Unfunded SOGR Gap	$1.71M	$24.89M	$31.39M
Accumulated Unfunded SOGR Gap in 2034	$0.00M	$248.90M	$313.90M
Risk Assessment Required Due to Under-funding (as per Section 5.4.1)	No	Yes	Yes
Use of Available Reserve Balances	To Reduce Debt Requirements	To Reduce Debt Requirements	To Reduce Debt Requirements

*The 3 options do not take into account the 1% infrastructure levy approved in the 2025 budget

With the 'Do Nothing' option, the accumulated unfunded Proposed LOS Gap would be $419 million in 2034.

Reserve Adequacy and Rationalization Review

As noted in **Section 5.5**, the Town has a variety of reserve funds, of which only a portion could be considered available towards funding the SOGR asset renewal gap. In the review of these reserves, there was difficulty correlating the reserves to the asset classes. This made it difficult to determine the extent to which any of the reserve balances would be available to assist in closing the funding gap.

Accordingly, the Town may consider undertaking a review of established reserves as to their adequacy in addressing their intended purpose, and to see if any of the reserve balances could be repurposed towards funding the SOGR asset renewal gap. Any repurposed reserves would reduce the level of SOGR debt required as noted in financing strategies. The review should also consider rationalizing the reserves and establishing appropriate target balances and annual contributions.

5.5.3 Overall Financial Considerations

The following key points related to the Financing Strategy are for consideration by the Town:

- As per the Capital Forecast, the Town is planning to spend an average of **$93.69** million in capital per year, including investments in growth, policy & planning, maintenance, renewal, and new services. At a minimum, this planned capital funding level should be maintained as base SOGR funding into the future.
- The Financing Strategy Options presented in this report should be considered by the Town to support closing the annual SOGR funding gap and meeting Council approved initiatives, as outlined in LOS, estimated at approximately $41.89 million.
- If Option 2 or Option 3 are preferred, then consideration should be given to identifying the risks associated with continuing to under-fund the SOGR gap.
- A reserve adequacy and rationalization review should be undertaken, and available balances applied to reducing debt requirements.
- The preferred Financing Strategy Option should be implemented in 2026 and monitored annually.


Asset ID #57716
Stormwater Pond
Morra Ave.

Growth & Future Demand

6 Growth & Future Demand

6.1 Key Insights

This section describes the factors that will affect infrastructure needs into the future.

- Understanding the key drivers of growth and other future demand will allow the Town to plan for new infrastructure more effectively.
- We have experienced high levels of population growth and are projected to continue to grow in the future. Growing the Town's asset portfolio has a funding model through DCs, and the Asset Management Plan includes these considerations with consideration of design, build, and lifecycle costs.
- Pressures, service level changes, and other influences on future demand must be considered in long-term funding strategies that are designed to provide the proposed Levels of Service.

6.2 Growth

The demand for services delivered though infrastructure will change over time based on a combination of internal and external factors. Understanding and monitoring the key drivers of growth allows us to strive for effective planning for new infrastructure, and the upgrade or disposal of existing infrastructure. Increases in demand due to growth can affect what assets are needed and what Levels of Service will be required.

Population and employment forecasts help to quantify changing demand on infrastructure. Where available, demographic forecasts also inform asset planning (e.g. as the population ages, demands for services change). DCs help to fund projects that are triggered by an increase in population. Population and employment forecasts are used to formulate the DCs.

The Town's Development Charge Background Study[4] was referenced as the approved DC data source at the time of writing this Asset Management Plan.

4 2024 Development Charges Update Study, 2024 (Hemson)

6.2.1 Population and Employment Forecast

Replacing the 1996 Official Plan, the latest Peel Region Official Plan that is current for publication of this Asset Management Plan was approved by Regional Council in April 2022 (with modifications issued related to a Minister of Municipal Affairs decision). The Region of Peel is listed as a municipality in the Greater Golden Horseshoe growth plan area. The portion of the population and employment forecasts[5] allocated to the Town of Caledon (from the Region of Peel Official Plan[6]) is shown below in Table 25.

Table 25 Forecasted Population and Employment

	2021	2031	2041	2051
Population	80,000	112,000	201,000	300,000
Households	24,000	36,000	63,000	92,000
Employment	32,000	52,000	82,000	125,000

Shorter term forecasts are published in the Town's DC Background Study (2024) as shown in Table 26.

Table 26 Short-Term Forecast of Town's Development Charge

	2023 Estimate	Total at 2033
Census Population	79,654	125,742
Occupied Dwelling Units	25,020	42,006
Employment	32,273	56,675

By 2033, towards the end of the 10-year forecasting horizon of this Asset Management Plan, an additional 16,986 households are expected to develop, all requiring Town services, such as emergency, transportation, recreation, and storm, to name a few.

Also, the More Homes Built Faster Act, 2022 poses legislative changes that also impact our Town's growth costs and funding.

5 Figures are rounded to the nearest 5,000. Population figures include a Census undercount of 3.3%.

6 www.peelregion.ca/officialplan - Figure 10, April 2022

6.2.2 Assessing Growth-Related Asset Needs

Growth triggers the need for more assets, and funds to invest in the new assets throughout each asset's lifecycle. Planning for forecasted population growth may require the expansion of our existing asset portfolio and services, and the addition of new assets.

- As growth-related assets are constructed or acquired, they are integrated into the existing portfolio in the Asset Management Plan, with each update.
- Lifecycle costs associated with these assets are considered in long-term funding strategies that are designed to provide the proposed Levels of Service defined in the DC Background Study.

Estimated and forecasted capital and significant operating needs to accommodate our growth must be reported in this Asset Management Plan (*O. Reg. 588/17*). This must include estimated capital expenditures and significant operating costs related to new construction or to upgrade existing municipal infrastructure assets, based on the changing lifecycle activities.

Capital needs for growth-related infrastructure projects (and operating impact) are already forecasted in our most recent DC Background Study and are referred to by this Asset Management Plan. The DC background study is an excellent, detailed, legislated exercise where we quantify projected needs related to growth by asset based on the forecasted population. These assets may include roads, sidewalks, recreational facilities, libraries, parks, fire stations and other infrastructure needed to support complete communities.

The most recent and approved Town-wide DC Background study[7] includes a regulated Asset Management Plan section, focused solely on assets for future growth. In the DC Background Study, Table 10 depicts the annual capital provisions required to replace the development eligible and ineligible costs associated with the capital infrastructure identified in the DC Background Study. According to that table, the Town will need to fund an additional $27.0M per year to properly fund the full lifecycle costs of the new assets.

Operating costs are also impacted by the growth assets, and Table 11 in the DC Background Study summarizes the estimated increase in net operating costs for the new assets.

7 2024 Development Charges Update Study, 2024 (Hemson)

Table 27 Estimated Impact from Proposed Gross Capital Projects

Seromvice	Additional Operating Costs at 2033
Highway: Operations	$5,163,089
Highway: Roads & Related	$2,717,760
Fire Protection Services	$20,223,046
Parks and Recreation	$10,710,282
Indoor Recreation Facilities	$122,280,066
Library Services	$15,902,714
Animal Control	$4,155,000
By-law Enforcement	$7,896,471
Total	**$62,613,363**

Note that:

- Operating costs associated with the new infrastructure would be delayed until the works are in place and are anticipated to be covered through tax growth.
- Categories of assets are slightly different under the Development Charge Act than those adopted by the Town for both the Asset Management Plan and data management purposes.

The DC background Study also estimates the components of the development-related capital forecast that will require funding from non-DC charges sources. Of the $2.2 billion net capital forecast, about $224.1 million will need to be financed from non-development charges sources over the next 10 years. In addition, $797.6 million relates to service level increases and to development in the post-2033 period. It is likely that most of these monies could be recovered from future development charges.

6.2.3 Planning for Growth Expenditures

Looking now at what funds are allocated to address these growth needs, our Capital Forecast provides a high-level projection of capital costs for the next 10 years. By analysing the Capital Forecast, capital allocated for growth-related was compiled. Town planning, finance, and engineering staff prepare this forecast specific to the development projects planned for the next ten years.

Table 28 sums these projected capital budgets for growth-related asset project, derived from our capital forecast, by funding source. It is anticipated that the tax dollars from new residents offset these additional operating costs.

Table 28 Capital Budgets for Growth-related Asset Projects

Service	2024-2034 DC Related	2024-2034 Non-DC Related	Total Growth Costs
Fire Protection Services	$48,992,009	$79,710,095	$128,702,104
Parks & Recreation	$307,803,982	$45,700,000	$353,503,982
Library Services	$28,431,290	$52,333,710	$80,765,000
By-Law Enforcement	$10,296,285	$28,379,890	$38,676,175
Development Related Studies	$ -	$ -	$ -
Services Related To A Highway: Operations	$99,010,333	$10,090,667	$109,101,000
Services Related To A Highway: Roads & Related	$640,846,746	$696,287,838	$1,337,134,584
Total	**$1,135,380,645**	**$912,502,200**	**$2,047,882,844**

Updates to master plans, the Official Plan, and the DC Background Study continually prompt the update and evolution of infrastructure 'needs' and 'budgets', requiring staff to stay informed and communicate needs and budgets, and the Asset Management Plan to be periodically updated.

6.2.4 Changing Levels of Service

Meeting new Levels of Service established/approved in Master Plans may require additional investments in infrastructure. As Master Planning exercises occur, changing Levels of Service are recognized, and fiscal impacts fully defined where possible, then captured in DC Background Study updates, and as proposed Levels of Service in the Asset Management Plan. The sum of executing all Master Plans should not exceed available budgets, and Master Plans should include definitive guides on which plan elements are executed and in what order. This link is important in ensuring investment decisions are made with a full line of sight to fiscal, maintenance, service level and asset lifecycle awareness. This connection will strengthen the Town's overall business and planning processes, awareness, and transparency, and asset management planning will benefit from the leading practices regularly applied in Master Planning.

6.3 Future Demand from Other Drivers

This section describes what factors create demand or pressure on the assets and services we provide. These factors and drivers may pose pressures on the available budgets and must be considered and included in the asset planning process going forward. This Asset Management Plan forecasts asset investments based on proposed Levels of Service and considers these impending drivers.

6.3.1 Climate Change

On January 28, 2021, Town Council unanimously passed a motion declaring a climate emergency in Caledon. Following this the Town approved a Climate Change Action Plan (CCAP) called the Resilient Caledon Plan. The Plan contains over 60 action items to prepare for the local impacts of climate change and reduce greenhouse gas (GHG) emissions to 36% below 2016 levels by 2030 and reach net zero GHG emissions by 2050.

This strategic document was developed with input from Caledon residents and key stakeholders. The primary goals of Resilient Caledon are to reduce GHG emissions and increase our Town's resiliency to the impacts of current and future projected climate conditions – notably flooding, extreme weather events, and extreme heat – on residents, businesses, and natural and built infrastructure.

The Plan includes strategies to increase the resiliency of infrastructure by enhancing the capacity of roads and bridges to withstand extreme weather impacts, upgrading stormwater plans and practices to reduce risks, and include climate change considerations into our asset management planning processes.

This Asset Management Plan reflects the objectives to enhance infrastructure resiliency and creates an avenue to further advance infrastructure resiliency in the future. Utilizing the risk mitigation models and strategies that were developed during the Asset Management Plan process, staff can factor in risks associated with climate change and sustainability. Staff can take into consideration infrastructure resiliency when rehabilitating existing infrastructure, constructing new assets, and disposing/decommissioning other assets. There are also opportunities to embed costs related to lowering GHG emissions of our Town's assets, specifically fleet and buildings.

The Town's corporate climate actions are guided by the Corporate GHG Reduction Framework and the Green Fleet Strategy. The Corporate Framework contains actions to reduce emissions from Town-owned buildings, fleet, and waste and water consumed in Town facilities; and is set to be updated in 2025. As part of this Framework, the Town is currently updating all of it's building condition assessments (BCAs) from 2016 with a strong lens on emissions reduction. Pathways to reach net zero emissions are also being completed for all Town-owned facilities.

The Green Fleet Strategy outlines an approach to replacing fleet assets and fuel with lower carbon sources and technology, which also informed proposed levels of service and some asset replacement costs in the Asset Management Plan. Once finalized, these documents will further advance our capacity to develop asset management strategies that incorporate climate change mitigation and adaptation considerations.

6.3.2 Aging Infrastructure

Our asset portfolio continues to age, which can be reasonably managed if replacement can be predicted, and the rate of replacement is manageable and planned for.

However, waves of rapid urban expansion in the last century triggered surges of infrastructure growth, evident in some of the figures of installation history within the Service Area Plans. These groups of assets can tend to come due for renewal in similar short time horizons, and these intense spurts of infrastructure needs, and the ability to deliver this capital at intensified rates, must also be factored into the planning and forecasting activities.

6.3.3 Inflation

The rising cost of goods and services is adding an additional strain on the budget for infrastructure projects. In the wake of the post-pandemic era, we are challenged with inflation exerting significant pressure on our efforts to maintain infrastructure. The surge in inflationary pressures has escalated the costs associated with materials, services, labour, and construction, making routine maintenance and upgrades more financially burdensome.

6.3.4 Staff Capacity

The capacity of our Town Staff to plan, design, acquire, operate, and maintain assets is set by the current staffing levels, processes and tools to deliver the asset lifecycle work that is required. The Town strives to cognizant of the capacity, ability, and engagement of our staff to retain out valued employees and carry out the required activities to manage our assets to meet the expected services the Town provides.

6.3.5 Regional Asset Transfer

Planned transfer of Region of Peel assets to the Town is anticipated to take place in the next several years and will add additional pressure to Town resources.

Asset ID #54517
Pedestrian Bridge
Etobicoke Creek Trail

Continuous Improvement

7 Continuous Improvement

7.1 Key Insights

This section describes the areas in which asset management practices at the Town may improve.

- The Town has made significant effort in asset management in the past several years, resulting in a positive culture, growing understanding, asset & asset data improvements, and coordination between groups.
- Recommendations to improve are included, and focus on continual learning, further asset management understanding, organizational coordination, developing strategies, testing, practices and implementing improved service delivery enablers.

7.2 Overview

In addition to the more detailed Data Quality assessments within each Service Area Plan, an AM maturity assessment was conducted on the Town's AM practices overall. Conducting an AM maturity assessment is a helpful way to check in on successful practices already in place, and identify opportunities for improvements into the future, to continue advancing our asset management practices. This assessment helps us optimize our management strategies, ensure compliance with legislation, improve decision-making processes, and maintain the long-term sustainability and efficiency of our infrastructure and services.

By evaluating the current maturity level of asset management practices against the commitments made in the Town's AM Policy and IIMM[8] reference material, we can identify gaps to commitments in our AM Policy and industry practices and implement best practices that lead to more effective and efficient management of our public assets. This structured approach not only supports better service delivery but also contributes to the overall resilience and reliability of municipal services.

AM maturity assessment serves several key purposes:

- **Value to community through assets, equipment, and infrastructure**: The assessment helps align and build a coordinate effort across organizational silos that are community centric through Council approved service levels, while managing cost and risks effectively.
- **Continual improvement:** The assessment provides specific requirements that the Town can work towards to progress their ability to effectively manage assets to ensure customer service excellence.
- **Current state:** The assessment helps the municipality gain a comprehensive understanding of its existing asset management system of practices and processes through a consistent lens. It identifies strengths and areas of opportunity in the current system, highlighting areas that may need improvement through strategic alignment and planning that includes leadership and culture.
- **Transparency**: Through the assessment with clearly defined sections, it can systematically provide to the community and Council a simplified understanding of the actions that are carried out on assets.
- **Benchmarking:** The assessment allows the municipality to compare its asset management maturity level to leading practices.

8 International Infrastructure Management Manual, 6th Edition

This maturity assessment builds upon the previous assessment done as part of the Town's 2020 Asset Management Plan, and evaluates the current maturity of Town's asset management practices as they relate to:

- Objectives stated in the Town of Caledon's AM Policy,
- Legislated requirements, and
- Industry leading practices as defined by IIMM.

7.3 Assessment Approach

This assessment, based on the IIMM's Maturity Assessment Framework, allows us to evaluate our asset management practices in three key categories, each with various elements to consider. The three categories are described below, and Table 29 lists the corresponding elements to consider for each.

- **Understanding AM Requirements** – Assesses how well the Town knows what it owns and why, what services are being provided at what levels, and what will be needed into the future. This category includes a review of strategic direction, Levels of Service, forecasting, condition assessment, and the Asset Management Plan.
- **Developing Lifecycle Strategies –** Explores what documented processes the Town follows to plan and intentionally act upon a strategy to manage its assets. This category includes a review of risk management, operational/capital planning, fiscal planning, and the Asset Management Plan.
- **Enabling AM –** Reviews elements that support effective asset management practices, such as advanced technology, standardized processes (including continuous improvement), leadership and people, asset data, and engagement strategies.

Table 29 AM Maturity Assessment Framework

Understanding AM Requirements	Developing Lifecycle Strategies	Enabling AM
Analysing the Strategic Direction	Managing Risk & Resilience	AM People & Leaders
Levels of Service Framework	Operational Planning	Asset Data & Information
Demand Forecasting & Management	Capital Works Planning	AM Information Systems
Strategic AM Plan	Asset Financial Planning & Management	AM Process Management
	AM Plans	Continuous Improvement

Based on third party observations, data and first-hand account, the elements within each category are assigned maturity levels on a scale from 'aware' through to 'advanced', as demonstrated below in Table 30.

Table 30 Maturity Scale

Aware	Basic	Core	Intermediate	Advanced
Limited awareness, typical in a municipality that is new to planning or documenting its asset management	Aware but not formal, common in many Ontario municipalities	Aware and formalized but not optimized, common in many Ontario municipalities	Fully implemented but not fully mature, optimized, or integrated in the Town. Common in larger municipalities or those with longstanding AM system in place	Fully implemented, mature, and effective, leading in the industry. Advanced AM can be rare in Ontario municipalities

The Town is just beginning to enhance its asset management practices. It is not the Town's goal to be advanced across every element. Management of some assets within the Town has been advancing in maturity for some time (e.g. roads), other assets are newer and are lifecycle needs still being learned (e.g. manufactured stormwater treatment devices), and other areas of asset management practices are newer to the Town as a whole (e.g. AM information systems).

7.4 Results: Town AM Maturity Summary

Overall, the Town's current maturity is in line with similar Ontario municipalities, (especially those that are smaller in population with a large rural geography), who have been focused on legislative asset management requirements, and are in the initial stages of formalizing asset management programs.

Table 31 provides a visual representation of the assessed current asset management maturity at the Town. Scoring is indicated by the shading next to each element.

Table 31 2024 AM Maturity Level Report Card

Understanding AM Requirements		Developing Lifecycle Strategies		Enabling AM	
	Analysing the Strategic Direction		Managing Risk & Resilience		AM People & Leaders
	Levels of Service Framework		Operational Planning		Asset Data & Information
	Demand Forecasting & Management		Capital Works Planning		AM Information Systems
	Strategic AM Plan		Asset Financial Planning & Management		AM Process Management
			AM Plans		Continual Improvement

Where:

= Aware

= Basic

= Core

= Intermediate

= Advanced

Guidance used for scoring is provided in **Appendix G.**

7.5 Results: Maturity Observations

The following observations further explain the scoring shown above.

7.5.1 Category 1: Understanding AM Requirements

Analysing the Strategic Direction

How well does the Town articulate its AM Policy and AM objectives in alignment with the Town's strategic direction across all areas of the Town including Council and the public?

Town Status: Basic

- An AM Policy was established in 2019 and has been reviewed and updated for 2025.
- Awareness, communication, and connections between the policy and other strategic or guiding documents within the Town have not been developed.
- No AM objectives have been formally established.
- The Policy has not been formally referenced since its inception and is not foundational in planning exercises.
- The recently updated Town Strategic Plan defines commitments towards progress and aligning asset management within the Town, implementing an AM Road map.

Levels of Service Framework

How well does the Town incorporate Levels of Service criteria into decision making?

Town Status: Aware

- Per *O. Reg 588/17* Levels of Service were defined in the 2020 and 2024 Asset Management Plans. Per *O. Reg 588/17* proposed Levels of Service were defined in the 2025 Asset Management Plan.
- No framework to incorporate measures, or levels into decision making. Levels of Service are basically aligned with corporate objectives and commitments.
- Some informal understanding of customer groups, but cost relationships, alignment to planning, or periodic review are not in place.

Demand Forecasting and Management

How well does the Town:

- Forecast demand for its services?
- Assess the possible impact on its asset portfolios?
- Evaluate demand management options as part of its network and/or project analysis?

Town Status: Basic

- Demand forecasts are presented in the Asset Management Plan with some supporting assumptions and risks.
- Ranges of demand scenarios (high/medium/low) are not included.
- Strategies to manage demand are documented/referenced in the Asset Management Plan, and demand management is considered in investment evaluations.
- Possible impacts of demand on asset portfolios are not formally considered or described in the Asset Management Plan.
- Demand management options are considered in master planning exercises.

Strategic Asset Management Plan

How well does the Town develop, communicate, resource and action its AM Plan?

How effectively does the Asset Management Plan define the AM System and link organizational and AM Objectives?

Town Status: Aware

- The Asset Management Plan (some strategy, Service Area-specific plans) is not yet broadly communicated or understood in the Town, but the corporate AM group has key responsibilities that are emerging in this area.
- Some linkage between Town objectives and AM activities have been established in the development of the Asset Management Plan, with the goal to create AM objectives.

7.5.2 Category 2: Developing Asset Management Lifecycle Strategies

Managing Risk and Resilience

How well is risk management and resilience planning integrated into your asset management decision making?

Town Status: Basic

- Risks are factored into asset management planning and documented as legislated and as committed to in the AM Policy.
- A risk management policy or framework are not currently in place, however high-level risks are identified, critical services and assets are understood and considered by staff involved in maintenance / renewal decisions.

Operational Planning

How well does The Town plan and manage its operations and maintenance activity to keep assets in service and meet AM objectives?

Town Status: Core

- Operational plans are available for critical assets and most operational areas.
- Operational scheduling is largely based on historic practices but have been expanded to include leading practice and consideration of critical spares and operational efficiencies.
- Some trends in proactive maintenance are considered and piloted.
- Emergency management plans are in place and annual emergency management exercises occur.

Capital Works Planning

How well does The Town plan and prioritize capital expenditure, including renewal programmes?

Town Status: Basic

- Projects are identified and prioritized based on formal decision criteria, data, and informed judgment regarding asset performance, growth, and risk considerations; however, they are not aligned with an AM process to formally link decision making and prioritization to corporate and AM Objectives.
- Project and captured and managed within a project register.
- Projects are tracked through capital planning stages.
- Short term capital projects are fully scoped and include cost estimates.
- Renewal program is based on age and limited condition data.
- Capital program is prioritised, based on agreed decision criteria, to rank the relative importance of capital projects and programmes.

Asset Financial Planning and Management

How well does the Town:

- Plan for asset-related expenditure and funding?
- Re-value its assets and consider depreciation in its funding strategy?
- Consider the whole of life cost of asset investments.

Town Status: Aware

- Asset related financial forecasts are prepared, but are currently more of a financial exercise, with some limited asset managers' input.
- Financial budgets for capital planning expenditure are prepared, but operational planning is simple at this time.
- Asset expenditure categories have recently been updated and better align with AM forecasting (SOGR terminology) but are yet to be properly utilized.
- OPEX for new assets is not yet included in OPEX forecasts, and asset and corporate long-term planning are not yet aligned.
- The whole of life cost of asset investments is not yet considered.

Asset Management Plan

How well does the Town develop, communicate, resource and action its asset management plans?

Town Status: Basic

- *O. Reg. 588/17* communication requirements have been met.
- A portfolio Asset Management Plan is in place, and contains basic information on assets, service levels, planned works and financial forecasts and future improvements.
- Asset Management Plan aligns with corporate long-term strategic and financial plans in a basic way, but as each does not yet dynamically inform the other. The Asset Management Plan or objectives are not signed off by managers.
- Some Asset Management Plan input was received from relevant teams and stakeholders.

7.5.3 Category 3: Asset Management Enablers

AM People and Leaders

What is the level of organisational commitment to asset management?

How is this reflected in existing organizational structure, responsibilities, and resourcing of AM competencies?

Town Status: Basic

- The Corporate AM group is formalizing AM functions, and some informal AM processes are followed by asset managers in Service Areas, but AM is not fully embedded or coordinated across the Town.
- Corporate AM group is actively working on enabling productive relationships and supports informal corporate-wide coordination.
- Visible ownership and support of AM by governance and leadership is not yet in place, and awareness of AM purpose across some areas of The Town is not fully evident.
- Finance is looping AM forecasting back to Asset Managers to better close the communication loop and collaborate on planning.

Asset Data & Information

How well does The Town…

- Capture its asset inventory and define its asset data requirements?
- Ensure the data if fit for purpose (accuracy, consistency, reliability).
- Measure and report on the condition and performance of its assets?
- Monitor the physical health of its network over time, to inform risk and investment decisions?

Town Status: Basic

- Sufficient information is available to meet *O. Reg. 588/17* AM Plan, and to complete depreciated replacement cost valuation, and to manage operational requirements for most assets.
- Asset hierarchy, identification document, attribute standards not yet in place
- A data improvement plan is underway.
- Age is used as a proxy for condition for all assets at this time, except for buildings, roads, bridges, large culverts, and a percentage of the storm main.
- Age can be used as a baseline of condition, however, for critical assets age data is not fit for this purpose. Actual condition or performance measurement is required for lifecycle monitoring, Levels of Service analysis, and risk assessments.
- Some knowledge of asset criticality and risk is in place but is informal and does not yet support the regularity of data collection and updating.
- Asset inventories are captured, in some cases, through TCA reporting.

AM Information Systems

How well does the Town ensure appropriate information systems are in place and fit-for-purpose considering complexity of assets and AM maturity level required?

Town Status: Basic

- AM applications are currently in place, with asset register capable of recording all core asset attributes – capacity, type, size, material, etc. Clear intention to complete the electronic asset register.
- Asset information reports can be manually generated for AM Plan input. The data entry, updates, and use of the AM applications are not embedded across the Town.
- Asset information reports cannot be reliably manually generated for AM Plan input, as data is not yet complete.
- Clear intention to continually improve the Town's asset registry in the EAM system, initiated through the TCA reporting process. In addition, staff are continually improving information in the Town's GIS system.

AM Process Management

How well does the Town:

- Define and implement appropriate AM process documentation?
- Review and improve AM processes?
- Align AM processes with those in other 'Management Systems'?

Town Status: Aware

- Town is aware of need for formalized processes to support AM.
- Process/operational documents are in place within Service Areas, but were not prepared with an AM lens, and are not yet connected to the Asset Management Plan.
- Minor alignment with budget process at this time.
- Finance is looping AM forecasting back to Asset Managers to better close the communication loop and collaborate on planning.

Continual Improvement

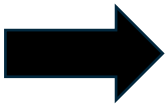
How well does the Town ensure that it continues to develop its asset management capability towards an appropriate level of maturity?

Town Status: Aware

- Recommendations for continual improvement are included in the Asset Management Plan, and some action has taken place since its last publication.
- Improvement actions identified and allocated generally to Corporate AM group, but staff allocation and progress monitoring is not yet in place.
- Town has an AM Roadmap that is planned to be re-initiated pending input and approval of senior leadership.

7.6 Recommendations

In line with the commitments in the Town's AM Policy, our general AM Maturity objective is to practice consistent, documented asset management. This requires some maturing of our current practices – from Aware/Basic to Core.

Aware / Basic		Core
Currently Town has some awareness and processes in place. Practices are not documented or consistently followed.		Town is currently aware, formalized processes are in place but not yet optimized. This is a common AM maturity level in many Ontario municipalities.

'Core' maturity requires that the Town build upon its awareness of AM benefits and requirements, and having some of the basic elements in place, create a state where AM practices are documented, implemented, and consistently followed. From the 'Core' maturity level, the Town will be more prepared to, over time, create additional enhancements to refine, balance and optimize its work. In the future, the Town can continue to advance its asset management practices beyond 'core' to intermediate or advanced.

The following areas of improvement include recommendations that take aim at key areas of the Town AM practices where gaps exist between the current maturity and the Town's AM Policy and objectives. Each improvement opportunity includes consideration of many elements of the AM Maturity Framework. Not all IIMM elements are mapped to a recommendation. Instead, the recommendations focus on areas that are foundational to asset management success, that should be addressed first, and improving the remaining elements/maturity to advanced levels can come after these fundamentals are established.

It is expected that actioning the recommendations will enable us to meet our Strategic AM Policy commitments, maintain legislative compliance, and align with industry-recognized practices, as defined by the IIMM.

7.6.1 Recommendation: Levels of Service Framework

These actions are recommended to move the Town beyond the Aware level of maturity.

Defining service levels is key in understanding what services our assets need to provide and at what standards or levels. This helps in managing expectations and planning for service delivery.

- Integrate Levels of Service into other AM processes, for example incorporate Levels of Service into decision making into the budget process, capital business cases, master plans, engineering standards, specifications, and asset lifecycle strategies to ensure investments are aligned with proposed Levels of Service.
- Communicate to inform all stakeholders of relevant activities and outcomes, enhancing transparency and support.
- Assess and define data required to support Levels of Service.
- Understand how current AM System can support Levels of Service.
- Capture roles, responsibilities, competencies, and organizational resources required to support Levels of Service.

7.6.2 Recommendation: Asset Financial Planning & Management

These actions are recommended to move the Town beyond the Aware level of maturity.

It is important to ensure that there is adequate financial planning and budgeting to support the asset management activities, acknowledging the asset needs from a Levels of Service perspective. This includes understanding the long-term cost implications of asset management decisions.

- Implement Full Lifecycle Costing Models for the largest Town portfolios to begin, say bridges, structures, roads, storm main, and buildings, to capture all costs associated with the acquisition, operation, maintenance, and disposal of assets. This includes direct and indirect costs, future maintenance and replacement expenses, and residual values.
- Ensure financial considerations are integrated into decision-making processes related to asset lifecycle activities, such as the design, acquisition, operation, maintenance, renewal, and disposal of assets.
- Implement periodic exercises to update replacement values, including the means to capture recent procurement pricing into the asset registry.
- Continue to implement funding allocation process improvements, including consistent tagging across all Service Areas for Business Cases to delineate projects as SOGR, growth, or new/increased services. This is a leading practice for long-term capital planning, enables more discreet asset management analysis, and may be especially beneficial if multi-year budgeting is considered.
- Consider enhancing the annual process to manage existing Capital Works in Progress (WIPs) to assure that dormant projects and or/ projects that are no longer deemed critical or urgent are closed, and those funds are re-allocated to more pressing renewal projects.
- Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

Also, as discussed in **Section 5**:

- The planned capital funding levels from the Town's Capital Forecast ($93.69M) should continue as base SOGR funding into the future.
- The Financing Strategy Options presented in this report should be considered by the Town to support closing the annual SOGR funding gap estimated at approximately $41.89 million.
- If Option 2 or Option 3 are preferred, then consideration should be given to identifying the risks associated with continuing to under-fund the SOGR gap.
- A reserve adequacy and rationalization review should be undertaken, and available balances applied to reducing debt requirements.
- The preferred Financing Strategy Option should be implemented in 2026 and monitored annually.

7.6.3 Recommendation: Managing Risk and Resilience

It is important to identify and manage the risks associated with owning and operating assets. This involves understanding how these risks may affect the delivery of services and taking steps to implement appropriate controls and mitigation strategies.

- Risk Management practice should include Objectives (aligns risk management activities and the Town's overall AM objectives), Registry, Identification & Categorization, Analysis & Prioritization, Evaluation & Mitigation
- Integrate Risk Management practice with other AM processes.
- Communicate to inform all stakeholders of relevant activities and outcomes, enhancing transparency and support.
- Assess data required to support Risk Management.
- Understand how current AM System can support Risk Management.
- Capture roles, responsibilities, competencies, and organizational resources required to support Risk Management.
- In the future, once a more advanced maturity level is achieved, an Enterprise Asset Management and Enterprise Risk Management practices may also be considered.
- Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. This should include a risk matrix or scoring systems to consistently evaluate competing needs.
- Scenario Planning and Contingency Strategies: Developing and reviewing different funding scenarios and their associated risks (e.g., impact of delaying a major rehab vs. executing partial repairs), and establishing contingency plans for high-risk assets to minimize service disruptions.

An analysis should be carried out by the Town to determine both the asset lifecycle cost benefit and customer service impacts for determining the appropriate balance and timing of required PM work, reactive or run to failure work, lifecycle refurbishments and replacements. Such analysis would help ensure the lowest possible asset lifecycles cost occur in meeting Council-approved Levels of Service.

7.6.4 Recommendation: Developing Lifecycle Strategies

A clear understanding of the full lifecycle of assets, from their creation or acquisition through to their eventual disposal, is an important undertaking for the Town. This includes making informed decisions that balance performance, risk, and cost throughout each stage of the asset's life.

- Establish a Lifecycle Management process - a structured approach to managing the various stages of an asset's life, from planning and acquisition to operation, maintenance, renewal, and eventual disposal. The Lifecycle Management process should include:
- Lifecycle Phases Definition,
- Lifecycle Strategies (that consider performance, cost & risk), and
- Maintenance & Renewal Programs.
- Integrate the Lifecycle process with other AM processes and decision making.
- Communicate to inform all stakeholders of relevant activities and outcomes, enhancing transparency and support.
- Assess data required to support Lifecycle Management.
- Capture roles, responsibilities, competencies, and organizational resources required to support the Lifecycle process.
- An analysis should be carried out by the Town to determine both the asset lifecycle cost benefit and customer service impacts for determining the appropriate balance and timing of required Preventive Maintenance (PM) work, reactive or run to failure work, lifecycle refurbishments and replacements. Such analysis would help ensure the lowest possible asset lifecycles cost occur in meeting Council-approved Levels of Service.
- In establishing an EAM, lifecycle data should be included. Condition assessment data and work management data should be recorded against assets to build asset histories to enable enhanced decision-making. Through the EAM, a single consistent Work Management Process can be considered for managing all assets that includes Service Request, Work Orders, Planning and Scheduling Work and work documentation of all work completed on assets.
- Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to extend asset life where feasible (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance), and adjusting maintenance priorities dynamically based on real-time data and field observations.

7.6.5 Recommendation: Developing an Asset Management Program

It is important to maintain a clear asset management policy, strategy, and program that can be effectively implemented and followed. The asset management program should outline the key principles and objectives for managing infrastructure assets, ensuring they are aligned with the Town's broader strategic goals.

Creation of AM program to include:

- Corporate AM objectives – Connected to real, achievable objectives defined in Corporate Asset Management or in the Asset Management Plan
- A connection between corporate commitments and AM objectives
- Develop a means to create and foster awareness of asset management and objectives across the Town.
- Integrate the AM Policy into other corporate processes for developing, renewing, or reviewing other corporate strategic plans and documents.
- Communicate to inform all stakeholders of relevant activities and outcomes, enhancing transparency and support.

7.6.6 Recommendation: Continual Improvement

These actions are recommended to move the Town forward in continual improvement.

- Establish processes for ongoing improvement based on performance monitoring, reviews, and the evolving leading practices in asset management.
- Consider enhancing proactive maintenance planning, scheduling, and work completion through a Town wide Work Management process review.

7.6.7 Recommendation: Asset Data & Information

While the processes and awareness are being developed, building on recommendations from the 2024 Asset Management Plan, some data management tools and processes may aid the Town in managing its wealth of data and information.

- A Town-wide Levels of Service registry in a formal hierarchy for use by all.
- Require that drawing sets from new developments must be provided at a suitable inspection/assumption stage and are provided in suitable format to update the asset registry (inventory GIS).
- Require that any assets assumed though the Region of Peel transfer include accurate and updated asset registry data, by unique asset number and information such as description, age, replacement values, condition, etc., and aligned with GIS mapping.
- Require that any assets assumed through the Region of Peel transfer include lifecycle history and costing information. Carry-out a review of inital information provided by the Region and were missing request the following information and data by unique asset number;
- Accurate and updated asset registry data with information such as description, location, age, replacement values in present day dollars, vendor information, etc.,
- Lifecycle data and information of all completed condition assessments (BCA's, FCI's, OSIM's, BCI's, CCTV, PCI's, OCI's, etc.), inspections and financial valuations,
- Lifecycle data and information of identified and documented risks and risk mitigations, all Work Order data and information of completed work histories, including repair costs (labour and material) etc. plus asset specific documented planned work (PM's, reactive planned work – tasks, resources, planned task durations, and task frequencies etc.) and,
- Provided asset data and information is to be in alignment / coordinated with GIS mapping of GIS data and information.

7.6.8 Recommendation: AM People and Leaders

These actions are recommended to move the Town forward in AM leadership.

- Ensure roles and responsibilities outlined in the Town's AM Policy are implemented, and also communicated to new staff in those roles. For example, the CAO is designated as the Executive Lead in the AM Policy, and documented discussion of these responsibilities would be encouraged.
- Continuous improvement of asset management at the Town should include the development of an asset management framework and program involving people leaders and senior leadership with the development and implementation governance.

7.6.9 Recommendation: Implementation

Additional recommendations that may assist the Town in successful implementation of the asset management practices, specific to the Town's strengths and challenges, are provided.

- Regularly maintain and strive to adhere to the Capital Forecast, to minimize asset emergency and non-emergency failures resulting in high cost and impacting Levels of Service.
- Consider establishing a simple but transparent and consistent capital priority framework based on risk considerations.
- As part of developing an asset management framework and program consider establishing a steering committee and working group, to further advance AM maturity at the Town.

7.6.10 Recommendation: Public Engagement

These actions are recommended to move the Town forward in Public Engagement.

- Beyond public consultation regarding the levels of service framework, the Town should share key resulting recommendations as a plan for continuous improvement between reporting periods and ensure updates on improvements are communicated.
- Communicate outcomes with stakeholders, enhancing transparency and support and sharing processes and success.
- In public consultation, consider the formulation of questions to provide meaningful direction and feedback. Rather than initiating a distinct "Asset Management Survey," it is suggested that the Town continues utilize its existing budget survey and other consultation exercises, which boast high participation rates and are frequently administered. Given the financial focus, the budget survey presents an opportune platform for incorporating well-considered questions pertaining to service levels and costs. It is advised that instead of open comment fields, specific questions that can be acknowledged and used, be asked. This will also avoid asking for input and being viewed as not acting upon it, even though an overwhelming majority may request a certain thing.

AREA PLANS

The following sections present the specific plans for the Town's five services areas:

- Administration,
- Emergency,
- Recreation & Culture,
- Stormwater Management, and
- Transportation.

Asset ID #56773
Town Hall

Administration

Asset ID #703
Animal Services by Town Staff

Asset ID #703 Animal Service Shelter
&
Asset ID #58380 Service Vehicle

8 Administration

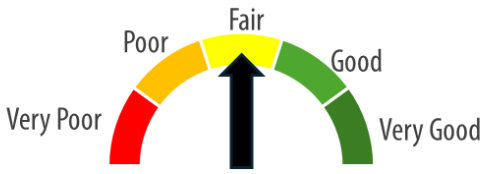
8.1 Key Insights

Administration services that we provide rely on the following classes of assets:

- Buildings,
- Equipment,
- Fleet, and
- IT & Communications.

Total Replacement Value of Assets **$73.6 Million**

Overall Asset Condition[9] **Fair**

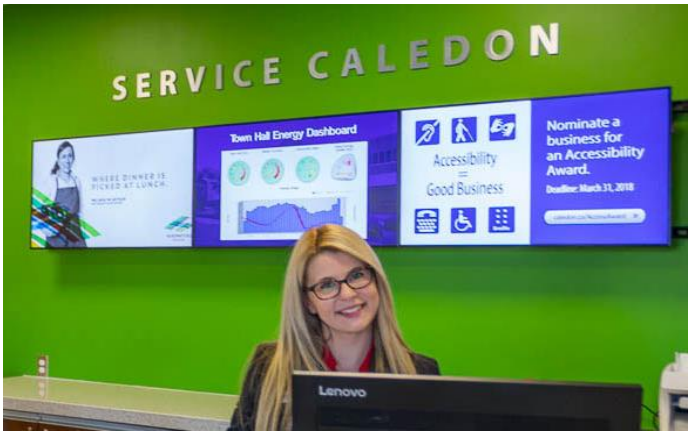


9 Presented as a weighted average, weighted by replacement value.

8.2 Description

Administration Services provided by the Town of Caledon rely on a variety of assets. The core functions in Administration include:

- Services from the Clerk's Office,
- Planning and Building Services,
- Bylaw Services,
- Corporate Services,
- General Counter Services, and
- Animal Services.



The assets used to provide these services are summarized below.

Administration Services

Assets are used to enable staff and to provide services to the public and the community. Our Animal Services department uses specialized buildings, fleet, and equipment to provide emergency, education, adoption, and fostering animal services in the community.

Examples of Administration assets include:

Buildings:

- Civic buildings (including Old Town Hall, Town Hall, Ontario Court of Justice, and Animal Shelter).

Fleet:

- Building vehicles,
- Bylaw vehicles,
- Animal service vehicles, and
- Other Administration vehicles.

Equipment:

- Animal services equipment,
- General tools & equipment (e.g., chairs, catch pole, folder inserter machine), and
- IT equipment.

8.3 Levels of Service

We maintain safe, reliable, available, and sustainable assets, to enable us to continue providing a wide range of municipal administration and general governance services. This service delivery is supported through assets such as:

- Buildings, which provide safe and sound buildings used for public access,
- Equipment and furniture, which enable staff to provide services, and
- Fleet, to enable the movement of staff and materials.

As stated in the Town of Caledon Strategic Plan 2023-2035, service excellence and accountability are priorities. We have committed to investing strategically to ensure fiscal responsibility including incremental investment in people, process, and technology to ensure that assets are in a SOGR.

8.3.1 Level of Service Metrics

The Town proposes to continue providing safe, compliant, reliable, available, and sustainable Administration assets, indicated through the following metrics:

Level of Service Metric	Current Performance	Proposed Performance by 2034
Percentage of Administration assets in a SOGR	92.8%	**92.8%**
Implementation of the recommendations in the Green Fleet Strategy*	20%	**100%**
Implementation of the recommendations in the Corporate GHG Reduction Framework*	85%	**100%**
Implementation of growth-driven new/increased service levels*	0%	**100%**
Implementation of other capital forecast items*,**	0%	**100%**

* Reference year is 2025, considering all of the committed or planned expenditures until 2034.

**Examples include investments in records digitization

8.3.2 Other Monitoring

Other important performance metrics are shown below.

Other Monitoring	2024 Performance
Current annual capital reinvestment rate[10]	2.4 %

We also monitor other indicators of Levels of Service including:

- The reliability and redundancy of network connections.
- The public service network availability.
- Information Technology service levels.
- The demand and capacity of our animal services.
- The accessibility of our buildings to Accessibility for Ontarians with Disabilities.

8.4 Current Asset Inventory and Condition

Table 32 lists the Administration asset inventory including asset class, value, estimated useful life[11], and average age. These values and quantities are based on information from the Service Area. The installation[12] history is shown in Figure 11.

Table 32 Inventory of Administration Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Buildings	4	$59,623,195	5-50	19
Equipment	4	$168,6366[13]	-	-
Fleet	6	$1,017,016	7	6
IT & Communications	-	$12,926,574[14]	-	-
Total		**$73.6M**		

10 Based on capital renewal projects identified in the Town's 10-year Capital Forecast.

11 The estimated useful life is the typical lifespan in a typical operating environment.

12 Installation date used for the Asset Management Plan was either based on original in-service date, acquisition date or in-service date available in the Town's data, in the order of priority.

13 Includes Animal Shelter equipment. Only $22K worth of equipment had inventory information available. An additional animal shelter equipment of $165K was manually added.

14 This replacement value was manually entered as a lump sum based on staff estimates. The IT & Communications allocation is $4.3M IT communications equipment, $8.4M IT communications PSN Network.

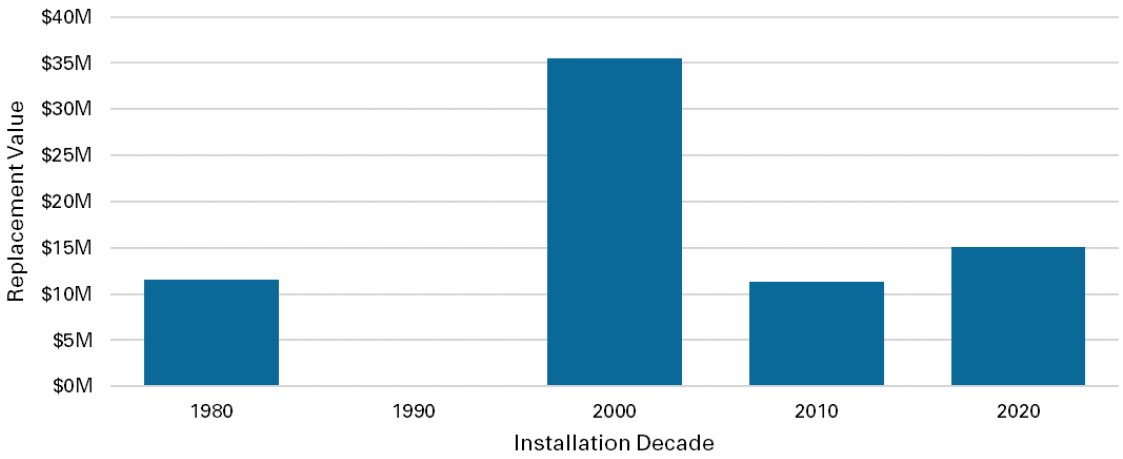


Figure 11 Installation History of Administration Assets, Shown by Replacement Value

The overall average condition of the Administration assets is Fair. Figure 12 shows the current condition of the Administration fleet assets by percentage of total replacement value.

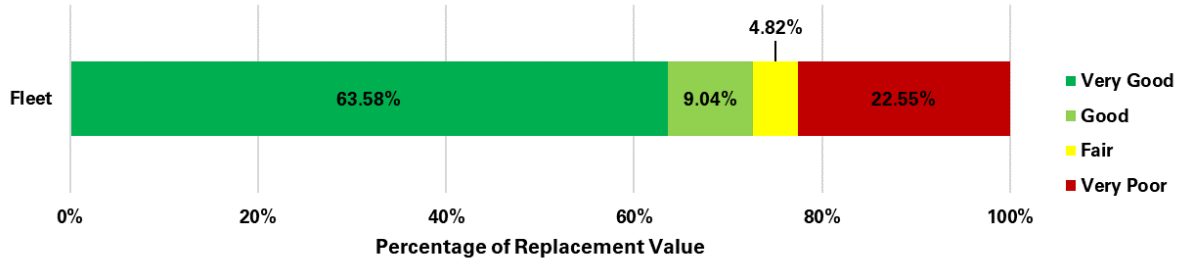


Figure 12 Current Condition of Administration Fleet, by Percentage of Replacement Value

Figure 13 shows the current overall condition of the Administration buildings on the Very Poor to Very Good scale.

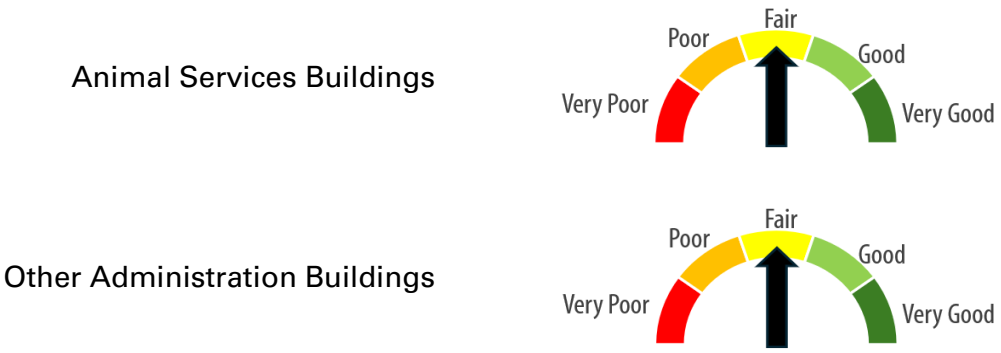


Figure 13 Current Condition of Administration Buildings

The methods for assessing condition vary by asset:

- Buildings are complex assets made up of components each with specific age, useful life, and condition. The building condition presented above is based on building condition assessments and has taken into account the various building components to establish the replacement cost of the buildings.
- For all other Administration assets, age is used as a proxy for condition.
- Condition assessment methods are described in further detail in **Section 3.**

Figure 14 shows the overall proportion of Administration assets in a SOGR. SOGR refers to assets that are not in the Condition category of Very Poor. These assets are assumed to still be able to follow the desired lifecycle strategy to remain in working order. See **Section 3** for more information on SOGR.

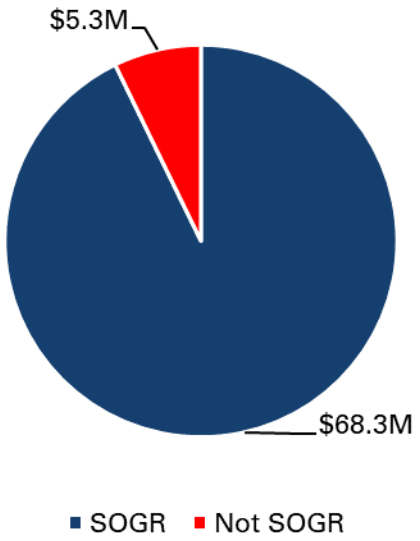


Figure 14 Proportion of Administration Services Assets in a SOGR

8.5 Public Input

It is important to stay aware of community expectations and priorities. Various recent public consultation activities were reviewed to distil public input related to asset management in Administration. Key messages:

- The community would like the Town to continue providing animal services.
- By law enforcement was voted in the top 3 most important services to the community.
- Priorities for Levels of Service include infrastructure improvements.
- Priorities for asset improvements include parking.
- When it comes to managing growth, the community feels it is most important to continue to renovate, expand and build community facilities.
- Due to the increased cost of maintaining current service levels and infrastructure, the Town must balance taxation and service delivery levels. The top response the community voted for was to add or increase user fees to maintain current services.
- Respondents ranked risk and return on investment as the most important criteria our Town should use to prioritize issues and services, and impact on climate change and quality of life as the least important.

A more detailed description of takeaway asset management feedback from the public is provided in the **Appendix E**.

8.6 Lifecycle Strategies

We employ a combination of lifecycle activities to provide proposed Levels of Service provided through Administration assets while striving to optimize costs based on defined risk. The strategy is a series of activities throughout an asset's lifecycle that help get the most value out of the asset. These activities include policy/planning, operation, maintenance, monitoring, rehabilitation, replacement, and decommissioning while continuing to prepare for growth and introduce new or increased service levels.

When feasible, we also strive 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.

Lifecycle activities we choose to apply are selected, reviewed, and modified based on continual industry benchmarking, staff training, professional networking, online reviews, consultant recommendations, and trial and error through pilot programs.

8.6.1 Lifecycle Strategy for Administration Fleet and Equipment

The lifecycle strategy applied to the Administration fleet and equipment is aligned with the strategy for all fleet and equipment, which is described in detail in **Section 12.6**.

8.6.2 Lifecycle Strategy for Buildings

The following series of activities generally describe the lifecycle strategy that we have adopted for buildings in an effort to provide proposed Levels of Service at a defined level of risk within current budget.

Policy and Planning Activities

- Council Strategic Plan includes a commitment to community vitality and livability, which includes plans and initiatives related to provision of services and programs, and facility expansions. Master plans for various Service Areas predict future needs for building assets (e.g., Parks and Recreation Master Plans, Facilities Needs Assessments, Fire Master Plans).
- Studies are occasionally carried out to evaluate usage or space allocation.
- Building condition audits guide the Town in future capital requirements for both SOGR and for net zero feasibility.
- Town standards for planning include energy performance standards (Corporate Green Building Standards) to be considered in designs.
- O. Reg. 25/32 which requires the Town to report annually on the energy consumed in its buildings and to prepare a 5-year conservation demand management plan and set targets to reduce energy consumption.
- Processes are in place for planning new building designs or major renovations that involves consultation with staff including operations.
- New Fire buildings involve a Statement of Requirements prepared by the Town.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- Planned PM programs for building components, such as building air conditioning maintenance.
- Reactive maintenance programs for building components as required.
- Building condition audits identify deficiencies. Regularly scheduled inspections and comprehensive building condition assessments. In accordance with manufacturer manuals where it can be afforded.
- Pilot programs to enhance the work order process, to enhance proactive planning, work order utilization, and building of asset work history information.
- Process for Civic Buildings and Fire Stations involves work orders triggered by staff observation. Parks buildings maintained based on schedule, use, and user group comments/ recommendations.
- Regular health and safety inspections also trigger repairs and maintenance.
- Operators' notebooks for tracking observed deficiencies requiring repair.
- Commissioning requirements through contracts in new builds trigger the transfer of operation/maintenance documents and training from the contractor to staff, handover of documents by contractor.

SOGR: Rehabilitation & Replacement Activities

- Capital projects from Building Condition Assessments may trigger rehabilitation or replacement of various components or subcomponents of buildings. Also requires input from service contractors, staff, and technology.
- Before like-for-like automatic replacement of a building or its components, Town has a process to check the feasibility to decommission, repurpose based on cost-effectiveness, value to Council/community, heritage, and other criteria.
- To forecast the future building renewal needs for this Asset Management Plan, it is assumed that the Town strives to replace building components at the end each component's EUL.

Decommissioning Activities

- Processes are in place to check the feasibility to decommission, repurpose based on cost-effectiveness, value to Council/community, heritage, other criteria.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk -** Reduces risk of not having buildings available, open, safe, functional, with adequate capacity to meet the Town's requirements, and available at the right time, sustainable into the future.
- **Corporate Risk & Liability** – Reduces liabilities from unplanned breakdowns in buildings, especially with public use, vacant properties.
- **Financial Risk –** Reduces losses from deficiencies, excess energy consumption, unplanned major failures resulting in unnecessary excessive costs, replacing or retaining buildings or components that are no longer of use (e.g. costs in retaining a vacant building), or from planning for or constructing buildings in excess, poor use of Town funds.
- **Reputational Risk –** Reduces negative optics from a poorly maintained or unavailable municipal building, especially one for public access and use, unnecessary use of Town funds, poor planning of buildings with Town funds.
- **Operational Risk –** Reduces inefficiencies from unavailable buildings, components out of service, unsuited, unavailable, undersized, or poorly designed buildings.
- **Environmental Risk –** Reduces environmental risk of spills, excess energy consumption or emissions due to poor maintenance spills, excess energy consumption or emissions due to retention of decommissioned buildings, excess energy consumption or emissions due to poor maintenance or poor design.
- **Safety and Health Risk –** Reduces public and staff safety and health risks from building deficiencies or poorly maintained components, such as HVAC or flooring, or from vacant buildings.

8.6.3 Lifecycle Strategy for IT & Communications

The following series of activities generally describe the lifecycle strategy that the Town has adopted for IT & Communications assets, in an effort to provide proposed Levels of Service at a defined level of risk within current budget.

Planning, Maintenance, and Replacement Activities

- Monitor and track age and usage.
- Focus is to ensure that IT assets serve user, mitigate potential malware/cyber-attacks, ensure effective operation for users.
- Users of Town hardware and software assets provide asset concerns through alerting applications and PM. Concerns are also addressed through routine maintenance programs reported by the user to the IT group.
- Rehabilitation and replacement programs may exist for Town's directly owned cable network. Typically, cable is not replaced at the end of life rather it is run to failure. There is a need to increase in capacity.
- End user devices are generally not rehabilitated.
- Replacement of IT assets as per licensing or obsolescence requirements. Scheduled replacement programs in place. Replacements are always upgraded and like for like is not typically used.
- Laptops hard drives are wiped of data using appropriate procedures and are typically suitably disposed.
- Warranty practices are used to enable maintenance to maximize the technology lifespan.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk -** Reduces risk of not having IT assets available or effective to perform technical functions, unavailable networks.
- **Corporate Risk & Liability** – Reduces risk of data loss, errors, privacy breach, inability to process work.
- **Financial Risk –** Reduces losses from data loss, errors, privacy breach financial transaction errors. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Reduces negative optics related to data loss, errors, customer interface, privacy breach, unavailable public network.
- **Operational Risk –** Reduces inefficiencies and losses from IT deficiencies, unavailable network.
- **Safety Risk –** Reduces safety risks related to IT deficiencies relating to security.

8.6.4 Lifecycle Strategies if Maintaining Current Levels Only

This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

8.6.5 Lifecycle Strategies with a Funding Shortfall

This chapter and the Financial Strategy in Section 5 present investment needs to provide proposed Levels of Service, and projected funding to be available. If, based on the funding projected to be available, there is a funding shortfall, the Town will strive to:

- Execute the policy and planning activities as planned,
- Carry out the SOGR operation and maintenance activities most critical to preserving operation of the assets, as decided on a continual and case-by-case basis by staff,
- Carry out the most critical SOGR rehabilitation and replacement activities, based on failures and criticality of assets, determined by staff, and
- Decommission assets as needed to yield the most value.

Should there be a funding shortfall, and these prioritization decisions have to be made, then the Town will manage resulting risks by doing the following activities. These may not be fully documented at this time, but this maturity task is included as recommendations.

Regular Communication and Reporting: Providing annual reports to Council outlining the funding gaps, trade-offs made, and the anticipated impacts on levels of service, and communicating the consequences of deferring activities, including using visualizations to illustrate risks.

Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing in the future) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. When developed, this may include a risk matrix or scoring systems to consistently evaluate competing needs.

Scenario Planning and Contingency Strategies: Developing and reviewing different funding scenarios and their associated risks (e.g., impact of delaying a major rehab vs. executing partial repairs), and establishing contingency plans for high-risk assets to minimize service disruptions.

Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to maintain designed asset end of life where feasible (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance), and adjusting maintenance priorities dynamically based on real-time data and field observations.

Temporary Service-Level Adjustments and Temporary Measures: When necessary, defining minimum acceptable service levels and exploring interim measures to maintain essential services (e.g., setting up a temporary location for public interaction or Council meetings in case of a catastrophic Town Hall failure). Also, may include striving to adjust service delivery expectations to align with available funding while minimizing disruptions.

Strategic Decommissioning and Asset Rationalization: Assessing whether underutilized or redundant assets can be decommissioned to reduce financial burden, and considering alternative service delivery models or shared service agreements with neighboring municipalities.

Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

8.7 Forecasted Investment Needs

Based on the current state of Administration assets and the Town's lifecycle strategies described in this Asset Management Plan, a range of investments are needed in the next decade to provide proposed and maintain current Levels of Service.

8.7.1 Operating Budget Needs (2025-2034)

The Town's operating budget funds some but not all of the asset investments required to provide proposed Levels of Service. The current operating budget for administration is assumed to be sufficient to maintain current Levels of Service, not including growth-related needs.

The cost to deliver more capital projects than what is currently delivered via Town staff would likely require additional staff resources, and therefore additional operating budget. The operating budget needed for added/expanded administration assets due to growth is calculated and reported in the DC Background Study, and further discussed in Section 6.

8.7.2 Capital Budget Needs (2025-2034)

Annual capital investments needed in the next decade to provide proposed Levels of Service for administration assets are summarized in Table 33. This is reflective of asset forecasting. The investment is meant to provide the proposed Levels of Service described in **Section 8.3**.

Not all assets are currently in a SOGR. Levels of Service are primarily based on continuing lifecycle activities so that the total amount of assets in a SOGR does not decrease.

Table 33 Annual Capital Investments Needed to Provide Proposed Administration Levels of Service (2025-2034)

Asset Investment Type	Investment Need to Provide Proposed LOS
SOGR Maintenance	$0
SOGR Renewal	$1,854,000
New/Increased Services and Policy and Planning	$122,000
Growth	$129,000
Total	**$2,105,000**

For reference, and to satisfy the legislation, it is important to note costs to maintain current levels of service. Current Levels of Service are primarily based on continuing lifecycle activities so that the current total value of assets in a SOGR does not decrease. The renewal cost to maintain this current level of service is $1.9 million annually.

SOGR Renewal Needs

Renewal lifecycle activities can be the most challenging for the Town to forecast and plan for and are therefore discussed in more detail.

Short Term (2025-2034)

Table 34 shows the annual renewal investment needs to provide proposed Levels of Service for Administration, for the next ten years. The total Administration average annual investment for the next ten years equates to $1.9M.

Table 34 Annual Renewal Needs for Administration Services, 2025-2034

Core Function	Annual Investment Need
Animal Services	$81,000
Town Hall/ Municipal Administrative Services	$1,774,000
Total	**$1,855,000**

Long Term (2025-2049)

Looking over a longer time horizon, the Table 35 lists the average annual renewal investment needed to provide proposed Levels of Service for 25 years. The total Administration average annual investment need for the next 25 years equates to $1.0M.

Table 35 Long Term Annual Renewal Needs for Administration Services, 2025-2049

Core Function	Annual Investment Need
Animal Services	$81,000
Town Hall/ Municipal Administrative Services	$915,000
Total	**$996,000**

Eliminating Backlog

Backlog refers to any assets that are classified as Very Poor, not in a SOGR. These assets are flagged for renewal however have not yet been addressed.

For comparison or consideration, should the Town wish to eliminate renewal backlog entirely, that is, renew Administration assets so that all assets remain in a SOGR at all times, the annual renewal investment required would be $1.9M for the next ten years. This is the unconstrained cost to consistently follow our defined lifecycle strategy.

8.8 Data Quality

In addition to the assessment discussion in **Section 7** related to asset management and data maturity, data quality observations specific to Administration are provided. Data that was used for the Asset Management Plan was reviewed for completeness, consistency, uniqueness, validity, and accuracy. The focus of this quality assessment is Administration data related to inventory (count of assets), attributes (such as age, length, or in-service date), condition (age-based or based on actual assessment), and valuation (replacement value). Ratings were assessed based on the following guidance:

- Advanced: Data available with no assumptions (e.g. condition assessments, inspection reports, databases with proven track record).
- Intermediate: Data available with minimal assumptions.
- Basic: Significant assumptions required, or no information available.

The assessed quality of the data used to prepare the Administration analysis is summarized in Table 36.

Table 36 Data Quality for Administration Assets

Asset Class	Inventory	Attribute	Condition	Valuation
Buildings	Intermediate	Basic	Intermediate	Intermediate
Equipment	Basic	Basic	Basic	Basic
Fleet	Intermediate	Intermediate	Basic	Intermediate
IT Equipment	Intermediate	Basic	Basic	Basic

Rationale for ratings is provided below.

Inventory Data

- Major portion of the equipment data and all of the IT data was provided as a lump sum and no associated inventory data was rendered.
- Fleet inventory data is currently under development. There were some occurrences of blanks or missing units.

Attribute Data

- Age of some fleet and equipment has multiple, sometime conflicting values in various attributes, including original in-service date, acquisition date, or in-service date.

Condition Data

- Age was used as a proxy for condition for equipment, and fleet.
- Building Condition reports were used for condition of buildings.

Valuation Data

All assets had replacement values that were inflated to 2024 values using the Non-Residential Building Condition Price Index[15] (NRBCPI).

- For some fleet and equipment, historical cost rather than replacement value was inflated to 2024 and assumed to be current replacement value.
- For buildings data, an additional adjustment was applied on the inflated replacement values.

15 Non-Residential Building Condition Price Index (Statistics Canada), Other reference periods - Surveys and statistical programs - Non-Residential Building Construction Price Index (NRBCPI) (statcan.gc.ca)

Asset ID #54261
Bolton Fire Station
Emergency Services Staff

Emergency

Asset ID #56773
Town Hall
Emergency Management Exercise

Asset ID #2023 Valleywood Fire Station &
Asset ID #59007 Aerial Truck
Fire Staff Performing Daily Inspections

9 Emergency

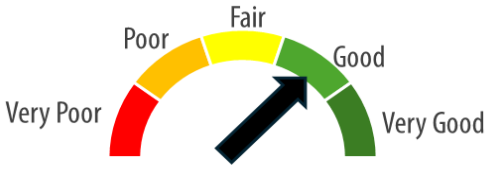
9.1 Key Insights

Emergency services that we provide rely on the following classes of assets:

- Buildings,
- Equipment, and
- Fleet.

Total Replacement Value of Assets **$147.8 Million**

Overall Asset Condition[16] **Good**



16 Presented as a weighted average, weighted by replacement value.

9.2 Description

The Town uses assets to provide emergency response, fire prevention, public education, administration, communication, training, maintenance, and support services to the community.

Emergency Services

Emergency Services provided by the Town of Caledon are focused on Fire Services, which require a range of assets to deliver prompt, reliable services. Examples of Emergency assets include:

Buildings:

- Fire stations and Fire training facilities, and
- Police station.

Fleet:

- Fire support vehicles (such as pickups and SUVs),
- Large fire apparatus (such as pumpers and tankers), and
- Trailers.

Equipment:

- Emergency response, such as fire hoses, Auto Extractor Tools (Jaws of Life), and
- Non-emergency response, such as generators.

External agencies provide police and paramedic services to the community – police through the province's OPP and paramedics through the Region of Peel. Although those agencies own and manage the assets used to provide those services, we lease building space to both agencies, and these building assets are reported through the overall Emergency Services summaries in this section.

9.3 Levels of Service

The Town uses assets to reliably and effectively provide emergency response, fire prevention, public education, administration, communication, training, maintenance, and support services to the community, as defined in our Establishing and Regulating By-Law. Fire services are directly provided to the community through our Town staff and assets, while police (provincial) and paramedic (Regional) services are locally enabled through the provision of Town buildings. We provide emergency services through assets that are maintained so that prevention, preparedness, and response services can be relied upon.

As stated in the Town of Caledon Strategic Plan 2023-2035:

- Service Excellence and Accountability is a priority, and we committed to investing strategically to ensure fiscal responsibility, including incremental investment in people, process, and technology to ensure that assets are in a SOGR.
- Environmental Leadership is a priority, and we committed to becoming net-zero by 2050.

9.3.1 Level of Service Metrics

The Town proposes to continue providing safe, compliant, reliable, available, and sustainable Emergency assets, indicated through the following metrics:

Level of Service Metric	Current Performance	Proposed Performance by 2034
Percentage of Emergency assets in a SOGR	94.27%	**94.27%**
Implementation of the recommendations in the Green Fleet Strategy*	10%	**100%**
Implementation of the recommendations in the Community Climate Change Plan*, **	85%	**100%**
Implementation of growth-driven new/increased service levels*	0%	**100%**
Implementation of other capital forecast items*, ***	0%	**100%**

* Reference year is 2025, considering all of the committed or planned expenditures until 2034.

** Recommendations are interconnected with initiatives in other Plans and a framework for reporting performance is being considered.

***Examples include investments in the Fire Master Plan, communications upgrades, drone

9.3.2 Other Monitoring

The Town also monitors other important asset and performance information:

Other Information	2023 Performance
Current annual emergency capital reinvestment rate[17]	0.8 %
Operating/Maintenance costs per number of fire calls	$3,871
Percentage of fire equipment that is repaired or replaced when it fails testing	100 %
Percentage of fire responses within the NFPA 1720 target[18]	34%

9.4 Current Asset Inventory and Condition

Table 37 lists the Emergency asset inventory including asset class, value, estimated useful life[19], and average age. These values and quantities are based on information from Service Area.

Table 37 Inventory of Emergency Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Buildings	13	$90,552,686	5-50	18
Equipment	-	$14,930,065	5-20	-
Fleet	55	$42,305,302	8-20	10
Total		**$147.79M**		

17 Based on capital renewal projects identified in the Town's 10-year Capital Forecast.

18 Covering response times for suburban and rural areas with 80% volunteer and 20% full-time fire fighter crews

19 The estimated useful life is the typical lifespan in a typical operating environment.

The relative values of the various asset classes are also shown in Figure 15. The total replacement value of the Emergency assets is $147.8M.

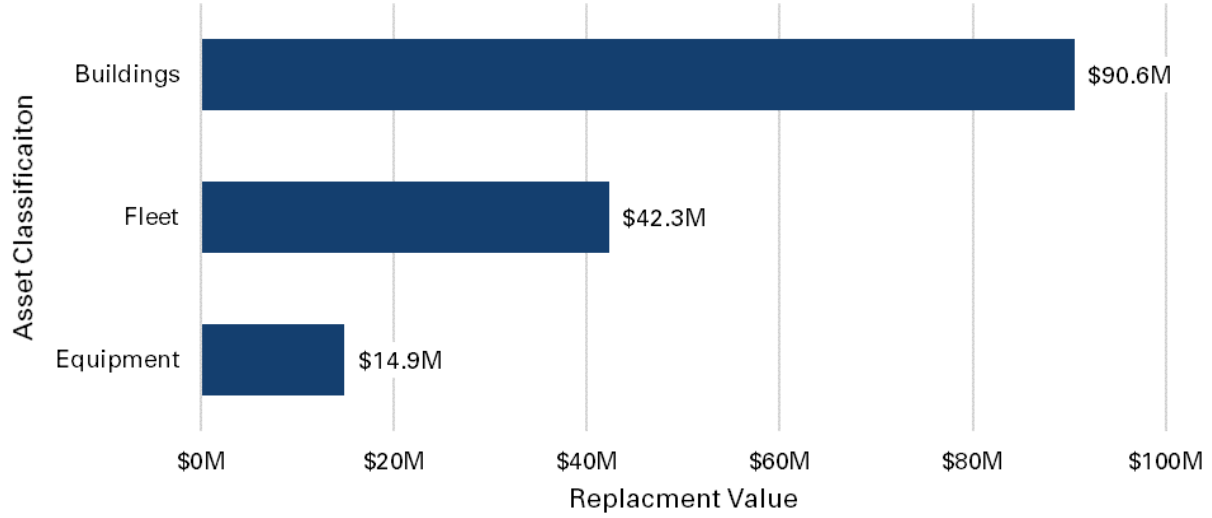


Figure 15 Relative Replacement Values for Emergency Assets

The overall average condition of the Emergency assets is Good. Figure 16 shows the current condition of the Emergency fleet and equipment.

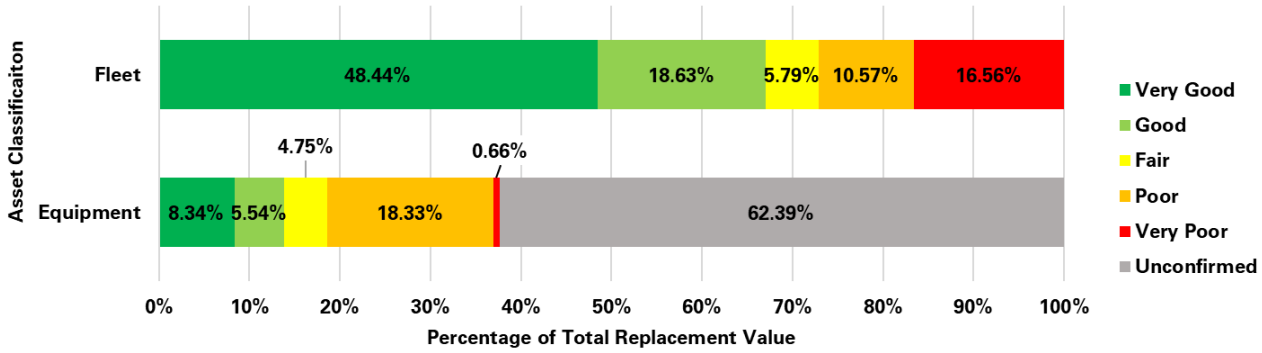


Figure 16 Current Condition of Emergency Fleet and Equipment, by Percentage of Replacement Value

Figure 17 shows the current overall condition of the Emergency buildings.

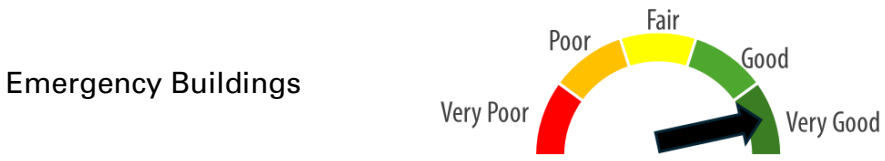


Figure 17 Current Condition of Emergency Buildings

The methods for assessing condition vary by asset.

- Buildings are complex assets, made up of components each with specific age, useful life, and condition. The building condition presented above is based on building condition assessments and has taken into account the various building components to establish the replacement cost of the buildings.
- For all other Emergency assets, age is used as a proxy for condition. The Town is currently working on enhancing condition data for fleet.

Condition assessment methods are described in further detail in **Section 3.**

The installation history for the Emergency assets is shown in Figure 18. Figure 19 shows the proportion of Emergency assets in a SOGR. SOGR refers to assets that are not in the Condition categorization of Very Poor. These assets are assumed to still be able to follow the desired lifecycle strategy to remain in working order. See **Section 3** for more information on SOGR. The overall condition of these assets is Fair.

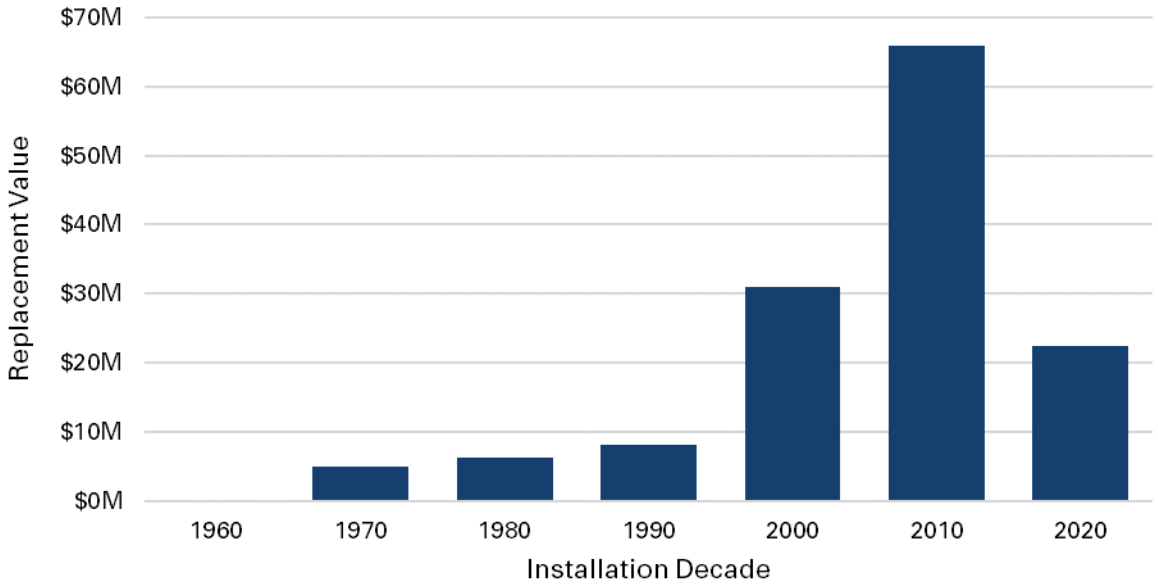


Figure 18 Installation History of Emergency Assets, Shown by Replacement Value

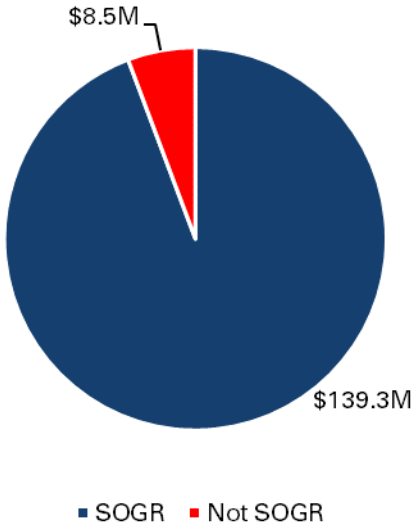


Figure 19 Proportion of Emergency Services Assets in a SOGR

9.5 Public Input

It is important to stay aware of community expectations and priorities. Various recent public consultation activities were reviewed to distil public input related to asset management in Emergency. Key messages:

- Fire & Emergency Services were voted in the top 3 most important services to the community.
- Priorities for asset improvements include fire and emergency assets.
- Priorities for Levels of Service include fire and emergency services, and infrastructure improvements.
- Due to the increased cost of providing service levels and infrastructure, the Town must balance taxation and service delivery levels. The top response the community voted for was to add or increase user fees to maintain current services.
- Respondents ranked risk and return on investment as the most important criteria the Town should use to prioritize issues and services, and impact on climate change and quality of life as the least important.
- When it comes to managing growth, the community feels it is most important to continue to renovate, expand and build community facilities.

A more detailed description of takeaway asset management feedback from the public is provided in the **Appendix E.**

9.6 Lifecycle Strategies

The Town employs a combination of lifecycle activities to provide proposed Levels of Service provided through Emergency assets while striving to optimize costs based on defined risk. The strategy is a series of activities throughout an asset's lifecycle that help get the most value out of the asset. These activities include policy/planning, operation, maintenance, monitoring, rehabilitation, replacement, and decommissioning, while continuing to prepare for growth and introduce new or increased service levels.

When feasible, we also strive 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.

This strategy is not static. Lifecycle activities we choose to apply are selected, 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.

9.6.1 Lifecycle Strategy for Fire Fleet

In addition to the fleet strategies described in **Section 12.6**, the following series of activities generally describe the lifecycle strategy that we have adopted for fire fleet assets. These are applied to provide proposed Levels of Service at a defined level of risk within the current budget.

Policy & Planning Activities

- Fire Master Plan to assess fire fleet asset needs into the future.
- Sharing of some emergency services from Fire Fleet is established between local neighbouring municipalities. When required for specialty equipment or calls, Brampton Fire supports Caledon Fire with resources.
- Shared Fire/operations fleet services allow for some economies of scale with shared lifecycle activities, procurement, inventory, staffing, and building costs.
- Fire consults with internal and external stakeholders before procuring apparatus. Fire recommends separate procurement of large apparatus.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.
- Green Fleet Strategy to identify future fuel switching opportunities, stronger alignment with asset management, and education opportunities.

SOGR: Operation & Maintenance Activities

- Fire must ensure large apparatus are maintained to the industry/NFPA standards.
- Operating strategies to maximize fleet usage across all seasons and minimize dormant vehicles (e.g. Building/Bylaw use a vehicle repository for sign-out when required).
- Where practical, activities and fleet are planned to include crews sharing vehicles when suitable, and to reduce excessive idling.
- Regular PM program in place, such as oil changes, tire rotation, etc., generally based on manufacturer recommendations.
- Reactive maintenance program in place.
- Striving to track failures as incidents to continually improve.
- Engaging staff/management to be engaged in key decisions about elective repairs to ensure continuity of service and fewer breakdowns while in service.
- Fire working with Fleet and IT to introduce a new fleet work order management system EMDECS - a fleet management program that has the ability to track failures so we can continuously improve. Inventory management is a component of EMDECS.
- Enhanced PM strategy for trucks with high call response is being investigated to help reduce downtime between scheduled maintenance windows.

SOGR: Rehabilitation & Replacement Activities

- Major overhauls or reconditioning fleet assets are typically found to be poor value for money, often not extending life, and are not typically conducted.
- Regular PM programs assist in determining rehabilitation or replacements required.
- Need and priority for replacement is usually first triggered by age, and an internal discussion of other factors such as past performance and maintenance costs, hours, other similar equipment, spending strategy, and options through deferrals.
- Salvage/sell replaced fleet to avoid consuming valuable yard space for storage.
- Fleet replacement strategy is dictated by NFPA standards.
- Exploring opportunities to implement Green Fleet Strategy.

Decommissioning Activities

Obsolete fleet that is no longer of service to the Town may be identified through master planning activities and studies. Obsolete fleet that is not replaced is salvaged, sold, or auctioned, to avoid consuming valuable yard space for storage and recover financial value.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk** – Reduces risk of not having the right fleet suited to the Town's requirements, available at the right time, sustainable into the future.
- **Corporate Risk & Liability** – Reduces risk of unplanned fleet breakdowns causing disruptions on winter road maintenance or emergency response, or from fleet in storage.
- **Financial Risk** – Reduces losses from purchasing excess, unsuitable, or dormant underutilized fleet, or poor use of Town funds, or for major breakdowns, excess parts inventory, missing salvage/auction opportunities. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk** – Reduces negative optics from dormant/redundant/unused fleet, or from poorly maintained fleet or breakdowns, or crowded storage yards.
- **Operational Risk** – Reduces risk of inefficiencies from breakdowns or unavailable fleet for the work at hand.
- **Environmental Risk** – Reduces risks of poorly maintained fleet with spills, excessive emissions or fuel consumption, prolonged storage of dormant fleet.
- **Safety Risk** – Reduces public and staff safety risks from poorly maintained fleet.

9.6.2 Lifecycle Strategy for Equipment

The following series of activities generally describe the lifecycle strategy that we have adopted for equipment, in an effort to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy & Planning Activities

- Dedicated staff and a process to manage warranties and service agreements with suppliers.
- Processes are in place to consult stakeholders before procurement of large equipment to specify the most suited/effective equipment. Options for extended warranties are reviewed when applicable.
- Insurance coverage for some equipment. Insurance policies provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.
- Fire consults with internal and external stakeholders before procuring of equipment.

SOGR: Operation & Maintenance Activities

- Overall, there is a staff commitment to process improvements in equipment maintenance and management.
- Regular PM program in place, generally based on manufacturer recommendations.
- Reactive maintenance program in place.
- Working on implementing a PM strategy through Check IT, an application, to improve maintenance on small engine equipment.

SOGR: Rehabilitation and Replacement Activities

- Major overhauls or reconditioning equipment is typically poor value for money, often not extending life.
- The need and priority for replacement is usually first triggered by condition or age, and an internal discussion of other factors.
- Salvage/sell replaced equipment to avoid consuming valuable yard space for storage or large units.

Decommissioning Activities

- Obsolete equipment that is not replaced is salvaged, sold, or auctioned, to avoid consuming valuable yard space for storage.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk -**Reduces risk of not having the right equipment suited to the Town's requirements, available at the right time.
- **Corporate Risk & Liability** – Reduces risk of unplanned equipment breakdowns causing disruptions on winter road maintenance or emergency response.
- **Financial Risk –** Reduces losses from purchasing excess, unsuitable, or dormant underutilized equipment, or poor use of Town funds, breakdowns, excess parts inventory, missing salvage/auction opportunities. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Reduces negative optics of dormant, redundant, poorly maintained, or unused equipment. crowded storage yards.
- **Operational Risk –** Reduces risk of inefficiencies from unavailable or unsuitable equipment for the work at hand.
- **Environmental Risk –** Reduces environmental risk from wasteful equipment, excessive emissions or fuel consumption, poorly maintained equipment with spills, excessive emissions or fuel consumption, prolonged storage of dormant equipment.
- **Safety Risk –** Reduces public or staff safety risk from poorly maintained equipment.

9.6.3 Lifecycle Strategy for Buildings

The lifecycle strategy applied to the Emergency buildings is aligned with the strategy for all municipal buildings, which is described in **Section 8.6.**

9.6.4 Lifecycle Strategies if Maintaining Current Levels Only

This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

9.6.5 Lifecycle Strategies with a Funding Shortfall

This chapter and the Financial Strategy in Section 5 present investment needs to provide proposed Levels of Service, and projected funding to be available. If, based on the funding projected to be available, there is a funding shortfall, the Town will strive to:

- Execute the policy and planning activities as planned,
- Carry out the SOGR operation and maintenance activities most critical to preserving operation of the assets, as decided on a continual and case-by-case basis by staff,
- Carry out the most critical SOGR rehabilitation and replacement activities, based on failures and criticality of assets, determined by staff, and
- Decommission assets as needed to yield the most value.

Should there be a funding shortfall, and these prioritization decisions have to be made, then the Town will manage resulting risks by doing the following activities. These may not be fully documented at this time, but this maturity task is included as recommendations.

Exceeding Budget: Due to the critical nature of Emergency Services, capital or operating budgets may be exceeded to accommodate shortfalls.

Regular Communication and Reporting: Providing annual reports to Council outlining the funding gaps, trade-offs made, and the anticipated impacts on levels of service, and communicating the consequences of deferring activities, including using visualizations.

Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing in the future) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. When developed, this may include a risk matrix or scoring systems to consistently evaluate competing needs.

Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to extend asset life where feasible on candidate assets (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance).

Strategic Decommissioning and Asset Rationalization: Assessing whether underutilized or redundant assets can be decommissioned to reduce financial burden, and considering alternative service delivery models or shared service agreements with neighboring municipalities.
Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

9.7 Forecasted Investment Needs

Based on the current state of transportation assets and the Town's lifecycle strategies described in this Asset Management Plan, a range of investments are needed in the next decade to provide proposed and maintain current Levels of Service.

9.7.1 Operating Budget Needs (2025-2034)

The Town's operating budget funds some but not all of the asset investments required to provide proposed Levels of Service. The current operating budget for emergency assets is assumed to be sufficient to maintain current Levels of Service, not including growth-related needs.

The cost to deliver more capital projects than what is currently delivered via Town staff would likely require additional staff resources, and therefore additional operating budget. The operating budget needed for added/expanded emergency assets due to growth is calculated and reported in the DC Background Study, and further discussed in Section 6.

9.7.2 Capital Budget Needs (2025-2034)

Annual capital investments needed in the next decade to provide proposed Levels of Service for Emergency assets are summarized in Table 38 below.

- As a reminder, proposed and current Levels of Service are described in **Section 9.3**.
- Not all assets are currently in a SOGR. Current Levels of Service are primarily based on continuing lifecycle activities so that the total value of assets in a SOGR does not decrease.

Table 38 Annual Capital Investments Needed to Provide Proposed Levels of Service (2025-2034)

Asset Investment Type	Investment Need to Provide Proposed LOS
SOGR Maintenance	$896,000
SOGR Renewal	$4,065,000
New/Increased Services and Policy and Planning	$310,000
Growth	$8,609,000
Total	**$13,880,000**

For reference, and to satisfy the legislation, it is important to note costs to maintain current levels of service. Current Levels of Service are primarily based on continuing lifecycle activities so that the current total value of assets in a SOGR does not decrease. The renewal cost to maintain this current level of service is $4.1 million annually.

Renewal Needs

Renewal lifecycle activities can be the most challenging for the Town to forecast and plan for and are therefore discussed in more detail.

Short Term (2025-2034)

Figure 20 shows the annual renewal investment needed to provide proposed Levels of Service which equates to an annual investment need of $4.1M.

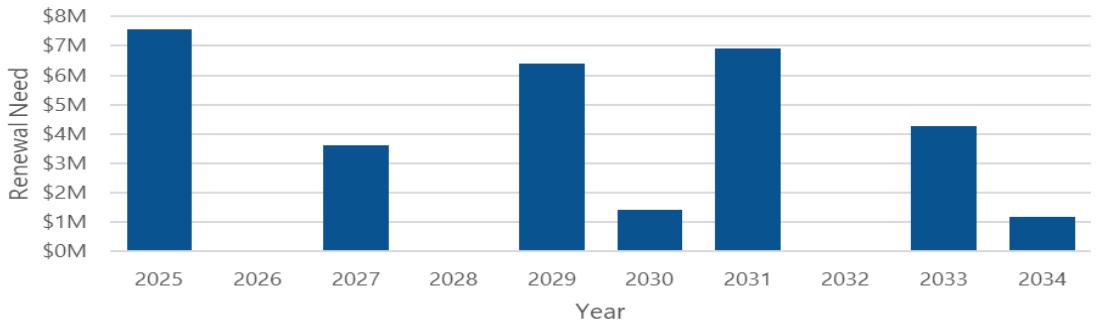


Figure 20 Renewal Investment Needs to Provide Proposed Levels of Service, 2025-2034

Long Term (2025-2048)

Looking over a longer time horizon, the average annual renewal investment needed to provide proposed Levels of Service for 25 years is $3.5 million. Figure 21 shows the annual renewal investment needed to provide proposed Levels of Service.

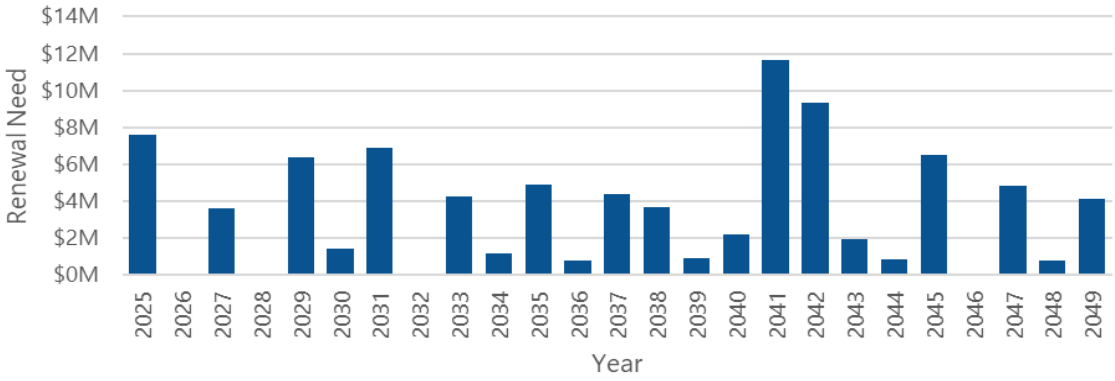


Figure 21 Renewal Investment Needs to Provide Proposed Levels of Service, 2025-2049

Eliminating Backlog

For comparison or consideration, should we decide to eliminate renewal backlog entirely, that is, renew Transportation assets so that all assets are in a SOGR at all times, the annual renewal investment required would be $5.7M for the next ten years. This is the unconstrained cost to consistently follow our defined lifecycle strategy.

9.8 Data Quality

In addition to the assessment discussion in **Section 7** related to asset management and data maturity, data quality observations specific to Emergency Services are provided. Data that was used for the Asset Management Plan was reviewed for completeness, consistency, uniqueness, validity, and accuracy. The focus of this quality assessment is Transportation data related to inventory (count of assets), attributes (such as age, length, or in-service date), condition (age-based or based on actual assessment), and valuation (replacement value). Ratings were assessed based on the following guidance:

- Advanced: Data available with no assumptions (e.g. condition assessments, inspection reports, databases with proven track record).
- Intermediate: Data available with minimal assumptions.
- Basic: Significant assumptions required, or no information available.

The assessed quality of the data used to prepare the Emergency analysis is summarized in Table 39.

Table 39 Data Quality for Emergency Assets

Asset Class	Inventory	Attribute	Condition	Valuation
Buildings	Intermediate	Basic	Intermediate	Intermediate
Equipment	Basic	Basic	Basic	Basic
Fleet	Intermediate	Intermediate	Basic	Intermediate

Rationale for ratings is provided below.

Inventory Data

- Fleet inventory data is currently under development. There were some occurrences of blanks or missing units.

Attribute Data

- Age of some fleet and equipment has multiple, sometime conflicting values in various attributes, including original in-service date, acquisition date, or in-service date.

Condition Data

- Age was used as a proxy for condition for equipment and fleet.
- Building condition assessments was used for condition of buildings.

Valuation Data

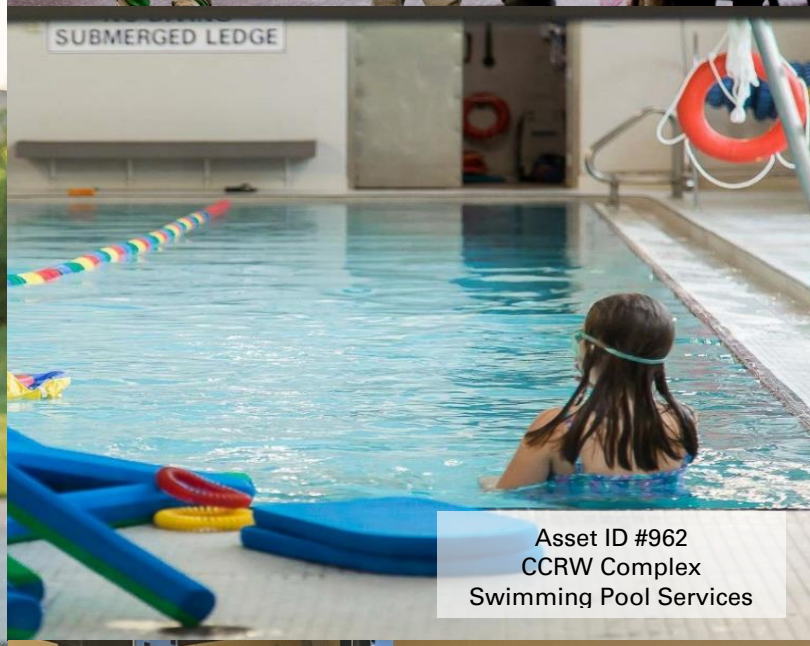
- All assets had replacement values that were inflated to 2024 values using NRBCPI.
- For some fleet, historical cost was inflated to 2024 and assumed to be current replacement value. The same was done for about a third of the equipment data.
- For buildings data, an additional adjustment was applied on the inflated replacement values.
- Due to market uncertainty and pressures in the manufacturing sector related to emergency equipment replacement costs remain unpredictable.

Asset ID #61498
Dennison Park

Recreation & Culture

Asset ID #61498
Dennison Park

Asset ID #967
CECC
Library Services



Asset ID #962
CCRW Complex
Swimming Pool Services

Asset ID #54593
Albion Bolton IT Staff
Maintaining Library IT Infrastructure

10 Recreation & Culture

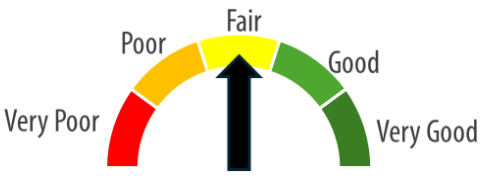
10.1 Key Insights

Recreation & Culture services that we provide rely on the following classes of assets:

- Amenities,
- Buildings,
- Collections – Library,
- Equipment,
- Fleet,
- IT & Communications,
- Linear & ROW Infrastructure, and
- Parks & Other Land.

Total Replacement Value of Assets **$620.5 Million**

Overall Asset Condition[20] **Fair**



20 Presented as a weighted average, weighted by replacement value.

10.2 Description

Recreation and Culture Services provided by the Town rely on assets to provide three core functions – Library Services, Parks and Forestry Services, and Recreation Services, described below.

Asset ID #967
CECC Complex
Community Services

Library Services	Parks & Forestry Services	Recreation Services
Providing access to educational and recreational resources, books, technology, and community programs to promote literacy, lifelong learning, and cultural enrichment within the community.	Maintaining parks, green spaces, and forests to enhance community recreation, environmental conservation, and quality of life.	Providing recreational programs, facilities, and events aimed at promoting physical activity, social engagement, and overall well-being within the community.
Assets include: • Collections (physical and digital) • Equipment (e.g. instruments) & Furniture • IT & Communications Library Branch building space is rented from the Town. The inventory of the buildings is included in Recreation Buildings[21].	Assets include: • Amenities & Sports Fields • Parks Buildings & Shade Structures • Pathways & Trails • Cemeteries • Parks • **Parks Fleet** (pickup trucks, lawn mowers) • **Equipment** (e.g. chainsaws, leaf blowers, generators)	Assets include: • **Recreation Buildings** (such as Community Centres and other Recreation Buildings) • **Fleet** (e.g. trailers) • **Equipment** (e.g. fitness equipment, programming equipment)

21 This is a key metric in determining service levels for library services

10.3 Levels of Service

Our recreation, library, parks, and forestry assets are safe, accessible, reliable, cost effective, and sustainable. The Town uses recreation and culture assets to provide affordable, accessible, quality recreation opportunities that promote a safe, healthy, and fun lifestyle in the Town of Caledon. The entire community, rural and urban, is offered recreation opportunities. As stated in the Town of Caledon Strategic Plan 2023-2035:

- **Service Excellence and Accountability** is a priority, and we committed to investing strategically to ensure fiscal responsibility, including incremental investment in people, process, and technology to ensure that assets are in a SOGR.
- **Environmental Leadership** is a priority, and we committed to protecting and enhancing the natural environment to create a thriving system of connected, biodiverse features and areas. We also committed to becoming net-zero by 2050, and ensuring new development reflects efficient, green, and liveable design.
- **Community Vitality and Liveability** is a priority, and we committed to offering services that support a healthy, caring, engaged, and inclusive community, including building outdoor community spaces and parks.

10.3.1 Level of Service Metrics

The Town proposes to continue providing safe, compliant, reliable, available, and sustainable Recreation & Culture assets, indicated through the following metrics:

Levels of Service Metric	Current Performance	Proposed Performance by 2034
Percentage of Recreation & Culture assets in a SOGR	96.86%	**96.86%**
Implementation of recommendations in the Green Fleet Strategy*	10%	**100%**
Implementation of recommendations in the Parks Plan*	0%	**100%**
Implementation of recommendations in the Library Growth Plan*	<1%	**100%**
Implementation of recommendations in the Corporate GHG Reduction Framework*, **	85%	**100%**
Implementation of growth-driven new/increased service levels*	0%	**100%**
Implementation of other capital forecast items*, ***	0%	**100%**

* Reference year is 2025, considering all of the committed or planned expenditures until 2034.

** Recommendations are interconnected with initiatives in other Plans and a framework for reporting performance is being considered.

***Examples include Building Condition Assessments, elevator upgrades, and washroom upgrades in Recreation & Culture facilities

10.3.2 Other Monitoring

The Town also monitors the accessibility of our buildings to *Accessibility for Ontarians with Disabilities*, and other important asset and performance information:

Other Information	2023 Performance
Provision of parkland (in hectares) per 1000 people	2.6 [22]
Square feet of recreation buildings per person (population)	5.65 [23]
Greenhouse gas emissions (GJ/m^2)	0.95 [24]
Square feet of library buildings per person (population)	0.53 [25]

22 As published in Parks Plan 2022.

23 Based on 2021 census data.

24 Weighted average based on area, where information was available (based on 12 buildings).

25 As published within the library comprehensive growth plan (2020 population).

10.4 Current Asset Inventory and Condition

Reported values and quantities are based on information from Service Areas. The asset classes used in Recreation & Culture are shown in Figure 22. The total replacement value of the Recreation & Culture assets is $620.5 million.

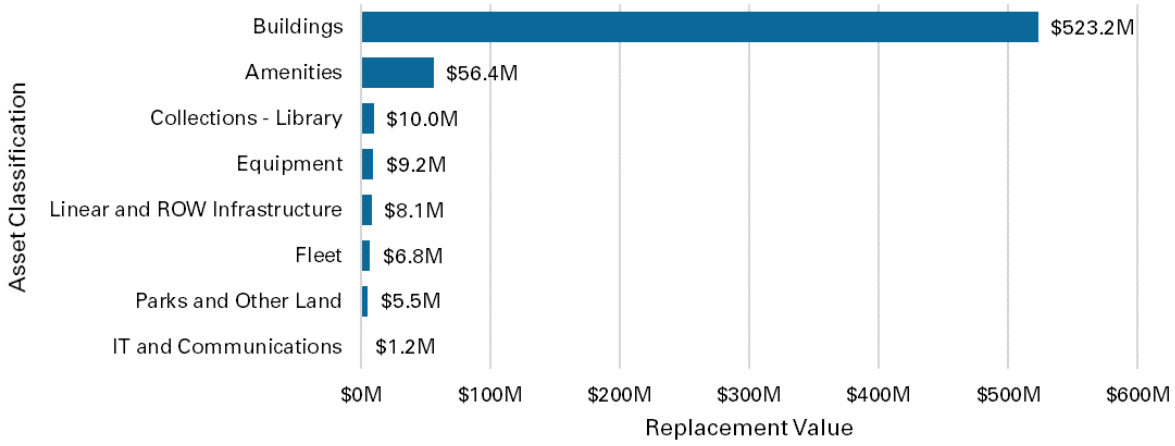


Figure 22 Replacement Values of Recreation & Culture Assets

Linear & ROW infrastructure includes pathways, and signs.

The overall average condition of the Recreation & Cultures assets is Good. The chart in Figure 23 shows the current condition of the various asset classes in Recreation & Culture, by replacement value. The classes are listed in order from largest replacement value (buildings) to smallest (IT & Communications assets). Buildings are shown separately in Figure 24.

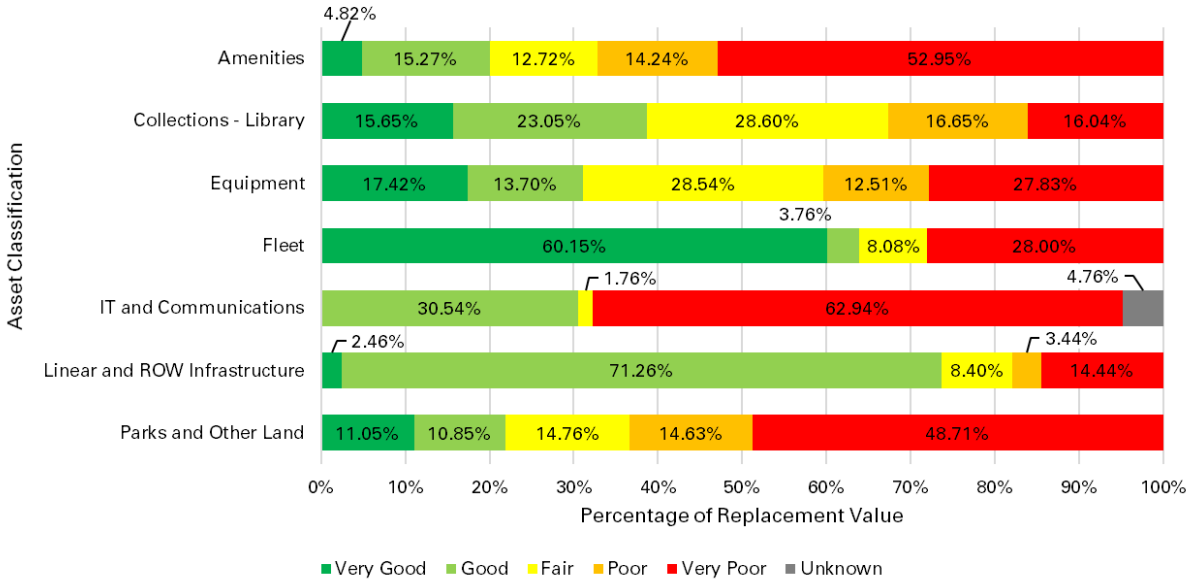


Figure 23 Current Condition of Recreation & Culture Assets, by Replacement Value

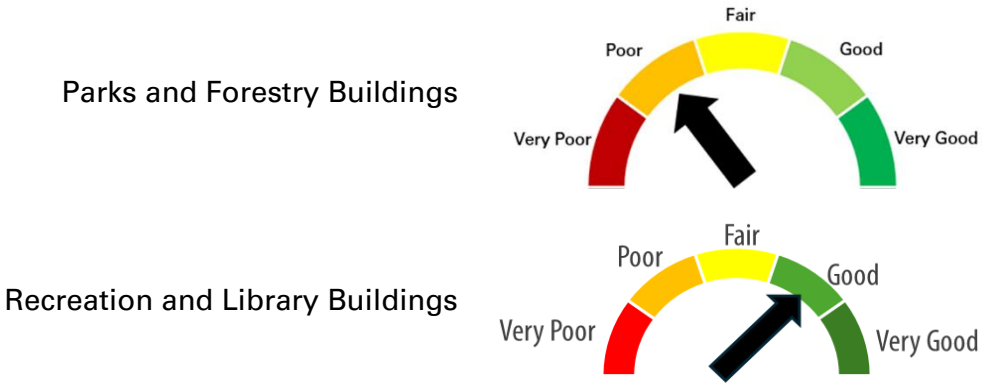


Figure 24 Current Overall Condition of Recreation & Culture Buildings

The methods for assessing condition vary by asset.

- Buildings are complex assets, made up of components each with specific age, useful life, and condition. The building condition presented above is based on building condition assessments and has taken into account the various building components to establish the replacement cost of the buildings.
- For all other Recreation and Culture assets, age is used as a proxy for condition. We are currently working on enhancing condition data for fleet, amenities, really most of the other asset types.

Condition assessment methods are described in further detail in **Section 3.** The following sections provide more specific asset information for each Recreation & Culture service.

10.4.1 Library Services

Table 40 describes the Library Services asset inventory including asset class, value, estimated useful life[26], and average age. These values and quantities are based on information from Service Areas.

Table 40 Inventory of Library Services Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Equipment	-	$1,397,755[27]	1-20	5
Collections– Library	-	$10,000,883	5	7
IT & Communications	-	$758,201	2-25	4
Total		**$12,156,838**		

Library Services operates their branches out of 7 different Town-owned buildings.

(eight if library holding lockers are included). The buildings that house Library Services branches are represented within the Town's Recreation Services portfolio, in this iteration of the Asset Management Plan. Table 41 lists the Library Branch building locations and corresponding space used.

26 The estimated useful life is the typical lifespan in a typical operating environment.

27 Cost based on information available at this time. Total value is expected to increase as data improves

Table 41 Library Space in Town Buildings

Building	Library Space Usage (sq. ft.)
Albion Bolton Branch (Albion Bolton Community Centre)	15,552
Alton Branch (Alton Library and Community Room)	1,300
Belfountain Holds Locker (Belfountain Community Hall)	0
Caledon Village Branch (Caledon Village Place)	2,400
Caledon East Branch (Caledon East Community Complex)	9,569
Inglewood Branch (Inglewood Community Centre)	1,200
Margaret Dunn Valleywood Library and Community Centre	3,175
Southfields Village Branch (Southfields Community Centre)	7,768
Total	**40,964**

Figure 25 shows the relative replacement values of the Library Services assets.

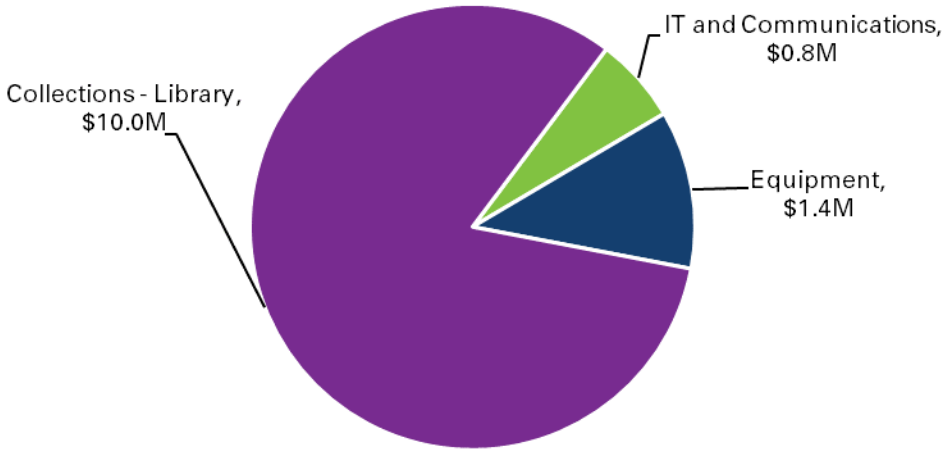


Figure 25 Replacement Value of Library Services Assets

The installation[28] history for the Library Services assets is shown in Figure 26.

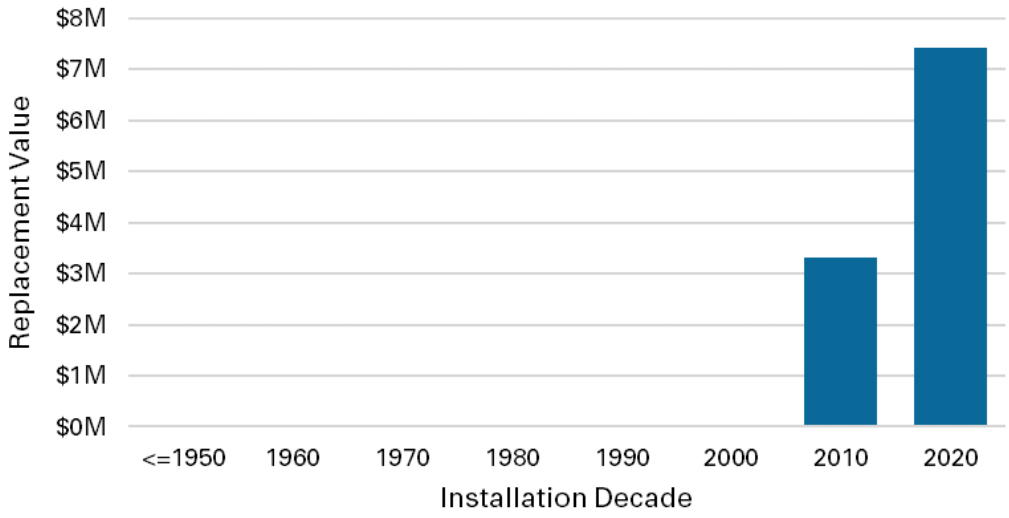


Figure 26 Installation History of Library Services Assets, Shown by Replacement Value

Figure 27 shows the proportion of Library Services assets in a SOGR. SOGR refers to assets that are not in the Condition categorization of Very Poor. These assets are assumed to still be able to follow the desired lifecycle strategy to remain in working order. See **Section 3** for more information on SOGR. The overall average condition of these assets is Good.

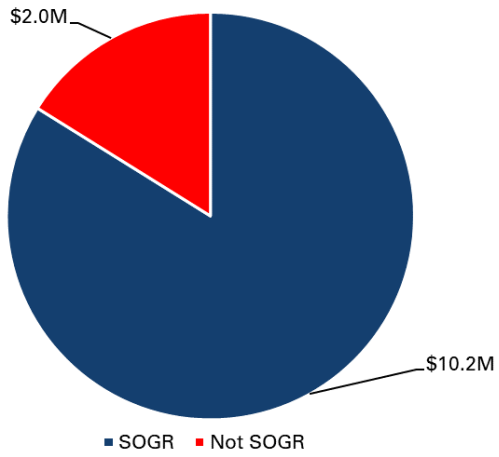


Figure 27 Proportion of Library Services Assets in a SOGR

28 Installation date used for the Asset Management Plan was either based on original in-service date, acquisition date or in-service date available in the Town's data, in the order of priority. The age of some equipment cannot be verified trough data available and may be older than figure 26 indicates

10.4.2 Parks & Forestry Services

Table 42 describes the Parks & Forestry Services asset inventory including asset class, value, estimated useful life[29], and average age. These values and quantities are based on information from Service Areas.

Table 42 Inventory of Parks & Forestry Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Amenities	252	$56,437,609	7-25	16
Buildings	30	$19,284,912	5-50	31
Parks & Other Land	123	$5,518,742	20-999	24
Linear & ROW Infrastructure (Pathways)	-	$8,119,994	15-25	16
Equipment	592	$730,416	5-12	7
Fleet	48	$5,338,540	3-20	6
Total		**$95.4M**		

Trees and signs being counted and assessed to be included in the inventory at a future date. Pathway quantities are under development at this time.

29 The estimated useful life is the typical lifespan in a typical operating environment.

Figure 28 shows the relative replacement values of the Parks & Forestry Services assets.

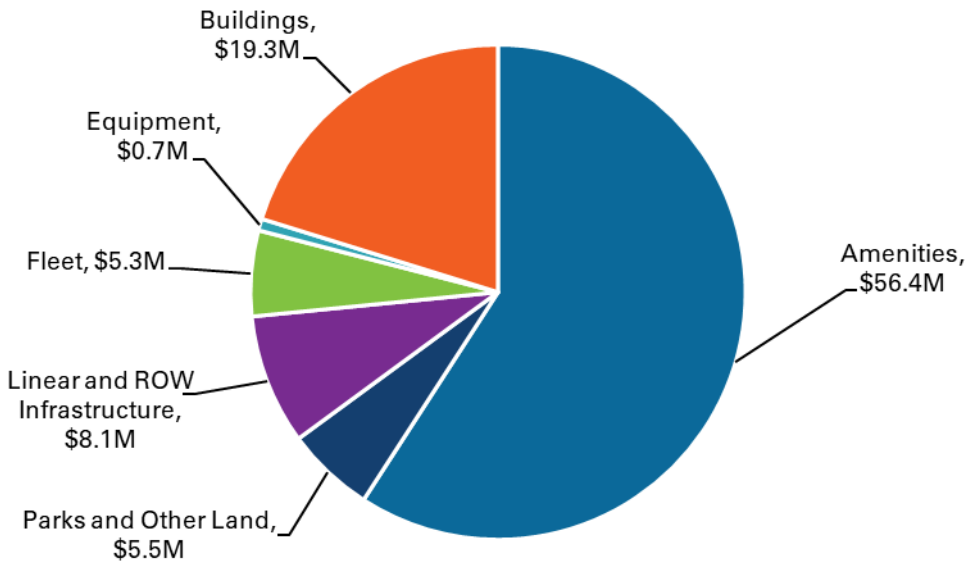


Figure 28 Relative Replacement Values of Parks and Forestry Services Assets

The installation history for the Parks & Forestry Services assets is shown in Figure 29.

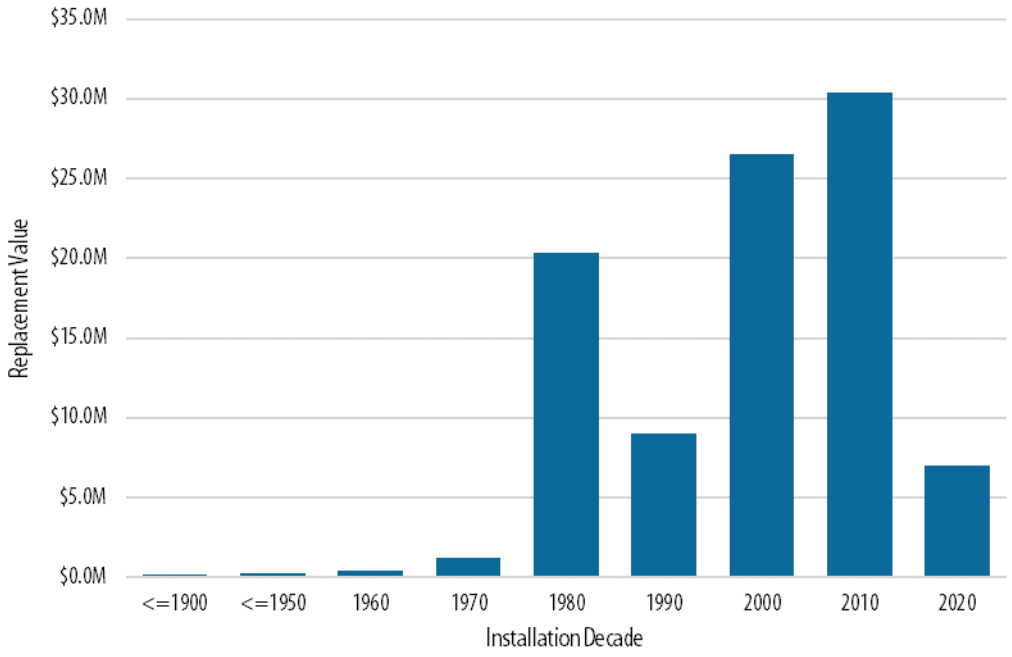


Figure 29 Installation History of Parks and Forestry Services Assets, Shown by Replacement Value

Figure 30 shows the proportion of Parks & Forestry Services assets in a SOGR. The overall average condition of these assets is Good.

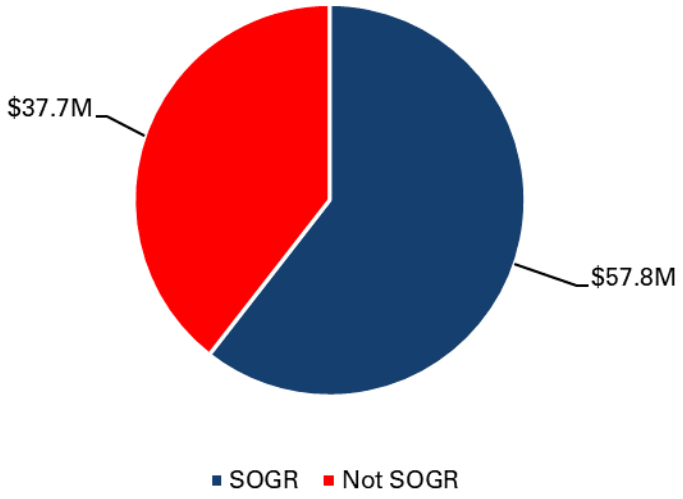


Figure 30 Proportion of Parks & Forestry Assets in a SOGR

10.4.3 Recreation Services

Table 43 describes the Recreation Services asset inventory, including asset class, value, estimated useful life[30], and average age. These values and quantities are based on information from Service Areas. This inventory includes buildings that are used for Library Services.

Table 43 Inventory of Recreation Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Buildings	21	$503,947,503	5-50	20
Equipment	-	$7,061,499	3-20	8
Fleet	12	$1,499,587	5-12	15
IT & Communications	-	$439,270	3-10	-
Total		**$512.95M**		

30 The estimated useful life is the typical lifespan in a typical operating environment.

The installation history for the Recreation Services assets is shown in Figure 31.

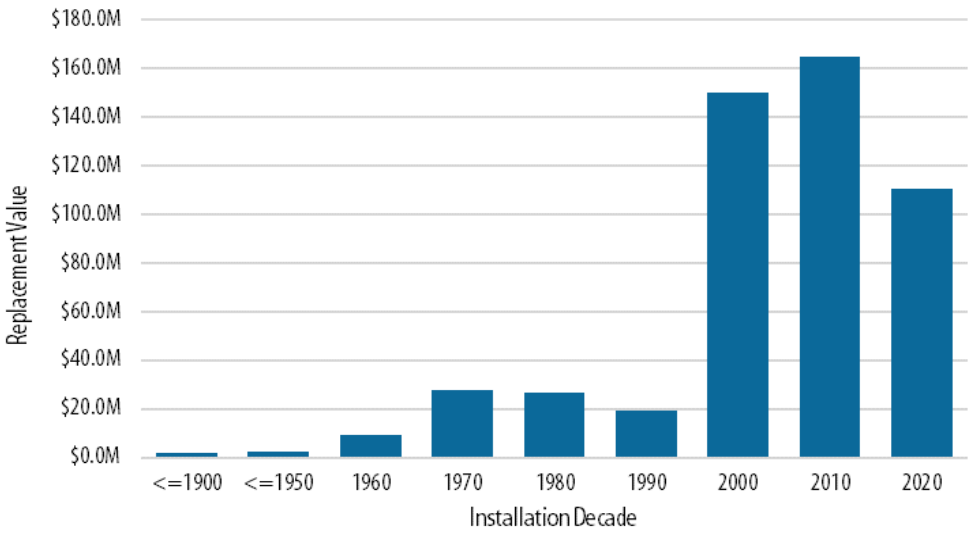


Figure 31 Installation History of Recreation Services Assets, Shown by Replacement Value

Figure 32 shows the proportion of Recreation Services assets in a SOGR. SOGR refers to assets that are not in the Condition categorization of Fair.

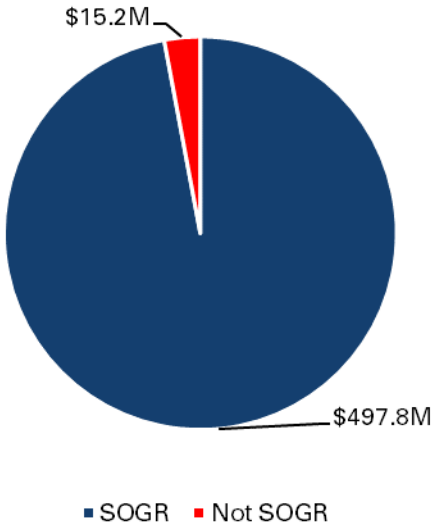


Figure 32 Proportion of Recreation Services in a SOGR

These assets are assumed to still be able to follow the desired lifecycle strategy to remain in working order. See **Section 3** for more information on SOGR. The overall average condition of these assets is Fair.

10.5 Public Input

It is important to stay aware of community expectations and priorities. Various recent public consultation activities were reviewed to distil public input related to asset management in Recreation and Culture. Key messages:

- Respondents said they would like the Town to own and continue to operate the cemetery.
- Priorities for asset improvements include parking.
- Priorities for Levels of Service include infrastructure improvements.
- When it comes to managing growth, the community feels it is most important to continue to renovate, expand and build community facilities, and to protect the environment as we grow.
- Due to the increased cost of providing service levels and infrastructure, we must balance taxation and service delivery levels. The top response the community voted for was to add or increase user fees to maintain current services (please note, the *Public Library Act* has limitations on user fees and charges)
- The community voted that wildlife and nature are among the things valued most about Caledon East.
- Respondents ranked risk and return on investment as the most important criteria the Town should use to prioritize issues and services, and impact on climate change and quality of life as the least important.

10.6 Lifecycle Strategies

The Town employs a combination of lifecycle activities to provide proposed Levels of Service provided through Recreation & Culture assets, while striving to optimize costs based on defined risk. The strategy is a series of activities throughout an asset's lifecycle that help get the most value out of the asset. These activities include policy/planning, operation, maintenance, monitoring, rehabilitation, replacement, and decommissioning, while continuing to prepare for growth and introduce new or increased service levels.

When feasible, we also strive 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.

Lifecycle activities we choose to apply are selected, 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.

10.6.1 Lifecycle Strategy for Recreation & Culture Fleet & Equipment

The lifecycle strategy applied to the Fleet and Equipment used for Recreation and Culture is aligned with the strategies for all fleet and equipment, which are described in **Section 12.6.**

The lifecycle strategy applied to the Library IT & Communications assets is similar to Administrative IT & Communications lifecycle strategies described in **Section 8.6.**

10.6.2 Lifecycle Strategy for Buildings

The lifecycle strategy applied to the Recreation and Culture buildings is aligned with the strategy for all municipal buildings, described in detail in **Section 8.6.** The Buildings/ Portions of buildings that host Library branches will look to have their owns strategies in future versions. Library's buildings space condition is related to their own metrics and therefore their buildings strategies may differ.

10.6.3 Lifecycle Strategy for Park Amenities

The following series of activities generally describe the lifecycle strategy we have adopted for park amenities in an effort to provide proposed Levels of Service at a defined level of risk within current budget.

Policy and Planning Activities

- Official Plan and Parks & Recreation Master Plan guides the Town in long term planning for demand. Plans cover buildings, land requirements, service level standards, and future demand. It also provides a framework for decision making (subject to political and local consideration) and involves stakeholder consultation.
- The comprehensive Library Comprehensive Growth Plan guides our long-term planning, adopted in 2023.
- The 2022 Parks Plan (land requirements).
- Conservation education programs/outreach in place.
- Town Development Standards in place to ensure amenities are maintainable, sustainable, effective.
- Donation policy in place.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- Compliance inspections and regular inspections.
- Maintenance triggered by staff observation, inspection, or public input.
- Regular maintenance activities, such as mulch top up, repairs.
- Coordinated assessment programs for efficiency.

SOGR: Rehabilitation & Replacement Activities

- Rehabilitation or replacement decisions based on the combination of inspections, risk, budget, lifecycle, triggers, obsolescence, public input, options, efficiencies (climate change).
- Bundling of tenders, capital, and projects for cost savings.
- Mulch top up, major repairs, or overall replacement and updating.

Decommissioning Activities

- When obsolete or taken offline, amenity assets are suitably disposed.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Level of Service Risk –** Helps ensure the Town has the suited amenities with adequate capacity to meet the Town's requirements, available for use, sustainable into the future.
- **Corporate Risk & Liability** – Reduces liabilities from safety deficiencies.
- **Financial Risk –** Avoids losses from planning for or constructing amenities in excess, poor use of Town funds, unplanned repairs. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Avoids negative Reduces negative optics from poor planning of amenities with Town funds, or poorly maintained assets.
- **Operational Risk –** Improved operational efficiencies from planning and procuring effective parks amenities (e.g. parkettes vs. parks, access by Town staff).
- **Safety Risk –** Reduces risk of safety-related deficiencies.

10.6.4 Lifecycle Strategy for Parks & Other Land

The following series of activities generally describe the lifecycle strategy that the Town has adopted for parks and other land in an effort to provide proposed Levels of Service at a defined level of risk within current budget.

Policy and Planning Activities

- Official Plan, Active Transportation Master Plan, Trails Plan, and Parks and Recreation Master Plan enable robust planning of parks and land needs.
- Council Strategic Plan includes an Enhanced Transportation and Mobility commitment, which notes Orangeville-Brampton rail corridor conversion and other transportation planning initiatives.
- Urban Forest Policy plans for urban trees plan.
- Exploring regional study on urban tree canopy.
- Woodland Preservation Policy helps manage eencroachments into natural heritage systems.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.
- Encouragement of conservation of parks and associated infrastructure through policy, procedures, and public outreach.
- Continuing to work with local conservation authorities.

SOGR: Operation & Maintenance Activities

- Typically, maintenance is undertaken based on available resources, routine schedules like grass cutting, and field observations.
- Ecological monitoring, which can include invasive species management.
- Public access and bylaw enforcement to ensure park infrastructure is being utilized as planned and that it is sustainable with respect to surrounding natural heritage system.
- Reactive maintenance for trees, managed through service requests.
- PM is in place, such as gravel top-up and grading on parking lots and winter maintenance, grass cutting and maintenance for sports fields, passive parks, cemeteries, and open space.
- Trails have reactive maintenance in place, and trails associated with essential services also have winter maintenance, which will include more stormwater pond lookouts/access lanes.

SOGR: Rehabilitation & Replacement Activities

- Typically, these assets are not replaced except for some siteworks.

Decommissioning Activities

- When obsolete or taken offline, parks assets are disposed, or surplus land is sold.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk –** Helps ensure the Town has the suited parks and land suited to meet the Town's requirements, available for use, sustainable into the future, and in SOGR for the community's recreation, health & wellness, available for use.
- **Corporate Risk & Liability** – Reduces liabilities from safety deficiencies, including siteworks or parking lots.
- **Financial Risk –** Avoids losses from planning for or acquiring/managing parks or land in excess, poor use of Town funds, unplanned maintenance, undetected damage, natural hazards. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Avoids negative optics from poor planning of parks and land needs with Town funds, or from poor provision of natural or recreational areas to the community, poorly maintained parks and lands.
- Environmental Risk – Reduces risks related to biodiversity, urban sprawl, invasive species, climate change impacts.
- **Safety and Health Risk –** Reduces risk of safety or health-related deficiencies, such as trip hazards, pests.

Lifecycle Strategy for Natural Assets

Although not yet included in the inventories or forecasting in this Asset Management Plan, we have implemented a lifecycle strategy for natural assets. The following generally describes the strategy that has been implemented to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy and Planning Activities

- Council Strategic Plan includes an Environmental Leadership commitment, including the Tree Preservation By-law and Woodland Conservation By-law.
- Official Plan, Active Transportation Master Plan, Trails Plan, and Parks and Recreation Master Plan enable robust planning of parks and land needs.
- Urban Forest Policy plans for urban trees plan.
- Exploring regional study on urban tree canopy.
- Woodland Preservation Policy helps manage encroachments into natural heritage systems.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.
- Encouragement of conservation of parks and associated infrastructure through policy, procedures, and public outreach.
- Encouragement of conservation through policy, procedures, public outreach, and partnership with local conservation authorities.
- Engineering design standards to reduce tree injury/damage using construction requirements.

SOGR: Operation & Maintenance Activities

- Long term planning is challenging for living assets, and sometime difficult to measure.
- Maintenance activities of urban street trees or trees in right of way including trimming, removals, plantings, treatment, and watering based on available resources.
- Reactive maintenance when triggered by staff observations and public feedback.
- Woodlands managed as an asset unit, with reactive maintenance only.

SOGR: Rehabilitation & Replacement Activities

- Only urban street trees are replaced at this time.
- Occasionally, certain activities can be performed to extend lives of mature and veteran heritage trees, considered on a case-by-case basis.

Decommissioning Activities

When tree removal is considered necessary, without replacement, the tree is disposed of, and the site is restored. Typically, woodlot trees are left in situ when they are deceased; however, exceptions could occur if deemed a hazard.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk –** Keeps streets beautiful for the community's enjoyment, and health & wellness. Sustains natural assets and canopy, which is suitable for a healthy lifestyle, and keeps trees and woodlots beautiful for the community's enjoyment.
- **Corporate Risk & Liability** – Reduces liabilities from safety deficiencies related to street trees.
- **Financial Risk –** Reduces losses from unplanned maintenance, undetected damage, natural hazards.
- **Reputational Risk –** Reduces risk of negative optics from poorly maintained trees.
- **Safety and Health Risk –** Reduces risk of safety or health-related deficiencies, such as injury hazards, pests.
- **Environmental Risk –** Reduces risks related to biodiversity threats, invasive species, climate change impacts.
- **Financial Risk –** Avoids losses from planning for or acquiring/managing natural assets in excess, poor use of Town funds.

10.6.5 Lifecycle Strategies if Maintaining Current Levels Only

This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

10.6.6 Lifecycle Strategies with a Funding Shortfall

This chapter and the Financial Strategy in Section 5 present investment needs to provide proposed Levels of Service, and projected funding to be available. If, based on the funding projected to be available, there is a funding shortfall, the Town will strive to:

- Execute the policy and planning activities as planned,
- Carry out the SOGR operation and maintenance activities most critical to preserving operation of the assets, as decided on a continual and case-by-case basis by staff,
- Carry out the most critical SOGR rehabilitation and replacement activities, based on failures and criticality of assets, determined by staff, and
- Decommission assets as needed to yield the most value.

Should there be a funding shortfall, and these prioritization decisions have to be made, then the Town will manage resulting risks by doing the following activities. These may not be fully documented at this time, but this maturity task is included as recommendations.

Regular Communication and Reporting: Providing annual reports to Council outlining the funding gaps, trade-offs made, and the anticipated impacts on levels of service, and communicating the consequences of deferring activities, including using visualizations to illustrate risks.

Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing in the future) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. When developed, this may include a risk matrix or scoring systems to consistently evaluate competing needs.

Scenario Planning and Contingency Strategies: Developing and reviewing different funding scenarios and their associated risks (e.g., impact of delaying a major rehab vs. executing partial repairs), and establishing contingency plans for high-risk assets to minimize service disruptions.

Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to extend asset life where feasible (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance), and adjusting maintenance priorities dynamically based on real-time data and field observations.
Temporary Service-Level Adjustments and Temporary Measures: When necessary, defining minimum acceptable service levels and exploring interim measures to maintain essential services (e.g., setting up a temporary location for programming meetings in case of a catastrophic facility failure). Also may include striving to adjust service delivery expectations to align with available funding while minimizing disruptions.

Strategic Decommissioning and Asset Rationalization: Assessing whether underutilized or redundant assets can be decommissioned to reduce financial burden, and considering alternative service delivery models or shared service agreements with neighboring municipalities.

Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

10.7 Forecasted Investment Needs

Based on the current state of Recreation and Culture assets and the Town's lifecycle strategies described in this Asset Management Plan, a range of investments are needed in the next decade to provide proposed and maintain current Levels of Service.

10.7.1 Operating Budget Needs (2025-2034)

The Town's operating budget funds some but not all of the asset investments required to provide proposed Levels of Service. The current operating budget for recreation & culture assets is assumed to be sufficient to maintain current Levels of Service, not including growth-related needs.

The cost to deliver more capital projects than what is currently delivered via Town staff would likely require additional staff resources, and therefore additional operating budget. The operating budget needed for added/expanded recreation and culture assets due to growth is calculated and reported in the DC Background Study, and further discussed in Section 6.

10.7.2 Capital Budget Needs (2025-2034)

Annual capital investments needed in the next decade to provide proposed Levels of Service for Recreation & Culture assets are summarized in Table 44. For reference, investments needed to maintain current levels of service are also provided.

- As a reminder, proposed and current Levels of Service are described in **Section 10.3**.
- Not all assets are currently in a SOGR. Current Levels of Service are primarily based on continuing lifecycle activities so that the total value of assets in a SOGR does not decrease.

Table 44 Annual Capital Investments Needed to Provide Proposed Recreation and Culture Levels of Service (2025-2034)

Asset Investment Type	Investment Need to Provide Proposed LOS
SOGR Maintenance	$1,233,000
SOGR Renewal	$8,223,000
New/Increased Services and Policy and Planning	$13,144,000
Growth	$8,584,000
Total	**$31,184,000**

For reference, and to satisfy the legislation, it is important to note costs to maintain current levels of service. Current Levels of Service are primarily based on continuing lifecycle activities so that the current total value of assets in a SOGR does not decrease. The renewal cost to maintain this current level of service is $8.2 million annually.

Renewal Needs

Renewal lifecycle activities can be the most challenging for the Town to forecast and plan for and are therefore discussed in more detail.

Short Term (2025-2034)

The annual renewal investments needed to provide proposed Recreation & Culture Levels of Service are shown in Figure 33, for the next ten years. This investment equates to an annual investment need of $8.22 million.

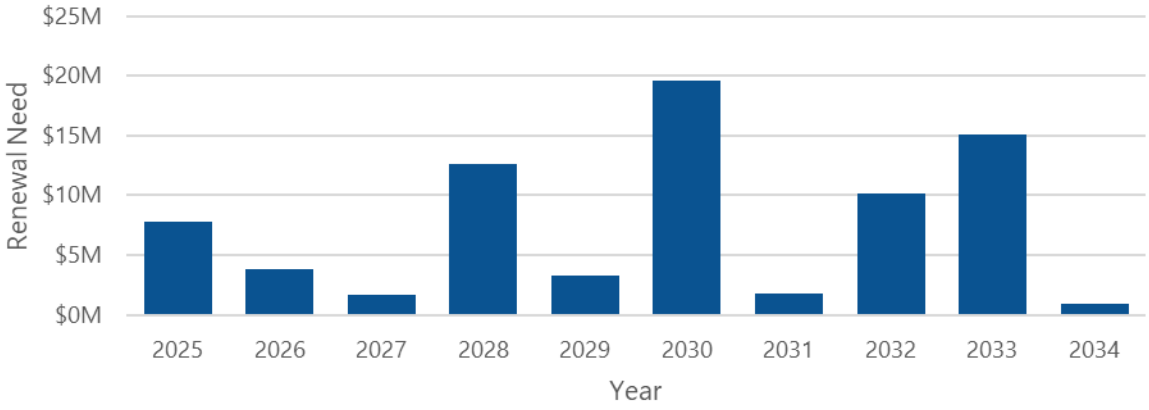


Figure 33 Annual Renewal Investment Needs to Provide Proposed Levels of Service, 2025 - 2034

For each core function in Recreation & Culture, the average of the investment needs above are shown in Table 45.

Table 45 Annual Renewal Needs for Recreation and Culture, 2025-2034

Core Function	Annual Investment Need
Library Services	$672,000
Parks and Forestry Services	$3,991,000
Recreation Services	$3,560,000
Total	**$8,223,000**

The investment need shown for Library Services reflects the equipment, collections, and IT asset needs.

Long Term (2025-2049)

Looking over a longer time horizon, the annual renewal investments needed to provide proposed Recreation & Culture Levels of Service are shown in Figure 34, for the next 25 years. This investment equates to an annual investment need of $8.25M.

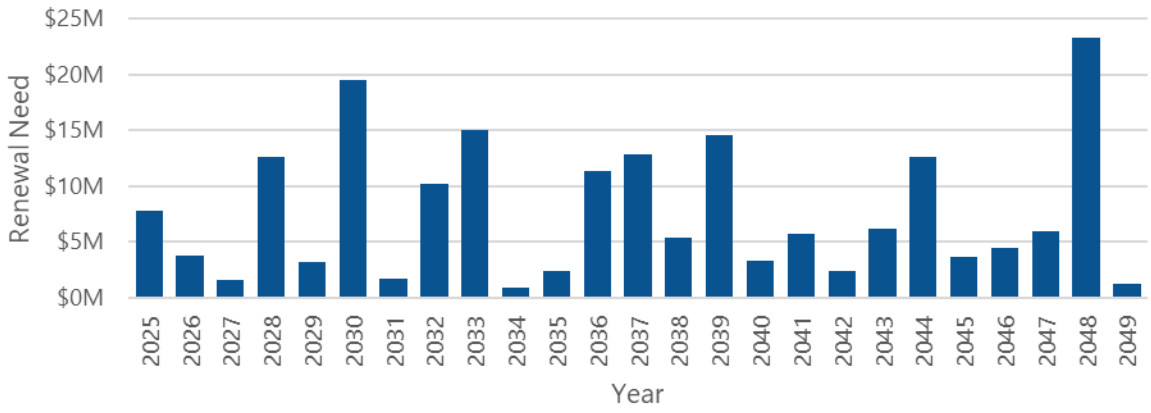


Figure 34 Annual Renewal Investment Needs to Provide Proposed Levels of Service, 2025 - 2049

For comparison, Table 46 lists the average annual renewal investment needed to provide proposed Levels of Service for the next 25 years.

Table 46 Long Term Annual Renewal Needs for Recreation and Culture, 2025-2049

Core Function	Annual Investment Need
Library Services	$674,000
Parks and Forestry Services	$3,508,000
Recreation Services	$4,070,000
Total	**$8,252,000**

Eliminating Backlog

For comparison or consideration, should we eliminate backlog entirely, that is, renew recreation and culture assets so that all assets are in a SOGR at all times, the annual renewal investment required would be $11.7 million for the next ten years. This is the unconstrained cost to consistently follow our defined lifecycle strategy.

10.8 Data Quality

In addition to the assessment discussion in **Section 7** related to asset management and data maturity, data quality observations specific to Recreation & Culture data are provided. Data that was used for the Asset Management Plan was reviewed for completeness, consistency, uniqueness, validity, and accuracy. The focus of this quality assessment is data related to inventory (count of assets), attributes (such as age, length, or in-service date), condition (age-based or based on actual assessment), and valuation (replacement value). Ratings were assessed based on the following guidance:

- Advanced: Data available with no assumptions (e.g. condition assessments, inspection reports, databases with proven track record).
- Intermediate: Data available with minimal assumptions.
- Basic: Significant assumptions required, or no information available.

The assessed quality of the data used to prepare the recreation & culture analysis is summarized in Table 47 .

Table 47 Data Quality for Recreation & Culture Assets

Asset Class	Inventory	Attribute	Condition	Valuation
Buildings	Intermediate	Basic	Intermediate	Intermediate
Amenities	Basic	Basic	Basic	Basic
Equipment	Intermediate	Intermediate	Basic	Intermediate
Fleet	Intermediate	Intermediate	Basic	Intermediate
Pathways	Intermediate	Intermediate	Basic	Intermediate
Parks & Other Land	Intermediate	Intermediate	Basic	Intermediate
IT & Communications	Intermediate	Intermediate	Basic	Basic
Libraries	Basic	Basic	Basic	Basic

Rationale for ratings is provided below.

Inventory Data

- There was some building data overlapping with parks assets, and some asset data was missing.
- Fleet and equipment had overlapping data with other datasets. This can introduce error in assigning precedence in cases of conflicts in values for the same asset present in multiple datasets.

Attribute Data

- Age of some fleet and equipment has multiple, sometimes conflicting, values in various attributes including original in-service date, acquisition date, or in-service date.
- In amenities, the quantity data field was not consistent.
- EUL was inconsistent or missing for some fleet, linear and ROW infrastructure, and parks assets.

Condition Data

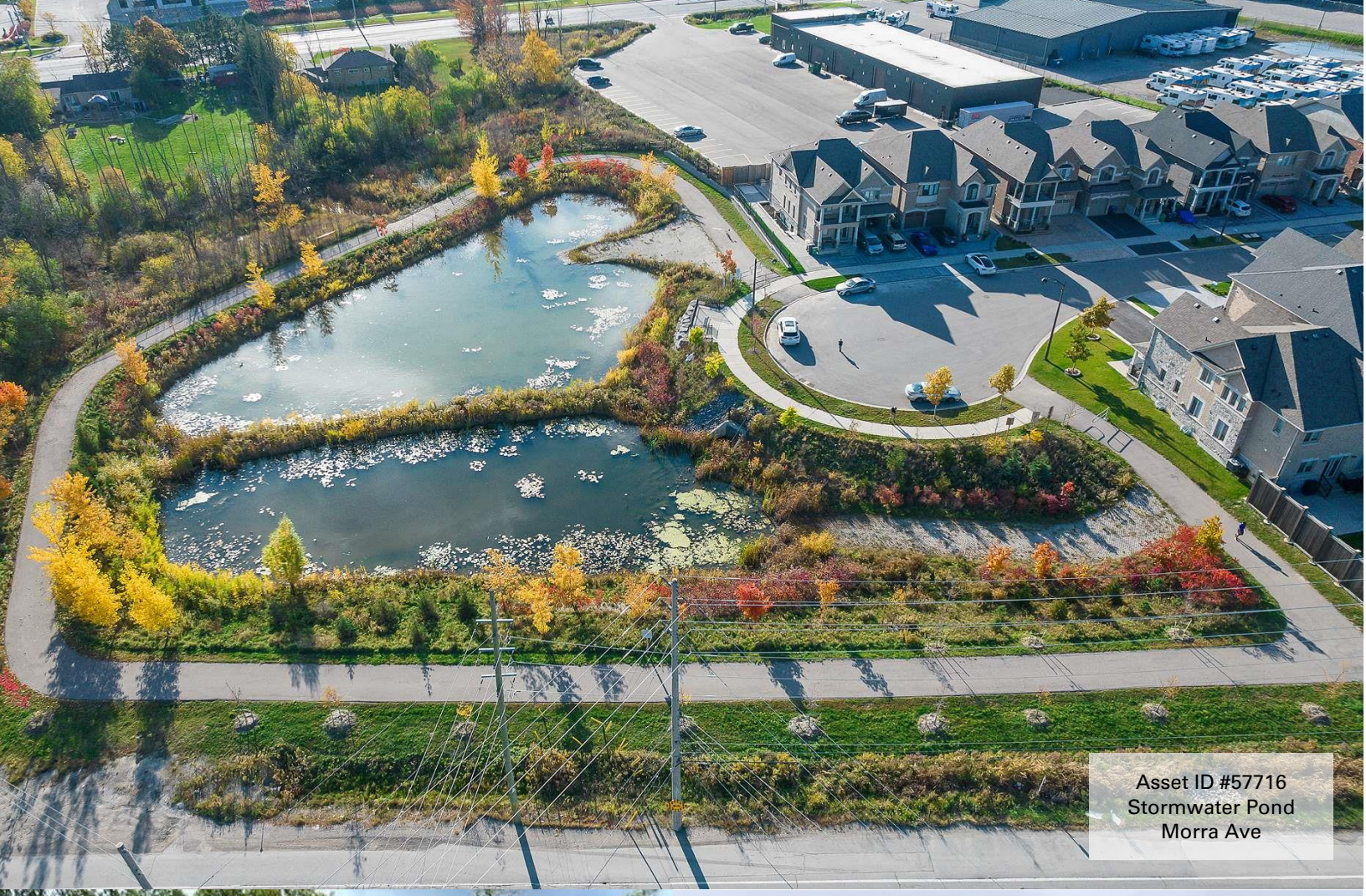
- For most of the assets, some conflicts between age-based condition supplied by the Town vs. consultant calculations occurred.
- Building condition assessments was used for condition of buildings.

Valuation Data

All assets had replacement values that were inflated to 2024 values using NRBCPI.

- For some fleet and equipment, historical cost was inflated to 2024 and assumed to be current replacement value.
- For buildings data, an additional adjustment was applied on the inflated replacement values.

Stormwater Management



Asset ID #57716
Stormwater Pond
Morra Ave

Asset ID #11
Stormwater Pond, Cranston Dr.
Infiltration Facility, East Caledon

Asset ID #2023
Stormwater Pond
Bolton

11 Stormwater Management

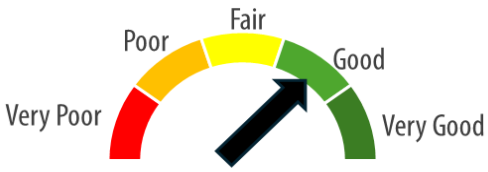
11.1 Key Insights

Stormwater Management services that we provide rely on the following classes of assets:

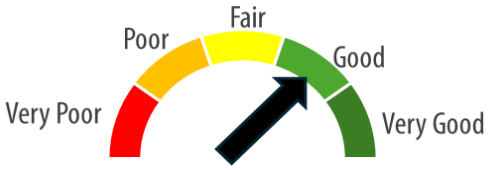
- Linear & ROW Infrastructure, and
- Stormwater facilities.

Total Replacement Value of Assets **$575.7 Million**

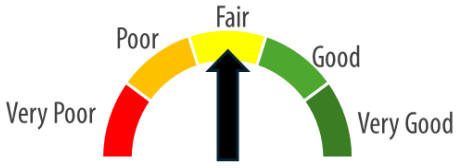
Overall Asset Condition[31] **Good**



Overall Condition of Stormwater Mains[32] **Good**



Overall Condition of Stormwater Ponds **Fair**



31 Presented as a weighted average, weighted by replacement value.

32 Limited information on older systems and assumed higher useful life not reflective of all mains.

11.2 Description

The Stormwater Management services provided by the Town use a variety of assets to help collect and convey stormwater, to control quantities of stormwater flows, flooding, and sometimes quality of some stormwater flows.

Asset ID #22
Stormwater Pond, Bolton
Restoration Work by Town Staff (Engineering)

Stormwater Services

Two asset classes provide Stormwater Management services: linear/ROW infrastructure and stormwater facilities.

Linear and ROW infrastructure is an interconnected system of underground linear stormwater infrastructure, used to collect and convey stormwater. Assets include:

- Stormwater mains,
- Catch basins,
- Access holes, and
- Outfalls.

Stormwater Facilities throughout the Town manage stormwater quantities and occasionally also quality. Assets include:

- Water quality control facilities such as wet ponds and constructed wetlands,
- Water quantity control facilities such as dry ponds,
- Green infrastructure such as bioretention assets and bioswales, and
- Manufactured treatment devices such as oil grit separators and jellyfish filters.

We have actively been working towards improving the data quality of all stormwater infrastructure across the Town, including measuring condition rather than relying on age as an indicator. As this work continues, we continue to provide planning, operations, maintenance, and management of approximately 196.4 kilometres of stormwater sewers and several kilometres of individual surface drainage inlet connections and associated catch basins, access holes and outfalls, overland flow routes, green infrastructure, and Stormwater Management ponds.

The management of the stormwater system is complex, as it must function within the natural environment, and it interacts with Region of Peel stormwater infrastructure. The 2016 Stormwater Management Master Plan provided direction on the maintenance and rehabilitation efforts required to achieve an improved Levels of Service.

11.3 Levels of Service

The safety, reliability, availability, and sustainability of our Stormwater Management assets enable us to drain, collect, convey, regulate, and treat stormwater, and to protect the rural and urban community from flooding, now and into the future. The Environmental Compliance Approval for our consolidated linear infrastructure, which resembles a provincial permit to operate and manage our stormwater assets, sets out environmental plans, practices, and procedures related to stormwater infrastructure, which underpin our Levels of Service. As stated in the Town of Caledon Strategic Plan 2023-2035:

- Service Excellence and Accountability is a priority, and we committed to investing strategically to ensure fiscal responsibility, including incremental investment in people, process, and technology to ensure that assets are in a SOGR.
- Environmental Leadership is a priority, and we committed to protecting and enhancing the natural environment, including renewing the Stormwater Master Plan with a best practice approach to ensure reliable stormwater servicing.

As our Town grows, our dedication to addressing the evolving precipitation patterns remains steadfast. We employ a treatment train strategy that handles rainfall where it falls, as it moves through ditches and pipes, and at retention and treatment ponds. This approach to Stormwater Management serves as an important framework for constructing a sustainable and robust network for stormwater infrastructure.

In general, the Town strives for:

- Cost effectiveness – Providing stormwater services at an affordable and manageable cost.
- Reliability – Providing a reliable, continuous, and effective delivery of stormwater services and infrastructure to all the existing and new customers with minimal to no service disruptions, supporting the protection of the community from the impacts of severe weather events.
- Safe – Ensuring stormwater services and infrastructure provided to the community are safe, integrated with industry leading practices, complying with regulatory requirements.
- Sustainability – Providing sustainable delivery of stormwater services and infrastructure which supports the protection of environment, resilient to future climate projections, minimizes the impact to the water resource system.

11.3.1 Areas Serviced

The majority of Caledon is rural countryside, comprised of open space, agriculture, and natural areas, where stormwater runoff is conveyed through a series of rural ditches and culverts. Urban developments include commercial, industrial, and residential areas that are designed with an urban road right-of-way cross section (curb and gutter) and may be serviced by stormwater sewers and facilities. In general, the Town strives to protect areas from flooding related to flooding in the right of way or flooding from development. These areas may include:

- Properties within developments that were designed and constructed in alignment with a Stormwater Management Plan (such as subdivisions with stormwater ponds),
- Properties fronting stormwater main in the road allowance,
- Properties fronting rural ditches, in some cases, and
- The Town's Road allowances.

11.3.2 Level of Service Metrics

The Town proposes to continue providing safe, compliant, reliable, available, and sustainable Stormwater assets, indicated through the following metrics:

Metric	Current Performance	Proposed Performance by 2034
Percentage of Stormwater assets in a SOGR	97.85%	**100%**
Implementation of requirements from the Town's new Consolidated Linear Infrastructure Environmental Compliance Approval*	0%	**100%**

* Reference year is 2025, considering all of the committed or planned expenditures until 2034.

11.3.3 Other Monitoring

The Town also monitors other important asset and performance information:

Other Information	2023 Performance
Percentage of properties resilient to flooding from a 100-year storm	96%
Percentage of the stormwater system resilient to a 5-yr storm	95%
Operating/Maintenance costs per km of stormwater mains	$1258
Operating/Maintenance costs per SWM facility (wet ponds only)	$19,636
Operating/Maintenance costs per SWM facility (all)	$13,541
Unplanned failures of stormwater assets	$74,936
Number of service requests related to surface flooding	220
Percentage of stormwater mains inspected with CCTV	31%
Annual capital reinvestment rate[33]	0.3%

These cost estimates do not include emergency repairs on culverts.

33 Based on capital renewal projects identified in the Town's 10-year Capital Forecast.

11.4 Current Asset Inventory and Condition

Table 47 describes the Stormwater Management asset inventory, including asset class, value, estimated useful life[34], and average age. The total replacement value of the Stormwater Management assets is $575.7million.

Table 47 Inventory of Stormwater Management Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Stormwater Main	196.4 km	$539,294,001	75	26
Stormwater Pond	54 (Town Owned) 24 (Easement)	$31,759,205	50	21
Manufactured Treatment Device	14	$873,907	50	14
Low Impact Development	10	$3,734,724	50	6
Total		**$575.65M**		

It should be noted that inventory data for Stormwater Management assets is under development, including quantity, replacement values, age, and condition. The Town will strive to provide updated inventory data with the next Asset Management Plan.

Figure 35 shows the relative replacement value of the asset classes.

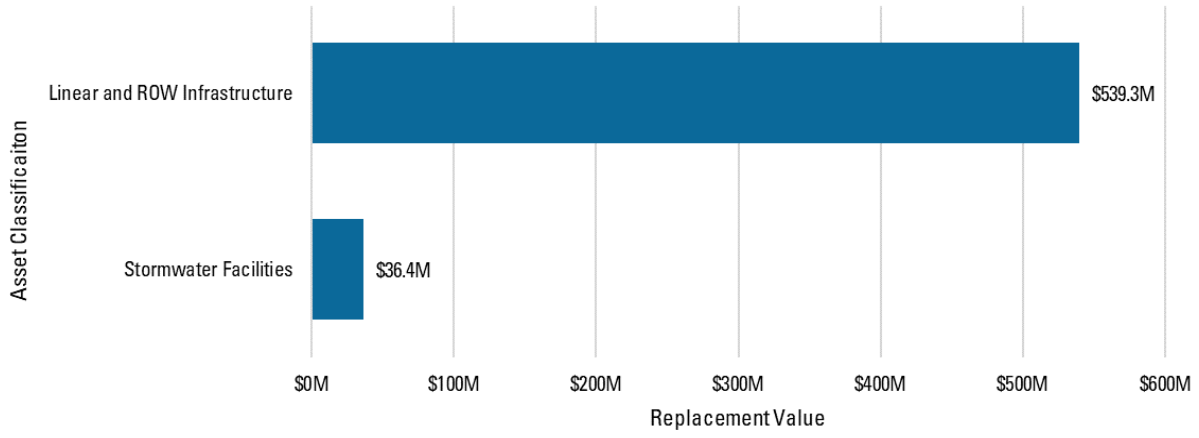


Figure 35 Replacement Values of Stormwater Assets

34 The estimated useful life is the typical lifespan in a typical operating environment. For this version of the Asset Management Plan, it should be noted that the estimated useful life for stormwater main is assumed to be equivalent for all stormwater main materials.

Linear & ROW infrastructure includes stormwater main, catch basins, conveyance ditches, municipal drains, and outfalls. Stormwater facilities include low impact development, manufactured treatment devices, and stormwater ponds.

Figure 36 shows the current condition of the various Stormwater Management asset classes, by replacement value. The classes are listed in order from largest replacement value to smallest. The overall average condition of the Stormwater Management assets is Very Good.

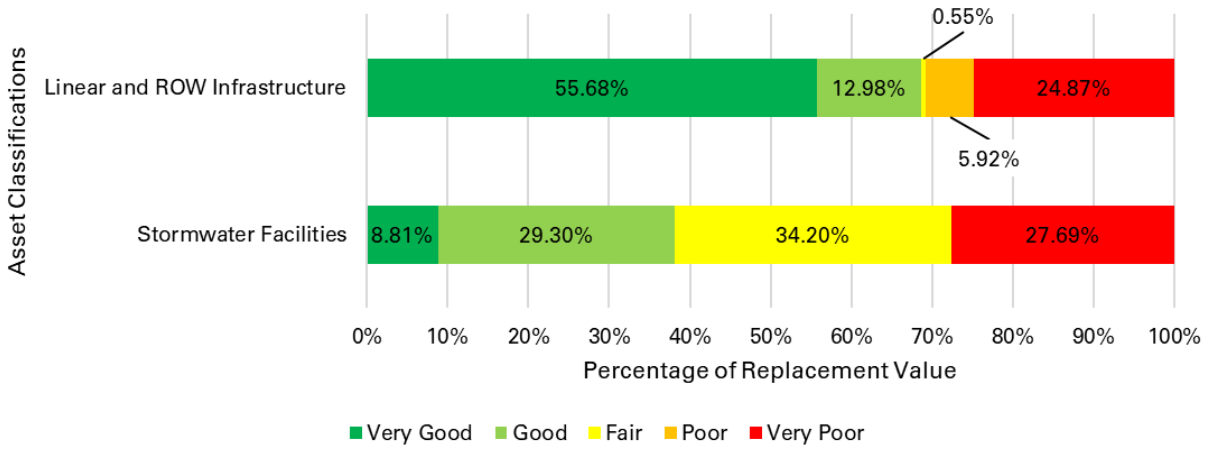


Figure 36 Current Condition of Stormwater Management Assets, by Replacement Value

The methods for assessing condition vary by asset class. For stormwater main, staff have undertaken a multi-year program to assess the condition. The assets are inspected using the National Association of Sewer Services Companies Pipeline Assessment Certification Program and Manhole Assessment Certification Program, an industry standard for sewer and access hole inspection providing a standard system for the identification, classification and reporting of the type, severity, and extent of structural and operational defects. As this is costly and time-consuming, the assessment of all stormwaters main is not yet complete. For these remaining linear assets, for the purposes of this Asset Management Plan, condition is assumed based on age. Therefore, it should be noted that since most of the stormwater main was installed less than 75 years ago (see Figure 38), and the EUL of stormwater main is 75 years, the condition of the stormwater main shown in Figure 36 reflects this age-based current state.

Due to the data maturity challenge, and other reasons, the current state of the stormwater main is likely in poorer condition than that shown. For the purpose of modelling and forecasting future investment needs, the EUL for storm main is 75 years. In practice, the storm main may not reach 75 years, especially if construction/installation was deficient, or if the environmental condition of the stormwater main is challenging (such as high acidity soil or high water table).

The Town's CLI ECA requires regular inspection of stormwater ponds. For the purposes of this Asset Management Plan, pond condition is based on age, until inspection results can be further incorporated into condition ratings.

- The Town's Stormwater Management Master Plan and CLI ECA also require updated storm asset information, and there is action to develop a regular inspection program to inform maintenance and rehabilitation.
- Condition assessment methods are described in further detail in **Section 3.**

Ditches, outfalls, and third pipes are being counted and assessed to be included in the inventory at a future date and are not expected to significantly impact the capital analyses. Municipal drains are not included.

Figure 37 shows the relative replacement values of the Stormwater Management assets.

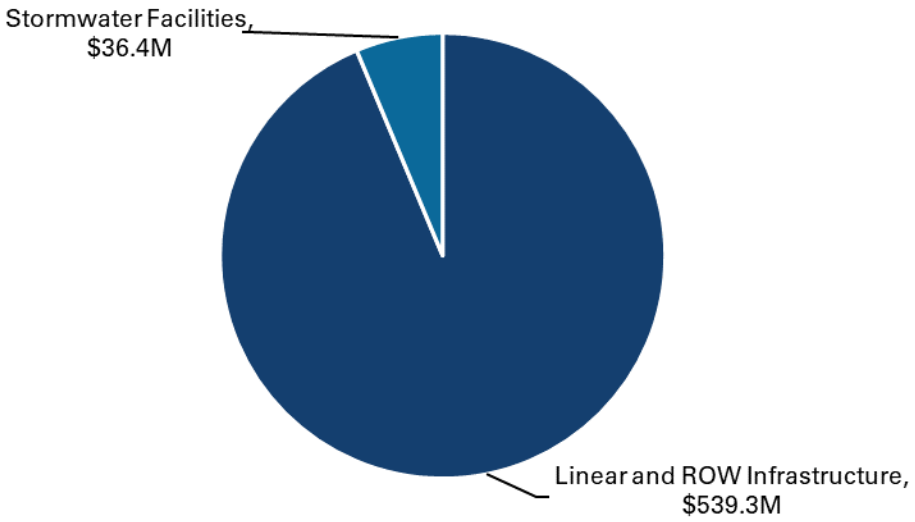


Figure 37 Replacement Value of Stormwater Management Assets

The installation[35] history for the Stormwater Management assets is shown Figure 38.

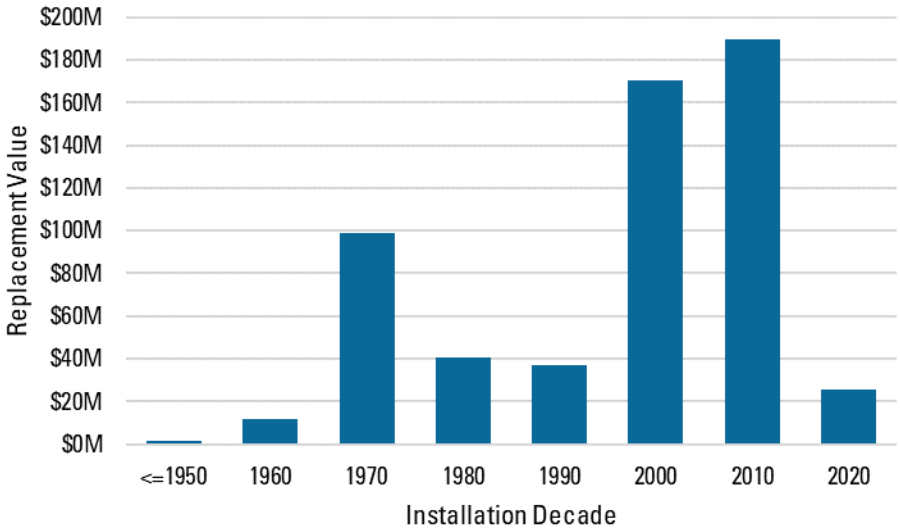


Figure 38 Installation History of Stormwater Management Assets, Shown by Replacement Value

Figure 39 shows the proportion of Stormwater Management assets in a SOGR. SOGR refers to assets that are not in the Condition categorization of Very Poor. These assets are assumed to still be able to follow the desired lifecycle strategy, to remain in working order. See **Section 3** for more information on SOGR. The overall condition of these assets is Very Good.

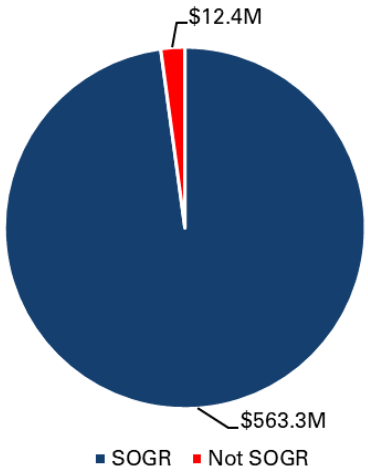


Figure 39 Proportion of Stormwater Management Assets in a SOGR

35 Installation date used for the Asset Management Plan was either based on original in-service date, acquisition date or in-service date available in the Town's data, in the order of priority.

11.5 Public Input

It is important to stay aware of community expectations and priorities. Various recent public consultation activities were reviewed, to distil public input related to asset management in Stormwater Management. Key messages:

- Stormwater Management was voted in the top 3 most important services to the community.
- Priorities for Increased Levels of Service include infrastructure improvement.
- When it comes to managing growth, the community feels it is important to protect the environment as we grow.
- Due to the increased cost of maintaining current service levels and infrastructure, the Town must balance taxation and service delivery levels. The top response the community voted for was to add or increase user fees to maintain current services.
- The community voted that wildlife and nature are among the things valued most about Caledon.
- Respondents ranked risk and return on investment as the most important criteria the Town should use to prioritize issues and services, and impact on climate change and quality of life as the least important.

A more detailed description of takeaway asset management feedback from the public is provided in the **Appendix E.**

11.6 Lifecycle Strategies

The Town employs a combination of lifecycle activities to provide proposed Levels of Service provided through stormwater assets, while striving to optimize costs based on defined risk. The strategy is a series of activities throughout an asset's lifecycle that help get the most value out of the asset. These activities include policy/planning, operation, maintenance, monitoring, rehabilitation, replacement, and decommissioning, while continuing to prepare for growth and introduce new or increased service levels.

When feasible, we also strive 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.

Lifecycle activities the Town chooses to apply are selected, 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.

11.6.1 Lifecycle Strategy for Stormwater Management

The following series of activities generally describe the lifecycle strategy that the Town has adopted for Stormwater Management assets, in an effort to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy and Planning Activities

- Council Strategic Plan includes an Environmental Leadership commitment, which focuses on the Stormwater Master Plan and stormwater infrastructure planning.
- Stormwater Master Plan guides the Town in long term planning for demand.
- Resilient Caledon guides the Town in recommendations for climate change impacts on stormwater assets.
- Town Development Standards include TRCA sediment/erosion designs controls for new construction.
- CLI ECA sets design standards & operating requirements for stormwater assets.
- Coordination with operations.
- Striving to continue developing overall stormwater program to focus on more data collection.
- IDF curve updates to modify design planning into the future for stormwater assets.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

Stormwater Mains:

- Emergency-based general response to stormwater main issues.
- Reactive flushing, monitoring indirectly through MMS road patrols.
- Second year using the collected stormwater condition data in 2023.
- CCTV inspection on portion of system every year (constrained by budget value, no set portion or percentage target yet).
- Street sweeping, spot repairs, sediment removal from culverts and reactive maintenance on catch basins.
- Stormwater main relining (new in 2022).
- Ditches – mowing and regrading.
- CLI ECA defines requirements for maintenance plan and monitoring, which the Town strives to follow.

Stormwater Facilities:

- Signage at ponds and use of the Parks Bylaw to discourage activities at ponds that impact the pond health.
- CLI ECA defines requirements for rehabilitation plans.
- Drainage area preventive measures in place, such as vegetation management, debris and litter removal, and inlet and outlet structures clearing.
- PM for new facilities as per CLI/ECA and/or manufacturer requirements, as budget allows.
- Condition monitoring (sediment) informs capital planning. Pond inspection program with operations is in place, Town has installed gauges on ponds and berm monitoring.
- LIDs/MTDs have annual maintenance inspection/maintenance program in accordance with manufacturer requirements.

SOGR: Rehabilitation & Replacement Activities

Stormwater Mains:

- Relining of mains is being explored and tested, considered an option for some eligible stormwater main candidates striving to establish a regular stormwater relining program.
- Urgency condition ratings, gathered through CCTV exercises that are commencing on parts of the system annually, are used to indicate highest priority candidates for rehabilitation or replacement, or based on age, staff input, or past deficiencies.
- Planned replacements are in coordination with other transportation assets, when viable
- Emergency-based rehab and replacement in response to stormwater main issues.

Stormwater Facilities:

- Newer assets to the portfolio, which means the Town is still 'learning' the coming requirements. Although these assets are 'newer' to the portfolio, they require regular inspection to assess if sediment removal is required.
- The Town strives to rehabilitate stormwater ponds every 20 years in a pond's lifecycle, or as triggered by sediment accumulation, or Master Plan recommendations. Rehabilitation usually involves dredging and replacement/repair of major or minor components as required, or adding missing components as required (outlet structures, headwalls, vegetation, access roads). Rehabilitation also depends on the stormwater design.
- Oil/Grit Separators are generally newer with minimal rehabilitation expected over the next 10 years.
- Green stormwater facilities, such as Low Impact Development assets, are new assets with minimal rehabilitation work expected over the next 10 years.

To forecast the future stormwater renewal needs for this Asset Management Plan, several modelling scenarios were considered, with varying lifecycle activities and triggers. Due to challenges with the rehabilitation records and costing data, for this version of the Asset Management Plan, the stormwater ponds forecasted needs were based on replacement every 50 years. The scenario applied is shown in Table 48.

Table 48 Renewal Scenarios for Stormwater Management Assets

Asset Class	Renewal Scenario / LOS Threshold	Intervention Cost
Stormwater Ponds	Replace at 50 years	100% of replacement value
Stormwater Mains	Replace at Urgency condition rating of 9 or greater, or age-based condition of very poor (at the end of its estimated useful life)	100% of replacement value

Decommissioning Activities

Stormwater assets are typically not decommissioned. Dry stormwater ponds may be upgraded to wet ponds when rehabilitation or replacement is required.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk –** Reduces risk of not having stormwater assets available to provide sufficient collection and conveyance services, sustainable into the future.
- **Corporate Risk & Liability** – Reduces liabilities from insufficient capacity and availability of stormwater services as the Town grows, from flooding, sinkholes, poorly maintained stormwater assets.
- **Financial Risk –** Reduces losses from planning for or constructing stormwater in excess or insufficient capacity, poor use of Town funds, and unplanned repairs. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Operational Risk –** Reduces inefficiencies due to unnecessary flooding response.
- **Reputational Risk –** Reduces negative optics from poor planning of stormwater with Town funds, flooding events, poorly maintained ponds, sinkholes.
- **Environmental Risk –** Reduces environmental risk of flooding based on poor capacity planning, blockages, failures, erosion.
- **Safety and Health Risk** – Reduces safety and health risks from flooding or stagnant storage based on poor capacity planning.

11.6.2 Lifecycle Strategies if Maintaining Current Levels Only

This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

11.6.3 Lifecycle Strategies with a Funding Shortfall

This chapter and the Financial Strategy in Section 5 present investment needs to provide proposed Levels of Service, and projected funding to be available. If, based on the funding projected to be available, there is a funding shortfall, the Town will strive to:

- Execute the policy and planning activities as planned,
- Carry out the SOGR operation and maintenance activities most critical to preserving operation of the assets, as decided on a continual and case-by-case basis by staff,
- Carry out the most critical SOGR rehabilitation and replacement activities, based on failures and criticality of assets, determined by staff, and
- Decommission assets as needed to yield the most value.

Should there be a funding shortfall, and these prioritization decisions have to be made, then the Town will manage resulting risks by doing the following activities. These may not be fully documented at this time, but this maturity task is included as recommendations.

Regular Communication and Reporting: Providing annual reports to Council outlining the funding gaps, trade-offs made, and the anticipated impacts on levels of service, and communicating the consequences of deferring activities, including using visualizations to illustrate risks.

Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing in the future) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. When developed, this may include a risk matrix or scoring systems to consistently evaluate competing needs.

Scenario Planning and Contingency Strategies: Developing and reviewing different funding scenarios and their associated risks (e.g., impact of delaying a major rehab vs. executing partial repairs) and establishing contingency plans for high-risk assets to minimize service disruptions.

Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to extend asset life where feasible (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance), and adjusting maintenance priorities dynamically based on real-time data and field observations.

Temporary Service-Level Adjustments and Temporary Measures: When necessary, defining minimum acceptable service levels and exploring interim measures to maintain essential services (e.g., rerouting pedestrians and traffic in case of a catastrophic storm culvert failure). Also, may include striving to adjust service delivery expectations to align with available funding while minimizing disruptions.

Strategic Decommissioning and Asset Rationalization: Assessing whether underutilized or redundant assets can be decommissioned to reduce financial burden, and considering alternative service delivery models or shared service agreements with neighboring municipalities.

Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

11.7 Forecasted Investment Needs

Based on the current state of stormwater assets and the Town's lifecycle strategies described in this Asset Management Plan, a range of investments are needed in the next decade to provide proposed and maintain current Levels of Service.

11.7.1 Operating Budget Needs (2025-2034)

The Town's operating budget funds some but not all of the asset investments required to provide proposed Levels of Service. The current operating budget for stormwater is assumed to be sufficient to maintain current Levels of Service, not including growth-related needs.

The cost to deliver more capital projects than what is currently delivered via Town staff would likely require additional staff resources, and therefore additional operating budget. The operating budget needed for added/expanded stormwater assets due to growth is calculated and reported in the DC Background Study, and further discussed in Section 6.

11.7.2 Capital Budget Needs (2025-2034)

Annual capital investments needed in the next decade to provide proposed Levels of Service for Stormwater Management assets are shown in Table 49 and summarized below. For reference, investments needed to maintain current levels of service are also provided.

- As a reminder, proposed and current Levels of Service are described in **Section 12.3**.
- Not all assets are currently in a SOGR. Current Levels of Service are primarily based on continuing lifecycle activities so that the total value of assets in a SOGR does not decrease.

Table 49 Annual Capital Investments Needed to Provide Proposed Stormwater Management Levels of Service (2025-2034)

Asset Investment Type	Investment Need to Provide Proposed LOS
SOGR Maintenance	$821,000
SOGR Renewal	$2,057,000
New/Increased Services and Policy and Planning	$132,000
Growth	$0
Total	**$3,010,000**

For reference, and to satisfy the legislation, it is important to note costs to maintain current levels of service. Current Levels of Service are primarily based on continuing lifecycle activities so that the current total value of assets in a SOGR does not decrease. The renewal cost to maintain this current level of service is $2.1 million annually.

Renewal Needs

Renewal lifecycle activities can be the most challenging for the Town to forecast and plan for and are therefore discussed in more detail.

Short Term (2025-2034)

The annual renewal investment needed to provide proposed Stormwater Management Levels of Service is $3.01M.

Long Term (2025-2048)

Currently, the stormwater analysis focuses on the 10-year horizon. There is uncertainty with the investment needs triggered by the requirements of CLI ECA. The Town will work towards determining the long-term needs as data and analyses mature.

Eliminating Backlog

For comparison or consideration, should we eliminate renewal backlog entirely, that is, renew Stormwater Management assets so that all assets are in a SOGR at all times, the annual renewal investment required would be $2.3M for the next ten years. This is the unconstrained cost to consistently follow our defined lifecycle strategy.

11.8 Data Quality

In addition to the assessment discussion in **Section 7** related to asset management and data maturity, data quality observations specific to Stormwater Management are provided. Data that was used for the Asset Management Plan was reviewed for completeness, consistency, uniqueness, validity, and accuracy. The focus of this quality assessment is Stormwater Management asset data related to inventory (count of assets), attributes (such as age, length, or in-service date), condition (age-based or based on actual assessment), and valuation (replacement value). Ratings were assessed based on the following guidance:

- Advanced: Data available with no assumptions (e.g. condition assessments, inspection reports, databases with proven track record).
- Intermediate: Data available with minimal assumptions.
- Basic: Significant assumptions required, or no information available.

The assessed quality of the data used to prepare the Stormwater Management analysis is summarized in Table 50.

Table 50 Data Quality for Stormwater Management Assets

Asset Class	Inventory	Attribute	Condition	Valuation
Linear & ROW infrastructure	Intermediate	Basic	Basic	Basic
Storm Facilities	Intermediate	Intermediate	Intermediate	Basic

Rationale for ratings is provided below.

Inventory Data

- Stormwater inventory data is currently under development.

Attribute Data

- Storm mains length was missing for some of the assets.

Condition Data

- A portion of the stormwater mains had condition data available (CCTV). However, the asset IDs ('Pipe Segment Reference') from some of the CCTV data did not match asset IDs ('Import ID') from the overall stormwater asset inventory.
- It should be noted that a study provided under separate cover showed that using age as a proxy for condition of stormwater mains may misrepresent the portfolio. CCTV data reveals condition of stormwater main is worse than age may indicate.
- Age was used as a proxy for condition for the majority of linear & ROW infrastructure.

Valuation Data

- There were multiple discrepancies in the replacement values in the AM.

Asset ID #57880
Road Segment, Old School

Transportation

Caledon Trail

Asset ID #DCB-I-8-2,
Catch Basin McDonald Street
Maintenance by Town staff
Using Asset ID #60664 Sweeper

Asset ID #211
Pedestrian Bridge
Caledon Trail

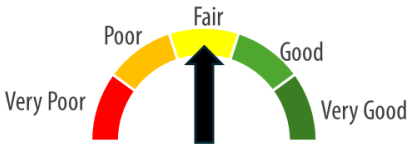
12 Transportation

12.1 Key Insights

Transportation services that we provide rely on the following classes of assets:

- Bridges & Culverts,
- Buildings,
- Equipment,
- Fleet, and
- Linear & ROW Infrastructure.

Total Replacement Value of Assets	$1.269 Billion
Overall Asset Condition[36]	Fair
Overall Condition of Roads	Fair
Overall Condition of Bridges & Culverts[37]	Fair



36 Presented as a weighted average, weighted by replacement value.

37 Asset Management Plan includes culverts to which OSIM applies (>3m diameter).

12.2 Description

Transportation services provided by the Town of Caledon include three core functions – **Active Transportation Services, Operations, and Roads Services,** described below.

Caledon Trail
Winston Churchill Blvd.

Active Transportation Services	Operations	Roads Services
Helping the community use human power to get from one place to another, such as walking or cycling.	A 'back-of-house' service keeping the fleet and equipment in good working order.	Maintaining the road network, traffic, and related components.
Assets include: • Pedestrian bridges, • Pedestrian culverts, and • **Linear & ROW assets**, which include sidewalks.	Assets include: • **Operations buildings** (e.g. Yard 1, 2, 3), • **Equipment** (e.g. rammers, plate tampers, chain saws, radar speed signs), and • **Fleet** (e.g. pickup trucks, graders, tandem dump trucks).	Assets include: • Bridges, • **Culverts** (OSIM only), and • Linear & ROW assets, which include: • Roads • Gateway features • Guiderails • Noise attenuation barriers • Retaining walls • Streetlights

The roads within the Town boundaries are owned by the Province, the Region of Peel, and the Town of Caledon. This Asset Management Plan covers the Town-owned roads. The Region of Peel is responsible for most of the high-volume arterial roads within the Town limits, while the province has jurisdiction for the 400-series and provincial highways.

Buildings, fleet, and equipment are other key assets that are used in Transportation to provide these overall services to the community. Traffic signals involved share responsibilities with the Region of Peel and are not included in the Asset Management Plan at this time.

12.3 Levels of Service

We use transportation assets to reliably and effectively enable the movement of people and goods through our Town. Town bridges and culverts are used to enable continuous flow of traffic across waterways, other roads, and paths.

Town roads include various types that are classified by their speed limits and daily traffic. Roads are classified as Class 2-5, based on traffic volumes and posted speed limits.

- Busier/faster roads generally form block grids and function as main thoroughfares, usually classified as Class 2 or 3.
- Other roads serve as continuous collectors carrying moderate traffic volumes, generally formed in smaller block grids between the busier/faster system, usually classified as Class 3 or 4.
- Less busy local roads connect to the collector roads and provide access to individual properties in residential and commercial areas, usually classified as Class 4 or 5.

As stated in the Town of Caledon Strategic Plan 2023-2035:

- Service Excellence and Accountability is a priority, and we committed to investing strategically to ensure fiscal responsibility, including incremental investment in people, process, and technology to ensure that assets are in a SOGR.
- Enhanced Transportation and Mobility is a priority, and we committed to deliver a capital road, bridge and culvert program that ensures that the entire Caledon transportation network is in a good state of repair.

In general, the Town strives for:

- **Availability -** The road network service is conveniently accessible to the whole community in sufficient capacity (meets traffic demands) and is available under all weather conditions. The bridges and culverts are accessible to most of the community with only 13% of the bridges having load restrictions.
- **Reliability -** Transportation services are reliable, with assets maintained in a SOGR with minimal closures and disruptions.
- **Cost-effectiveness -** Transportation services are provided to all customers at an affordable cost.
- **Safety -** Transportation services are safe and compliant with legislation.

12.3.1 Areas Serviced

The road network is comprised of various classes of roadways connected across the Town. Caledon offers 4.36 lane-kilometres of road for every square kilometre of land in our community, which includes [38]:

- 105 Km of centre line arterial roads
- 411 Km of centre line collector roads
- 245 Km of centre line local roads

The Town's collector road system generally forms smaller block grids between the arterial road system. These roads are generally continuous and carry moderate traffic volumes. Within the rural service centres, villages, and hamlets, the collector roads provide address to the local road system. The local roads connect to the collector roads and provide access to individual properties in residential and commercial areas.

Bridges and culverts vary in structure class and what they are crossing over (e.g. water, roadway, paths). Users include heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, and cyclists.

38 Lane-kilometre information for arterial, collector and local roads is still pending and was not available for this Plan.

12.3.2 Level of Service Metrics

The Town proposes to continue providing safe, compliant, reliable, available, and sustainable Transportation assets, indicated through the following metrics:

Levels of Service Metric	Current Performance	Proposed Performance by 2034
Percentage of Transportation assets in a SOGR	87%	**87%**
Implementation of the recommendations in the Green Fleet Strategy *	15%	**100%**
Implementation of the recommendations in the Active Transportation Master Plan*	0%[39]	**100%**
Implementation of the recommendations in Age Friendly Caledon*	0%	**100%**
Implementation of the recommendations in the Community Corporate Climate Change Plan*	30%	**100%**
Implementation of growth-driven new/increased service levels*	85%	**100%**
Implementation of other capital forecast items*, **	0%	**100%**

* Reference year is 2025, considering all of the committed or planned expenditures until 2034.

**Examples include Transportation and traffic planning studies, traffic calming program, cycling infrastructure

39 Progress update on implementation of Active Transportation Plan was unavailable at time of writing. An update will be provided in the 2026 status update report.

12.3.3 Other Monitoring

The Town also monitors other important asset and performance information:

Other Information	2024 Performance
Average OCI for paved roads	68
Average surface condition of unpaved roads	Fair
Percentage for roads inspected	100%
Percentage of sidewalks inspected	100%
Percentage of bridges that have loading or dimensional restrictions	13%
Average BCI for bridges	72 (Good)
Average BCI for culverts	69(Fair)
Annual capital reinvestment rate[40]	1.5 %
Percentage of streetlights with LED or low energy fixtures	37 %

At this stage in the Town's asset management maturity, the Levels of Service focus on condition, but the Town strives to enhance the measures beyond condition at a later date. Recommendations pertaining to asset data are provided in **Section 7**.

For paved roads, pavement condition is a closely monitored indicator of the state of repair, shown below.

Paved Road Condition	Description	2024 Performance
Very Good	Few cracks, little distortion, few rough areas	23 %
Good	Slight cracks or dishing, slightly rough & uneven	32 %
Fair	Moderate cracking or dishing, somewhat rough & uneven	19 %
Poor	Frequent cracking or dishing, considerably rough & uneven	12 %
Very Poor	Extensive severe cracking, dishing, very rough & uneven	14 %

For bridges and culverts, physical condition is a closely monitored indicator of the state of repair, shown below.

40 Based on capital renewal projects identified in the Town's 10-year Capital Forecast.

Bridge & Culvert Condition	Description	2024 Performance
Very Good	Few deficiencies	17 %
Good	Slight deck issues, foundation settlement, corrosion, deterioration, hairline cracking in culverts.	20 %
Fair	Moderate deck issues, foundation settlement, corrosion, deterioration, pitting of culvert invert.	47 %
Poor	Frequent deck issues, foundation settlement, corrosion, deterioration, deep pitting of culvert invert.	15 %
Very Poor	Extensive deck issues, foundation settlement, corrosion, deterioration, extensive heavy culvert rust, invert erosion of culvert, partial collapse of culvert.	<1 %

12.4 Current Asset Inventory and Condition

The asset classes used in Transportation are shown in Figure 40. The total replacement value of the Transportation assets is $1.198 billion.

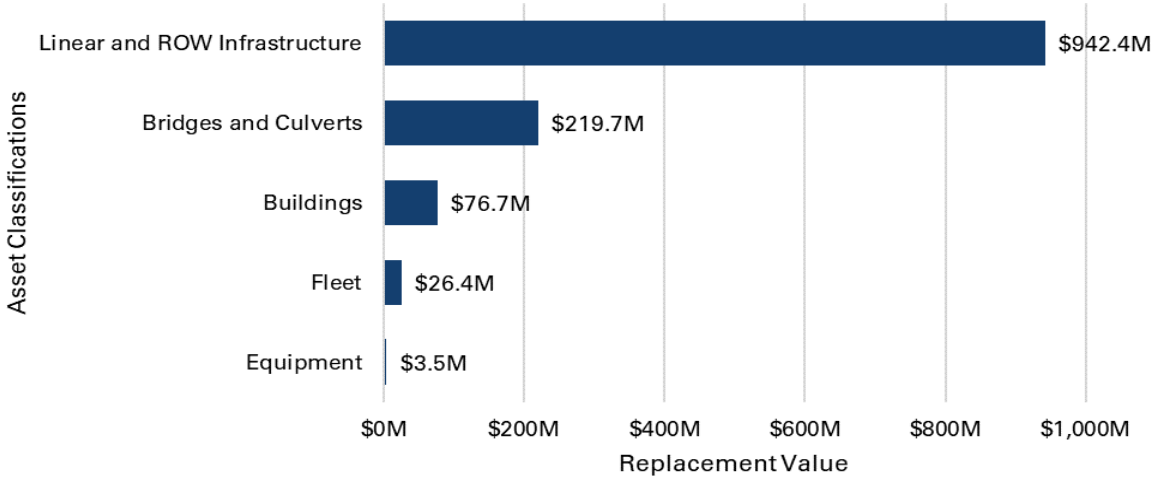


Figure 40 Replacement Values of Transportation Assets

Linear & ROW infrastructure includes roads, guiderails, noise attenuation barriers, retaining walls, signs, and streetlights. Figure 41 shows the current condition of the various Transportation asset classes, by replacement value, not including buildings - condition of buildings is shown in Figure 42. The classes are listed in order from largest replacement value (roads and linear infrastructure) to smallest. The overall average condition of the Transportation assets is Fair.

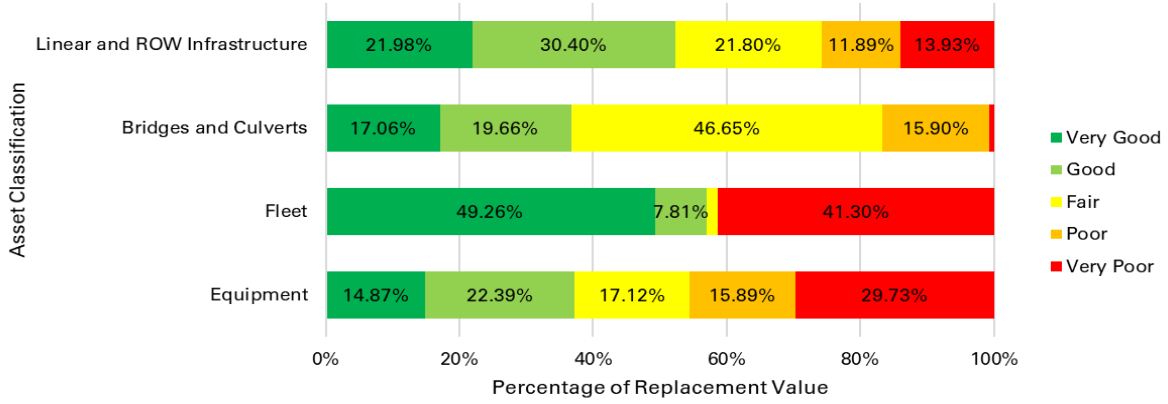


Figure 41 Current Condition of Transportation Assets, by Replacement Value

Figure 42 Current Overall Condition of Transportation Buildings

The methods for assessing condition vary by asset.

Buildings are complex assets, made up of components each with specific age, useful life, and condition. The building condition presented above is based on age of the various building components rolled up into an overall condition rating for each building. More detailed inspection information is being assessed and compiled now by the Town to provide actual condition information for each building. This will be used in future Asset Management Plans.

For roads, overall pavement condition index is used to indicate condition. For bridges and culverts, bridge condition index is used to indicate condition. For all other Transportation assets, age is used as a proxy for condition. We are currently working on enhancing condition data for fleet. Condition assessment methods are described in further detail in **Section 3.** Figure 43 shows overall the proportion of Transportation assets in a SOGR.

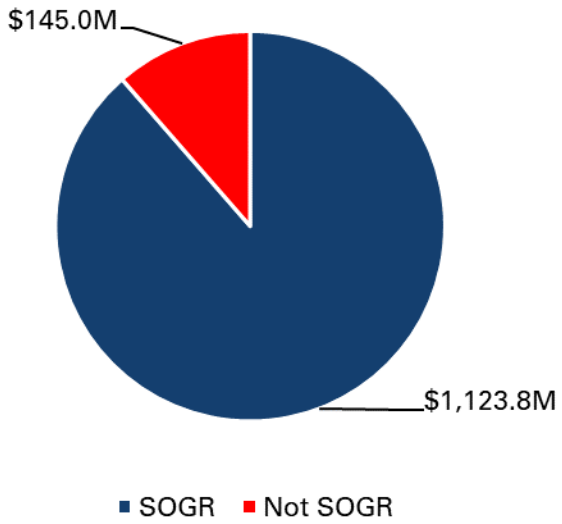


Figure 43 Overall Proportion of Transportation Assets in SOGR

12.4.1 Active Transportation Services

Table 51 describes the Active Transportation asset inventory, including asset types, value, estimated useful life[41], and average age.

Table 51 Inventory of Active Transportation Assets as of 2023

Asset Type	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Pedestrian Bridges	27	$26,708,041	75	55
Pedestrian Culverts	33	$44,216,331	50	60
Sidewalks	166 km	$39,102,346	30	19
Total		**$110.02M**		

The pedestrian culverts include large diameter OSIM-applicable culverts only. Figure 44 shows the relative replacement values of the Active Transportation assets. Linear & ROW infrastructure includes sidewalks. The installation[42] history for the Active Transportation assets is shown in Figure 45.

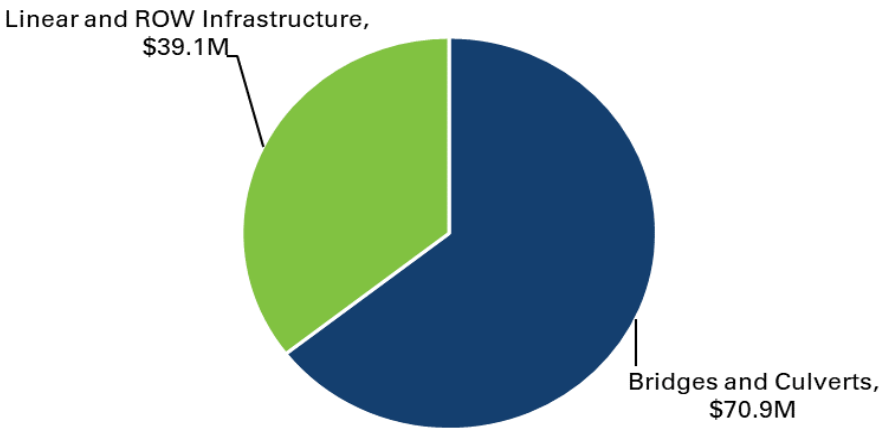


Figure 44 Replacement Value of Active Transportation Assets

41 The estimated useful life is the typical lifespan in a typical operating environment.

42 Installation date used for the Asset Management Plan was either based on original in-service date, acquisition date or in-service date available in the Town's data, in the order of priority.

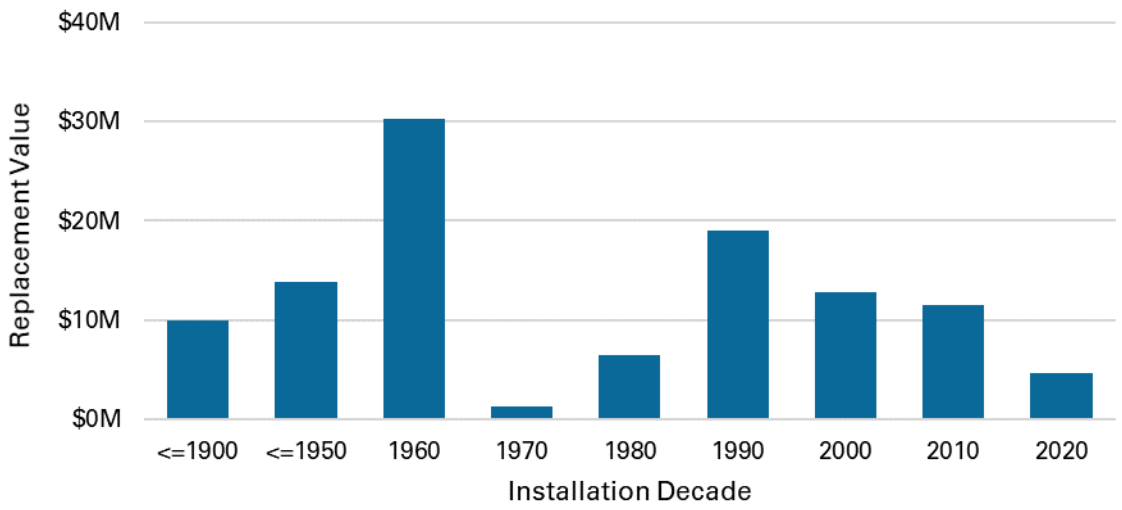


Figure 45 Installation History of Active Transportation Assets, Shown by Replacement Value

Figure 46 shows the proportion of Active Transportation assets in a SOGR. The overall average condition of these assets is Fair.

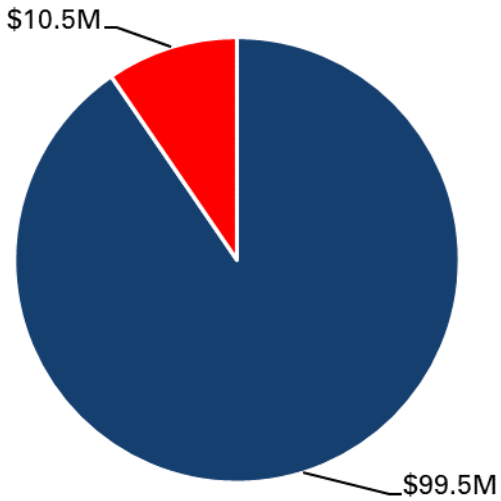


Figure 46 Proportion of Active Transportation Assets in a SOGR

12.4.2 Operations

Table 52 describes the Operations asset inventory, including asset class, value, estimated useful life[43], and average age.

Table 52 Inventory of Operations Assets as of 2023

Asset Class	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Buildings	3	$76,743,280	5-50	24
Equipment	204	$3,373,060	5-14	9
Fleet	144	$26,421,843	7-14	8
Total		**$106.54M**		

Figure 47 shows the relative replacement values of the Operations assets. The EUL is the typical lifespan in a typical operating environment.

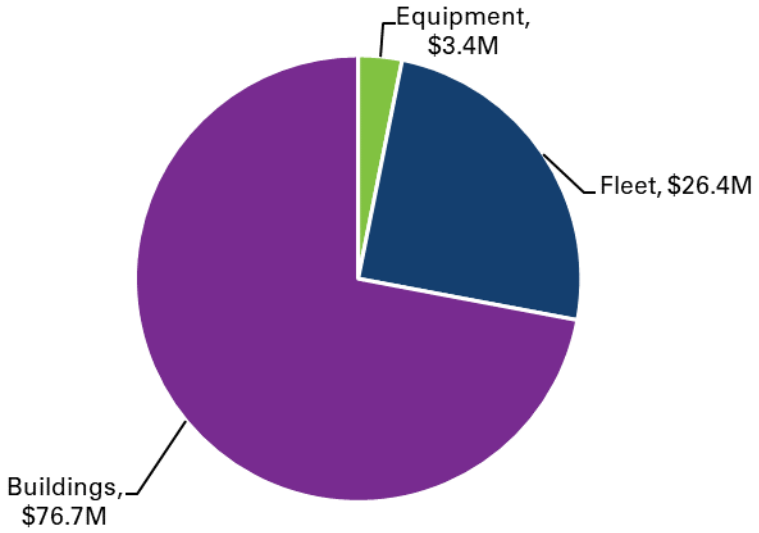


Figure 47 Replacement Value of Operations Assets

43 The estimated useful life is the typical lifespan in a typical operating environment.

The installation history for the Operations assets is shown in Figure 48. Figure 49 shows the proportion of Operations assets in a SOGR. The overall average condition of these assets is Fair.

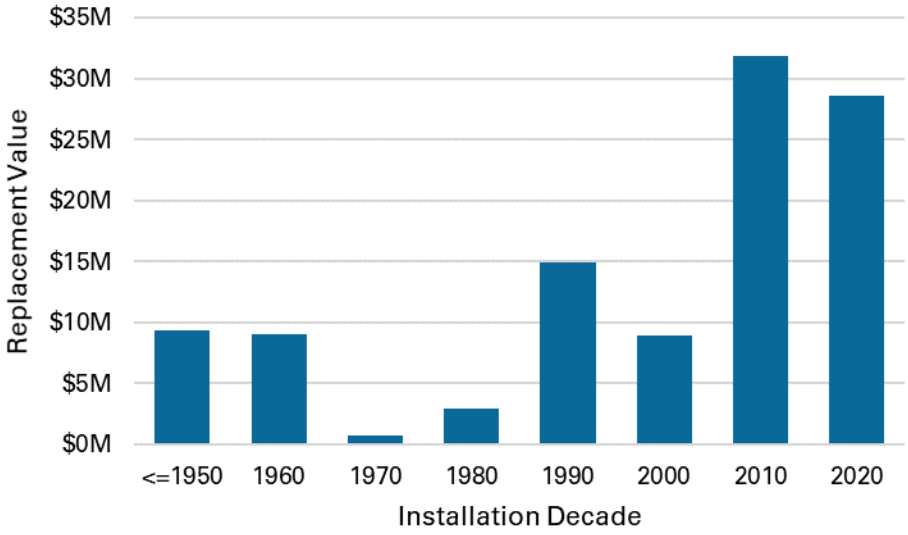


Figure 48 Installation History of Operations Assets, Shown by Replacement Value

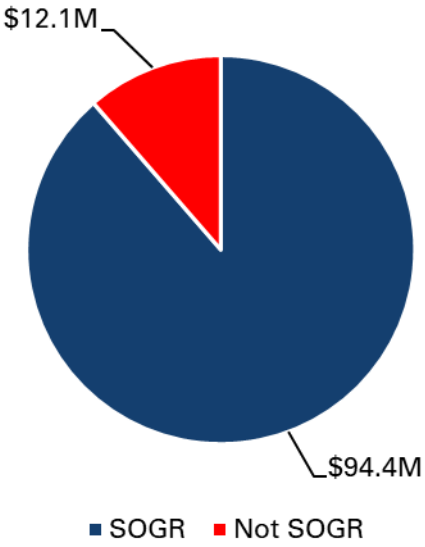


Figure 49 Proportion of Operations Assets in a SOGR

12.4.3 Roads Services

Table 53 describes the Roads Services asset inventory, including asset types, value, estimated useful life[44], and average age.

Table 53 Inventory of Roads Services Assets as of 2023

Asset Type	Quantity	Replacement Value	Estimated Useful Life (Years)	Average Age (Years)
Bridges	61	$100,924,128	75	55
Culverts	38	$47,804,862	50	46
Class 2 Roads	66.8 km	$103,754,337	30	19
Class 3 Roads	133.6km	$144,119,544	30	16
Class 4 Roads	157.1km	$181,796,635	30	19
Class 5 Roads	401km	$404,016,702	30	20
Class 6 Roads	1.2 km	$1,882,639	30	11
Other ROW Assets (guiderails, streetlights, etc.)	5524	$72,579,561	10-40	21
Total		**$1.051B**		

Quantity of road length is shown in total kilometres, rather than lane kilometres.

It should be noted that gravel roads are included in the inventory above. Boundary assets, such as some roads, bridges, and culverts, are subject to shared responsibilities with neighbouring municipalities. Curbs are reported as part of roads, and road signs are not included in the inventory.

44 The estimated useful life is the typical lifespan in a typical operating environment.

Figure 50 shows the relative replacement values of the Roads Services assets.

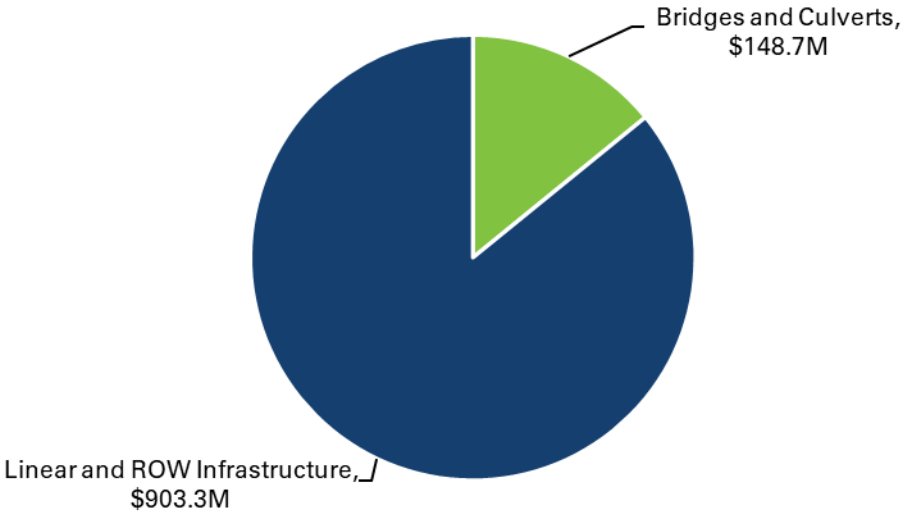


Figure 50 Replacement Value of Roads Services Assets

The installation history for the Roads Services assets is shown in Figure 51. Figure 52 shows the proportion of Roads Services assets in a SOGR. The overall average condition of these assets is Fair. Figure 53 shows the range of condition of roads by MMS road class.

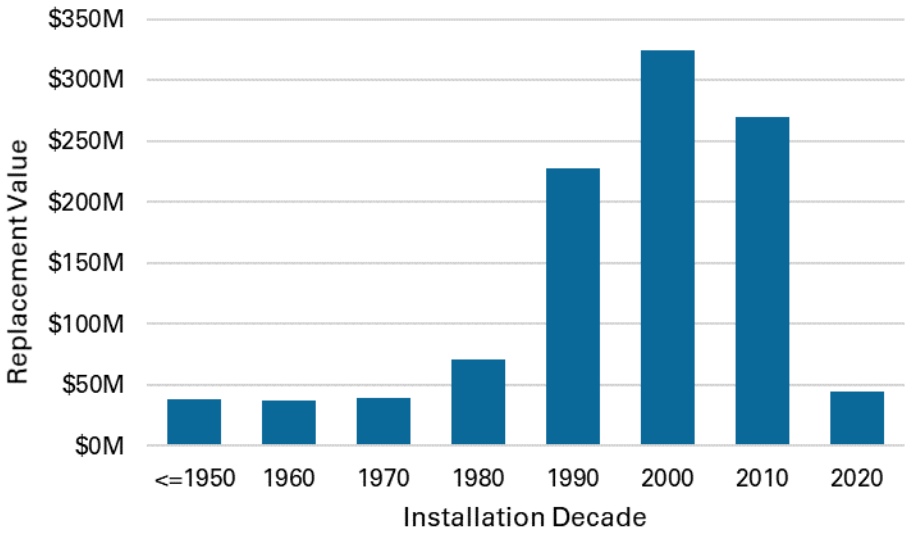


Figure 51 Installation History of Road Services Assets, Shown by Replacement Value

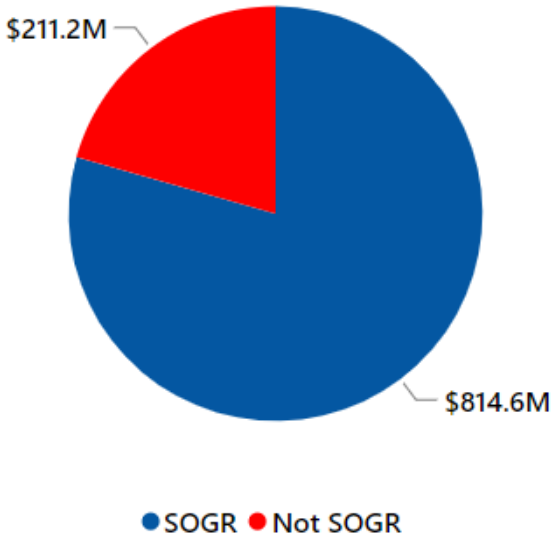


Figure 52 Proportion of Roads Services Assets in a SOGR

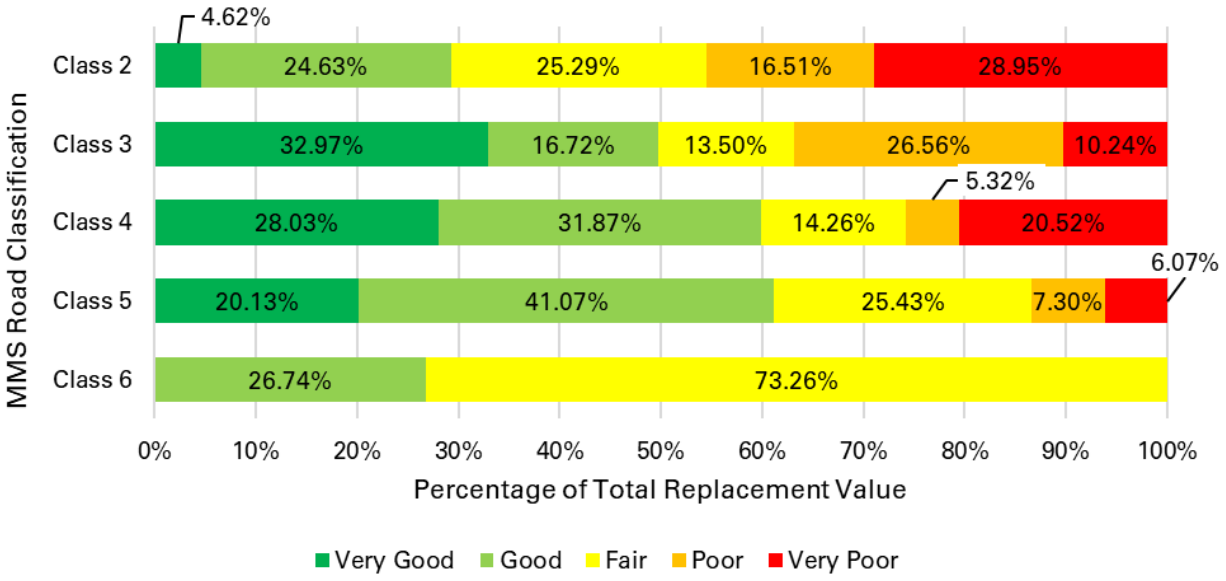


Figure 53 Condition of Road Classes (MMS) by Percentage of Total Replacement Value

Network-wide condition assessments are completed for all paved roads every 2 years and are carried out by an external contractor to ensure consistency and standardization.

Each road receives an Overall Condition Index (OCI) rating, formulated from a Pavement Condition Index and a Roughness Index, providing a complete indication of the driving quality associated with each road surface. In this Asset Management Plan, we use the OCI rating to determine the current condition of road segments and forecast future capital requirements.

The range of condition of bridges and culverts is shown in Figure 54. The range of condition of other road assets is shown in Figure 55.

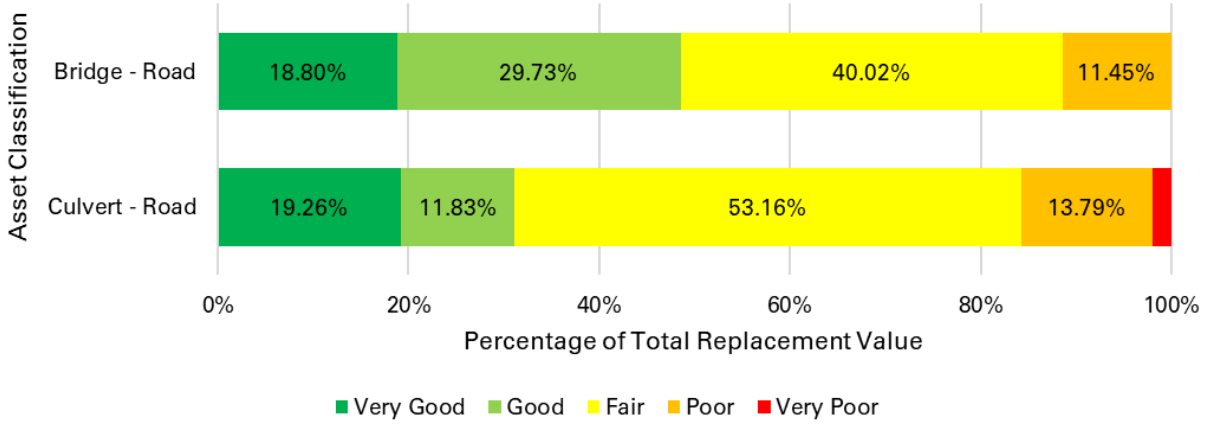


Figure 54 Condition of Bridges and Culverts, by Percentage of Total Replacement Value

All municipally owned bridges and structural culverts with a span greater than or equal to 3 metres are required to be inspected every 2 years according to the Ontario Structure Inspection Manual (OSIM). All structures receive a Bridge Condition Index (BCI) Rating between 0-100.

In this Asset Management Plan, we use the BCI rating to determine the current condition of structures and forecast future capital requirements. The BCI rating is adapted from International Infrastructure Management Manual (IIMM) standards and from the Ministry of Transportation (MTO).

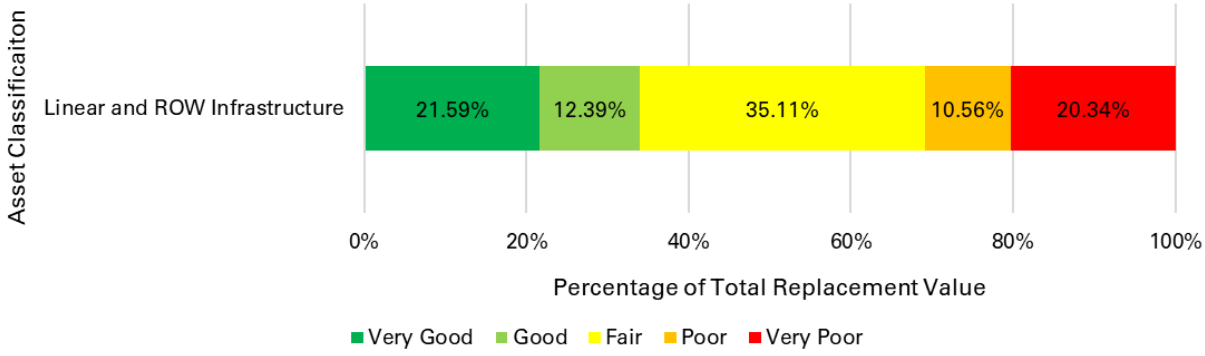


Figure 55 Condition of Other Roads Assets, by Percentage of Replacement Value

For the remaining transportation assets, age is used as a proxy for condition. The age, in relation to the expected useful life, is converted to an equivalent condition rating. Condition assessment methods are described in further detail in **Section 3.**

12.5 Public Input

It is important to stay aware of community expectations and priorities. Various recent public consultation activities were reviewed to distil public input related to asset management in Transportation. Key messages:

- Transportation was voted in the top 3 most important services to the community.
- Priorities for Asset Improvements:
- Active Transportation connectivity, safety, and destination oriented,
- Public Transportation,
- Appearance of streets and sidewalks, and
- More benches.
- Priorities for Increased Levels of Service: Roads & Operations.
- When it comes to managing growth, the community feels it is most important to continue to renovate, expand and build community facilities.
- Within the top three key challenges facing the growth Caledon are lack of Public Transportation options.
- The highest active transportation priorities identified by the community included connection of routes, visible and destination-oriented routes, and safe, comfortable, and diverse options.
- Respondents ranked risk and return on investment as the most important criteria the Town should use to prioritize issues and services, and impact on climate change and quality of life as the least important.
- Due to the increased cost of maintaining current service levels and infrastructure, the Town must balance taxation and service delivery levels. The top response the community voted for was to add or increase user fees to maintain current services.

A more detailed description of takeaway asset management feedback from the public is provided in the **Appendix E.**

12.6 Lifecycle Strategies

The Town employs a combination of lifecycle activities to provide proposed Levels of Service (as stated above) while striving to optimize costs based on defined risk. The strategy is a series of activities throughout an asset's lifecycle that help get the most value out of the asset. These activities may include policy/planning, operation, maintenance, monitoring, rehabilitation, replacement, and decommissioning, while continuing to prepare for growth and introduce new or increased service levels.

When feasible, we also strive 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.

This strategy is not static. Lifecycle activities we choose to apply are selected, 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.

12.6.1 Lifecycle Strategy for Transportation Fleet

The following series of activities generally describe the lifecycle strategy that the Town has adopted for fleet assets in an effort to provide proposed Levels of Service at a defined level of risk within current budget.

Policy & Planning Activities

- Exploring the feasibility of a Fleet Management Policy, taking current and future state and demands into account such as:
- Studies to assess fleet usage, maintenance needs and performance.
- Process to mature and analyze fleet data such as age, condition, mileage, function, Service Area demands, and service history.
- Trial and testing of new innovations in fleet to validate suitability (e.g. Two-way dump box).
- Fleet Standardization Policy establishes consistency and efficiency in some fleet types (reducing training and repair costs).
- Periodic training for Operators and Fleet Maintenance staff in safe and effective fleet operation and maintenance.
- Processes are in place to manage warranties and service agreements with suppliers.
- Processes are in place to consult stakeholders before fleet procurement to specify the most suited/effective vehicle. Options for extended warranties are reviewed when applicable.
- Insurance policies carried for fleet assets. Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- Operating strategies to maximize fleet usage across all seasons and minimize dormant vehicles (e.g. Building/Bylaw use a vehicle repository for sign-out when required).
- Where practical, activities and fleet are planned to include crews sharing vehicles when suitable, and to reduce excessive idling.
- Regular PM program in place, such as oil changes, tire rotation, etc., generally based on manufacturer recommendations.
- Proactive planning work occurring in the Town's two Work Order Management Systems, to build histories that show lifecycle work completed and some of the costs such as parts and materials.
- Reactive maintenance program in place.
- Striving to track failures as incidents in order to continually improve.
- Inventory controls for fleet parts and materials.
- Engaging staff/management to be engaged in key decisions about elective repairs, to ensure continuity of service and fewer breakdowns while in service.

SOGR: Rehabilitation & Replacement Activities

- Major overhauls or reconditioning fleet assets are typically poor value for money, often not extending life.
- Regular PM programs assist in determining rehabilitation or replacements required.
- Need and priority for replacement is usually first triggered by age, and an internal discussion of other factors such as past performance and maintenance costs, hours, other similar equipment, spending strategy, and options through deferrals.
- Salvage/sell replaced fleet, to avoid consuming valuable yard space for storage.
- To forecast the future fleet renewal needs for this Asset Management Plan, it is assumed that the Town strives to replace fleet units at the end of EUL.

Decommissioning Activities

- Obsolete fleet that is no longer of service to the Town is salvaged, sold, or auctioned, to avoid consuming valuable yard space for storage.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk** – Reduces risk of not having the right fleet suited to the Town's requirements, available at the right time, sustainable into the future.
- **Corporate Risk & Liability** – Reduces risk of unplanned fleet breakdowns causing disruptions on winter road maintenance or emergency response, or from fleet in storage.
- **Financial Risk** – Reduces losses from purchasing excess, unsuitable, or dormant underutilized fleet, or poor use of Town funds, or for major breakdowns, excess parts inventory, missing salvage/auction opportunities. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk** – Reduces negative optics from dormant/redundant/unused fleet, or from poorly maintained fleet or breakdowns, or crowded storage yards.
- **Operational Risk** – Reduces risk of inefficiencies from breakdowns or unavailable fleet for the work at hand.
- **Environmental Risk** – Reduces risks of poorly maintained fleet with spills, excessive emissions or fuel consumption, prolonged storage of dormant fleet.
- **Safety Risk** – Reduces public and staff safety risks from poorly maintained fleet.

12.6.2 Lifecycle Strategies to Maintain Current Levels of Service

This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

12.6.3 Other Risk Options

- More PM may reduce unplanned failures or extend fleet service life but would require increased required budget. Overall lifecycle costs may be reduced.
- Extended warranties could reduce repair costs, rehabilitation costs or extend time to replacement, but increase acquisition costs, and sometimes impact operations due to mandatory service and managing warranty information.

12.6.4 Lifecycle Strategy for Transportation Equipment

The following series of activities generally describe the lifecycle strategy that the Town has adopted for equipment, in an effort to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy and Planning Activities

- Process to manage warranties and service agreements with suppliers.
- Process to consult stakeholders before procurement of large equipment to specify the most suited/effective equipment. Options for extended warranties are reviewed when applicable.
- Insurance coverage for some equipment. Insurance policies provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- Overall, there is a staff commitment to process improvements in equipment maintenance and management.
- Regular PM program in place, generally based on manufacturer recommendations.
- Reactive maintenance program in place.

SOGR: Rehabilitation and Replacement Activities

- Major overhauls or reconditioning equipment is typically poor value for money, often not extending life.
- The need and priority for replacement is usually first triggered by condition or age, and an internal discussion of other factors.
- Salvage/sell replaced equipment, to avoid consuming valuable yard space for storage or large units.

To forecast the future equipment renewal needs for this Asset Management Plan, it is assumed that the Town strives to replace equipment at the end of its EUL.

Decommissioning Activities

- Obsolete equipment that is not replaced is salvaged, sold, or auctioned, to avoid consuming valuable yard space for storage.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk** – Reduces risk of not having the right equipment suited to the Town's requirements available at the right time.
- **Corporate Risk & Liability** – Reduces risk of unplanned equipment breakdowns causing disruptions on winter road maintenance or emergency response.
- **Financial Risk –** Reduces losses from purchasing excess, unsuitable, or dormant underutilized equipment, or poor use of Town funds, breakdowns, excess parts inventory, missing salvage/auction opportunities. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Reduces negative optics of dormant, redundant, poorly maintained, or unused equipment, or crowded storage yards.
- **Operational Risk –** Reduces risk of inefficiencies from unavailable or unsuitable equipment for the work at hand.
- **Environmental Risk –** Reduces environmental risk from wasteful equipment, excessive emissions or fuel consumption, poorly maintained equipment with spills, excessive emissions or fuel consumption, prolonged storage of dormant equipment.
- **Safety Risk –** Reduces public or staff safety risk from poorly maintained equipment.

12.6.5 Lifecycle Strategy for Transportation Buildings

The lifecycle strategy applied to the Transportation buildings is aligned with the strategy for all municipal buildings. This is described in **Section 8.6**.

12.6.6 Lifecycle Strategy for Roads & Linear Assets

The following series of activities generally describe the lifecycle strategy that the Town has adopted for roads assets, in an effort to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy and Planning Activities

- Council Strategic Plan includes an Enhanced Transportation and Mobility commitment, which notes Active Transportation, Multi-Modal Transportation Master Plans guide Town in long term planning for demand.
- Operational programs such as seasonal weight restriction program, encroachment permit program, load/weight permit program – regulate usage of roads through policy.
- Resilient Caledon guides Town in recommendations for climate change impacts on roads assets.
- Salt Management Plan aids in proper salt management to reduce asset and environmental impact.
- Town Development Standards include requirements for road design to strive for optimized lifespan (e.g. materials, design for use & maintenance).
- MMS sets standards for maintaining road assets, including rigorous condition monitoring of many rights of way assets.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- PM program in place, including street sweeping, pavement marking, crack sealing on non-minor local roads, signage maintenance to reduce damages/collisions, and usage programs described in 'policy' section. Road's maintenance and rehabilitation strategy is carried out in accordance with the Town's Surface Preservation Program.
- Regular inspection and patrolling for early detection of deficiencies, as per MMS.
- Bi-annual global review of pavement condition.
- Reactive maintenance as required for minor repairs such as potholes, utility cut repairs, sidewalk levelling.
- Sidewalks are maintained to adhere to MMS requirements, using a variety of methods such as overlay patching with asphalt (cold patch, or a hot mix/cold patch combination).

SOGR: Rehabilitation & Replacement Activities

- High traffic volumes and environmental factors can accelerate road deterioration.
- Road's maintenance and rehabilitation strategy is carried out in accordance with the Town's Surface Preservation Program.
- Rehabilitation options usually applied include micro surfacing, asphalt patching, large scale mill/shave and pave, and overlays.
- Selection of the optimal road's treatment based on current condition, rehab options, projected deterioration, roadside safety issues, budget, and Council approval.
- The small roads program involves mill and pave.
- Sidewalks eligible for rehabilitation are treated using a variety of options, such as slab jacking, based on conditions.
- Other linear roads assets are typically replaced when required.

To forecast the future roads renewal needs for this Asset Management Plan, several modelling scenarios were considered, with varying lifecycle activities and triggers. The modelling scenario most feasible, based on asset data available, is shown in Table 54. For further explanation on deterioration models, see **Section 3**.

Table 54 Renewal Scenarios for Roads

Asset Class	Renewal Scenario / LOS Threshold	Intervention Cost
Class 2,3,4, 5 Roads	Replace at OCI=40 (very poor)	100% of replacement value

The modelled scenario is depicted in Figure 56. The Levels of Service threshold is the theoretical trigger point which assets are considered to not be in a SOGR.

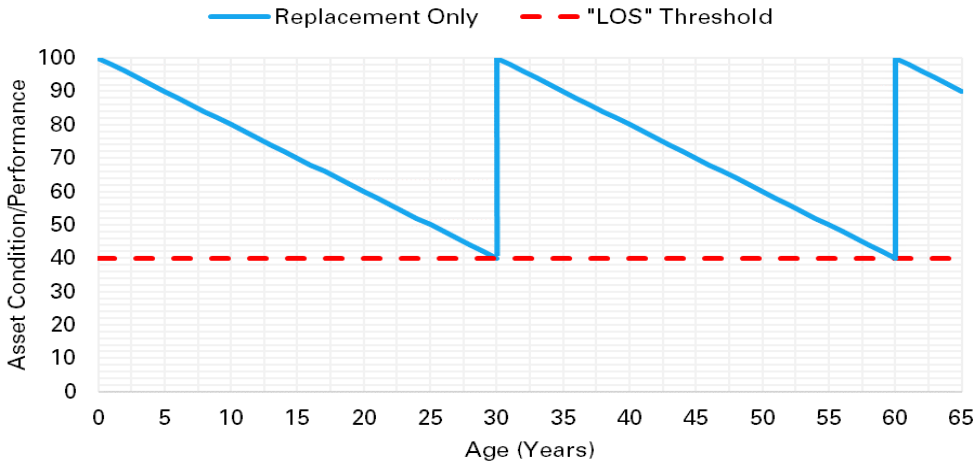


Figure 56 Modelled Deterioration of a Typical Road Performance Over Time

Decommissioning Activities

Decommissioning obsolete road assets is carried out as needed while striving to reduce costs to the Town through resale where possible, and this may include unopened road allowances. Roadway disposals are infrequent and generally related to rerouting. Should a section of a road be permanently closed, the section may be deconstructed, and the land sold or repurposed.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk** – Reduces risks of roads assets with insufficient capacity as the Town expands, sustainable into the future, road closures, congestion, poor illumination, poor drainage, and reduces likelihood of road deficiencies on decks of bridges or culverts affecting structure performance.
- **Compliance Risk** – Reduces risk of failing to maintain minimum maintenance standards established by the province, and lack of due diligence.
- **Corporate Risk & Liability** – Reduces risk from deficiencies in the roads assets that contribute to a safety, damage, or collision issues, lawsuits from insufficient capacity or connectivity as the Town grows.
- **Financial Risk** – Reduces losses from planning for or constructing roads in excess width, design, or insufficient capacity, poor use of Town funds, and from unplanned major repairs or replacement, excess energy consumption of streetlights. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Operational Risk** – Reduces risk of consuming staff capacity on more significant failures and closures, rerouting during closures, operational losses or inefficiencies from challenging designs, such as cul-de-sacs.
- **Reputational Risk** – Reduces negative optics from poorly maintained or unavailable roads assets, or from poor planning with Town funds.
- **Environmental Risk –** Reduces risk from flooding based on poor cross-sectional design, or from lack of consideration of climate change (asphalt heat sinks, congestion).
- **Safety Risk** – Reduces risks from roads deficiencies or poorly maintained components, flooding based on poor cross-sectional design, or from lack of consideration of climate change (asphalt heat sinks).

12.6.7 Lifecycle Strategy for Bridges & Culverts

The following series of activities generally describe the lifecycle strategy that the Town has adopted for bridges and culverts, in an effort to provide proposed Levels of Service at a defined level of risk, within current budget.

Policy and Planning Activities

- Transportation Master Plan guides Town in long term planning for demand, including usage considerations and capacity/widening options.
- Operational programs such as seasonal weight restriction program, encroachment permit program, load/weight permit program – regulate usage of bridges and culverts through policy.
- Resilient Caledon guides Town in recommendations for climate change impacts on bridges and culverts.
- Salt Management Plan aids in proper salt management to reduce asset and environmental impact.
- Town Development Standards include requirements for bridge and culvert design to strive for optimized lifespan (e.g. materials, design for use & maintenance).
- MMS and OSIM set standards for maintaining road assets, including rigorous condition monitoring.
- Insurance policies are in place, which provide continuous protection, risk mitigation, and financial stability for the assets throughout their entire lifespan.

SOGR: Operation & Maintenance Activities

- Biannual inspections of all bridges and large culverts in accordance with OSIM.
- Minor maintenance from OSIM recommendations is currently not usually carried out, based on budget. Striving to assign minor maintenance to Operations where feasible in the future.
- Some PM in place, including street sweeping, pavement marking, crack sealing on non-minor local roads, signage maintenance to reduce damages/collisions, and usage programs described in 'policy' section.
- Road's maintenance and rehabilitation strategy is carried out in accordance with the Town's Surface Preservation Program, which impacts bridges and culverts. This includes crack sealing on eligible non-minor local roads.
- Regular inspection and patrolling for early detection of deficiencies, as per OSIM and MMS.
- Periodic pavement condition studies, which includes pavement on bridges and culverts.

SOGR: Rehabilitation & Replacement Activities

- Major capital rehabilitation and renewal work is budgeted and carried out as per OSIM recommendations, based on budget, approval, and construction viability. Renewal projects are planned with consideration of OSIM recommendations and secondary consultant review, budget, current condition, forecasted deterioration, grant funding, and Council approval. Rehabilitation and replacement are largely funding dependent.
- Rehabilitation options are typically more applicable to larger structures.
- Staff are making efforts to transfer OSIM recommendations into Caledon's 10-year Capital Forecast.
- Rehabilitation may include replacement or refurbishing of major components, such as structural reinforcement, deck replacement.
- Emergency-based response to Culvert issues.

Asset #60
Bridge Before Replacement
Condition “Very Poor”

Asset #60
Bridge After Replacement
Condition “Very Good”

To forecast the future bridges and culvert renewal needs for this Asset Management Plan, several modelling scenarios were considered with varying lifecycle activities and triggers, as shown in Table 55.

Table 55 Renewal Scenarios for Bridges & Culverts

Asset Class	Renewal Scenario / LOS Threshold	Intervention Cost
Bridges	Replace at BCI=40 (very poor)	100% of replacement value
Culverts	Replace at BCI=40 (very poor)	100% of replacement value

This modelling scenario used to forecast the Town's needs, is shown in Figure 57.

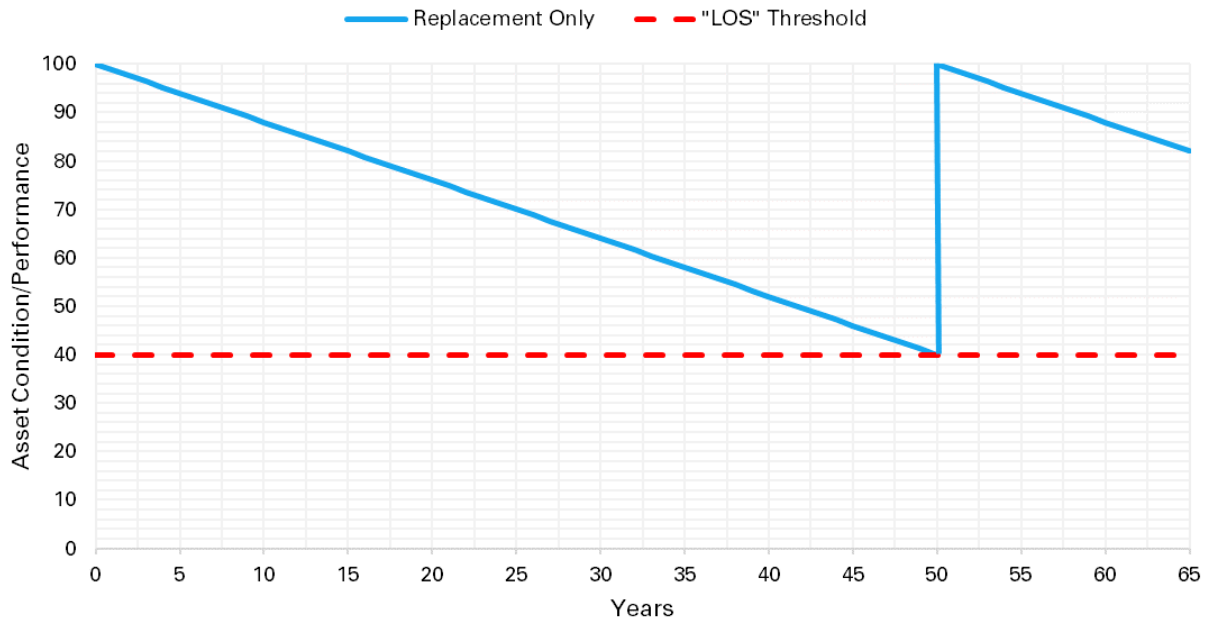


Figure 57 Modelled Deterioration of Typical Bridge Performance Over Time

Decommissioning Activities

Bridges and culverts are rarely decommissioned and not replaced. Culverts in an unopened road allowance may be decommissioned, and would be disposed of accordingly, and no salvage value is assumed. Bridges and culverts are decommissioned on a case-by-case basis based on a variety of factors.

Risk Benefits

These are the risk benefits the Town experiences as a result of applying the lifecycle strategies described.

- **Levels of Service Risk –** Reduces risk of bridges and culverts with insufficient capacity or dimensions to carry all types of traffic, including pedestrian, as the Town expands, sustainable into the future, and risk of failures, closures of trails and roads/detours, congestion, and reduces likelihood of road deficiencies on decks of bridges or culverts affecting structure performance.
- **Compliance Risk** – Reduces risk of failing to maintain minimum maintenance standards established by the Province, and lack of due diligence.
- **Corporate Risk & Liability** – Reduces risk of lawsuits from restricted access or use, or from deficiencies that contribute to a safety, damage, or collision issues.
- **Financial Risk –** Reduces losses from planning for or constructing bridges or culverts in excess/insufficient capacity, design, or poor use of Town funds, or from unplanned major repairs or replacement. Reduced unplanned failures resulting in unnecessary excessive costs.
- **Reputational Risk –** Reduces negative Reduces negative optics from poor planning with Town funds, or from poorly maintained or closed bridges or culverts.
- **Operational risk –** Reduces operational losses or inefficiencies from designs that are challenging to maintain, consuming staff capacity on more significant failures and rerouting during closures.
- **Environmental risk –** Reduces risk from flooding based on poor design, or from lack of consideration of climate change (stormwater flows).
- **Safety risk –** Reduces risk from flooding based on poor design, lack of consideration of climate change, or public safety risks from deficiencies or poorly maintained components.

12.6.8 Lifecycle Strategies if Maintaining Current Levels Only

Asset Management legislation requires that this AMP include information about lifecycle activities that would be applied should the County opt to maintain current levels of service, rather than pursue proposed levels of service. This chapter provides details on the combination of lifecycle activities we apply so that we may provide the proposed Levels of Service, while striving to optimize costs based on defined risk. For reference, if the Town opted to maintain current performance, rather than strive for the proposed levels of service defined in this AMP, lifecycle strategies would not be significantly different. Instead, the investment in the new proposed levels of service would not occur.

12.6.9 Lifecycle Strategies with a Funding Shortfall

This chapter and the Financial Strategy in Section 5 present investment needs to provide proposed Levels of Service, and projected funding to be available. If, based on the funding projected to be available, there is a funding shortfall, the Town will strive to:

- Execute the policy and planning activities as planned,
- Carry out the SOGR operation and maintenance activities most critical to preserving operation of the assets, as decided on a continual and case-by-case basis by staff,
- Carry out the most critical SOGR rehabilitation and replacement activities, based on failures and criticality of assets, determined by staff, and
- Decommission assets as needed to yield the most value.

Should there be a funding shortfall, and these prioritization decisions have to be made, then the Town will manage resulting risks by doing the following activities. These may not be fully documented at this time, but this maturity task is included as recommendations.

Regular Communication and Reporting: Providing annual reports to Council outlining the funding gaps, trade-offs made, and the anticipated impacts on levels of service, and communicating the consequences of deferring activities, including using visualizations to illustrate risks.

Risk-Based Decision-Making Framework: Enhancing or implementing (and formalizing in the future) a framework to assess and prioritize activities based on asset criticality, failure risks, and service impacts. When developed, this may include a risk matrix or scoring systems to consistently evaluate competing needs.

Scenario Planning and Contingency Strategies: Developing and reviewing different funding scenarios and their associated risks (e.g., impact of delaying a major rehab vs. executing partial repairs), and establishing contingency plans for high-risk assets to minimize service disruptions.

Adaptive Operations & Maintenance Strategies: Shifting maintenance strategies to extend asset life where feasible (e.g., increased inspections, temporary reinforcements, or targeted preventive maintenance), and adjusting maintenance priorities dynamically based on real-time data and field observations.

Temporary Service-Level Adjustments and Temporary Measures: When necessary, defining minimum acceptable service levels and exploring interim measures to maintain essential services (e.g., rerouting traffic in case of a catastrophic bridge failure). Also may include striving to adjust service delivery expectations to align with available funding while minimizing disruptions.

Strategic Decommissioning and Asset Rationalization: Assessing whether underutilized or redundant assets can be decommissioned to reduce financial burden, and considering alternative service delivery models or shared service agreements with neighboring municipalities.

Advocacy and External Funding Strategies: Pursuing grants, partnerships, and funding programs to supplement municipal investments.

12.7 Forecasted Investment Needs

Based on the current state of transportation assets and the Town's lifecycle strategies described in this Asset Management Plan, a range of investments are needed in the next decade to provide proposed Levels of Service.

12.7.1 Operating Budget Needs (2025-2034)

The Town's operating budget funds some but not all of the asset investments required to provide proposed Levels of Service. The current operating budget for transportation is assumed to be sufficient to maintain current Levels of Service, not including growth-related needs.

The cost to deliver more capital projects than what is currently delivered via Town staff would likely require additional staff resources, and therefore additional operating budget. The operating budget needed for added/expanded transportation assets due to growth is calculated and reported in the DC Background Study, and further discussed in Section 6.

12.7.2 Capital Budget Needs (2025-2034)

Annual capital investments needed in the next decade to provide proposed Levels of Service for transportation assets are summarized in Table 56, in present-day dollars. For reference, investments needed to maintain current levels of service are also provided.

- As a reminder, proposed and current Levels of Service are described in **Section 13.3**.
- Not all assets are currently in a SOGR. Current Levels of Service are primarily based on continuing lifecycle activities so that the total value of assets in a SOGR does not decrease.

Table 56 Annual Capital Investments Needed to Provide Proposed Transportation Levels of Service (2025-2034)

Asset Investment Type	Investment Need to Provide Proposed LOS
SOGR Maintenance	$11,390,000
SOGR Renewal	$21,700,000
New/Increased Services and Policy and Planning	$14,503,000
Growth	$37,806,000
Total	**$85,399,000**

For reference, and to satisfy the legislation, it is important to note costs to maintain current levels of service. Current Levels of Service are primarily based on continuing lifecycle activities so that the current total value of assets in a SOGR does not decrease. The renewal cost to maintain this current level of service is $21.7 million annually.

Renewal Needs

Renewal lifecycle activities can be the most challenging for the Town to forecast and plan for and are therefore discussed in more detail.

Short Term (2025-2034)

The annual renewal investments needed to provide proposed Transportation Levels of Service for the next ten years are shown in Figure 58. The 10-year Capital Forecast equates to an annual investment need of $21.7M.

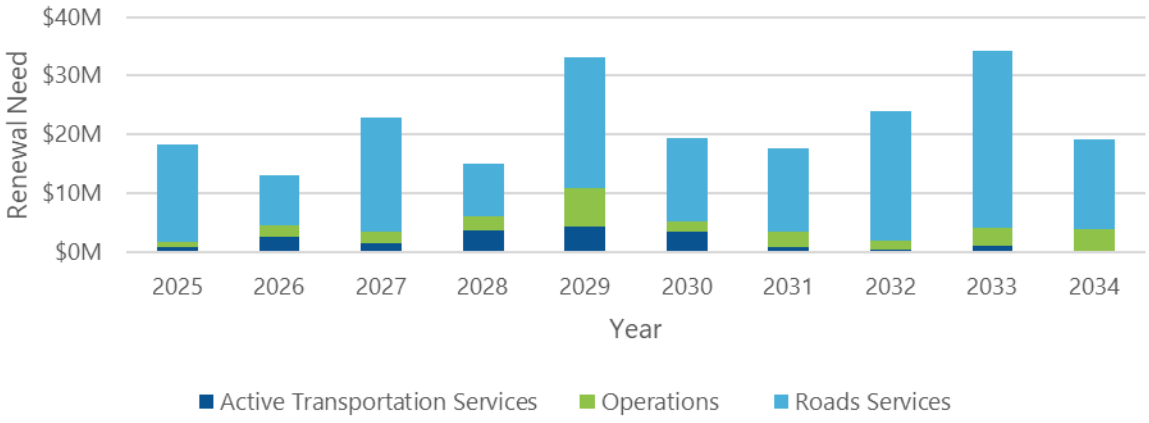


Figure 58 Annual Renewal Investment Needs to Provide Proposed Levels of Service, 2025 - 2034

For each core function in Transportation, the average of the investment needs above are shown in Table 57.

Table 57 Annual Renewal Needs for Transportation, 2025-2034

Core Function	Annual Investment Need for Proposed LOS
Active Transportation	$1,851,000
Operations	$2,647,000
Roads Services	$17,203,000
Total	**$21,701,000**

Long Term (2025-2049)

Looking over a longer time horizon, $33.5 is needed every year to provide proposed Levels of Service over the next 25 years, as shown in Figure 59.

Table 58 lists the average annual renewal investment needed to provide proposed Levels of Service for 25 years for each core function of Transportation.

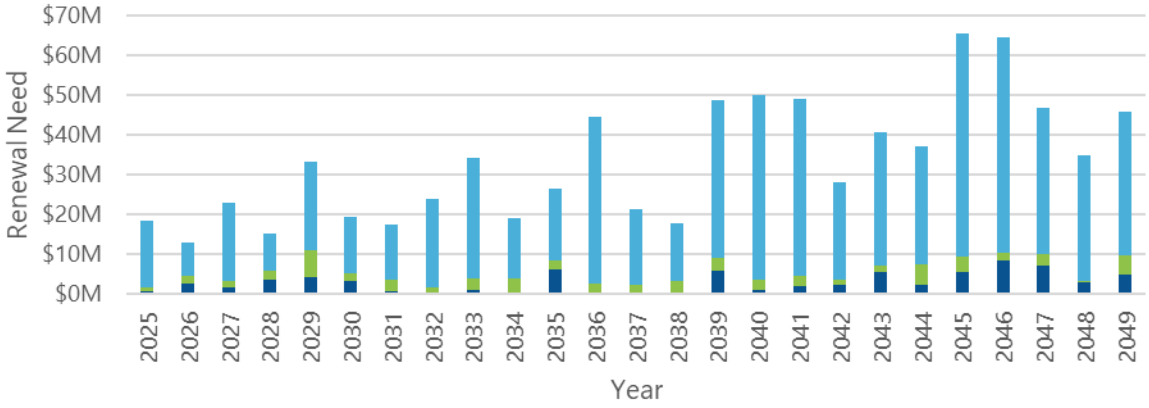


Figure 59 Annual Renewal Investment Needs to Provide Proposed Levels of Service, 2025-2049

Table 58 Long Term Annual Renewal Needs for Transportation, 2025-2049

Core Function	Annual Investment Need
Active Transportation	$2,928,000
Operations	$2,647,000
Roads Services	$27,927,000
Total	**$33,502,000**

Eliminating Backlog

For comparison or consideration, should the Town wish to eliminate renewal backlog entirely, that is, renew Transportation assets so that no assets are beyond replacement thresholds, and all assets are in a SOGR at all times, the annual renewal investment required would be approximately $37.2M for the next ten years. This is the unconstrained cost to consistently follow our defined lifecycle strategy.

12.8 Data Quality

In addition to the assessment discussion in **Section 7** related to asset management and data maturity, data quality observations specific to Transportation are provided below. Data that was used for the Asset Management Plan was reviewed for completeness, consistency, uniqueness, validity, and accuracy. The focus of this quality assessment is Transportation data related to inventory (count of assets), attributes (such as age, length, or in-service date), condition (age-based or based on actual assessment), and valuation (replacement value). Ratings were assessed based on the following guidance:

- Advanced: Data available with no assumptions (e.g. condition assessments, inspection reports, databases with proven track record).
- Intermediate: Data available with minimal assumptions.
- Basic: Significant assumptions required, or no information available.

The assessed quality of the data used to prepare the Transportation analysis is summarized in Table 59.

Table 59 Data Quality for Transportation

Asset Class	Inventory	Attribute	Condition	Valuation
Bridges & Culverts	Advanced	Advanced	Advanced	Intermediate
Buildings	Intermediate	Basic	Intermediate	Intermediate
Equipment	Basic	Basic	Basic	Basic
Fleet	Intermediate	Intermediate	Basic	Intermediate
Linear & ROW infrastructure	Intermediate	Intermediate	Intermediate	Basic

Rationale for ratings is provided below.

Inventory Data

- Fleet inventory data is currently under development. There were some occurrences of blanks or missing units.
- Some roads data may be missing as the number of segment records in the various files provided did not align.

Attribute Data

- Age of some fleet and equipment has multiple, sometimes conflicting, values in various attributes including original in-service date, acquisition date, or in-service date.

Condition Data

- Age was used as a proxy for condition for equipment and fleet.
- Building Condition reports were used for condition of buildings
- For fleet and equipment, some conflicts between age-based condition supplied by the Town vs. consultant calculations occurred.
- Condition data for roads, bridges and culverts is provided through third party inspection.

Valuation Data

- Some bridges and culverts are missing replacement values (current and historic).
- For some fleet and equipment, historical cost was inflated to 2024 and assumed to be current replacement value.

APPENDIX

Appendix	Title
A	Assumptions
B	Definitions
C	Reconciliation to *O. Reg. 588/17*
D	Asset Hierarchy
E	Public Engagement
F	Current Reserves
G	Maturity Assessment Scoring Guide
H	Figures Reference List
I	Tables Reference List
J	Index

Appendix A: Assumptions

Gaps and missing data are inevitable when developing asset management plans and therefore key assumptions were made in the development of this Asset Management Plan. Below are the key assumptions applied in preparing this Asset Management Plan.

Asset Management Plan Results

- This Asset Management Plan was developed based on the best available information where some assumptions using professional judgement were made to address gaps.
- Unless otherwise noted, percentages of assets are reported by replacement value in this Asset Management Plan.
- All fiscal values are presented in present day dollars (end of 2024), and no inflation has been added to the forecasts.
- It is assumed that Federal and Provincial Gas Tax will remain at a consistent level.
- It is assumed that growth needs in the 10-year Capital Forecast have been developed using the Development Charges study.
- All financial costs are based on the most recent budgets and estimates. These figures were provided by the Finance Department.
- The Town defines replacement value as the estimated total cost required to acquire, install, and commission the asset.

Asset Register

- The hierarchy of assets was established in consultation with Town staff.
- Installation date was defined based on original in-service date, acquisition date or in-service date from the Town's data, in that order of priority (These date attributes were not consistently available in asset data).
- EUL values were reviewed through the Town, adopted from the 2020 and 2024 Asset Management Plans, workshop discussions and based on common industry values.
- For assets without replacement values, historical costs were first inflated to 2024. If historical cost was also not available, the average replacement value of other level 4 assets was used for the missing entries.
- Shade structures were assigned a generic replacement value of $30,000.
- Replacement values of buildings in the Town's data were adjusted by Town staff, based on recent tenders and average costs per square foot. A price increase factor

was based on suggested current replacement value calculated using a recommended cost per square foot and the size of the building. Then this factor was applied to the current replacement value to render an updated replacement value.

- Current replacement values were prepared using the NRBCPI Index (Toronto, 2024).
- Other missing information and data gaps were resolved by substituting institutional.
- Based on new information gathered, the Service Area and/or Sub Service Area may have been adjusted to reflect the proper allocation, compared to the previous year's AMP.

Analysis

- Asset data up to the end of December 2023 was utilized for analysis.
- Age of assets was calculated based on installation date, subtracted from 2024.
- Actual condition data, from testing or inspection, was used where available. Age-based condition was used where condition data were not available.
- The 10-year Capital Forecast from the 2024 Capital Budget, with extrapolation and adjustments with Finance, was used to derive some proposed levels of service, and assumed to be the planned spending for growth. The adjustment involved applying an adjustment factor to all investment categories, except growth, to represent a realistic levy forecast, provided by Finance.
- Forecasted renewal needs were prepared using a predictive model.
- Although some rehabilitation strategies are in place for roads and bridges, forecasting was completed applying a 'replace only' strategy, which provides the most costly indication of need. Actual forecasted needs for roads may be less, if the Town applies rehabilitation strategies consistently.
- To forecast needs using scenarios that include rehabilitation, asset data must include attributes to indicate past rehabilitation activities and dates for each asset. This was not available from the Town. An assumption was prepared to estimate this for bridges and for roads, based on age and condition of assets, but due to the error in this assumption, this scenario was not included in the forecasting information.
- Forecasted needs for policy/planning, maintenance, growth, and new services were assumed to be equivalent to corresponding values in the Capital Forecast, with adjustments as noted.
- When calculating age, precedence was given to the original in-service date over the acquisition date, which in turn was given precedence over the in-service date.

This precedence was based on the alignment of MVU calculated age-based condition with the age-based condition provided by the Town.

- Planned spending, categorized into investment types, were broadly assigned based on the analysis of projects in the Town's Capital Forecast. These allocations may not fully represent the intended use of the budget, due to limited information, but the whole budget plans are included in this Asset Management Plan. For example, SOGR. Renewal projects may be larger in value that those identified through the budget analysis, but as these projects were attributed to one asset class, and portions of that project may go towards maintenance, some minor discrepancies in investment needs may arise.
- Average conditions were based on modifications to normalize conditions across various condition scale rating systems to a consistent condition value.

Appendix B: Definitions

Table B-1 AMP Definitions

Term	Definition
Asset	The physical structures and associated facilities that form the foundation of development, and by or through which a public service is provided to the community. Non physical assets are starting to be included at the Town such as digital resources.
Attribute	The characteristics of an asset, such as size, material, or length.
Backlog	The cumulative value of assets currently in very poor condition. Assets that are triggered for renewal in the Town's lifecycle strategy, but which have not yet been addressed. In simple terms these are any assets that are classified as Very Poor or Not SOGR.
Condition	The state of the asset in terms of physical condition, function, or usability.
Core Asset	A term from *O. Reg. 588/17*, any municipal infrastructure asset that is a road, structure (bridge or culvert), water asset, wastewater asset, or stormwater asset.
Decommissioning	Activities associated with decommissioning or disposing (and not replacing) an asset once it has reached the end of its useful life and is otherwise no longer needed.
Estimated Useful Life (EUL)	The duration during which the Town foresees the asset being accessible for utilization and operational before necessitating replacement or removal.
Growth	Planned activities required to extend services to previously unserved areas or expand services to meet growth demands.
Growth Investments	Planned expenditures required to extend services to previously unserved areas or expand services to meet growth demands.
Infrastructure	The physical structures and associated facilities that form the foundation of development, and by or through which a public service is provided to the community. Examples include buildings, roads, and stormwater main.
Inventory	The count of assets available in the municipalities database. Certain assets like roads are quantified using length more effectively while assets like buildings are quantified better by number of individual buildings than the number of assets in a building.

Term	Definition
Levels of Service (LOS)	The attributes of services being provided to the community through assets, and their corresponding measurable levels. For example, the areas of the Town that are protected from flooding, measured by the percentage of properties that are resilient to a 100-year storm.
Lifecycle Activity	The activities that enable assets to provide service levels in a SOGR, in a sustainable way, while managing risks. Lifecycle activities include policy and planning, operation, maintenance, decommissioning, and renewal.
Maintain Levels of Service	The current sustenance of the quality and extent of services provided to the community through the use of assets.
Maintenance	Under efforts to operate and maintain assets in a SOGR, a lifecycle activity to operate, maintain, and monitor the assets. Includes investments in proactive and reactive activities to maintain the asset's design service life.
New or Increased Services	Activities and costs to change the service levels provided through the assets, such as improve the asset's capacity, quality, and system reliability. New assets not related to growth would be considered a service improvement
Non-Core Asset	All other asset types which are not part of the core asset group, such as fleet, buildings, and equipment.
Overall Condition Index (OCI)	A rating which combines the Pavement Condition Index with a Roughness Index to provide a more complete picture of the driving quality associated with each road surface.
Pavement Condition Index (PCI)	A rating which considers the quantity and severity of road surface distresses.
Policy / Planning	Lifecycle activities such as actions, initiatives, planning studies, programs, or policies that can lower costs, reduce wasted capacity/redundancy, extend useful lives, ensure appropriate sizing/suitability of needed assets.
Preventive Maintenance	Maintenance carried out to mitigate degradation and reduce the probability of failure.
Proposed Levels of Service	The anticipated, rather than current, quality and extent of services to be provided to the community through assets by partaking in timely intervention of lifecycle activities.
Public	Residential, commercial, industrial, and institutional members of the Town, visitors, agencies, interested parties, and any other party that relies on Town-owned municipal infrastructure assets.

Term	Definition
Rehabilitation	Under efforts to maintain assets in a SOGR, lifecycle activities involving significant repairs designated to extend the life of the asset.
Reinvestment Rate	A measurement of available or required funding relative to the total replacement value.
Renewal	Rehabilitation or replacement lifecycle activities.
Replacement	Under efforts to maintain assets in a SOGR, lifecycle 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, like for like replacement.
Replacement Value	The total costs associated with the full replacement or reconstruction of an asset.
Risk	The likelihood, probability, and/or consequence of impact resulting from a particular hazard or condition.
Roughness Index (RI)	A measure of road surface roughness.
Service Measure	The measures of attributes of services being provided to the community through assets, used to indicate Levels of Service.
State of Good Repair (SOGR)	The condition where assets are maintained at a level for safe, reliable, quality performance, in good working order without excessive spending or service disruption.

Appendix C: Reconciliation to *O. Reg. 588/17*

The following table paraphrases the Asset Management Plan requirements outlined in *Ontario Regulation 588/17* for municipalities to meet regarding Asset Management Plans. Next to each requirement is the corresponding section the required information can be found in the Town's Asset Management Plan, along with notes when applicable.

Table C-1 Summary of Regulatory Requirements related to Asset Management Plans

Reg. Section	Requirement	2025 AMP Reference	Notes
5.(2) 3.	Summary of assets in each category	Subsection 4 - Current Asset Inventory - within each Service Area Plan	E.g. For Transportation, see Section 12.4
5.(2) 3.	Replacement cost of assets in each category	Subsection 4 - Current Asset Inventory - within each Service Area Plan	E.g. For Transportation, see Section 12.4
5.(2) 3.	Average age of assets in each category	Subsection 4 - Current Asset Inventory - within each Service Area Plan	E.g. For Transportation, see Section 12.4
5.(2) 3.	Condition of assets in each category	Subsection 4 - Current Asset Inventory - within each Service Area Plan	E.g. For Transportation, see Section 12.4
5.(2) 3.	Description of municipality's approach to assessing condition of assets in each category	Subsection 4 - Current Asset Inventory - within each Service Area Plan, and also in Section 4	E.g. For Transportation, see Section 12.4
5.(2) 1.	Current Levels of Service, with core asset LOS determined in accordance with tables	Subsection 3 – Levels of Service - within each Service Area Plan	E.g. For Transportation, see Section 12.3

Reg. Section	Requirement	2025 AMP Reference	Notes
5.(2) 2.	Current performance measures of assets in each category	Subsection 3 – Levels of Service - within each Service Area Plan	E.g. For Transportation, see Section 12.3
5.(2) 4.	Lifecycle activities needed to maintain current Levels of Service for 10 years	Subsection 6 - Lifecycle Strategies - within each Service Area Plan	E.g. For Transportation, see Section 12.6
5.(2) 4.	Costs of providing lifecycle activities needed to maintain current LOS, based on assessment of lifecycle, options, risks, lower cost	Subsection 7 – Forecasted Investment Needs - within each Service Area Plan	E.g. For Transportation, see Section 12.7
5.(2) 4.	Link or description of assessment of current LOS lifecycle, options, risks, lower cost	Subsection 5 - Lifecycle Strategies - within each Service Area Plan, and supporting information in Sections 3.4 and 3.5	E.g. For Transportation, see Section 12.5
5.(2) 5.	For population <25K, description of population or economic forecast assumptions, and how these connect to lifecycle cost projections for current LOS	Not applicable	No notes
5.(2) 6.i.	For population 25K or more, population & employment forecasts	Not applicable	No notes
5.(2) 6.ii.	For population 25K or more, lower tier in GGH, Sched 7 or portion of upper tier growth plan forecast, or assumptions	Section 6	No notes
5.(2) 6.iii.	For population 25K or more, upper/single tier outside GGH, population & employment forecasts in OP, or assumptions	Not applicable	No notes
5.(2) 6.iv.	For population 25K or more, lower tier outside GGH, portion of upper tier growth plan forecast	Not applicable	No notes
5.(2) 6.vi.	For population 25K or more, capital & significant operating costs for each of 10 years, to maintain LOS to accommodate increase in demand cause by growth	Section 6, and Subsection 6 within each Service Area Plan	E.g. For Transportation, see Section 12.6

Reg. Section	Requirement	2025 AMP Reference	Notes
5.(3).	Description of how all background information and reports will be made available to the public (reports and info from which AMP content is developed)	Section 2	No notes
6.(1) 1.	Proposed Levels of Service, with core asset LOS determined in accordance with tables, for each of 10 years	Subsection 3 within each Service Area Plan, and supporting information in Section 3.3	E.g. For Transportation, see Section 12.3
6.(1) 2.	Explanation of why proposed LOS are appropriate, based on options, delta, achievability, affordability	Section 3	No notes
6.(1) 2.	Link or description of assessment of proposed LOS options, delta, achievability, affordability	Section 3.3	No notes
6.(1) 3.	Proposed performance measures of assets based on metrics established by the municipality (e.g. measures for energy usage, operating efficiency, etc.)	Subsection 3 within each Service Area Plan, with supporting information in Section 3.3	E.g. For Transportation, see Section 12.3
6.(1) 4.	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	Subsection 6 within each Service Area Plan, with supporting information in Sections 3.3 to 3.5	E.g. For Transportation, see Section 12.6
6.(1) 4. i.	Link or description of assessment of proposed LOS lifecycle, options, risks, lower cost	Subsection 6 within each Service Area Plan, with supporting information in Sections 3.3 to 3.5	E.g. For Transportation, see Section 12.6
6.(1) 4. ii.	An estimate of annual costs for undertaking identified lifecycle activities over a 10-year period.	Subsection 7 within each Service Area Plan, and also the summary in Section 5	E.g. For Transportation, see Section 12.7
6.(1) 4. iii.	Projections for annual funding to be available to undertake identified lifecycle activities over a 10-year period	Section 5	No notes
6.(1) 4. iii.	Explanation of the options examined to maximize the funding projected to be available	Sections 5.4 and 5.5	No notes
6.(1) 4. iv.	Identification of funding shortfalls for lifecycle activities over a 10-year period	Section 5	No notes

Reg. Section	Requirement	2025 AMP Reference	Notes
6.(1) 4. iv.	Identification of lifecycle activities that will be undertaken if there is a proposed LOS shortfall	Subsection 6.7 within each Service Area Plan, and supporting information in Section 3.4	E.g. For Transportation, see Section 12.6.7
6.(1) 4. iv.	Explanation of how risks associated with not undertaking any of the lifecycle activities will be managed.	Subsection 6.7 within each Service Area Plan, and supporting information in Section 3.4	E.g. For Transportation, see Section 12.6.7
6.(1) 5.	For population <25K, description of population or economic forecast assumptions, and how these connect to lifecycle cost projections for proposed LOS	Not applicable	No notes
6.(1) 6.	For population 25K or more, capital & significant operating costs for each of 10 years, to achieve proposed LOS to accommodate increase in demand caused by growth	Section 6.2	No notes
6.(1) 6. ii.	For population 25K or more, funding projected to be available, by source, due to growth	Section 5.2, supported by Section 6	No notes
6.(1) 6. iii.	For population 25K or more, overview of the risks associated with implementation of the AMP	Section 2.6	No notes
6.(1) 7.	Explanation of other key assumptions	Appendix A	No notes
7.(1)	Date of review and update of AMP - within 5 years	Section 2	No notes
8.	Endorsement of AMP by executive lead	Section 2, and corresponding staff report in Council agenda	No notes
8.	Approval of AMP by Council resolution	Section 2, and corresponding staff report in Council agenda	No notes
9.(1)	Date of Council review of AM progress - before July 1 every year	Section 2	No notes
9.(2)	Annual Council review includes progress, factors impeding implementation, strategy to address factors	Section 2	No notes
10	Website availability of policy and AMP, copy provided if requested	Section 2	No notes

Appendix D: Asset Hierarchy

The table below depicts the hierarchal relationship between assets used to organize and analyse asset data.

Table D-1 Asset Class and Type Hierarchy

Service Area	Level 2 Sub Service	Level 3 Asset Class
Administration	Animal Services	Buildings Equipment Fleet
	Town Hall / Municipal Administrative Services	Buildings Equipment Fleet IT & Communications
Emergency	Fire & Emergency Services	Buildings Equipment Fleet
Recreation & Culture	Library Services	Buildings Collections – Library Equipment IT & Communications
	Parks & Forestry Services	Amenities Buildings Equipment Fleet Linear & ROW Infrastructure Parks & Other Land
	Recreation Services	Buildings Equipment Fleet
Stormwater Management	Stormwater Management Services	Linear & ROW Infrastructure Stormwater Facilities
Transportation	Active Transportation Services	Buildings Equipment Fleet
	Operations	Bridges & Culverts Equipment Linear & ROW Infrastructure
	Roads Services	Bridges & Culverts Linear & ROW Infrastructure

Further to the description above, the table below shows the relationship between asset classes and asset types. Not all asset types had data available for use in this Asset Management Plan.

Table D-2 Asset Class and Type Hierarchy

Level 3 Asset Class	Level 4 Asset Type
Amenities	Other (skate park, bike pump track) Outdoor multi-use court (tennis, basketball) Outdoor skating rink Playground, play surface, or splashpad Sports field (baseball, soccer)
Bridges & Culverts	Bridge - pedestrian Bridge - road Culvert - pedestrian Culvert - road
Collections – Library	Library of things Physical collection Digital collection
Equipment	Charging station Equipment - emergency response Equipment - fitness Equipment - fuel Equipment - general Equipment - grounds Equipment - IT Equipment - programming Equipment - tools & shop Equipment - maintenance Equipment - non-emergency response Lighting
Buildings	Animal shelter Civic building Fire station Library Material storage facility Operations building Parks building Police station Recreation building Shade structure

Level 3 Asset Class	Level 4 Asset Type
Fleet	Construction vehicle Fire support vehicle Heavy duty vehicle Large fire apparatus Light duty vehicle Other fleet Trailer
Information Technology & Communications	Equipment - IT IT Infrastructure
Linear & ROW Infrastructure	Conveyance ditch Curb Guiderail Class 2 road Class 3 road Class 4 road Class 5 road Gateway feature Municipal drain Noise attenuation barrier Outfall Pathway Non-AT Retaining wall Sidewalk Signs Storm main Streetlight Traffic signal Trail
Parks & Other Land	Cemetery Landscaping or irrigation Natural space Parking lot
Stormwater Facilities	Low impact development Manufactured treatment device Stormwater Pond

Appendix E: Public Engagement

The Town of Caledon has gathered significant input from the community via multiple surveys. This feedback is utilized by asset managers to analyse whether the Town's investments are in line with community's needs and expectations, and effectively address public concerns.

Input from public engagement exercises can inform asset management processes that support decision makers as they:

- **Identify priorities:** Citizen feedback can help asset managers understand the needs and priorities of the community regarding public assets. By collecting feedback through surveys, public meetings, or online platforms, asset managers can identify which assets are most important to residents and allocate resources accordingly.
- **Set Levels of Service**: Feedback from citizens can be used to evaluate the performance of public assets from the perspective of users. By soliciting feedback on factors such as reliability, safety, and convenience, asset managers can assess how well assets are meeting the needs of the community and identify where Levels of Service target require adjustment.
- **Validate lifecycle management strategies**: Citizens often provide valuable information about the condition of public assets through reporting systems or direct communication with authorities. Asset managers can use this feedback to assess whether or not asset lifecycle strategies are effectively maintaining the asset condition and system performance necessary to achieve Levels of Service requirements.
- **Develop financial plans**: Citizen feedback can play a role in decision-making processes related to investment strategies and financial planning. Asset managers may consider public preferences and concerns when making decisions about investments. Public consultation also helps asset managers navigate the trade-offs inherent in investment decisions. For example, there may be competing priorities or limited resources available for infrastructure projects. By engaging with the community, asset managers can weigh different perspectives and prioritize investments that maximize overall benefits.

As an additional benefit, demonstrating the use of citizen feedback legitimizes the consultation processes and builds trust, potentially increasing community interest in participation in future engagements. Recent consultation exercises provide a wealth of asset-based service-related input from the community. Summaries are provided.

Active Transportation Master Plan

The Town sought out priorities for the future active transportation network. Respondents were tasked to "rank each element based on what you think is most important for the Town of Caledon to prioritize when deciding routes of the future active transportation network. Rank each element low priority, medium priority, or high priority."

This feedback may provide important insight into Levels of Service measures that can be considered in the next Asset Management Plan. Feedback included:

- **Connected** – Routes should achieve a continuous and connected system of walking and cycling routes and facilities which accommodate a wide range of uses and users. (High Priority)
- Visible and Accessible - The way in which AT routes are designed which ensures that they are a visible component of the transportation network (High Priority)
- **Diverse** - The network should support a diverse on and off-road experience for walking and cycling which recognizes skill level and trip purpose. (High/Medium Priority)
- **Destination Oriented** - Routes should provide access to major destinations within and outside of the Town including destinations for commuting, tourism and day to day activity purposes. (High Priority)
- **Safe and Comfortable** - Mitigating / preventing risks and conflicts as a result of the implementation of the route and identify facilities based on the user and the use. (High Priority)
- **Integrated** - The network should provide direct access to other modes of transportation within and outside of the Town and should complement land-use planning practices (High Priority)
- **Equity Focused** - The network should be identified and designed with equity in mind based to provide services to allow all individuals the opportunity to lead healthy and active lifestyles. (Medium/Low Priority)

Alton Cemetery

The Town sought out input from citizens about the ownership and operation of the Alton Cemetery. Citizens say they would like the Town to own and continue to operate the cemetery.

- 52 out of 58 respondents said the Town should keep ownership and provide a new Levels of Service to operate the Alton Cemetery rather than sell the cemetery to a private service provider to minimize costs for the Town.
- 40 out of 50 respondents said the Town should operate the Alton Cemetery as an active cemetery (new interment rights will be sold) and not as an inactive cemetery (only previously sold interment rights will be honoured).
- 35 out of 50 respondents think that if the Town should operate the cemetery over a private cemetery or funeral service provider.

Animal Services

The Town sought out input from citizens about Animal Services, which provides insight on the citizen perspective of the importance of the services and assets:

- Of 164 respondents 158 believe that it is important that the Town provide Animal Services and program.
- Just over half the respondents have used the leash free park in Bolton (58/101)

Bolton Community Improvement Plan

The Town sought out input from citizens about Bolton, which provides insight on the citizen perspective of the importance of the Bolton assets:

- Top 3 actions or initiatives the Town can undertake to support community improvement and revitalization within Bolton. (total respondents 135)
- 28 said Improved appearance of the streets and sidewalks.
- 25 said Enhanced trails and pathways.
- 22 said More pedestrian-oriented furniture and features, such as benches and parkettes Bolton Secondary Plan

The Town sought out input from citizens about Bolton, which provides insight on the citizen perspective of growth preferences and priorities:

- Please rank from most to least, what is important to you about how Bolton should grow?
- Access to parking 8.25
- Festival and events 8.04
- Scale and heights of buildings 7.52
- Attractive storefronts 7.04
- Mature Tree Canopy
- Access to community services 6.8
- Future development 6.64
- Access to higher order transit 6.27
- Access to parks and open spaces 6.07
- Range of businesses 6.02
- Check off what you think are three key challenges facing the growth of Bolton, and Caledon as a whole?
- Lack of Public Transportation options (62)
- Housing Options (50)
- Attracting more businesses (46)
- Walkability (36)
- What type of public space would you like to see in areas of intensification:
- Urban squares (12)
- Parkettes (9)
- Playgrounds (9)
- All of the above (76)

Caledon Budget 2023

The Town sought out input from citizens about its 2023 capital budget, which provides pointed insight on the citizen perspective of the importance of the services and assets, and the willingness to pay.

Top 3 - Town services currently provided that are most important to you:

- Fire and Emergency Services (145/609)
- Infrastructure Improvements (112/609)
- Bylaw Enforcement (94/609)

The Town of Caledon invests in services that meet the needs of its citizens. When it comes to municipal services, which would you increase, maintain, decrease funding for?

- Parks Recreation Community Events– maintain.
- Fire and Emergency Services – maintain.
- Diversity, inclusion and programming – maintain.
- By-law enforcement - increase
- Infrastructure improvements (like roads) – increase
- Environment Climate Change Programs and Support – maintain.
- Local Transit – maintain.
- Libraries – maintain.
- Cycling, Walking, open space, trails, Active transportation – maintain.

When it comes to managing growth, which area(s) are most important to you? Rank these options in order from most important to least important. (in order of importance)

1. Continue to renovate, expand and build community facilities.
2. Protect the environment as we grow.
3. Building complete, walkable communities that offer local employment and community services.

Municipal property taxes are the primary way to pay for services and programs provided by the Town. As you may know, there are trade-offs between investments in things like services and infrastructure and property tax levels. Due to the increased cost of maintaining current service levels and infrastructure, the Town must balance taxation and service delivery levels. Which of the following options would you prefer the Town pursue? Top 3 responses

1. Add or increase user fees to maintain current services.
2. Increase taxes to maintain current services.
3. Maintain taxes to cut services.

Based on all the programs and services provided by the Town of Caledon, how would you rate the value you are receiving for your tax dollar (as a reminder, Peel Region is responsible for garbage/recycling pick up, regional roads, public health and paramedic ambulance services)?

- 6 Point Scale: Very good, good, fair, unsure, poor, very poor – most responded Good and Fair

Caledon Budget 2024

The Town sought out input from citizens about its 2024 capital budget, which provides pointed insight on the citizen perspective of the importance of the services and assets, and the willingness to pay.

Top 3 - Town services currently provided that are most important to you:

- Fire and Emergency Services
- Roads, Operations (roads, bridges, culverts, stormwater, fleet)
- Bylaw Enforcement

The Town of Caledon invests in services that meet the needs of its citizens. When it comes to current municipal services, which would you Increase, Maintain, Decrease funding for?

- Parks, Rec, Community Events – Maintain
- Fire and Emergency Services – Maintain (just narrowly more that increase)
- Diversity, Inclusion and Programming – Maintain
- By-law enforcement – Maintain (just narrowly more that increase)
- Roads, Operations – Increase
- Environment Climate Change Programs and Support – Maintain
- Local Transit – Maintain
- Libraries – Maintain
- Cycling, Walking, Open Space, Trails, Active Transportation – Maintain

As a Caledon resident, what is most important to you?

- Most important - Enhanced transportation and mobility

Based on all the programs and services currently provided by the Town of Caledon, how would you rate the value you are receiving for your tax dollar.

- 6 Point Scale: Very good, good, fair, unsure, poor, very poor – most responded Good and Fair

Caledon Budget 2025

The Town sought out input from citizens about its 2025 capital budget, which provides pointed input on the citizen perspective of the importance of the services and assets, and the willingness to pay. Relevant results:

Top 3 Town services currently provided that are most important:

- **Fire and Emergency** Services (204/291)
- **Roads, Operations** (roads, bridges, culverts, stormwater, fleet) (184/291)
- **Bylaw** Enforcement (158/291)

The Town of Caledon invests in services that meet the needs of its citizens. When it comes to current municipal services, which would you Increase, Maintain, Decrease funding for? Answers: **All maintain**, except:

- Fire and Emergency Services – increase.
- Diversity & Inclusion Programming – decrease.
- By-law Enforcement – increase.
- Roads, Operations – increase.

As a Caledon resident, what is most important to you?

- Most important – Community Vitality and Liveability

Based on all the programs and services currently provided by the Town of Caledon, how would you rate the value you are receiving for your tax dollar.

- 6 Point Scale: Very good, Good, Fair, Unsure, Poor, Very poor
- Most responded **Fair** (97/290)

Caledon East Community Complex Expansion

The Town sought out input from citizens about the expansion of the CECC, which may provide information on desired assets.

Noting the expansion of CECC will include a variety of features, amenities, recreation programs and community activities, the Town asked: "Out of these features, what are you most excited about?"

The three most popular responses were:

1. Leisure and lap swimming in one pool, and new change rooms
2. A full-service fitness centre with cardio and weight equipment
3. Outdoor ice rink

Caledon Streetscape and Urban Design Study

The Town sought out input from urban design preferences, which provides insight on priority assets/services, and Levels of Service measures.

What kinds of spaces do you use? Top 3 answers:

1. Sidewalks, Trails or Cycling Lanes
2. Parks & Other Open Spaces
3. Community Hubs (Libraries, Community Centres, etc.)

What things do you value most about Caledon East? Select a maximum of three. Top 3 answers

1. Wildlife & Nature 241 /1479
2. Safety 193/1479
3. Neighbourhood Beautification / Streetscaping 122/1479

On a scale of 0 to 3, where 0 does not apply, 1 is not comfortable, 2 is somewhat comfortable and 3 is very comfortable, how do you feel about the following in Caledon East?

- Lighting at night – 2 somewhat comfortable
- Crossing the street as a pedestrian – 2 somewhat comfortable
- Seating/rest areas where needed – 2 somewhat comfortable.
- Finding where to go - 3 very comfortable.
- Route information – 2 somewhat comfortable
- Lively, active public spaces/people always nearby – 2 Somewhat comfortable

What areas can we improve on in Caledon East. Top 3 -

1. Variety of Businesses
2. Neighbourhood Beautification / Streetscaping
3. Safety

Official Plan

The Town sought out input from citizens about its Official Plan, which provides pointed insight on the citizen perspective of the importance of the services and assets.

The Transportation, Technology and Infrastructure focus area includes consideration for the way we move around town, the technology needed to support our community and other basic infrastructure needs. Tell us which initial directions you agree with – most popular answer:

- Create a connected community: In an increasingly digital world, Caledon requires **broadband infrastructure** that supports business, education and leisure opportunities for our community.

The Natural Resources and Agriculture focus area will contemplate how we protect our great natural resources and prime agricultural lands. Tell us which initial directions you agree with – most popular answer:

- **Protect our environment**: We will protect our natural heritage – conserving the escarpment, moraine, watersheds, and ecological features throughout the Town.

The Climate Change focus area will address how Caledon will plan to reduce our greenhouse gas emissions and work to adapt to the effects of our changing climate. Review the initial directions provided below. Tell us which initial directions you agree with – most popular answers (tied):

- **Protect o**ur climate: We will build and operate our community to minimize our impact on global climate change and we will prepare for the local impacts that climate change will bring.
- Pursue green development: Apply green development standards that encourage new net zero energy, resilient buildings and communities, including support for renewable energy generation and electric vehicle infrastructure.

Southfields Community Centre Program

The Town sought out input from citizens about the Southfields Community Centre, that may provide insight into uptake and usage.

If you have visited the facility, which activities have members of your household participated in? Select all that apply.

- Fitness (13/83)
- Sports (6/83)
- Camps (2/83)
- Swimming (30/83)
- Library (24/83)
- Community Partners (3/83)

Strategic Plan 2023

The Town sought out input from citizens about its Strategic Plan, which provides pointed insight on the citizen perspective of the importance of the services and assets.

To move toward your ideal Caledon, where should the Town focus its attention over the next 12 years? Top 3

- Environmental Stewardship
- Planning for Growth
- Healthy and Diverse Communities

Rank the criteria the Town should use to prioritize issues and services deemed important by local residents and business, most important to least:

1. Risk
2. Return on investment
3. Cost
4. Economic prosperity
5. Client experience (resident, business, etc.)
6. Impact on climate change
7. Quality of life

Appendix F: Current Reserves

Reserve	2024 Uncommitted Balance	2025 Proposed Uncommitted Projected Balance
Reserves for Operating Purposes		
Reserves		
Tax Funded Operating Contingency Reserve	$ 4,298,559	$ 2,357,595
Tax Stabilization Reserve	815,803	52,126
Fire Equipment Reserve	994	697
Building & Equipment Reserve	8,784	70,477
Land Sale Reserve	499,580	555,591
Ice Resurfacer Reserve	152,003	64,995
Information Systems and Technology Reserve	17,690	24,174
Election Reserve	329,084	506,638
Firefighter Post-Retirement Benefits Reserve	408,800	442,793
Caledon Public Library Board Donation and Bequests Reserve Fund	12,636	13,699
Discretionary		
Winter Maintenance	2,631,831	1,518,315
Group Benefit Stabilization	2,566,513	2,782,443
Community Improvement Plan	78	85
Development Approvals Stabilization	724,032	(333,661)
Engineering Stabilization	3,251,557	2,139,943
Development Charge Exemptions & Discounts	61,310	67,395
Obligatory		
Building Permit Stabilization	3,083,258	1,387,030
Heritage Property	54,553	58,213
Deferred Grant Funds	36,179	38,606
Reserves for Infrastructure Purposes		
Reserves		
Equipment	990,596	59,326
Accessibility (previously tax rate stabilization)	202,912	245,962
Animal Shelter	92,751	108,548
Transit	76,019	82,415
Corporate Energy	108,352	234,386
Fitness Equipment Replacement	139,410	182,782
Tax Funded Capital Contingency Reserve	3,149,168	354,362
Discretionary		
Capital Asset Replacement Fund (previously Caledon Hydro)	9,805,556	12,331,028
Northwest Caledon Indoor Recreation Facility	1,455,495	1,575,790
Cash in Lieu of Parking	493,373	534,882
Roads Capital	77,356	83,865
Broadband	(132,266)	1,287
Comprehensive Adaptive Management Plan (CAMP) Agreement	190,957	266,187
Obligatory		
Canada Community-Building Fund (previously Federal Gas Tax)	593,091	404,016
Provincial Gas Tax - Transit	1,467,504	834,869
Payment In Lieu of Parkland	10,031,039	13,385,617
Development Charges	26,065,729	43,186,885
Total	**$ 73,760,288**	**$ 85,619,361**

Appendix G: Maturity Assessment Scoring Guide

This assessment scoring guide is based on the International Infrastructure Management Manual, 6th Edition, with minor modifications to better represent the Town.

	Aware	Basic	Core	Intermediate	Advanced
Category 1 - Understanding Requirements					
Analysing the Strategic Direction	The Town demonstrates an awareness of its external and internal strategic environment	A high-level, informal strategic analysis has been carried out to determine major trends (strategic issues) influencing the delivery of AM, and the results documented. Strategic organisational planning may be in place but not integrated with asset management.	Governance and leadership expectations of the AM System are expressed through an approved and AM Policy and AM Objectives. The AM policy and objectives cover all aspects of the asset lifecycle. The AM policy and objectives are being actively applied. The AM Objectives are aligned to organisational objectives.	As for Core, plus: The AM Policy and Objectives have been developed with demonstrable consideration of the implications of: • Analysis of the strategic context (internal, external, customer environment) analysed. • Analysis of the asset portfolio to determine fitness-for-purpose (current and future).	As for Intermediate, plus: Achievements against AM Objectives and delivery of the AM Policy are regularly monitored and reported. Regular environmental scans are in place to identify strategic changes implicating the AM System and required changes are managed through SAMP and AMP review processes.
Levels of Service Framework	The Town recognises the benefits of defining Levels of Service, but they are not yet documented or quantified (evident in responses to interview questions).	Customer Groups defined and requirements informally understood. Some key performance measures have been defined for the activity	Level of Service statements cover a range of service attributes are: • aligned with Town service planning and performance management processes. • periodically measured and reviewed. • aligned and integrated with performance measures. Level of Service and cost relationship understood and described in the AMP.	As for core, plus: Customer groups needs or expectations are analysed and documented. Service level options (with associated risks and costs) have been presented to executive and governance teams to support Levels of Service decisions. Levels of service are integral to decision making and business planning, with evidence that AM strategies and decision frameworks are aligned to the Levels of Service framework. Asset (technical) performance measures are aligned to service (customer) performance measures.	As for intermediate, plus: A customer and stakeholder communications plan are in place outlining processes for engaging with customers and stakeholders, with evidence the plan is implemented. Key customers and stakeholders are presented with, and consulted on, significant service levels and options, with key outcomes documented in the AMP.
Demand Forecasting and Management	Future demand requirements generally understood but are not well documented.	Demand forecast trends based on knowledgeable staff. Demand drivers are understood and described. Demand management strategies are being developed. Some basic demand information is being collected and monitored.	Demand forecasts are based on relevant primary demand factors (e.g. population growth) and extrapolation of historic demand trends. Demand forecasts are presented in the AMP with supporting assumptions. Risk associated with demand change are broadly understood and documented in the AMP. Strategies to manage demand (demand management strategies, asset-responses) are documented in the AMP. Demand management is considered in investment evaluations.	Demand forecasts are based on analysis of historic demand trends and all material demand factors. A range of demand scenarios is developed (e.g. high/medium/low) and presented in the AMP with supporting assumptions. Strategies to manage demand (demand management strategies, asset-responses) are documented in the AMP with supporting evidence that costs and benefits have been evaluated in determining the best strategy. Demand management is considered in all strategy and capital project decisions.	As for Intermediate, plus: Risk assessment carried out for different demand scenarios with mitigation actions identified and evaluated in determining the appropriate demand forecast scenario for AM planning. Sensitivity testing is carried out to determine confidence levels in demand forecasting scenarios. Demand risks are included in organisational risk registers.

	Aware	Basic	Core	Intermediate	Advanced
The Strategic Asset Management Plan	The Town is aware of the concept of, and benefits of an AMP and AM System.	The AM System is broadly understood in terms of the assets and functions covered. A process for the establishing the AM System has commenced.	The scope of the AM System is defined. The links between organisational and AM objectives are defined. The process for establishing and maintaining the AM System is developed (e.g. the AM Improvement Plan). Strategic issues have been identified and options developed. The above aspects are documented in the AMP or equivalent document. AMP input from relevant teams and stakeholders (internal and external) occurs.	As for Core, plus: The relationships and processes between the AM System and other parts of The Town are defined in the AMP or equivalent document. Strategic issues and options have been analysed and prioritised and a long-term strategy has been developed. There is evidence that the AMP is widely communicated and is actively used to support decision making. A regular AMP review and approvals process is in place.	SAMP is in place, with content as per ISO 55002. Formal review, audit and approvals processes are documented with evidence of implementation.
Category 2- Developing Asset Management Lifecycle Strategies					
Managing Risk and Resilience	Risk management is identified as a future improvement (evident in responses to interview questions).	High level organisational risks are identified and reported to management. Critical services and assets are understood and considered by staff involved in maintenance / renewal decisions (evident in responses to interview questions).	An organisational risk management policy, framework and process is in place. An asset criticality framework has been developed and critical assets are recorded in the AMIS. Activity risks are identified in the risk register and regularly updated and monitored. Management strategies for highest risks and most critical assets are developed and documented (in the AMP, risk management plan or similar. The approach to managing asset network resilience is described in the AMP or other supporting document.	As for core, plus: A resilience strategy has been developed (may be part of the SAMP or AMP) and is being implemented. Systematic risk analysis and resilience considerations are incorporated into major decisions. The risk register is regularly updated, actions monitored and reported to management. Risk is managed, prioritised and escalated consistently across The Town.	Asset risks are assessed for multiple failure modes. An ongoing programme of asset network and organisational resilience assessments are completed with improvements identified and actively progressed. Risk and resilience levels are quantified for The Town and risk mitigation options to close identified gaps are evaluated. Risk and resilience are integrated into all aspects of decision making.
Operational Planning	Operational processes based on historical practices but there is awareness of opportunities to improve and optimise operational activities.	Operating plans are available for critical operational areas. Operational scheduling is largely based on historic practices with adjustments to planned and unplanned maintenance frequencies based on experienced staff and contractor knowledge. Operations organisational structure in place and roles assigned.	Operating plans are available for all operational areas. Incident and emergency management plans are in place. Operational support requirements have been reviewed against good practice and are in place, including consideration of critical spares requirements. Trends in planned and unplanned maintenance and renewal activities are analysed and trade-offs considered in determining optimal maintenance and renewal frequencies.	As for core, plus: Operational objectives and intervention levels defined (aligned to AM Objectives) and results analysed to drive improvements. A formal and regularly reviewed operational planning process is in place. Incident and emergency management plans are regularly tested. Optimal planned and unplanned maintenance and renewals programmes are established with analysis of operating cost, asset condition/ performance, risk and asset criticality.	Decision frameworks (e.g. multi-criteria analysis, benefit-cost analysis) are used to prioritise and optimise expenditure across planned and unplanned maintenance and renewals programmes. Continual review and improvement can be demonstrated for all operational processes. Reviews are undertaken after significant events and recommendations are implemented.

	Aware	Basic	Core	Intermediate	Advanced
Capital Works Planning	Capital investment projects are identified during annual budget process. There is awareness of the need for longer-term capital budgeting (evidenced in interviews).	There is a schedule of proposed capital projects and renewal programmes based on historical costs and staff judgement of future requirements. Renewals strategies are verbalised in interviews but are not well documented. CAPEX projects and programmes justified in AMP (high level) and supporting CAPEX database (detail).	Projects have been collated from a wide range of sources (e.g. through reviews of asset performance, growth, risk management and renewal analysis) and are collated into a project register. Projects are tracked (in a project register or similar) through capital planning stages. Short term capital projects are fully scoped (including options analysis), and cost estimated. Renewals programme is based on age and limited condition data. The CAPEX programme is prioritised, based on agreed decision criteria, to rank the relative importance of capital projects and programmes.	As for core, plus: A capital delivery / options evaluation framework is in place and used consistently across The Town. Formal options analysis and business case development has been completed for major projects in the next three years. Long term major capital projects are conceptually identified, and broad cost estimates are available. A formal prioritisation framework is routinely applied to all capital projects and programmes (utilising a multi-criteria or benefit-cost approach).	As for intermediate, plus: Formal options analysis and business case development has been completed for significant major projects beyond 3 years. Long-term capital investment programmes are derived from advanced decision techniques such as predictive renewal and network modelling which evaluate Levels of Service and cost scenarios.
Asset Financial Planning and Management	Financial planning of asset related expenditure is largely an annual budget process, but there is intention to develop longer term forecasts (evident in interviews).	Asset related financial forecasts prepared for period appropriate to asset life expectancies. Financial budgets for separate operational and capital planning expenditure are prepared.	Depreciated replacement cost valuations aligned to asset information used in renewal forecasts. Asset expenditure categories are suitable to enable AM costing / forecasting analysis. Asset-related financial forecasts are aligned to operational and capital planning and forecasting processes. Consequential OPEX for all new assets is included in OPEX forecasts. Asset and corporate long-term financial planning processes are aligned. Funding strategies are developed and documented.	As for core, plus: Long term asset funding options are regularly reviewed and evaluated with consideration of distribution of benefits (user pays), practicality, financial prudence and intergenerational equity. Major expenditure proposals incorporate whole of life costing.	As for intermediate, plus: Advanced financial modelling includes sensitivity testing of assumptions, demonstrable whole of life costing and cost analysis for Levels of Service options. A decision framework enables budgets, projects and programmes to be optimised across all activity areas. Formal risk-based sensitivity analysis of financial forecast scenarios is carried out. Asset and financial data and reporting are fully integrated or regularly reconciled.
AM Plans (for the Asset Portfolio and Assets)	Stated intention to develop AMPs (evident in responses to interview questions).	A portfolio AMP contains basic information on assets, service levels, planned works and financial forecasts and future improvements. The AMP may not cover all asset types or services, may only have a short-term focus, may be developed in isolation from organisational planning, or may not be otherwise sufficiently mature for The Town.	Portfolio AMPs contain core content including asset information, Levels of Service, demand and lifecycle strategies linking to financial forecasts with key assumptions stated. AMPs are aligned with corporate long-term strategic and financial plans and objectives and are signed off by managers. AMP input from relevant teams and stakeholders. Internal and external reviews occur. AMPs are updated in accordance with the AM Policy / SAMP.	As for core, plus: The Portfolio AMP is supported by Asset Class AMPs, where appropriate. AMPs include confidence levels, detailed significant assumptions and associated risks. AMPs are fully integrated with corporate long-term financial planning process and iterations are formally managed. AMPs are periodically updated, discussed and approved by governance and leaders.	As for intermediate, plus: AMPs are managed as a 'live' document and updated when significant changes signalled. Formal review, audit and approvals processes are documented with evidence of implementation.

	Aware	Basic	Core	Intermediate	Advanced
Category 3 - Asset Management Enablers					
AM People and Leaders	The Town recognises the benefits of an asset management function within The Town but has yet to implement a structure to support it (evident in responses to interview questions).	AM functions are carried out by small groups, but AM is not embedded or coordinated across The Town.	Regular ongoing AM coordination processes established (e.g. a cross-divisional committee) which support an integrated and consistent approach across The Town. Position descriptions incorporate the main AM roles and training is made available suitable to those roles. Visible ownership and support of AM by governance and leadership and awareness of AM purpose across most of The Town (evident through interviews).	As for core, plus: Leadership is involved in AM coordination (e.g. membership on a regular AM Steering Group or separate AM Governance coordination group). An internal AM communications and training plan is in place and being implemented. Roles reflect AM System competency requirements (defined in SAMP or equivalent document) and are defined in all relevant position descriptions. Demonstrable alignment between AM objectives, team and individual responsibilities.	As for intermediate, plus: Formal documented assessment of AM capability and capacity requirements to achieve AM objectives, regularly reviewed and recommendations incorporated into AM Improvement Plan. Governance and Leadership demonstrably fulfils all the requirements of ISO 55001: establishing policy/objectives, resourcing, communicating, monitoring, supporting cross-functional collaboration and promoting continual improvement of AM.
Asset Data & Information	Asset information is not available. Awareness of need for asset information (evident in responses to interview questions).	Basic physical asset information recorded (e.g. location, size, type), but may be based on broad assumptions or not complete.	Sufficient information to complete depreciated replacement cost valuation (physical attributes, replacement cost and asset age/life) and to manage operational requirements for assets. Asset hierarchy, identification and attribute standards documented and implemented. Metadata held as appropriate. A formal information needs analysis has been undertaken and an Information Strategy and data improvement plan developed. Knowledge of asset criticality and risk supports the regularity of data collection and updating.	As for core, plus: A reliable register of physical, financial and risk attributes recorded. The Information strategy and data improvement programme are being actively monitored and reported. The use of asset information in asset management planning and decision making is reviewed for effectiveness. Documented, systematic and audited data collection process in place based on a formal information needs analysis.	As for intermediate, plus: All asset data is accurate, consistent and reliable and is used to inform both short term and long-term decision making. Information on work history type and cost recorded at an appropriate asset or component level to enable analysis. Systematic and fully optimised data collection programme with supporting metadata.
Asset Management Information Systems (AMIS)	Intention to develop an electronic asset register / AMIS (evident in responses to interview questions). A financial fixed asset register may be in place but only captures accounting data.	Asset register capable of recording all core asset attributes – capacity, type, size, material, etc. Asset information reports can be manually generated for AM Plan input. Simple asset database in use (such as spreadsheet or Access database).	Industry-recognised AMIS or asset register system enables hierarchical asset capture and reporting to component level. AMIS enables live tracking of customer requests linked to maintenance tasks. AMIS provides basic AM reporting capability - condition / performance, renewal forecasts, valuations. The AMIS meets most user requirements (functionality, reporting, usability).	Financial, asset and customer service systems are integrated or able to be fully reconciled (to provide a 'single source of truth' for all data). An information systems strategy for asset related systems is implemented and regularly reviewed. AMIS has spatial mapping capability or interface. AMIS captures remote, 'live' data from operators. More automated analysis and reporting on a wider range of information. AMIS provides renewal modelling capabilities using factors such as age, condition, criticality and performance.	All advanced AM functions are available, including asset risk assessment, predictive maintenance and renewal modelling for different Levels of Service scenarios. Availability of 3D models to enable visual integration with data (e.g.: BIM/Digital Twin)

	Aware	Basic	Core	Intermediate	Advanced
AM Process Management	Awareness of need to formalise systems and processes (evident in responses to interview questions).	Simple AM process documentation in place for service-critical AM activities, covers operation, maintenance and renewal activities.	Critical AM processes are identified, documented, monitored and subject to review. There is evidence that these critical AM processes are followed in practice. AM process interfaces with other teams and organisations, are defined and managed.	As for core, plus: All AM processes have been identified and prioritised. AM Process documentation implemented in accordance with the AM System to appropriate level of detail, depending on process criticality (including business process mapping or similar). All internal management systems and cross-departmental processes are aligned and managed.	As for intermediate, plus: AM processes are regularly reviewed and audited, and improvements implemented. ISO certification of processes to multiple standards for large asset intensive organisations. AM System has been assessed and meets the requirements of ISO 55001. Strong integration of all management systems and cross-departmental processes within The Town.
Continual Improvement	Recognition of the need for AM improvement process, evident in responses to review questions.	Improvement actions identified and allocated to appropriate staff and progress monitored.	Current and future AM maturity assessed (gap analysis) and used to identify improvement actions. Appropriate maturity has been defined for each AM function. Identified improvement actions collated from the maturity assessment and other relevant studies and have been prioritised with input from relevant staff and management. Improvement plans identify timeframes, deliverables, resources and responsibilities and are monitored by the AM team. Improvement plans are monitored.	As for core, plus: Formal periodic monitoring of the AM improvement plan is in place with reporting to appropriate levels of The Town, at frequencies specified in the SAMP or AMP. Major improvement actions are managed within The Town's project management framework. Evidence of effective change management practices support AM Improvement Plan implementation. A formal audit and review framework is established.	A regular cycle of audit and maturity assessment is undertaken with actions fed back into improvement planning. KPIs for monitoring the effectiveness of AM improvement plan outcomes are reported.

Appendix H: Reference List of Figures

Appendix I: Reference List of Tables