TOWN OF HALTON HILLS

2025

Infrastructure Asset Management Plan

Staff Acknowledgement

The development of this Asset Management Plan is the result of a truly collaborative effort across the Town of Halton Hills. Asset management is not a one-time task; it is an ongoing, team-driven process that depends on the knowledge, dedication, and coordination of staff at every level.

We would like to recognize the contributions of staff from across the organization, including those who manage and maintain our assets daily, as well as the members of the Asset Management Network Team and the Corporate Asset Management Steering Committee. Your input, expertise, and commitment were essential in shaping this plan and ensuring it reflects the needs and priorities of our community.

We also extend our appreciation to Town Council for their continued support and leadership in advancing responsible asset management. Their guidance helps ensure that our infrastructure investments are sustainable, strategic, and aligned with the long-term vision for the Town.

Table of Contents

Key Insights

40,495	Number of infrastructure assets on record in the asset inventory
$2.06 billion	2025 estimated replacement value of the assets
$94,299	Replacement cost of infrastructure per household[1]
74%	Percentage of assets that are in Good or Fair condition
$37.98 million	Average Annual Infrastructure Funding Gap
$97.70 million	Estimated Infrastructure Backlog

[1] Based on the 2021 Census Profile [21,825 Number of Households]

Executive Summary

Municipal infrastructure assets are essential for providing services to the community. Municipal asset management seeks to deliver these services in an efficient and cost-effective manner by developing and implementing asset management programs, plans, and long-term financial strategies.

In 2018, the Province of Ontario introduced Regulation 588/17 (O.Reg. 588/17) which mandates asset management planning and reporting for municipalities. Municipalities must develop asset management plans detailing the current state of infrastructure, levels of service, lifecycle costs, risk assessments and funding strategies.

This Asset Management Plan (AMP) builds upon the Town's 2022 and 2024 AMPs, and ensures compliance with the 2025 requirements of O.Reg. 588/17.

State of Infrastructure

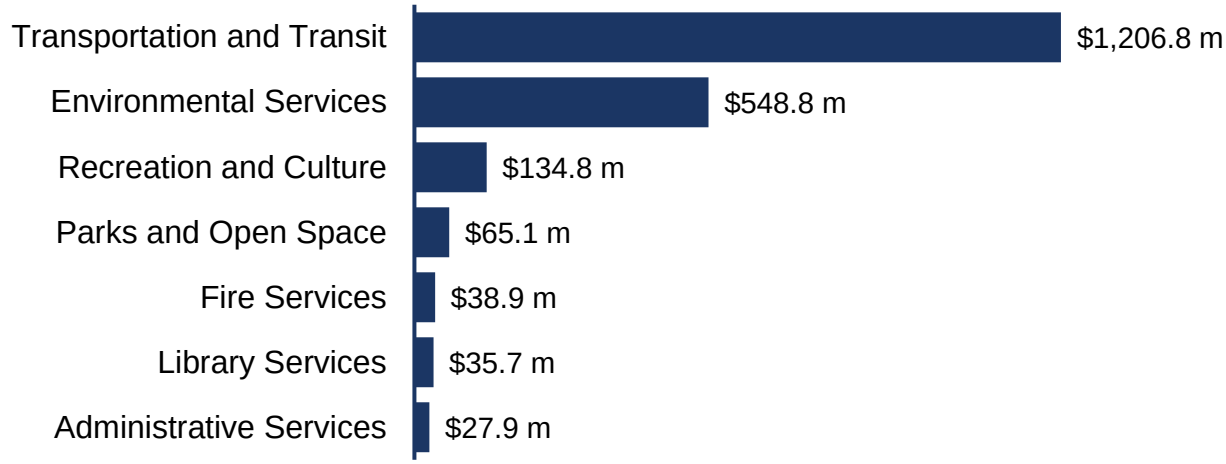
The infrastructure assets included in the scope of this AMP are detailed in Table E.1:

Table E.1: Scope of Asset Management Plan

Service Area	Asset Categories
Transportation and Transit	Roadway Network, Bridges and Structural Culverts, Traffic and Transportation, Walkways and Pathways, Facilities, Machinery and Equipment, Fleet
Environmental Services	Catch Basins, Culverts, Infiltration Galleries, Maintenance Holes, Oil/Grit Separators, Outfalls, Storm Sewers, Stormwater Management Ponds
Recreation and Culture	Aquatic Facilities, Community Centres, Miscellaneous Facilities
Parks and Open Space	Cemeteries, Parks, Playgrounds and Splashpads, Sport Fields and Courts, Trails and Pathways
Fire Services	Facilities, Equipment and Furnishings, Fleet
Library Services	Facilities, Equipment and Furnishings, Collection Material
Administrative Services	Civic Centre, Equipment and Furnishings

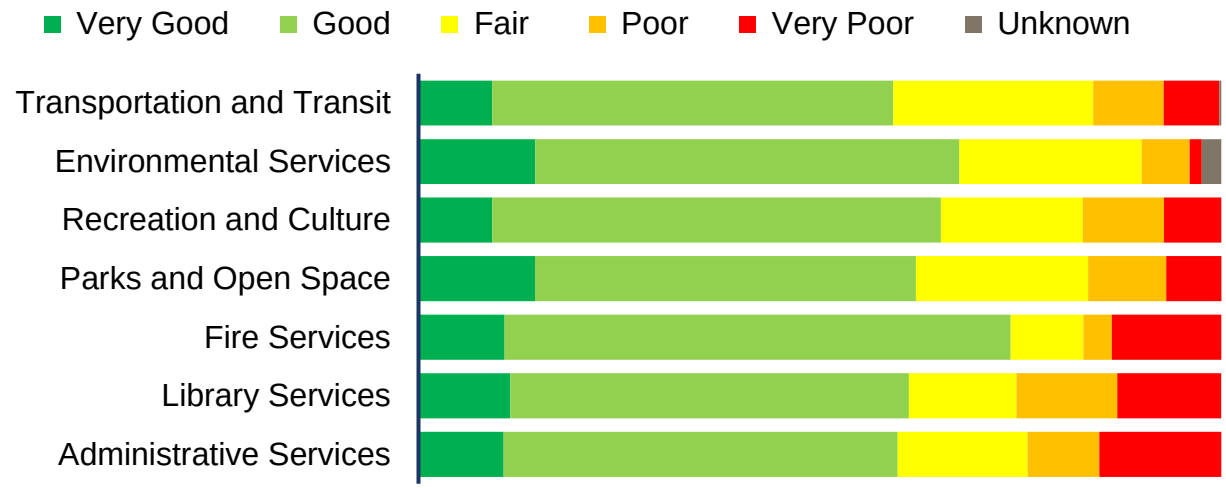
The estimated current replacement value of all the asset categories included in this AMP totals **$2.06 billion,** as shown in Figure E.1.

Figure E.1: Portfolio Replacement Value Profile



The majority of the assets are in good or fair condition as shown in Figure E.2.

Figure E.2: Portfolio Condition Profile



Levels of Service

Levels of Service (LOS) describe and measure the quality and performance of services the Town delivers to the community. In accordance with O. Reg. 588/17, the Town has designated its current LOS targets as the proposed LOS for the next ten years.

The Town currently faces an annual funding shortfall of $23.5 million to meet the current and proposed LOS. This average annual service delivery gap represents the difference between the services the Town aims to provide and what can be delivered with existing funding.

Importantly, this service delivery gap is a subset of the total infrastructure funding gap identified in this AMP, which also accounts for the additional investment needed to address aging infrastructure and support future growth.

Ongoing data analysis and periodic reviews of LOS priorities and requirements will support adaptive adjustments to the proposed target LOS in response to evolving community needs, technological advancements, and address the funding gap.

Future Demand

The Town anticipates that future infrastructure demands will be shaped by population growth, economic shifts, evolving demographics, and changing transportation patterns. Environmental constraints and increasing climate volatility will also play a significant role in how infrastructure is planned, maintained, and adapted.

This AMP integrates the latest growth-related capital cost estimates into its long-term forecast, including future asset acquisition and lifecycle management.

Risk Management

The Town's principal approach to asset management is to achieve sustainable levels of service and manage risks while minimizing lifecycle costs. The Town's risk strategy establishes a framework for quantifying the risk exposure of assets, facilitating project prioritization across various asset classes and service areas.

Current assessments have identified several high-risk assets that require attention. These are included in the following asset categories:

- Traffic Service Assets
- Fire Services Equipment
- Roadway Culverts
- Transportation and Transit Fleet
- Critical Facility Assets (Roof, HVAC, Electrical, Structural)

Investment in these areas to meet required LOS is vital to mitigate service disruptions, ensure regulatory compliance, and protect the health and safety of the community.

Lifecycle Management Planning

The Town manages its infrastructure assets using a whole lifecycle approach—planning, acquisition, installation, operation, maintenance, renewal, and eventual disposal. This approach ensures that assets continue to deliver reliable services while minimizing total cost of ownership and risk over time.

Based on the Town’s asset data and the 10-year capital forecast, the average annual asset needs are estimated to be **$114.44 million**. This figure reflects the funding needed to maintain existing assets in a state of good repair, address the existing infrastructure backlog, incorporate growth-related assets, and sustain service levels across all service areas.

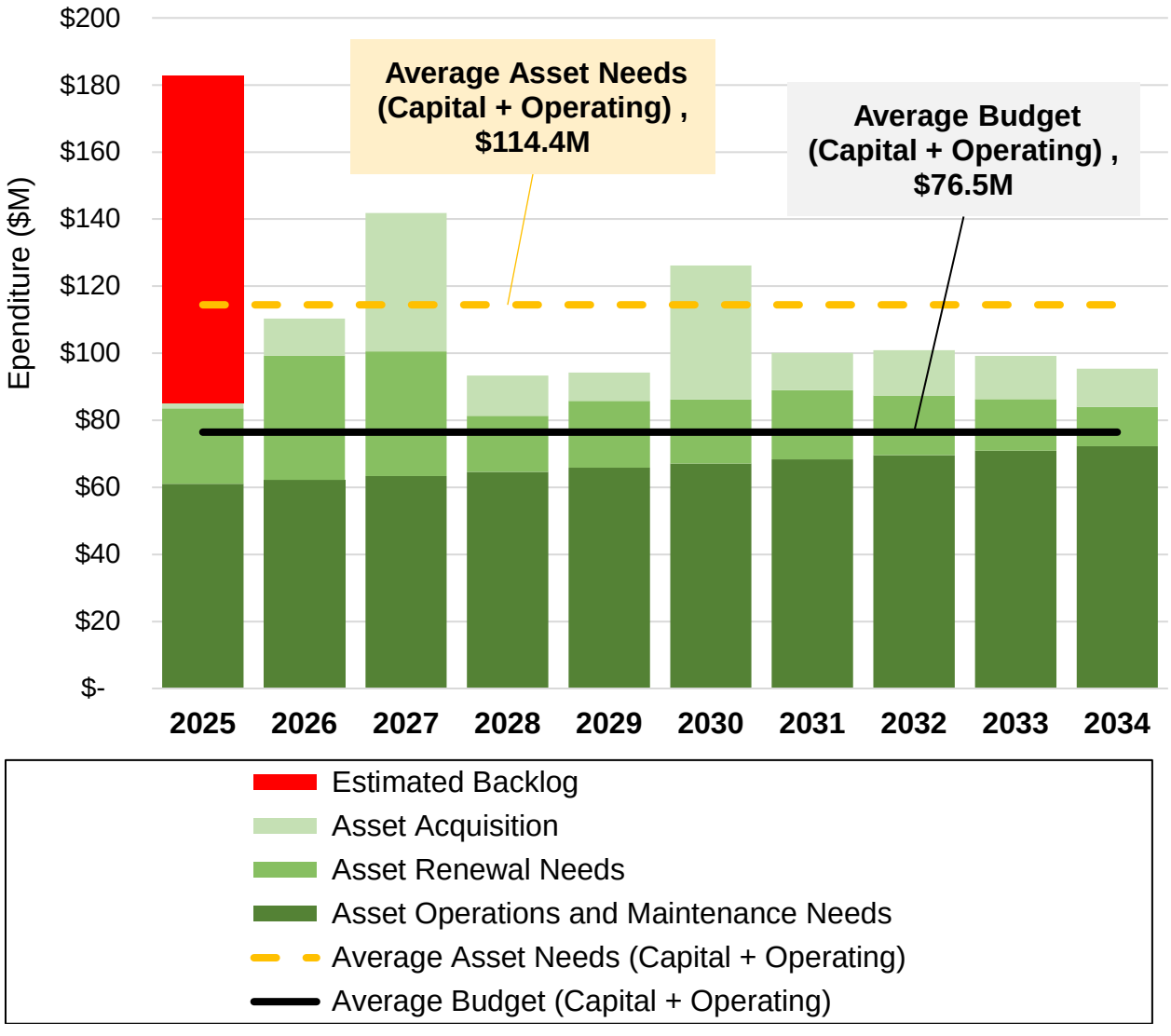
Financial Summary

This AMP defines the infrastructure deficit as the difference between the planned budget and the whole lifecycle needs of the assets. The average annual capital and operating budget is **$76.46 million**. When comparing the forecasted whole asset lifecycle needs to the planned capital and operating budgets, this AMP identifies a total infrastructure deficit of **$37.98 million** on average per year.

This infrastructure deficit is continuously being reviewed by the Town to align and integrate with the Long-Range Financial Plan. Any changes to the growth-related value estimates and enhancements to lifecycle management activities of existing assets will impact this figure and will need to be considered in short- and long-term financial forecasts. Additionally, changes in market conditions, inflationary pressures, and funding levels will also directly influence the ability to address the infrastructure deficit, potentially accelerating or delaying necessary interventions, and should be carefully evaluated.

Figure E.3 shows a summary of the whole lifecycle needs compared to the planned budgets for the Town's infrastructure assets over the next 10 years.

Figure E.3: Whole Lifecycle Summary



What will we do?

The Town's infrastructure deficit represents a persistent gap between the capital and operational investments required to maintain current service levels, meet future demand, and manage asset-related risks effectively. This challenge is not unique as municipalities across Canada are facing similar infrastructure funding shortfalls, reflecting a national trend of underinvestment in aging municipal assets.

In response, the Town has implemented a lifecycle management program focused on existing asset strategies and prioritizing interventions for high-risk, high-impact assets. This approach emphasizes maintaining assets in a state of good repair, with investment decisions guided by asset criticality and risk exposure. By aligning funding with areas of greatest need and potential value, the Town aims to enhance service resilience and long-term sustainability.

Continuous Improvement

Asset management is an evolving process that seeks continuous improvement to enable data-driven decisions. The following improvement items have been documented as part of the development of this plan:

- Improve accuracy and completeness of asset data by addressing inventory and condition data gaps
- Formalize a more robust condition and inspection monitoring program for all assets to help determine true infrastructure needs
- Determine the cost implications of implementing climate change adaptation strategies
- Determine more accurate lifecycle costing that is tracked at the asset level
- Determine operational budget impacts of proposed growth projects
- Proactively update asset unit replacement costs based on latest industry data

Conclusion

The 2025 AMP shows the interconnected relationship between levels of service, risk, lifecycle activities, and the associated costs to inform investment decision-making for the Town's infrastructure assets. It is an important planning and communication tool to Council and the community about the effective management of Town's infrastructure assets to continue delivering sustainable levels of service while optimizing values and minimizing risks.

It is important to emphasize that the financial requirements necessary to implement the updated AMP will require further review and ongoing refinement, as well as confirmation of the most appropriate approach for their integration into the Town's Long-Range Financial Plan and the development of a financial strategy - while recognizing the Town's financial capacity. The annual budget process will also

continue to be leveraged to advance this integration, as appropriate. If necessary, the Town's AMP will be updated accordingly.

Limitations and Constraints

Data gaps are inevitable when developing asset management plans, therefore key assumptions were made in the development of this AMP. These include:

- New asset values for 2025–2034 are based on capital projects funded through development charges and anticipated growth from future development plans.
- Planned Operations and Maintenance (O&M) budgets reflect the 2025 operational budget, with future O&M needs projected based on expected asset growth over the next decade.
- Asset Renewal and Replacement budgets were allocated per project and relevant asset category from the 2025–2034 Capital Forecast.
- Where engineering assessments were unavailable, renewal timing was estimated using asset age and expected useful life. Unknown installation dates were inferred from condition ratings, and age-based condition was used where formal assessments were lacking.
- Replacement costs were updated using inflation indices and industry benchmarks where asset-specific costing data was unavailable.
- Population growth projections from the 2022 Development Charges Study and growth-related projects in the capital forecast were used to estimate future infrastructure needs.
- Where data was missing, assumptions were informed by institutional knowledge and subject matter expertise.

The overall confidence level in the asset data is assessed as Moderate, with targeted improvements outlined in the Improvement Plan.

1 - Introduction

Asset Management at the Town

What is Asset Management?

Asset management is defined as the combination of management, financial, economic, engineering, and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner and at an acceptable level of risk. It involves data-driven decision-making and actions throughout the whole lifecycle of assets.

Effective asset management integrates several key components, including levels of service, risk management and lifecycle management. These concepts are applied throughout this asset management plan and described in later sections.

Corporate Asset Management Program

The Town's Corporate Asset Management (CAM) Program is a strategic, comprehensive approach to managing assets across the organization. It aims to maximize consistency among diverse service areas and create efficiency by harmonizing service levels and business processes while addressing associated risks. This program treats all assets as essential components of an interconnected system rather than isolated parts. Service areas evaluate, enhance, and maintain assets using a common framework and collaborative processes.

The program guides the Town to focus on the following objectives:

- Providing efficient, effective, and sustainable services to meet the needs of our community
- Optimizing asset value while minimizing lifecycle costs
- Managing risks to service delivery
- Committing to continual improvement of the CAM Program
- Achieving sustainable funding through integrated asset management planning

The program supports the Town's strategic priorities, ensures effective stewardship of public assets and meets service commitments to current and future residents in an efficient and sustainable manner.

Corporate Asset Management Policy

In accordance with the requirements outlined in O. Reg 588/17, the Town developed its Corporate Asset Management Policy in 2018 and updated it in 2024. The Town is required to review and/or update the policy on a 5-year review cycle to ensure it remains current and effective.

The policy commits the Town to the following objectives:

1. **Service Focused**
Provide assurance to the community through clearly defined levels of service and adhere to optimal asset management processes and practices, including investment, that are supported by continually updated asset data and performance measures.

2. **Innovative**
Continually improve our asset management approach, rededicating ourselves to innovation as new tools, techniques and solutions are developed.

3. **Fact-based Decision Making**
Uses of a formal but flexible, consistent, and repeatable approach to cost effectively manage our infrastructure assets.

4. **Optimal**
Make informed decisions between competing factors such as service delivery, asset quality and value, cost and risk by determining which option will deliver the optimal lifecycle value.

5. **Whole Lifecycle Perspective**
Consider the full impact of asset management activities on services, risks, and costs through their whole lifecycle phases from acquisition, operations, maintenance, renewal to disposal.

6. **Integrated System Focused**
Evaluate infrastructure assets in terms of its role and value within the context of the greater system, as opposed to examining individual assets in isolation, taking into consideration operating and capital budgets, masterplans, official plan and departmental strategic plans.

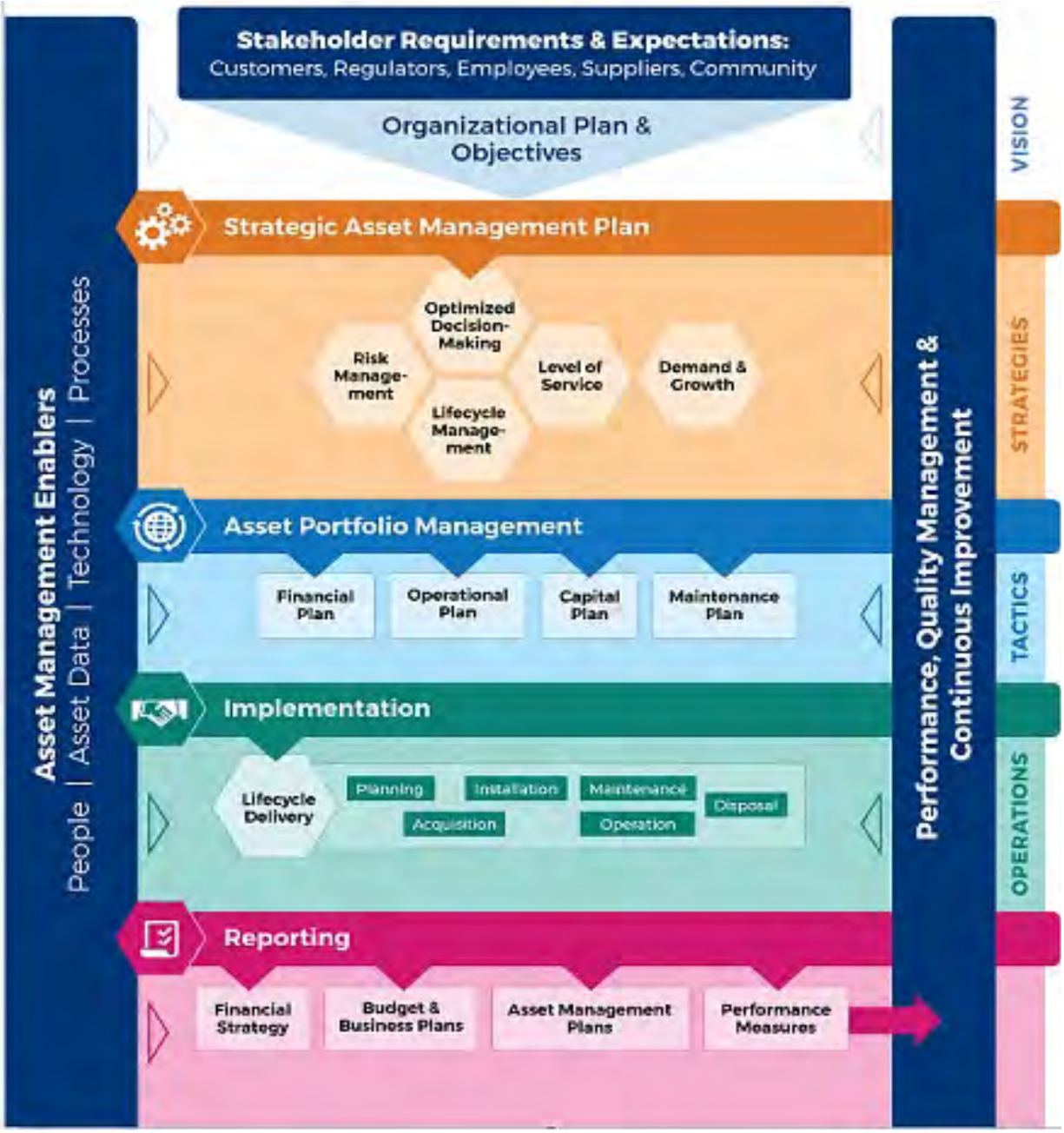
7. **Forward Looking & Sustainable**
Incorporate social, legislative, environmental, and economic considerations into decisions to adequately address present and future land use planning framework, to protect and preserve natural areas and green spaces, to enhance biodiversity through environmental stewardship, and to foster a thriving economy.

8. **Risk-based**

Comply with all relevant legislative, regulatory, and statutory requirements to minimize risks. Direct resources, expenditures, and priorities in a way that achieves the established levels of service at an acceptable level of risk to build a safe and welcoming community.

The Corporate Asset Management Framework in Figure 1.1 shows the overarching approach the Town is taking to promote collaboration and alignment between stakeholders.

Figure 1.1: Corporate Asset Management Framework



Key stakeholders involved in asset management planning are shown in Table 1.1.

Table 1.1: Key Stakeholders involved in Asset Management Planning

Key Stakeholders	Role in Asset Management Planning
• **Council** • **CAO** • **Senior Management Team**	• Represent needs of community/stakeholders • Allocate resources to meet planning objectives in providing services while managing risks • Support and endorse initiatives that support the goals and vision of the Town of Halton Hills • Provide strategic direction, integration, and alignment
Asset and Energy Management Team	• Ensure a collaborative and integrated approach is maintained between all stakeholders • Implement the strategic asset management practices across all asset groups • Present documentation to senior management and Council
Finance Team	• Supports the financial needs of the various stakeholders to ensure sustained service delivery • Supports the Capital and Operating budgeting process
Service Areas: • Administration, • Library Services, • Fire Services, • Parks and Open Spaces, • Recreation and Culture, • Transportation and Public Works	• Lead and manage key asset lifecycle activities including planning, acquisition, maintenance, operations, and disposal of infrastructure assets • Support the daily decisions related to infrastructure assets

Ontario Regulation 588/17

As part of the *Infrastructure for Jobs Prosperity Act, 2015,* the Ontario government introduced Regulation 588/17 – Asset Management Planning for Municipal Infrastructure (O. Reg. 588/17). This regulation established to address the challenges of underfunded municipal infrastructure needs.

Implementing consistent asset management practices is a Town wide priority and integrating the planning phase of asset management through a coordinated effort is an important step towards ensuring value from the Town's assets.

This asset management plan is produced in alignment, and to comply with, the 2025 requirements of O. Reg. 588/17, as outlined in Table 1.2 below.

Table 1.2: O. Reg. 588/17 Requirements and Reporting Deadlines

Requirements	2019	2022	2024	2025
Asset Management Policy	●		●	
Asset Management Plans		●	●	●
State of infrastructure for core assets		●		●
State of infrastructure for non-core assets			●	●
Current levels of service for core assets		●		●
Current levels of service for non-core assets			●	●
Proposed levels of service for all assets				●
Lifecycle costs for current levels of service		●	●	●
Lifecycle costs for proposed levels of service				●
Growth impacts		●	●	●
Financial strategy				●

See Appendix C for a detailed checklist of O. Reg. 588/17

Organization of the Document

This AMP is structured to meet the requirements of O. Reg. 588/17 (Current and Proposed Levels of Service). The contents of this plan follow the recommended elements of a detailed asset management plan as identified in ISO 55000:

Executive Summary: Summary of AMP

1 - Introduction: Outlines scope, methodology, relationship with other Municipal documents and plans, and applicable legislation

2 – State of Local Infrastructure: Summarizes the inventory, valuation, condition and remaining life of the assets in the inventory by service and asset type

3 - Levels of Service: Defines levels of service through performance indicators and targets, and outlines current performance

4 – Future Demand: Looks at the Town's ability to meet the changing needs of the industry and their customers over time.

5 – Risk Management Strategy: Defines the framework for identifying critical assets and quantifying risk to enable prioritization of lifecycle activities.

6 – Lifecycle Management Strategy: Summarizes the asset management strategies (i.e., planned actions) that will enable the assets to provide the required levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost

7 – Financial Strategy: Summarizes the infrastructure gap based on the determined infrastructure needs and associated budget.

8 – AMP Monitoring and Improvement: Summarizes the next steps including monitoring of AMP implementation progress and improving future iterations of the AMP.

Scope and Methodology

The 2025 Infrastructure AMP communicates the activities undertaken by the Town to ensure the sustainable delivery of services that support the quality of life of its residents and in compliance with regulatory requirements.

This asset management plan is to be read with the Town of Halton Hills' documents. This should include the following strategic documents:

- 2024 and 2025 Town of Halton Hills Business Plans and Budgets
- 2024 Non-Core Infrastructure Asset Management Plan
- Corporate Asset Management Policy
- Town of Halton Hills Strategic Plan (2023-2026)
- 2022 Core Infrastructure Asset Management Plan
- Town of Halton Hills Official Plan

Scope of Work

This AMP summarizes the state of the infrastructure for the Town's asset portfolio, establishes levels of service and the associated community and technical KPIs, outlines the current risk and lifecycle strategies, and provides a financial strategy for the service areas listed below:

Table 1.3: Scope of Asset Management Plan

Service Area	Asset Categories
Transportation and Transit	Roadway Network, Bridges and Structural Culverts, Traffic and Transportation, Walkways and Pathways, Facilities, Machinery and Equipment, Fleet
Environmental Services	Catch Basins, Culverts, Infiltration Galleries, Maintenance Holes, Oil/Grit Separators, Outfalls, Storm Sewers, Stormwater Management Ponds
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Administrative Services	Facility, Equipment and Furnishings

Calculating Replacement Values

There are various methodologies for determining the current replacement value of an asset, each differing in accuracy and reliability. This AMP uses two primary methods:

- **Internal Cost Estimate**: These are derived from data obtained through engineering reports and assessments, asset management software generated, staff expertise and insight.

- **Inflation Adjustment**: This method involves applying a Consumer Price Index or a Non-Residential Building Construction Price Index to historical asset costs.

Internal cost estimates derived from reliable sources are preferred. In the absence of precise costing data, inflation adjustments serve as an alternative method. This approach provides accurate estimates for recently acquired assets. However, its reliability diminishes over time due to shifting market conditions, increased price volatility, and the evolving specifications of replacement technologies.

Estimated Service Life and Remaining Service Life

The estimated service life of an asset represents the period during which it is expected to remain in service before replacement or disposal. For this AMP, estimated service life values were assigned using reliable sources, municipal staff expertise, and supplemented by recognized industry guidelines where necessary.

Remaining service life is calculated by comparing an asset's age to its estimated service life.

Deriving Asset Condition

Condition is measured using a 1 – 5 rating system as detailed in Table 1.4. This condition rating framework is used consistently across all asset types.

Table 1.4: Condition Rating Framework

Condition Grading	Description of Condition	Remaining Service Life (all asset types)
1	**Very Good**: Fit for the future. Well maintained, good condition. Newly or recently rehabilitated.	**>75 – 100%**
2	**Good**: Good working condition. Generally approaching mid-stage of expected service life.	**>50 – 75%**
3	**Fair**: Signs of deterioration, some elements exhibit deficiencies. Mid-stage of expected service life.	**>25 – 50%**

Condition Grading	Description of Condition	Remaining Service Life (all asset types)
4	**Poor**: Condition below standard, large portion of system exhibits significant deterioration. Approaching end of service life.	**>0-25%**
5	**Very Poor**: Widespread signs of advanced deterioration, asset may be unusable. Near or beyond expected service life.	**<=0%**

For this AMP, condition assessment data was incorporated from the following sources:

- 2025 internal condition estimates assigned to multiple asset categories that were based on staff input, asset history and performance.
- 2024 Pavement Quality Index (PQI) ratings assigned to road segments as part of the Town's pavement management program.
- 2024 Bridge Condition Index (BCI) ratings assigned to bridges and structural culverts (culverts with a span of greater than or equal to 3 meters) as part of the Ontario Structure Inspection Manual (OSIMs)

For the remaining assets, condition was based on the remaining service life, which was determined from the asset's age.

Table 1.5 shows how the five-point scores from Very Good to Very Poor were derived from the asset data available, including remaining useful life and other condition scoring systems.

Table 1.5: Conversion Table for Condition Grades

Condition Level	Remaining Useful Life (all asset types)	BCI	PQI	Internal Condition Estimate
Very Good	>75 – 100%	90 – 100	90 – 100	1
Good	>50 – 75%	70 – 90	70 – 90	2
Fair	>25 – 50%	60 – 70	40 – 70	3
Poor	>0 – 25%	40 – 60	20 – 40	4
Very Poor	<= 0%	0 – 40	0 – 20	5

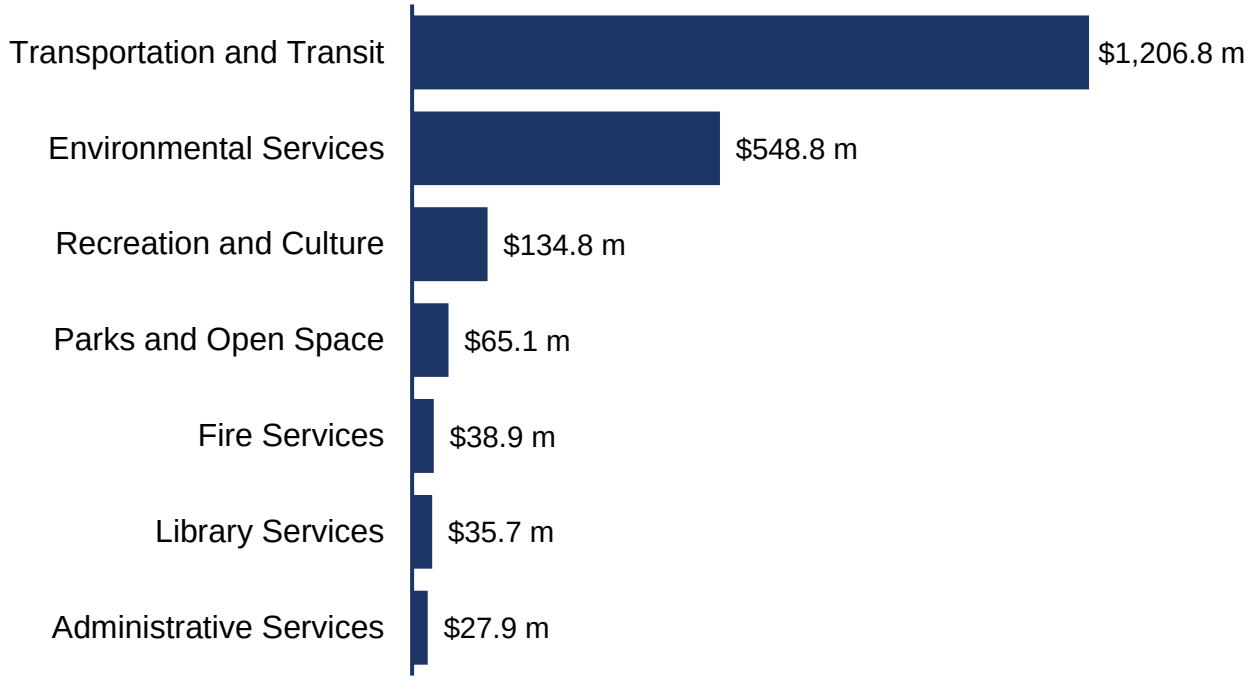
2 - State of Infrastructure

The State of Infrastructure section of the AMP describes the Town's asset portfolio, and provides a snapshot of the valuation, condition, and age of its assets. Recommendations for the sustainment of data collection and reporting are provided in the Plan Improvement and Monitoring section.

Portfolio Asset Valuation

The infrastructure assets included in this plan have an estimated current replacement value of $2.06 billion dollars as shown in Figure 2.1 below.

Figure 2.1: Portfolio Current Replacement Value



Transportation and Transit assets represent the largest share, which includes roads, bridges, and structural culverts – critical components of the Town's transportation network. The next largest are stormwater infrastructure assets, grouped in Environmental Services.

Understanding the replacement value of assets help the Town assess financial exposure, prioritize investment and plan for long-term service delivery.

Portfolio Asset Condition

Asset condition is evaluated through two main data sources: age-based assessments, which use the age profile of assets as an indicator of their expected deterioration, and direct condition assessments, which involve physical inspections or monitoring to determine actual performance and quality.

Figure 2.2 illustrates the portfolio condition profile, offering insight into the current state of and performance of the asset portfolio.

Figure 2.2: Portfolio Condition Profile

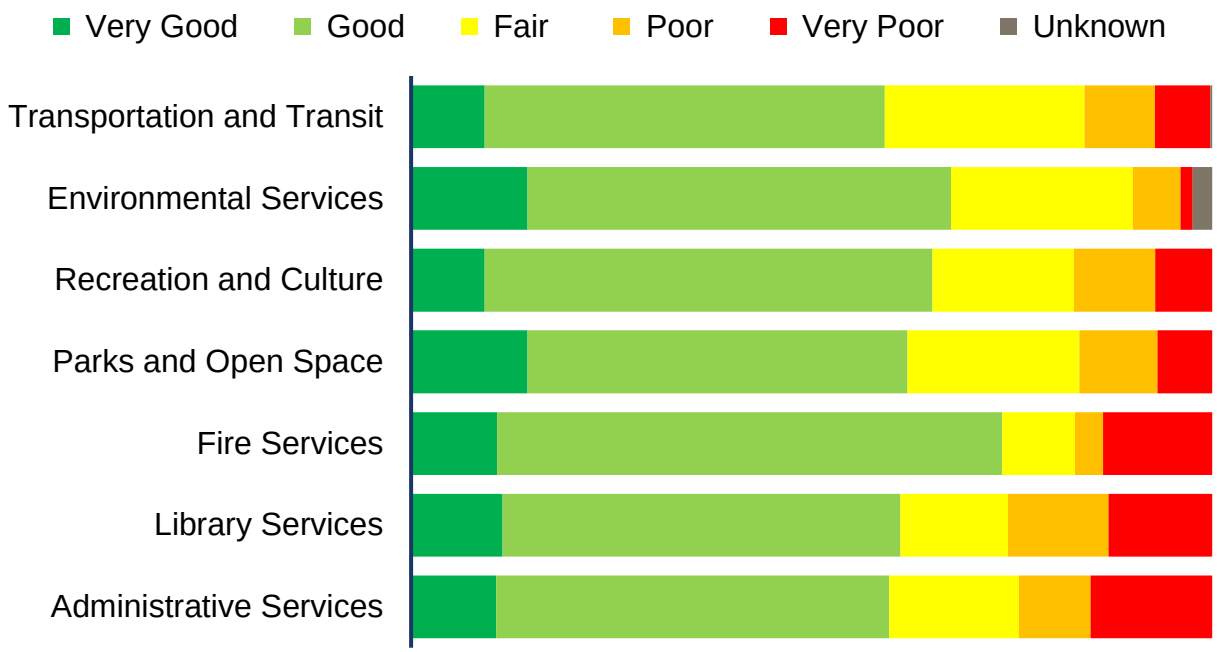
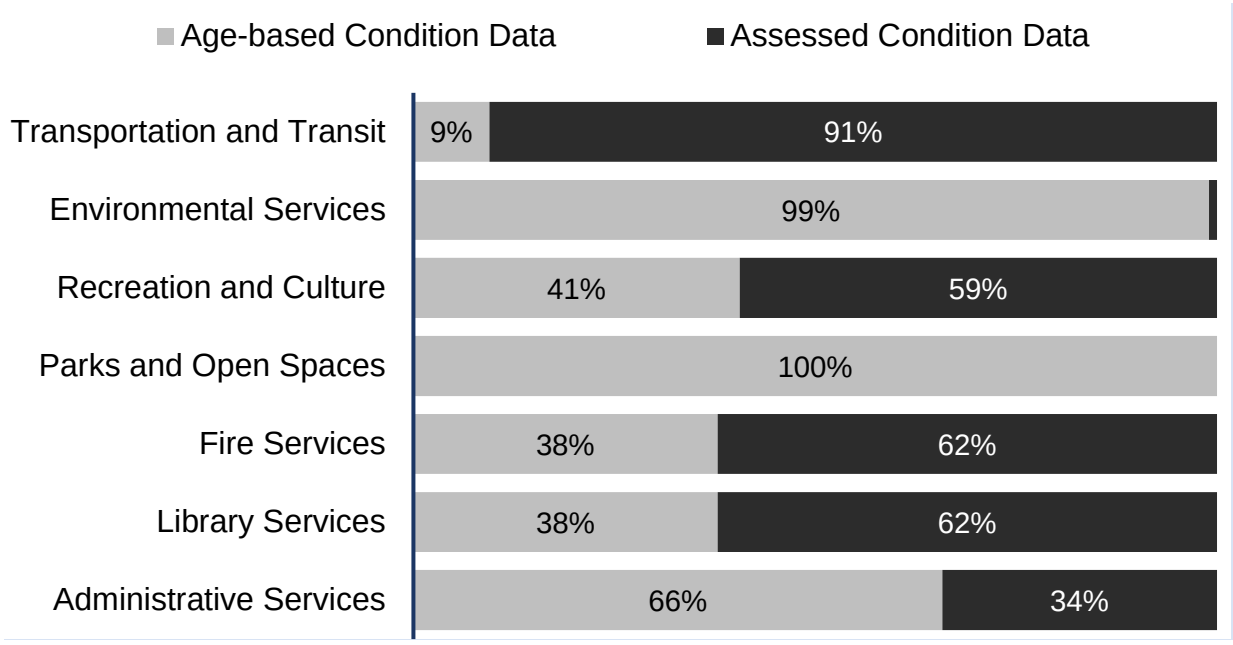


Figure 2.3 further shows the condition data source across service areas. Most of Transportation and Transit assets have been directly assessed, while Environmental services and Parks and Open Space rely on age-based condition estimates.

Assessed condition data provides a more accurate depiction of the assets' health by considering real-time inspections and performance metrics.

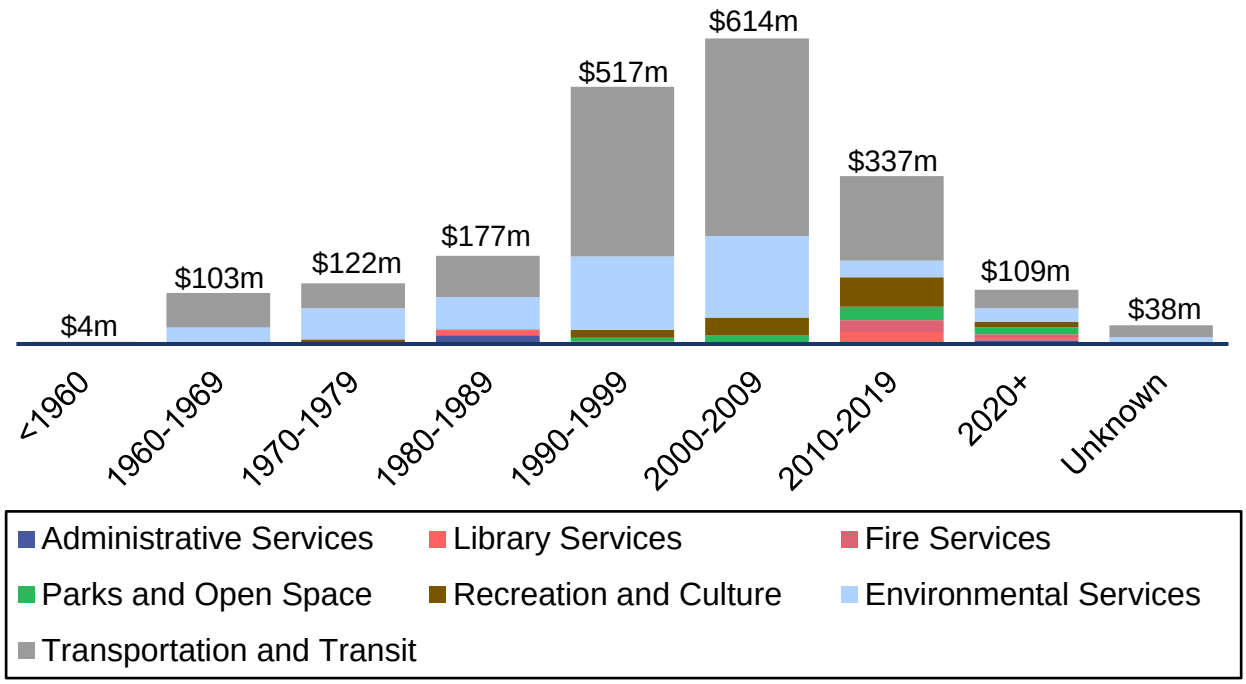
Figure 2.3: Condition Data Source



Portfolio Asset Age

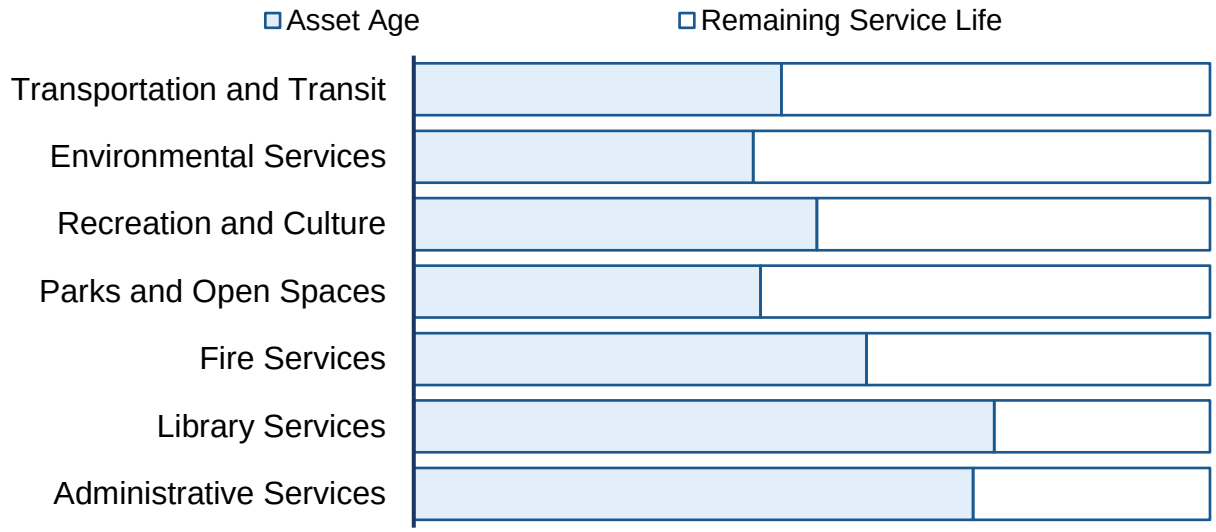
The age profile of the assets included in this AMP are shown in Figure 2.4. The bars in the graph represent the amount of total replacement value of assets installed each year.

Figure 2.4: Historical Infrastructure Investment



The highest level of investment occurred between 2000 and 2009, primarily in transportation, stormwater, recreation and cultural facilities. Figure 2.5 compares the average age of assets with their remaining service life across the service areas. In several areas – such as Transportation and Transit and Library Services – assets are approaching mid-life, while other areas show a more balanced profile.

Figure 2.5: Portfolio Age Profile



Transportation and Transit

Transportation and Transit assets enhance connectivity through the safe and efficient movement of people, goods, and services on well-maintained transportation infrastructure. The figures below provide an overview of transportation and transit assets.

Figure 2.7: Transportation and Transit: Asset Replacement Value Profile

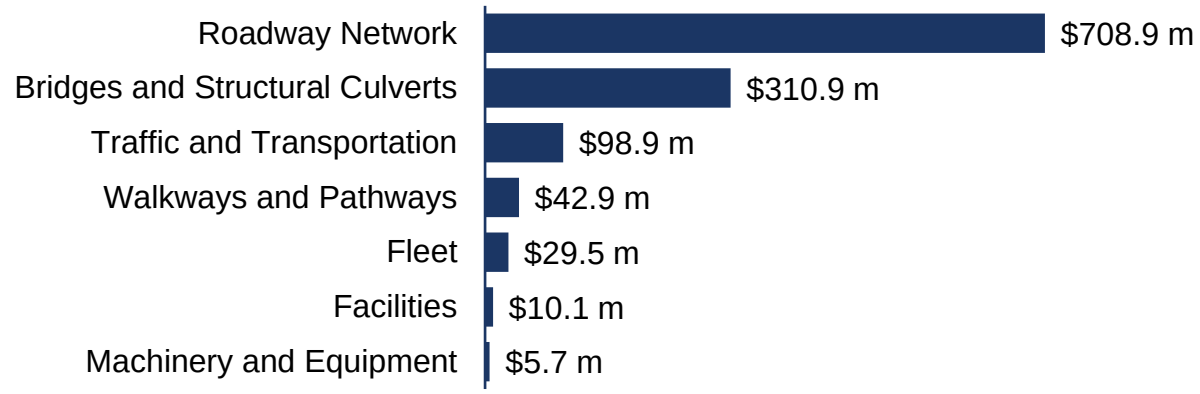


Figure 2.8: Transportation and Transit: Asset Condition Profile

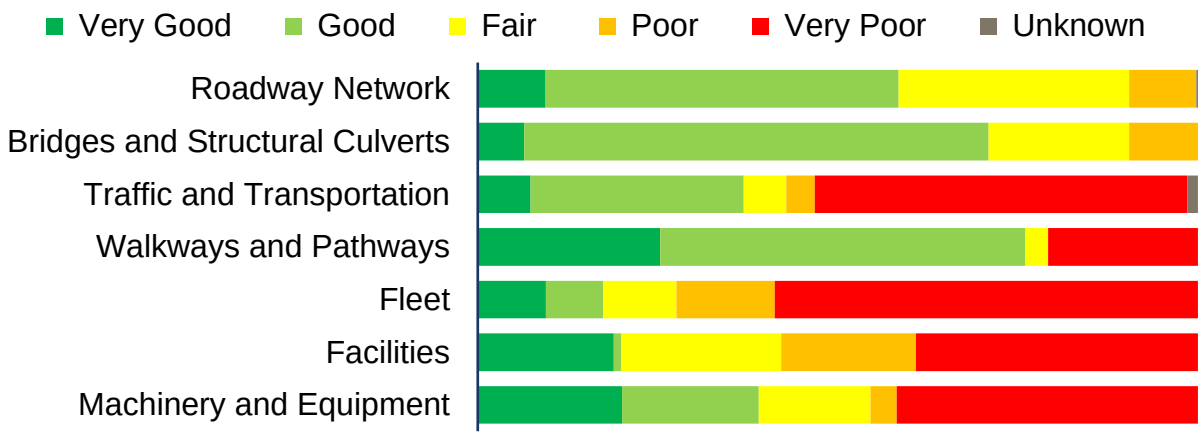
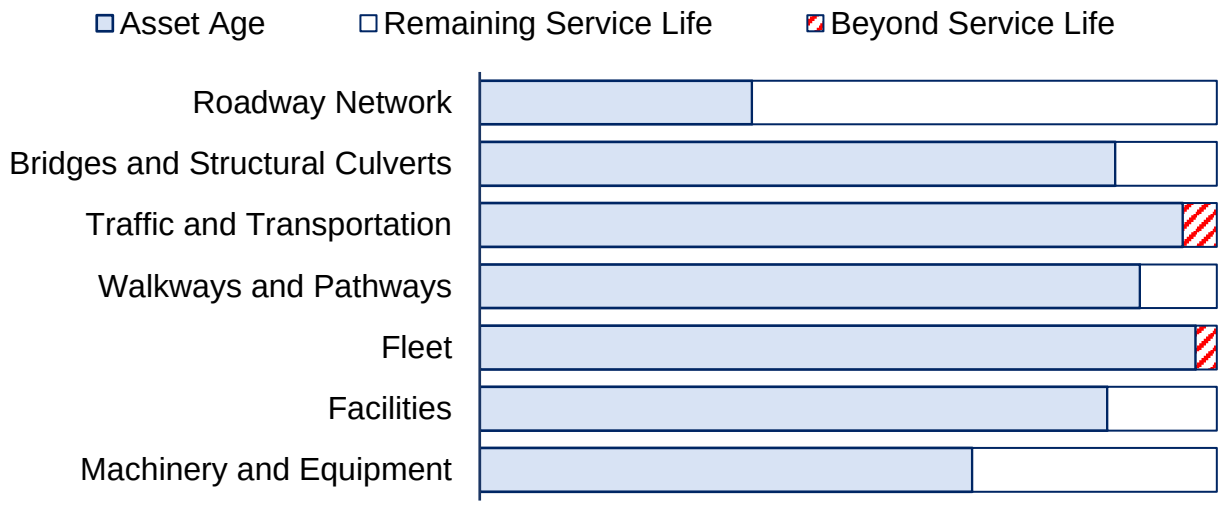


Figure 2.9: Transportation and Transit: Asset Age Profile



Environmental Services

Environmental Services assets protect public safety and environmental health by collecting, conveying and managing stormwater through a network of pipes, culverts, catch basins, and retention facilities. The figures below provide an overview of environmental services assets.

Figure 2.10: Environmental Services: Current Replacement Value Profile

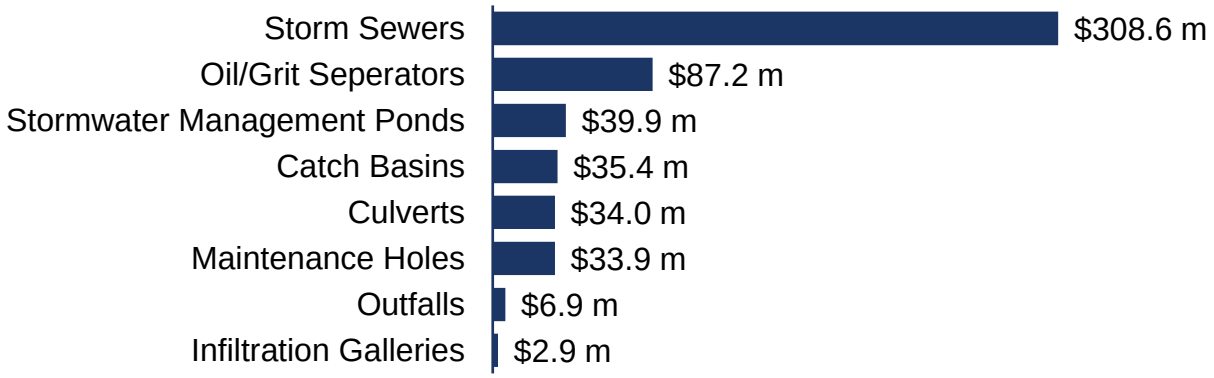


Figure 2.11: Environmental Services: Current Condition Profile

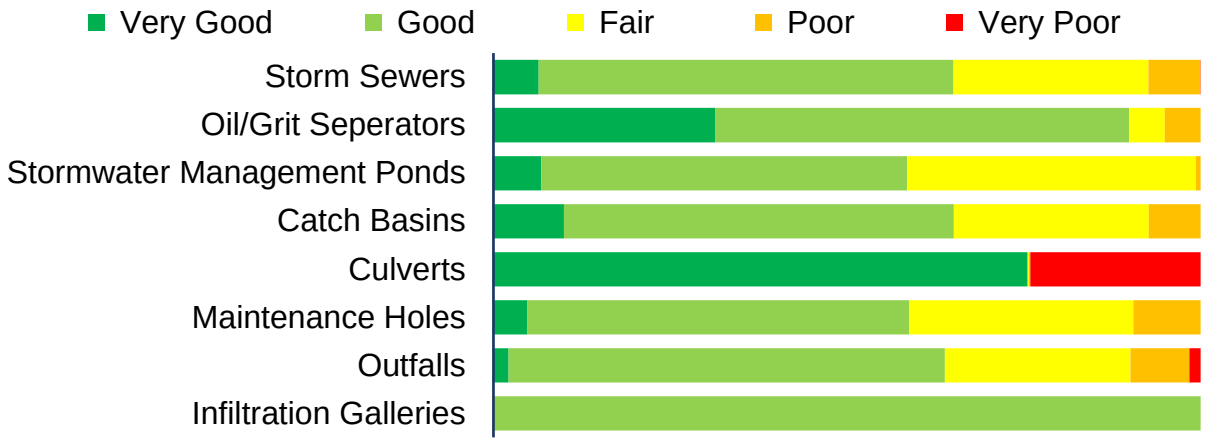
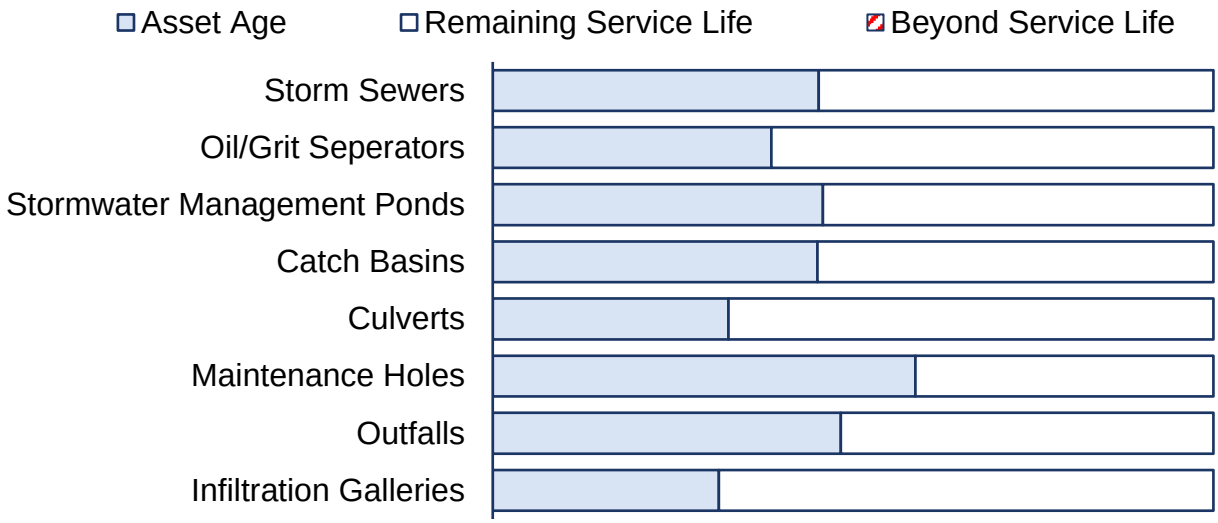


Figure 2.12: Environmental Services: Current Age Profile



Recreation and Culture

Recreation and Culture assets help manage the provision of recreation, culture and arts space to Town residents, as well as deliver recreation programs, activities for all abilities. This is done by identifying community needs and interests and maintain and operating associated facilities to provide a setting for recreation and culture activities The figures below provide an overview of recreation and culture assets.

Figure 2.13: Recreation and Culture: Current Replacement Value Profile

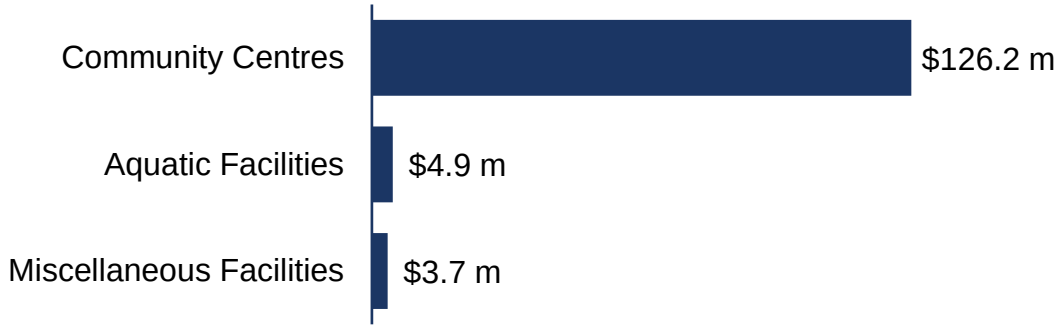
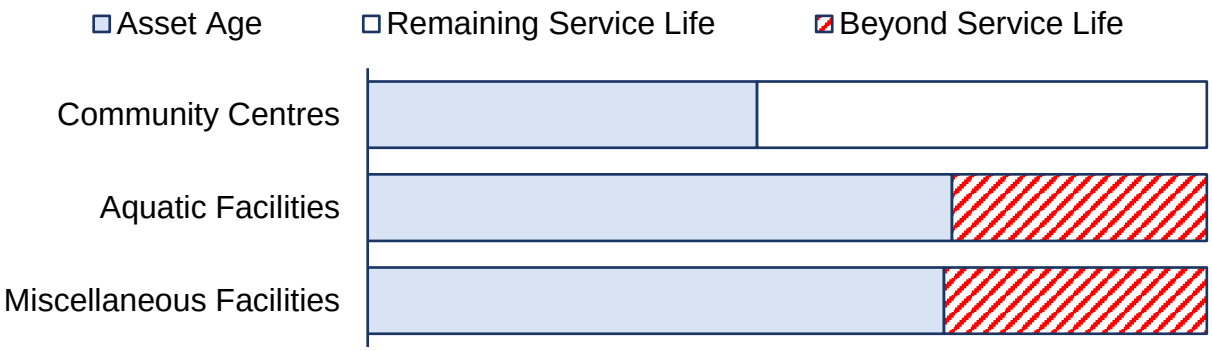


Figure 2.14: Recreation and Culture: Current Condition Profile

Figure 2.15: Recreation and Culture: Current Age Profile



Parks and Open Space

Parks and Open Space assets provide natural, semi-natural or planted space set aside for resident enjoyment and recreation or for the protection of wildlife or natural habitats. The figures below provide an overview of parks and open space assets.

Figure 2.16: Parks and Open Space: Current Replacement Value Profile

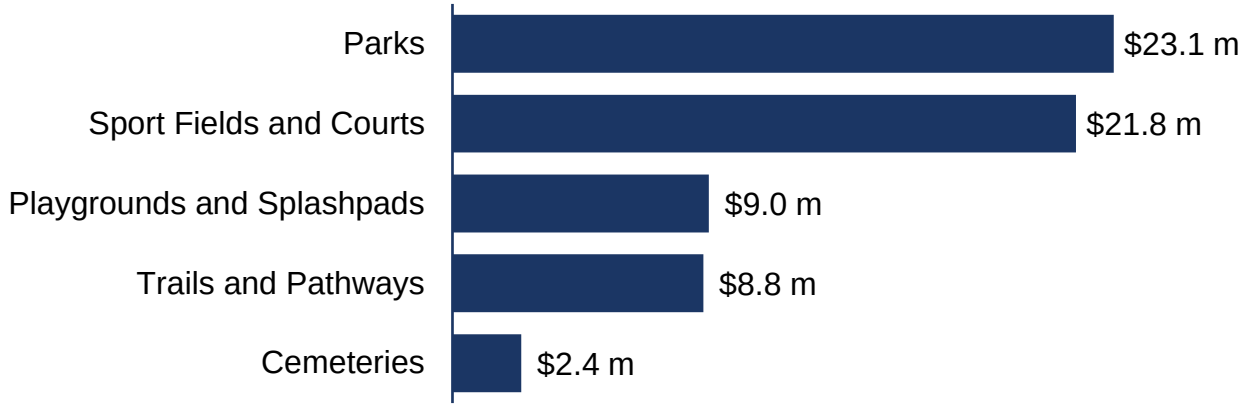


Figure 2.17: Parks and Open Space: Current Condition Profile

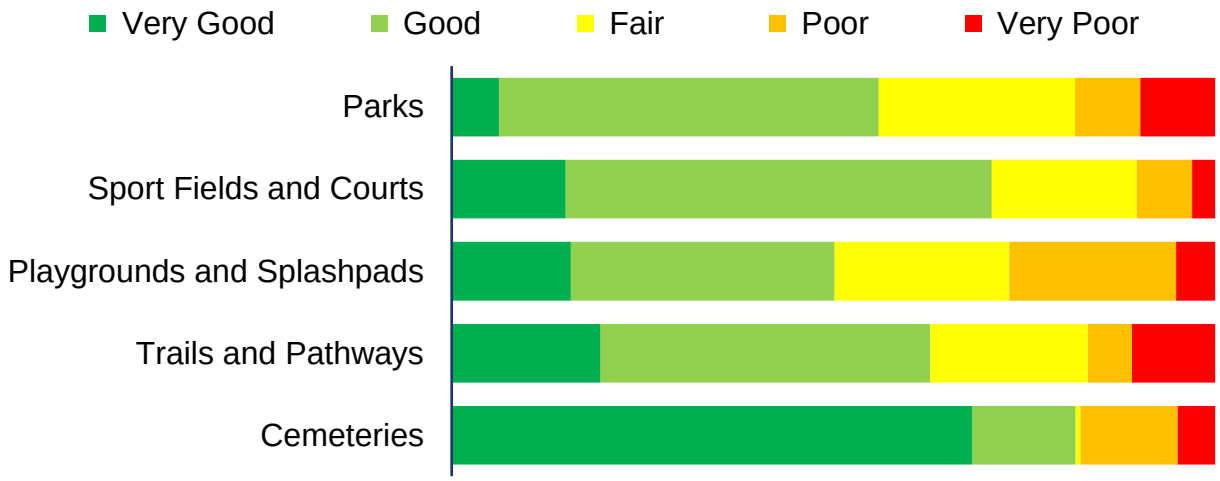
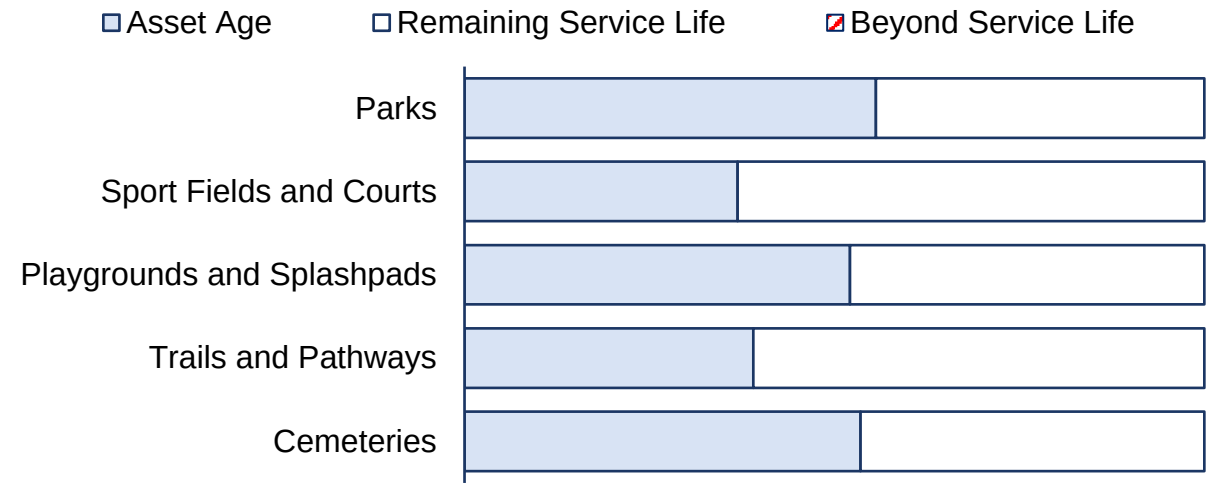


Figure 2.18: Parks and Open Space: Current Age Profile



Fire Services

Fire Services provides Town residents, visitors and businesses with protection against loss of life, property and the environment from the effects of fire, illness, accidents, and all other hazards through preparedness, prevention, public education, and emergency response, with an emphasis on quality services, efficiency, effectiveness, and safety. The figures below provide an overview of fire services assets.

Figure 2.19: Fire Services: Current Replacement Value Profile

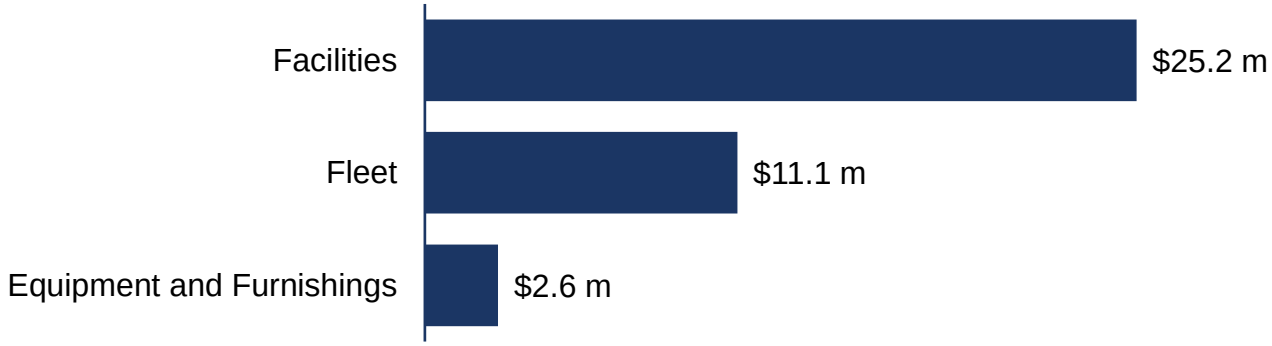


Figure 2.20: Fire Services: Current Condition Profile

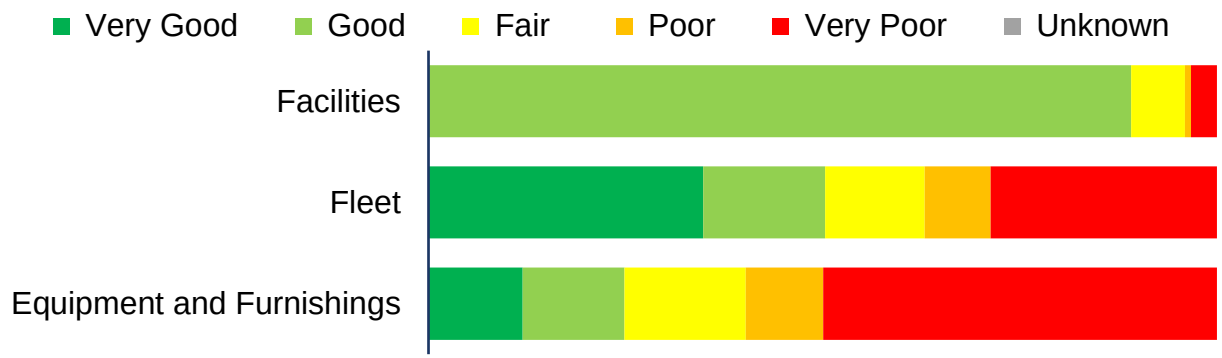
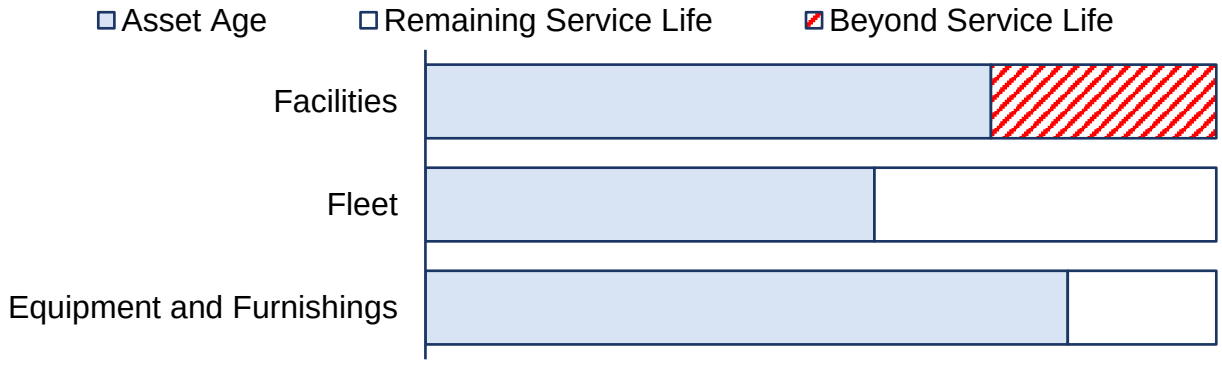


Figure 2.21: Fire Services: Current Age Profile



Library Services

Library Service means providing reading materials for convenient use; circulation of reading materials; service to help provide users with library materials, and educational and recreational audiovisual materials. The figures below provide an overview of library services assets.

Figure 2.23: Library Services: Current Replacement Value Profile

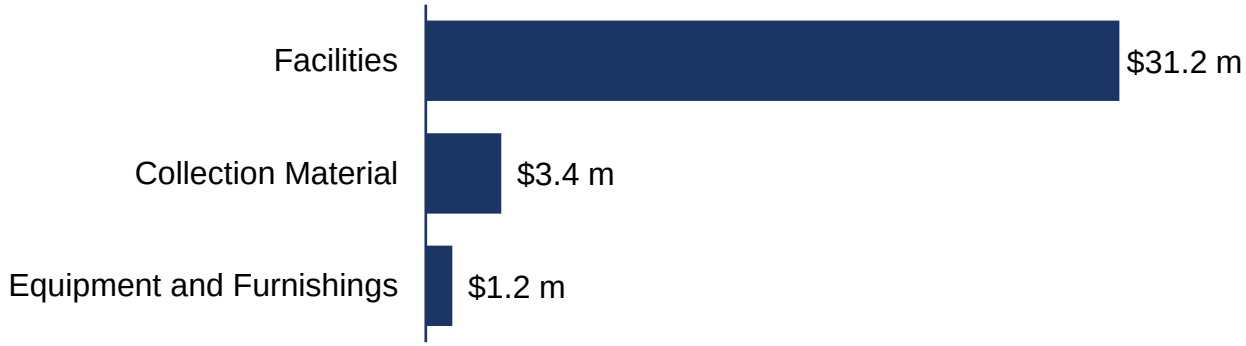


Figure 2.24: Library Services: Current Condition Profile

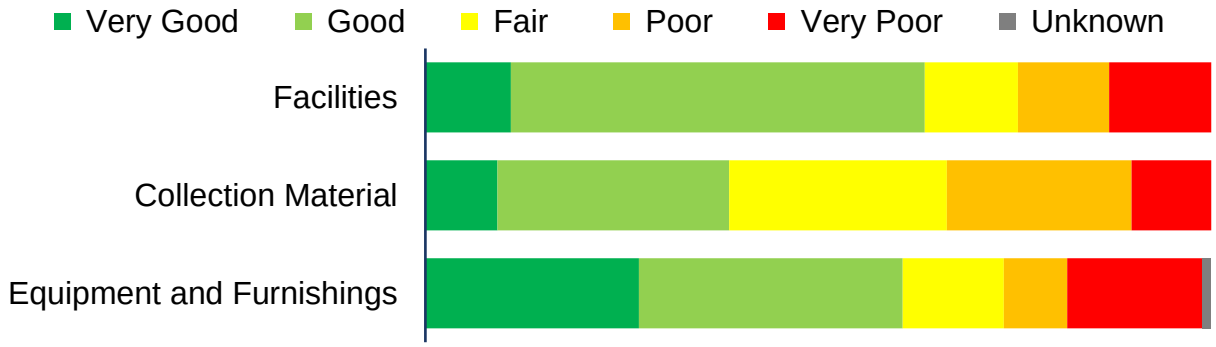
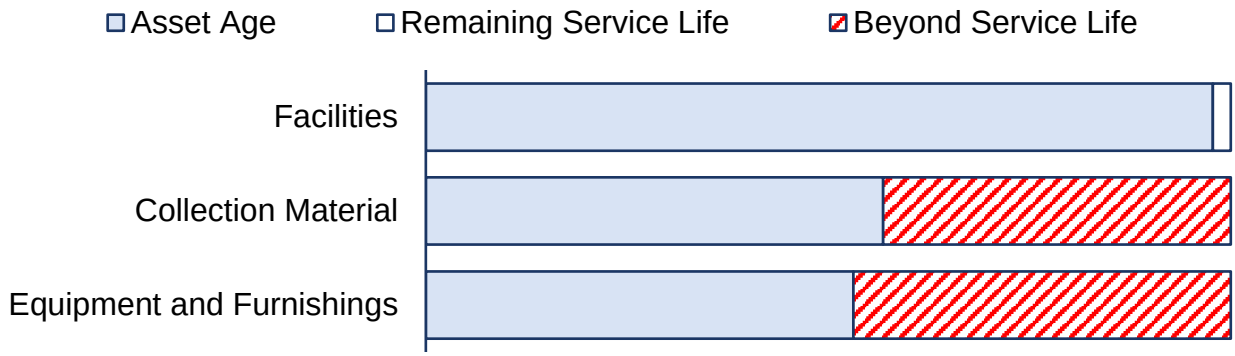


Figure 2.25: Library Services: Current Age Profile



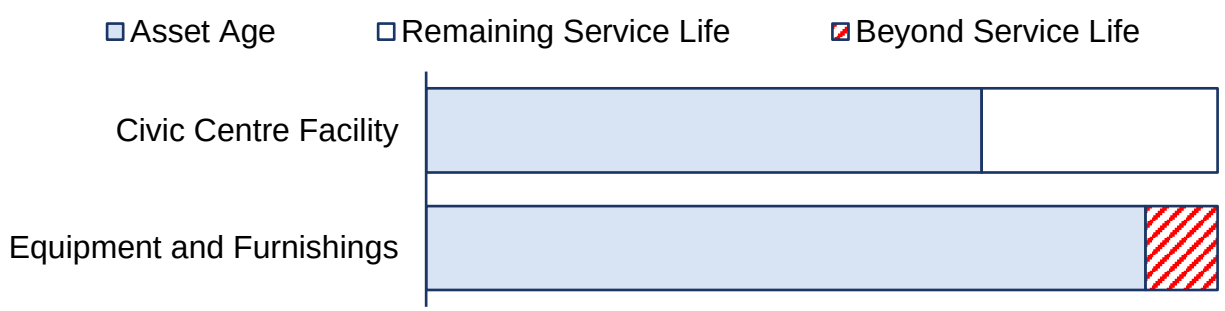
Administrative Services

Administrative Services help enable the planning, development, delivery or management of the Town's policies, programs, services or other activities directed to the Public Service. The figures below provide an overview of administrative services assets.

Figure 2.26: Administrative Services: Current Replacement Value Profile

Figure 2.27: Administrative Services: Current Condition Profile

Figure 2.28: Administrative Services: Current Age Profile



3 - Levels of Service

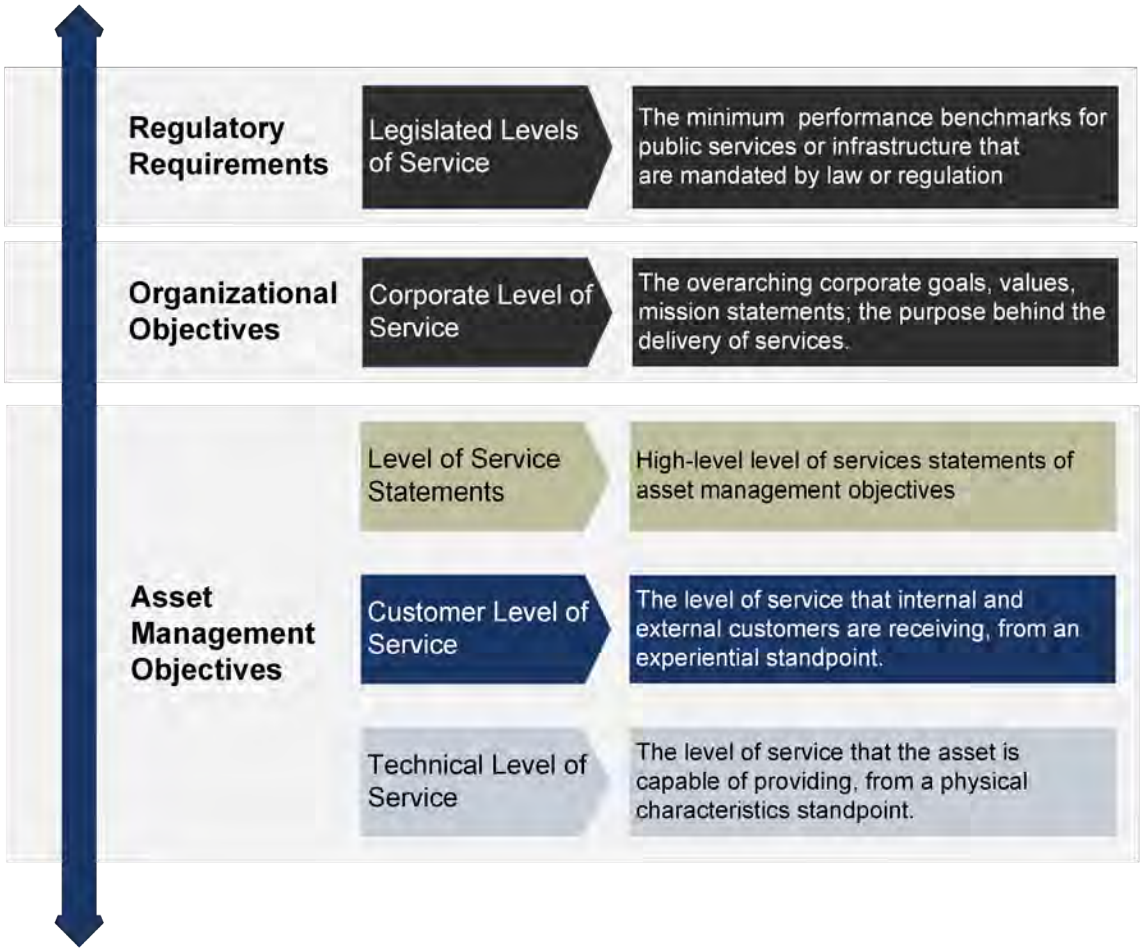
Levels of Service (LOS) describe the outputs and objectives that the Town provides to its residents, businesses, and other stakeholders. Developing, monitoring, and reporting on LOS are integral parts of a performance management program aimed at maintaining and improving service delivery while demonstrating accountability to the Town's stakeholders.

LOS are guided by a combination of customer expectations, legislative requirements, and internal guidelines, policies, and procedures. Often, LOS are implied based on past service delivery, community expectations, and infrastructure system design. Effective asset management planning requires formalizing LOS and supporting them with a framework of performance measures, targets, and timeframes for achieving these targets, as well as understanding and communicating the costs associated with delivering the documented LOS.

Levels of Service Framework and Line of Sight

Figure 3.1 illustrates the line of sight from the Town's organizational objectives to detailed asset-specific Technical LOS.

Figure 3.1 – Levels of Service – Line of Sight



In alignment with O. Reg. 588/17, this AMP discusses LOS under community (i.e. customer) and technical LOS categories, defined as:

- **Customer LOS**: Qualitative descriptions that demonstrate customer and other stakeholder expectations of services provided from the assets.
- **Technical LOS**: Technical metrics that translate customer expectations into technical objectives and performance measures.

The Town's organizational objectives, in conjunction with legislated LOS, inform the LOS statements that outline the overarching asset management objectives based on various service attributes. Table 3.1 outlines the service attributes utilized to measure LOS, along with the corresponding statements.

Table 3.1: LOS Service Attributes and Statements

Service Attributes	LOS Statement
Function	Services are provided to meet various customer needs, including health, safety, accessibility, security, and legislative requirements, with a focus on performance, efficiency, and effectiveness.
Quality & Reliability	Services provided are of quality, reliable, and meet customer expectations, ensuring consistent and dependable service delivery to the community.
Capacity & Use	Services are planned and managed to meet current demand and actual capacity, while considering future needs and changes to maintain operational requirements.
Environmental Stewardship	Services are committed to environmental stewardship through conservation, adaptation, the protection of natural ecosystems and responsible management of resources.
Financial Sustainability	Services are delivered sustainably to realize the best value from assets and infrastructure, ensuring both short-term efficiency and long-term investment.

Customer Research and Expectations

In 2023, the Town conducted two surveys to update its understanding of resident priorities and satisfaction: a telephone survey and an open-link online survey. Both methodologies aimed to evaluate the importance and satisfaction levels of various municipal services and identify emerging priorities.

Residents rated the quality of life in the Town of Halton Hills as "Good" or "Excellent" and expressed high satisfaction with Fire services, Library services, Recreational facilities and the availability and maintenance of parks and open spaces. Conversely, road maintenance and construction received more modest ratings, despite being among the highest-priority services. Figures 3.2 and 3.3 provide a summary of the satisfaction results.

Figure 3.2: Satisfaction Survey Results - Phone

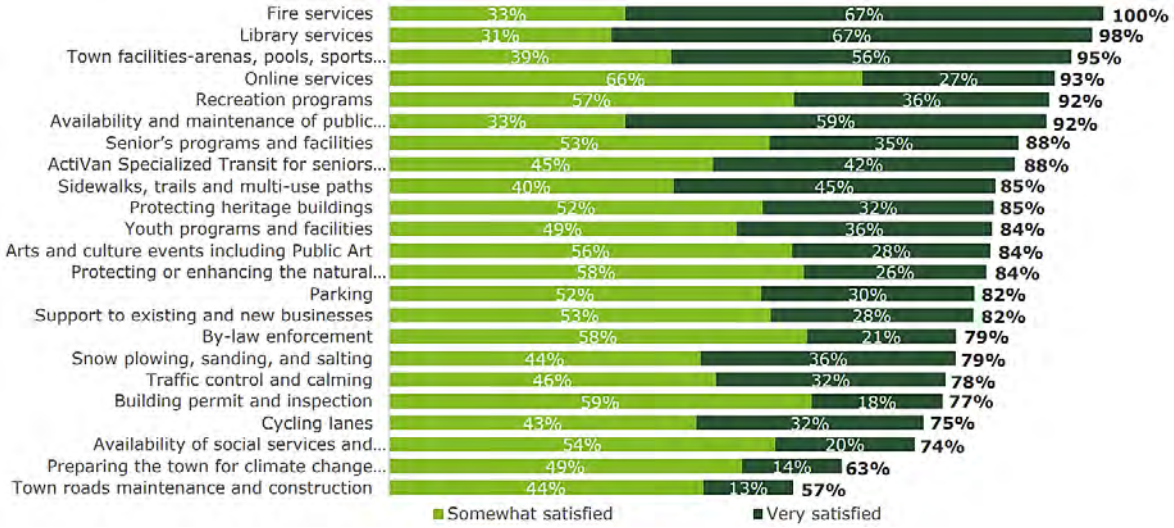
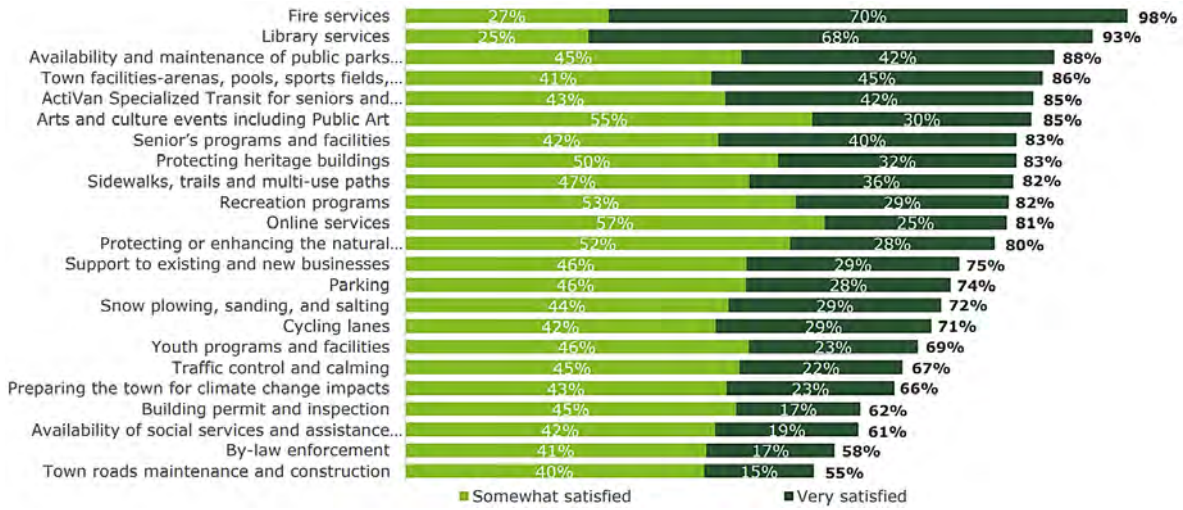


Figure 3.3: Satisfaction Survey Results – Online



Priority-importance matrices highlighted that while emergency-response infrastructure ranks high in both performance and importance, stormwater infrastructure capacity, and facility accessibility upgrades fall into the high-importance but low-performance quadrant, identifying them as potential targets for future capital and operating programs.

Town of Halton Hills Strategic Plan 2023 - 2026

This asset management plan is prepared under the direction of the Town of Halton Hills vision, mission, values, strategic priorities and objectives.

Vision

The Town of Halton Hills is a growing, nature-rich community that is proud of its small-town feel and urban rural mix where all people are welcomed, safe and connected.

Mission

To efficiently provide services that foster a higher quality of life for residents, making Halton Hills a desirable place to live, work and invest.

Values

- **Integrity and honesty:** Truthful, fact-based decisions in the Town's best interests.
- **Transparent and accessible:** Open and receptive communication and information sharing.
- **Effective stewardship:** Achieving the best outcomes as stewards of the community, corporate assets, resources and the natural environment.
- **Connected:** Staying informed and engaged with the community.
- **Respectful and caring:** Inclusive and collaborative support for all.

Strategic Priorities and Objectives

Thriving Economy

- Attract and retain businesses
- Promote commercial area growth
- Support agricultural viability
- Development of employment lands

Natural Areas and Heritage

- Increase access to parks and green spaces
- Protect biodiversity and landforms
- Preserve heritage features

Infrastructure and Asset Management

- Ensure that the town has resilient infrastructure to reduce impacts on the community.
- Ensure that Town assets, infrastructure and services keep pace with population and housing growth.
- Improve road safety.
- Maintain and renew green infrastructure.

Safe and Welcoming Communities

- Expand facilities and programs to meet evolving community needs
- Support community-driven and partnered recreation and sport programming
- Align emergency services are aligned with Town growth
- Enhance community outreach and engagement

Strategy Implementation

Successful implementation requires clear communication, adequate resourcing, and consistent progress tracking. Specific action and initiatives, often identified in annual department business plans and budget processes, will advance the strategic objectives. Council and Senior Management's commitment is crucial for achieving meaningful outcomes.

Performance Measurement

Regular monitoring and communication of progress towards the strategic objectives ensure transparency and accountability. A performance measurement framework with SMART KPIs aligns departmental actions with strategic objectives. Progress reports, including published report cards or online dashboards, will provide accessible and understandable updates to the community.

Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the Town's infrastructure assets are outlined in Table 3.2.

Table 3.2: Legislative Requirements

Legislation	Requirement
Ontario Regulation 588/17 The Infrastructure for Jobs and Prosperity Act, 2015	The Act sets out the principles for the provincial government to regulate that asset management planning for municipalities.
Municipal Act, 2001	The Act sets out the authority for a municipality to establish, operate, and maintain a transportation system.
Accessibility for Ontarians with Disabilities Act (AODA)	Developing, implementing, and enforcing accessibility standards in order to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises on or before January 1, 2025
Public Section Accounting Board Standard 3150	Standards on how to account for and report on tangible capital assets in government financial statements.

Legislation	Requirement
Ontario Regulation 472/10 Public Transportation and Highway Improvements Act	This legislation requires the design, evaluation, construction, or rehabilitation of a bridge to conform to: (a) the standards set out in the Canadian Highway bridge Design Code; and (b) the most current accepted engineering standards guidelines, procedures, and practices. The structural integrity, safety and condition of every bridge is determined through the performance of one inspection every second calendar year under the direction of a professional engineer and in accordance with the *Ontario Structure Inspection Manual*.
Minimum Maintenance Standards for Municipal Highways (MMS) Regulation 239/02 Routine Patrol	The Act sets out the standard for the frequency of patrolling highways to check for conditions described such as snow, ice, potholes, cracks, etc.
Highway Traffic Act R.R.O. 1990, Reg. 615: Signs	The Act sets out the standard for the erection and maintenance of signs.
Highway Traffic Act R.R.O. 1990, Reg. 626: Traffic Control Signal Systems	The Act sets out the standard for the erection and maintenance of traffic control signal systems.
Ontario Traffic Manual Book 18: Cycling Facilities	Provides guidelines for developing municipal cycling facilities.
Ministry of Transportation: Transit-Supportive Guidelines	Provides processes for planning Complete Streets.
Canadian Environmental Protection Act (CEPA)	An Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development.

Legislation	Requirement
Clean Water Act, 2006, S.O.2006, c.22	The purpose of this act Is to protect existing and future sources of drinking water and outlines the Municipality's role in this process.
MOECC Reg 347: General – Waste Management (hazardous material transport)	Designation of hazardous waste material as it pertains to stormwater and the requirements of its safe removal and transport.
Environmental Assessment Act, R.S.O. 1990 c.E.18	The purpose of this Act is the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment.
Environmental Protection Act, R.S.O. 1990, c.E.19	The purpose of this Act is to provide for the protection and conservation of the natural environment.
Building Code Act, 1992, S.O. 1992, c.23	The Building Code Act, 1992 (BCA) lays out the legislative framework governing the construction, renovation, demolition and change of use of buildings in Ontario. The Building Code is a regulation made under the Building Code Act . It sets out technical and administrative requirements
Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4	Provides standards for fire prevention, fire services, and fire safety for all buildings (including commercial, residential, personal use, landlords, etc.) which are governed by the Fire Protection and Prevention Act (the "FPPA").
Public Parks Act, R.S.O. 1990, c. P.46	States that a park, or a system of parks, avenues, boulevards and drives, or any of them, may be established in any municipality, and the same, as well as existing parks and avenues, may be controlled and managed in the manner hereinafter provided.

Current Levels of Service

This section of outlines the customer and technical performance measures specified for each service area. The customer performance measures focus on the quality-of-service delivery and customer satisfaction, ensuring that services meet the expectations and needs of the community. Conversely technical performance measures assess the condition, functionality, and efficiency of infrastructure assets, providing insights into areas needing improvement or maintenance.

According to Ontario Regulation 588/17, the performance metric collected for each measure must be feasible, applicable, and based on data from at most the two calendar years prior to the development of the asset management plan.

Staff are currently collecting and validating data to establish benchmarks for 2025. These benchmarks will serve as reference points for evaluating progress and guiding future decisions. This comprehensive approach ensures that asset management strategies remain dynamic and responsive to evolving demands.

Table 3.3 to 3.16 provides an overview on some of the potential customer and technical performances measures gathered as part of this framework.

Transportation and Transit

Table 3.3: Customer Levels of Service

Service Attribute	Customer Performance Measure
Capacity and Use	Description of the traffic that is supported by municipal bridges.
	Description, which may include maps, of the road network in the municipality and its level of connectivity
	Adequate quantity of fleet to provide the service
Quality and Reliability	Description or images that illustrate the different levels of road class pavement condition
	Description or images of the condition of bridges and how this would affect use of the bridges.
	Description or images of the condition of culverts and how this would affect use of the culverts.
	% of streetlights that are functioning and operating in hours of darkness
	Adequate type of equipment and attachments to effectively perform activities

Service Attribute	Customer Performance Measure
Function	Adequate quantity of fleet to provide the service
	Compliant with Legislative Requirements (MTO, Highway Traffic Act, O. Reg. 555/06)
Environmental Stewardship	Public awareness of biodiversity enhancement projects
Financial Sustainability	Average Asset Renewal Rate (# of Years)

Table 3.4: Technical Levels of Service

Service Attribute	Technical Performance Measure
Capacity and Use	# of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.
	# of lane-kilometres of collector roads and local roads as a proportion of square kilometres of land area of the municipality.
	# of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality
	% of bridges in the municipality with loading or dimensional restrictions
Quality and Reliability	Average pavement condition index (also referred to as the pavement quality index) value for paved roads
	Average surface condition (e.g. excellent, good, fair or poor) for unpaved roads.
	For bridges in the municipality, average bridge condition index value.
	For structural culverts in the municipality, average bridge condition index value.
	% of paved roads in poor or very poor condition

Service Attribute	Technical Performance Measure
	% of bridges and structural culverts in poor or very poor condition
	% of traffic infrastructure in poor or very poor condition
	% of walkways and pathways in poor or very condition
	% of fleet, machinery and equipment in poor or very poor condition
Function	Compliant with Legislative Requirements (MTO, Highway Traffic Act, O. Reg. 555/06)
	Average Detour Length around bridge or structural culverts
	% of pedestrian bridges that are AODA compliant
	% of traffic signals with APS
Environmental Stewardship	% of ROW areas with integrated stormwater management systems (such as permeable pavements, bioswales, rain gardens, and green roofs)
	% of streetlights with LED or low energy fixtures
Financial Sustainability	Capital Reinvestment Rate

Environmental Services

Table 3.5: Customer Levels of Service

Service Attribute	Customer Performance Measure
Capacity and Use	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.
	Annual number of complaints received
Function	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.

Table 3.6: Technical Levels of Service

Service Attribute	Technical Performance Measure
Capacity and Use	% of properties in municipality resilient to a 100-year storm
	% of the municipal stormwater management system resilient to a 5-year storm
Quality and Reliability	% of stormwater infrastructure assets in poor or very poor condition
Environmental Stewardship	% of SWM ponds that are below their target storage volume
	% of planned maintenance activities completed as per scheduled for stormwater quality features
Financial Sustainability	Capital Reinvestment Rate

Recreation and Culture

Table 3.7: Customer Levels of Service

Service Attribute	Customer Performance Measure
Capacity and Use	Number of Service Requests fulfilled
Quality and Reliability	Annual number of customer complaints/service requests relating to facility condition
Environmental Stewardship	% of facility users aware of sustainability and resiliency initiatives

Table 3.8: Technical Levels of Service

Service Attribute	Technical Performance Measure
Capacity and Use	Number of distinct opportunities (programs, non-programs and events) provided.
Quality and Reliability	% of facility assets in poor or very poor condition
Function	% of facilities that meet all regulatory requirements
Environmental Stewardship	Annual electricity consumption per square foot
	Annual natural gas consumption per square foot
	Annual water consumption per square foot
	Annual volume of rainwater harvested
Financial Sustainability	Capital Reinvestment Rate

Parks and Open Space

Table 3.9: Customer Levels of Service

Service Attribute	Customer Performance Measure
Quality and Reliability	Annual # of distinct RFS (Request for Service) regarding service quality
Function	% of residents satisfied with the parks, sport fields and open spaces
Environmental Stewardship	Annual # community participation events in sustainability-oriented programs (e.g. tree planting, clean-up drives, etc.)

Table 3.10: Technical Levels of Service

Service Attribute	Technical Performance Measure
Quality and Reliability	% of park and open space assets in poor or very poor condition
Function	% of parks, trails and cemeteries cleaned and maintained as scheduled
	% of playgrounds that meet CSA standard
Environmental Stewardship	Annual # of trees planted on parks and open spaces
Financial Sustainability	Capital Reinvestment Rate

Fire Services

Table 3.11: Customer Levels of Service

Service Attribute	Customer Performance Measure
Quality and Reliability	% of customers that are satisfied with the effectiveness of the prevention and inspection services
Function	# of Fire Safety Inspections successfully completed in the first attempt (business licenses inspection, vulnerable occupancies, industrial)

Service Attribute	Customer Performance Measure
	Annual # of Fire Safety Education Engagements

Table 3.12: Technical Levels of Service

Service Attribute	Technical Performance Measure
Quality and Reliability	% of fire services assets in poor or very poor condition
	Accurate performance data based on total calls for service by career firefighters, reflecting international standards and industry best practices (NFPA 1710): • Turnout Time • Travel Time (first due Pumper) • Travel Time (second due Pumper)
Function	Meeting compliance set by the "Emergency Management Program" and OEM guidelines
	Total number of calls to Fire Stations (Emergency and Non-Emergency)
Financial Sustainability	Capital Reinvestment Rate

Library Services

Table 3.13: Customer Levels of Service

Service Attribute	Customer Performance Measure
Quality and Reliability	% of residents satisfied with library services
Function	Service population per library (total population / of libraries)

Table 3.14: Technical Levels of Service

Service Attribute	Technical Performance Measure
	% of library services assets in poor or very poor condition

Service Attribute	Technical Performance Measure
Quality and Reliability	Annual # of unfulfilled requests
Function	Collection size (collection size/capita)
Financial Sustainability	Capital Reinvestment Rate

Administrative Services

Table 3.15: Customer Levels of Service

Service Attribute	Customer Performance Measure
Quality and Reliability	% of resident inquiries resolved on initial contact

Table 3.16: Technical Levels of Service

Service Attribute	Technical Performance Measure
Quality and Reliability	% of facility assets in poor or very poor condition
	% of equipment assets in poor or very poor condition
Financial Sustainability	Capital Reinvestment Rate

Current performance is based on existing resource provision and work processes. Levels of Service are expected to change over time due to shifts in customer priorities and technology used to complete work. Updating customer and technical levels of service metrics and their associated performance is an ongoing process.

Proposed Levels of Service

In accordance with O. Reg. 588/17, the Town is required to specify Proposed Levels of Service for its infrastructure over a 10-year period. For the purposes of this Asset Management Plan, the Town has decided to adopt the current LOS as the proposed target LOS for 2025-2034.

When defining the proposed levels of service and initial performance measures, the Town has focused on the use of technical performance measures—specifically the condition of infrastructure assets—to monitor and track LOS performance.

Condition-based performance measures provide objective and actionable insights into the level of service being provided, which can be translated into maintenance, rehabilitation, or replacement actions. This clear connection between measurement and intervention ensures effective resource deployment and enables consistent service delivery.

Any deviation from established benchmarks triggers a systematic review of maintenance, renewal, and rehabilitative strategies, thereby supporting a proactive, risk-based approach to asset management.

The tables below detail the proposed LOS measures for each service area.

Table 3.17: Proposed Levels of Service – Transportation and Transit

Service Area	Technical Performance Measure	Proposed LOS
Transportation and Transit	% of paved roads in poor or very poor condition	17%
	% of bridges and structural culverts in poor or very poor condition	10%
	% of traffic infrastructure assets in poor or very poor condition	56%
	% of walkway and pathway assets in poor or very poor condition	21%
	% of public work facility assets in poor or very poor condition	13%
	% of public work fleet, machinery and equipment assets in poor or very condition	20%

Table 3.18: Proposed Levels of Service – Environmental Services

Service Area	Technical Performance Measure	Proposed LOS
Environmental Services	% of stormwater infrastructure assets in poor or very poor condition	4%

Table 3.19: Proposed Levels of Service – Recreation and Culture

Service Area	Technical Performance Measure	Proposed LOS
Recreation and Culture	% of facility assets in poor or very poor condition	13%

Table 3.20: Proposed Levels of Service – Parks and Open Space

Service Area	Technical Performance Measure	Proposed LOS
Parks and Open Space	% of cemetery assets in poor or very poor condition	18%
	% of park assets in poor or very poor condition	17%
	% of trails and pathway assets in poor or very poor condition	17%

Table 3.21: Proposed Levels of Service – Fire Services

Service Area	Technical Performance Measure	Proposed LOS
Fire Services	% of fire facility assets in poor or very poor condition	13%
	% of fire fleet and equipment assets in poor or very poor condition	20%

Table 3.22: Proposed Levels of Service – Library Services

Service Area	Technical Performance Measure	Proposed LOS
Library Services	% of library facility assets in poor or very poor condition	13%

Service Area	Technical Performance Measure	Proposed LOS
	% of library equipment assets in poor or very poor condition	28%

Table 3.23: Proposed Levels of Service – Administrative Services

Service Area	Technical Performance Measure	Proposed LOS
Administrative Services	% of the Civic Centre facility assets in poor or very poor condition	20%
	% of equipment assets in poor or very poor condition	18%

4 - Future Demand

Future demand assesses the Town's ability to meet the evolving needs of the industry and community over time. Drivers affecting demand include technological changes, regulatory changes, population changes, environmental awareness, changes in demographics, seasonal factors, consumer preferences and expectations, and economic conditions.

These external trends and drivers may affect current LOS or the Town's ability to meet the proposed LOS in the future. The Town's 2022 Development Charges Background Study[2] details the anticipated scale and timing of population, household, employment and non-residential development.

Demand Drivers

Demand drivers can affect the future services required from infrastructure assets. These drivers can change how frequently or how much we use current existing assets, as well as how we use and interact with the assets and plan for future needs.

The DC Background Study outlines the five interrelated drivers that will affect future demand on infrastructure and these are summarized below:

- **Population Growth and Demographic Shifts:** new residents and dwellings increase the use of infrastructure, while an aging population requires more accessible sidewalks, multi-use paths and crossings.
- **Employment and Non-Residential Growth:** additional jobs, industrial and commercial growth will intensify peak-hour and freight movements.
- **Land-use Change and Housing Mix:** a shift to medium- and high-density forms alters drainage footprints and public-space needs.
- **Travel-mode Shifts:** modest increase in active transportation and transit use
- **Climate and Environment:** increasing climate volatility and protected natural areas demand resilient designs and early coordination with conservation authorities.

[2] Town of Halton Hills. 2022 Development Charges Background Study (Watson & Associates Economists Ltd., December 2021)

Demand Forecasts

Demand forecasting takes into consideration the demand drivers to ensure that continuity of service is maintained now and in the future. The present position and forecasted demand drivers that may impact future service delivery and use of assets have been documented.

As illustrated in Figure 4.1, between mid-2022 and mid-2032, the population of the Town is projected to increase to 83,823 and residential units to 30,353. Employment will increase to 29,289 by mid-2032, and the non-residential gross floor area is expected to be 8,780,300 ft^2.

Figure 4.1: Residential and Non-Residential Growth Summary

Time Horizon	Residential		Non-Residential[1]	
	Net Population	Residential Units	Employment	Gross Floor Area (Square Feet)
Mid 2022	64,001	22,564	21,096	
Mid 2032	83,823	30,353	29,289	
Mid 2036	91,885	33,401	32,873	
Incremental Growth				
10-year (2022-2032)	19,822	7,789	8,193	8,780,300
14-year (2022-3036)	27,884	10,837	11,777	12,714,700

1. Excludes Work at Home (W.A.H) and No Fixed Place of Work (N.F.P.O.W.)

These forecasts underpin asset management planning for Town infrastructure.

Demand Impact

The demand drivers affecting the assets in the scope of this plan are documented below along with their potential impact.

Population and Employment Increase

The Town of Halton Hills currently has a steadily growing population. Projections indicate significant future growth, which will contribute to an increased demand for services provided by the Town's infrastructure, potentially leading to accelerated deterioration of these assets and creating capacity challenges. Additionally, the growing economy within Halton Hills will intensify peak-hour traffic as people, goods, and services move across the Town, amplifying the need for capacity upgrades and more resilient transportation planning.

Change in Demographics

With regard to the forecast population growth, the share of residents aged 65 and over is projected to rise from 13% in 2016 to 18% in 2031, driven by the continued aging of the baby-boom cohort (persons born between 1946 and 1964). This demographic shift will increase demand for barrier-free infrastructure – accessible sidewalks, multi-use paths and safer crossings – and for recreation programs that are tailored to seniors' needs. Concurrently, the emergence of more medium- and high-density housing forms

will introduce younger families and smaller household units, placing greater pressure on public spaces and shared stormwater infrastructure.

Travel-mode shifts

By the 2031, Halton Region has a set a target of achieving at least 20% of daily trips by public transit and 5% of PM peak-hour via active modes (walking and cycling) under the Regional Official Plan Amendment 38. For the Town, these regional forecasts translate into focusing on the ongoing rehabilitation and renewal of roads and bridges to support private-vehicle use, as well as the incremental investment in active-transportation and transit-supported infrastructure.

Climate Volatility and Environment Constraint

Climate change is a growing driver of infrastructure and risk in the Town. The local climate is expected to become warmer, wetter, and more volatile, with more frequent and intense extreme weather events. These changes will place increasing stress on municipal infrastructure for instance:

- Stormwater infrastructure will be challenged by heavier and more frequent precipitation events, increasing the risk of localized flooding and erosion.
- Assets composed of asphalt or concrete such as roads, bridges, sidewalks may experience accelerated deterioration due to prolonged heatwaves, freeze-thaw cycles, flooding and other climate-related stressors
- Facilities may face HVAC strain, roof degradation, and envelop wear due to extreme heat and moisture.
- Recreational outdoor amenities like splash pads, sport fields and courts may see increased usage and wear during hotter seasons.
- Trails and Natural Pathways will be subject to erosion, washouts and vegetation overgrowth due to changing precipitation and temperature patterns.

In short, changing climate patterns will put pressure on many of the Town's infrastructure's ability to handle increased temperatures, precipitation, and intense weather events.

The Niagara Escarpment, Greenbelt, and other protected natural heritage features are vital ecological assets that support biodiversity, regulate climate, and offer recreational value. These areas are subject to strict provincial policies and conservation plans, which limit land use and development to preserve their environmental integrity.

While these constraints limit where and how infrastructure can be developed, they also present opportunities to integrate green infrastructure, enhance ecosystem services, and build climate resilience.

Demand Management Plan

Demand for new services will be managed through a variety of different interventions which can include:

- Management of existing assets
- Upgrade of existing assets
- Acquisition of new assets
- Policy and design changes
- Operation and maintenance changes

To manage the demand drivers outlined above, the demand management plan outlined in Table 4.1 are options for the Town to explore. Further opportunities will be developed in future iterations of this AMP.

Table 4.1: Demand Management Plan

Demand Driver	Demand Management Plan
Population Increase	• Ensure design of new assets accounts for the increased demand due to population increase. • Shorten the time between rehabilitation. • Consider expansion opportunities during renewal/rehabilitation projects. • Monitor demand to capacity limits to ensure sufficient number of Parks, Recreation and Cultural services provided for communities. • Monitor demand to capacity limits to ensure sufficient Fire Services are provided for communities.
Change in demographics	• Leverage insights from the upcoming Transit Implementation Plan to support responsive and inclusive mobility planning. • Continue to refine Recreation and Culture programs to meet population requirements.

Demand Driver	Demand Management Plan
Transportation Preferences	• The Mobility Master Plan considers active transportation and multi-use transportation routes to ensure future service levels can meet demands. • Promote the use of low-carbon transportation options.
Climate Volatility and Environmental Constraints	• Ensure that new projects and rehabilitations consider future climate conditions by updating material standards and design parameters, increasing the resilience of electrical systems, and encourage Low Impact Development. • Update and enhance operations and maintenance procedures and provide training programs for climate event response.
	• Future projects must identify existing environmental features that may be impacted by infrastructure assets (i.e. facility commissioning). • Conservation area authorities are included in asset construction planning, and their permission is required for the acquisition, upgrade or enhancement of new assets in designated areas.

Climate Change Adaptation

As noted above, climate change is a significant demand driver. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

In 2018 and 2020, the Town completed an Infrastructure Vulnerability assessment for all facilities on Transportation, Environmental and Parks & Open spaces infrastructure assets. This assessment outlined how climate change affects these infrastructure assets now and in the future. To address the impacts of climate change, the Town takes a holistic approach, considering adaptation, mitigation, and resilience and the actions are organized into three categories: policy, design, and operations and maintenance.

Table 4.2: Managing the Impact of Climate Volatility on Assets and Services

Action	Management & Opportunities
Policy Recommendations	Increase community engagement and education
	Ensure that new projects and retrofits consider future climate conditions
	Expand climate policies and procedures
Design Recommendations	Update material standards and design parameters
	Continue to encourage Low-Impact Development (LID)
	Increase resilience of electrical systems
	Consider user comfort in design and upgrades to Parks and Open Spaces
Operations & Maintenance	Establish procedures and training programs for climate event response
	Update inspection and maintenance procedures
	Explore digital solutions to track and inform maintenance and operations activities
	Formalize a tree and vegetation management program

Financial Impact

The financial impact of implementing climate adaptation actions to strengthen infrastructure resiliency to climate volatility is continuously assessed on a project by project basis and included in the forecasted lifecycle activities and asset management/financial planning process.

5 - Risk Management

In 2021, the Town developed a Risk Management Strategy aimed at providing a consistent approach to identifying, assessing, and managing risks for all Town assets. An enterprise approach to risk management will help the Town better understand and manage the probability of various threat events impacting its ability to deliver the levels of services that customers need.

Risk events, such as an asset's failure to have sufficient capacity, function, or quality, are events that may compromise the delivery of the Town's strategic objectives. Lifecycle management activities are used to manage the risk of failure by reducing the chance of asset failure to acceptable levels. The impact of asset failure on the Town's ability to meet its strategic objectives dictates the type and timing of lifecycle management activities.

Risk Assessment

The Town used the Risk Rating Matrices shown in Table 5.1 and 5.2 to assess risk for all Town assets. Risk is assessed in terms of Capacity & Use, Function, and Quality as aligned with the key service attributes outlined in O. Reg 588/17.

Table 5.1: Probability of Failure

Probability of Failure (POF)	Rating	Capacity & Use	Function	Quality
Rare	**1**	Demand corresponds well with actual capacity and no operational problems experienced. Meets current and future capacity needs within planning horizon.	The infrastructure in the system or network meets all program/service delivery needs in a fully efficient and effective manner. (Health, safety, security, legislative etc.)	Asset is physically sound and is performing its function as originally intended. Asset is new or at the beginning of its service life.
Unlikely	**2**	Demand is within actual capacity and occasional operational problems experienced.	The infrastructure in the system or network meets program/service delivery needs in an acceptable manner. (Health, safety, security, legislative etc.)	Asset is physically sound and is performing its function as originally intended. Typically, asset is within mid-stage of its expected life.
Possible	**3**	Demand is approaching actual capacity and/or operational problems occur frequently. Meets current capacity needs but not future without modifications.	The infrastructure in the system or network meets program/service delivery needs with some inefficiencies and ineffectiveness present. (Health, safety, security, legislative etc.)	Asset is showing signs of deterioration and is performing at a lower level than originally intended.

Probability of Failure (POF)	Rating	Capacity & Use	Function	Quality
Likely	**4**	Demand exceeds actual capacity and/or significant operational problems are evident.	The infrastructure in the system or network has a limited ability to meet program/service delivery needs. (Health, safety, security, legislative etc.)	Asset is showing significant signs of deterioration and is performing to a much lower level than originally intended.
Certain	**5**	Demand exceeds actual capacity and/or operational problems are serious and ongoing. Does not meet Current capacity Requirements.	The infrastructure in the system or network is seriously deficient and does not meet program/service delivery needs and is neither efficient nor effective. (Health, safety, security, legislative etc.)	Asset is physically unsound and/or not performing as originally intended. Asset has reached end of life and failure is imminent.

Table 5.2 Consequence of Failure

Consequence Categories	(Triple Bottom Line)	COF 1	COF 2	COF 3	COF 4	COF 5
		Insignificant	Minor	Moderate	Major	Catastrophic
Economic	**Financial**	Damages, losses (including 3rd party) or fines from $1k to $10k	Damages, losses (including 3rd party) or fines $10k to $100k	Damages, losses (including 3rd party) or fines $100k to $1M	Damages, losses (including 3rd party) or fines $1M to $10M	Damages, losses (including 3rd party) or fines > $10M
Social	**Health & Safety**	No obvious potential for injury or affects to health.	Potential for minor injury or affects to health of an individual. Full recovery is expected; or minor medical attention may be required	Potential for serious injury or affects to health. May affect many individuals and / or result in short term disability; or Hospitalization may be required for a short period of time.	Potential for serious injury or affects to health of one or more individuals with a possibility of loss of a life and the certainty of long-term disability; or Emergency hospitalization required for one or more individuals.	Potential for death or multiple deaths with probable permanent damage; or Emergency and long-term hospitalization required for several individuals.
	Availability	Small number of customer experiencing disruption / impact (less than 100 people or up to a few hours)	Localized service disruption / impact (100 to 1000 people or up to 1 day)	Significant localized disruption / impact (1,000 to 10,000 people or less than 1 week)	Major service disruption / impact 15,000 to 50,000 people or for more than a week)	Town wide service disruption / impact (greater than 50,000 people or permanent loss of services)
Environmental	**Environment**	Very negligible impact or can be restored within 1 week	Minor (within 1 month) very isolated damage / impact to the environment, local importance	Significant short-term impact (up to 2 months), local importance	Significant long-term impact (up to 1 year), Provincial importance.	Major long-term impact (greater than 1 year), Federal importance.

The risk ratings can be prioritised into the following categories below and on the 5 x 5 grid shown in Figure 5.1:

Low Risk: Status Quo no formal response. Risk is documented and will be reviewed periodically.

Low-Medium: Status Quo. Identify assets that are candidates for “run to failure”. Continue with current maintenance and performance / condition monitoring.

Medium Risk: Extend life & monitor threat events. Review maintenance strategies & plans (e.g., predictive, time based). Continue to maintain & monitor performance / condition.

Medium-High: Extend life & monitor / respond to threat events. Review maintenance strategies & plans (e.g., proactive). Review renewal strategies (NPV options analysis), spares strategy, available redundancy & monitoring programs.

High Risk: Respond to threat events. Identify capital renewal options, confirm spares strategy & available redundancy, & review monitoring programs.

Figure 5.1 Proposed Risk Thresholds

			Consequence of Failure				
			Insignificant	Minor	Moderate	Major	Catastrophic
			1	2	3	4	5
Probability of Failure	Improbable	1	1	2	3	4	5
	Unlikely	2	2	4	6	8	10
	Possible	3	3	6	9	12	15
	Likely	4	4	8	12	16	20
	Highly Probable	5	5	10	15	20	25

A risk assessment has been completed of the Town's infrastructure assets, which are shown in Figures 5.2 to 5.9.

Figure 5.2: Risk Assessment – Administrative Services

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Administration	IT Infrastructure													
Administration	IT Infrastructure	Servers	2	3	6	Low-Medium	2	3	6	Low-Medium	2	3	6	Low-Medium
Administration	IT Infrastructure	Storage & Backup	2	3	6	Low-Medium	2	3	6	Low-Medium	2	3	6	Low-Medium
Administration	IT Infrastructure	Wireless (Wi-Fi access points)	2	2	4	Low-Medium	1	2	2	Low	1	2	2	Low
Administration	IT Infrastructure	Network Infrastructure	2	3	6	Low-Medium	2	3	6	Low-Medium	2	3	6	Low-Medium
Administration	IT Infrastructure	Communication Systems	2	2	4	Low-Medium	2	2	4	Low-Medium	2	2	4	Low-Medium
Administration	End User IT													
Administration	End User IT	PCs	1	1	1	Low	2	1	2	Low	2	1	2	Low
Administration	End User IT	Tablets & Laptops	4	2	8	Medium	3	2	6	Low-Medium	2	2	4	Low-Medium
Administration	End User IT	Monitors	3	2	6	Low-Medium	1	2	2	Low	2	2	4	Low-Medium
Administration	End User IT	Printers/Photocopiers	2	1	2	Low	2	1	2	Low	3	1	3	Low
Administration	End User IT	Mobile Phones	2	2	4	Low-Medium	2	2	4	Low-Medium	3	2	6	Low-Medium
Administration	Business Systems													
Administration	Business Systems	Small Equipment	2	2	4	Low-Medium	1	2	2	Low	3	2	6	Low-Medium
Administration	Business Systems	Software	2	3	6	Low-Medium	3	3	9	Medium	2	3	6	Low-Medium
Administration	Administration Facilities	Town Hall	5	2	10	Medium	3	2	6	Low-Medium	3	3	9	Medium

Figure 5.3: Risk Assessment – Library Services

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Library Services	Library													
Library Services	Library	Library Content (books, electronic res	3	4	12	Medium-High	2	4	8	Medium	2	4	8	Medium
Library Services	Library	Library Furniture (Chairs, desks etc.)	2	1	2	Low	1	1	1	Low	2	1	2	Low
Library Services	Library	Library IT and Equipment (Town) - prir	2	4	8	Medium	4	4	16	Medium-High	2	4	8	Medium
Library Services	Library	Library IT and Equipment (Public)	3	4	12	Medium-High	4	4	16	Medium-High	3	4	12	Medium-High
Library Services	Library Facilities													
Library Services	Library Facilities	Acton Public Library	1	2	2	Low	1	2	2	Low	2	2	4	Low-Medium
Library Services	Library Facilities	Georgetown Public Library	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium

Figure 5.4: Risk Assessment – Fire Services

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Fire Services	Fire Equipment													
Fire Services	Fire Equipment	Major Equipment	2	5	10	Medium	2	5	10	Medium	2	5	10	Medium
Fire Services	Fire Equipment	Minor Equipment	1	2	2	Low	1	2	2	Low	2	2	4	Low-Medium
Fire Services	Fire Equipment	Personal Firefighter Equipment	1	2	2	Low	1	2	2	Low	2	2	4	Low-Medium
Fire Services	Fire Equipment	Communications & Control Systems	2	3	6	Low-Medium	1	3	3	Low	1	3	3	Low
Fire Services	Fire Fleet	Fire Apparatus												
Fire Services	Fire Fleet	Fire Apparatus	3	5	15	Medium-High	2	5	10	Medium	2	5	10	Medium
Fire Services	Fire Fleet	Fire Apparatus	3	5	15	Medium-High	2	5	10	Medium	2	5	10	Medium
Fire Services	Fire Fleet	Fire Apparatus	3	5	15	Medium-High	2	5	10	Medium	2	5	10	Medium
Fire Services	Fire Fleet	Fire Apparatus	2	3	6	Low-Medium	2	3	6	Low-Medium	2	3	6	Low-Medium
Fire Services	Fire Fleet	Fire Apparatus	1	2	2	Low	2	2	4	Low-Medium	2	2	4	Low-Medium
Fire Services	Fire Fleet	Fire Apparatus	3	5	15	Medium-High	5	5	25	High	3	5	15	Medium-High
Fire Services	Fire Fleet	Light Vehicles												
Fire Services	Fire Fleet	Light Vehicles	1	2	2	Low	2	2	4	Low-Medium	2	2	4	Low-Medium
Fire Services	Fire Fleet	Light Vehicles	2	2	4	Low-Medium	2	2	4	Low-Medium	2	2	4	Low-Medium
Fire Services	Fire Fleet	Light Vehicles	2	2	4	Low-Medium	2	2	4	Low-Medium	2	2	4	Low-Medium
Light Vehicles	Light Vehicles	Light Vehicles	4	3	12	Medium-High	1	3	3	Low	2	3	6	Low-Medium
Fire Services	Fire Facilities													
Fire Services	Fire Facilities	Acton Fire Hall	5	5	25	High	5	5	25	High	4	5	20	High
Fire Services	Fire Facilities	Maple Fire/EMS S	2	5	10	Medium	2	5	10	Medium	2	5	10	Medium
Fire Services	Fire Facilities	South Headquarters	3	5	15	Medium-High	3	5	15	Medium-High	2	5	10	Medium

Figure 5.5: Risk Assessment – Parks & Open Spaces

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Parks & Open Spaces	Recreation & Parks													
Parks & Open Spaces	Recreation & Parks	Community Parks	4	4	16	Medium-High	1	4	4	Low-Medium	2	4	8	Medium
Parks & Open Spaces	Recreation & Parks	Neighbourhood Parks	3	3	9	Medium	3	3	9	Medium	3	3	9	Medium
Parks & Open Spaces	Recreation & Parks	Parkettes	3	3	9	Medium	3	3	9	Medium	3	3	9	Medium
Parks & Open Spaces	Open Spaces	Trails	3	3	9	Medium	2	3	6	Low-Medium	2	3	6	Low-Medium
Parks & Open Spaces	Cemeteries													
Parks & Open Spaces	Cemeteries	Active Cemeteries	3	3	9	Medium	1	3	3	Low	2	3	6	Low-Medium
Parks & Open Spaces	Cemeteries	Inactive Cemeteries	1	1	1	Low	1	1	1	Low	2	1	2	Low

Figure 5.6: Risk Assessment – Recreation & Culture

Asset Hierarchy			Capacity and Use				Function				Quality			
L2	L3	L4	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Recreation Services														
Recreation Services	Program Equipment (Category 1 - Furniture, Pool Tables, Rescue Equipment etc.)		3	2	6	Low-Medium	2	2	4	Low-Medium	2	2	4	Low-Medium
Recreation Services	Program Equipment (Category 2 - life jackets, games, books etc.)		2	1	2	Low	2	1	2	Low	2	1	2	Low
Culture Services														
Culture Services	Library Art Collection		1	3	3	Low	1	3	3	Low	1	3	3	Low
Culture Services	Town Art Collection		2	3	6	Low-Medium	2	3	6	Low-Medium	1	3	3	Low
Culture Services	Helson Collection		3	3	9	Medium	1	3	3	Low	1	3	3	Low
Culture Services	Climate Control Unit (Storage)		4	3	12	Medium-High	4	3	12	Medium-High	3	3	9	Medium
Culture Services	Climate Control Unit (Exhibition)		4	3	12	Medium-High	2	3	6	Low-Medium	2	3	6	Low-Medium
Culture Services	Town Public Art		3	2	6	Low-Medium	3	2	6	Low-Medium	3	2	6	Low-Medium
Recreation & Culture Facilities	Community Centres													
Recreation & Culture Facilities	Community Centres	Acton Arena & Community Centre	3	3	9	Medium	3	3	9	Medium	2	3	6	Low-Medium
Recreation & Culture Facilities	Community Centres	Acton Seniors Centre (Inside Area Only)	1	1	1	Low	2	1	2	Low	4	3	12	Medium-High
Recreation & Culture Facilities	Community Centres	Cedarvale Park Community Centre / Daycare	4	3	12	Medium-High	5	3	15	Medium-High	5	3	15	Medium-High
Recreation & Culture Facilities	Community Centres	Gellert Community Centre	5	3	15	Medium-High	2	3	6	Low-Medium	4	3	12	Medium-High
Recreation & Culture Facilities	Community Centres	Hornby Community Hall / Daycare	4	3	12	Medium-High	5	3	15	Medium-High	4	3	12	Medium-High
Recreation & Culture Facilities	Community Centres	Mold-Masters SportsPlex	4	3	12	Medium-High	4	3	12	Medium-High	3	3	9	Medium
Recreation & Culture Facilities	Community Centres	Norval Park Community Centre	3	2	6	Low-Medium	4	2	8	Medium	5	3	15	Medium-High
Recreation & Culture Facilities	Aquatic Facilities													
Recreation & Culture Facilities	Aquatic Facilities	Acton Indoor Pool	5	2	10	Medium	4	5	20	High	4	4	16	Medium-High
Recreation & Culture Facilities	Aquatic Facilities	Georgetown Indoor Pool	5	2	10	Medium	4	5	20	High	4	4	16	Medium-High
Recreation & Culture Facilities	Misc. Facilities													
Recreation & Culture Facilities	Misc. Facilities	Ambulance Station House	3	2	6	Low-Medium	2	2	4	Low-Medium	5	2	10	Medium
Recreation & Culture Facilities	Misc. Facilities	Cedarvale Park Artisan House / Cottage	4	2	8	Medium	4	2	8	Medium	4	2	8	Medium
Recreation & Culture Facilities	Misc. Facilities	Cedarvale Park Caretaker's Residence	2	1	2	Low	3	3	9	Medium	4	2	8	Medium
Recreation & Culture Facilities	Misc. Facilities	Devereaux House	2	1	2	Low	3	2	6	Low-Medium	5	2	10	Medium

Figure 5.7: Risk Assessment – Environmental Services

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Environmental Services	Stormwater													
Environmental Services	Stormwater	Stormwater Management Ponds	3	3	9	Medium	1	3	3	Low	4	3	12	Medium-High
Environmental Services	Stormwater	Pump Station (Bailey's Pond)	4	2	8	Medium	5	2	10	Medium	3	2	6	Low-Medium
Environmental Services	Storm Sewer System													
Environmental Services	Storm Sewer System	Stormwater Mains	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Environmental Services	Storm Sewer System	Maintenance holes	1	2	2	Low	1	2	2	Low	4	2	8	Medium
Environmental Services	Storm Sewer System	Drainage Culverts	2	2	4	Low-Medium	1	2	2	Low	4	2	8	Medium
Environmental Services	Storm Sewer System	Catch basins	1	2	2	Low	1	2	2	Low	4	2	8	Medium
Environmental Services	Storm Sewer System	Outfalls (Engineered Outfall & Inlets)	3	2	6	Low-Medium	1	2	2	Low	4	2	8	Medium
Environmental Services	Storm Sewer System	Stormwater Quality Units (Oil Grit Separa	1	2	2	Low	1	2	2	Low	1	2	2	Low
Environmental Services	Low Impact Development	Infiltration Galleries	1	2	2	Low	1	2	2	Low	2	2	4	Low-Medium

Figure 5.8: Risk Assessment – Transportation & Transit – Core Assets

Asset Hierarchy			Capacity and Use				Function				Quality			
L1	L2	L3	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Transportation & Transit	Roadway Network													
Transportation & Transit	Roadway Network	Arterial	3	4	12	Medium-High	2	4	8	Medium	3	4	12	Medium-High
Transportation & Transit	Roadway Network	Collector	2	3	6	Low-Medium	2	3	6	Low-Medium	3	3	9	Medium
Transportation & Transit	Roadway Network	Local	1	2	2	Low	2	2	4	Low-Medium	2	2	4	Low-Medium
Transportation & Transit	Transportation Structures													
Transportation & Transit	Transportation Structures	Roadway Bridges	3	4	12	Medium-High	3	4	12	Medium-High	2	4	8	Medium
Transportation & Transit	Transportation Structures	Pedestrian Bridges	1	2	2	Low	1	2	2	Low	2	2	4	Low-Medium
Transportation & Transit	Transportation Structures	Roadway Culverts	4	4	16	Medium-High	3	4	12	Medium-High	4	4	16	Medium-High
Transportation & Transit	Transportation Structures	Drainage Culverts	4	3	12	Medium-High	3	3	9	Medium	4	3	12	Medium-High
Transportation & Transit	Transportation Structures	Retaining Walls	1	3	3	Low	4	3	12	Medium-High	4	3	12	Medium-High
Transportation & Transit	Transportation Structures	Guiderails	3	3	9	Medium	2	3	6	Low-Medium	3	3	9	Medium
Transportation & Transit	Traffic Services													
Transportation & Transit	Traffic Services	Signals	2	4	8	Medium	2	4	8	Medium	2	4	8	Medium
Transportation & Transit	Traffic Services	Street Lighting	3	3	9	Medium	3	3	9	Medium	2	3	6	Low-Medium
Transportation & Transit	Traffic Services	Pavement Markings	1	4	4	Low-Medium	1	4	4	Low-Medium	2	4	8	Medium
Transportation & Transit	Traffic Services	Traffic Signage	1	4	4	Low-Medium	2	4	8	Medium	3	4	12	Medium-High
Transportation & Transit	Walkways and Pathways													
Transportation & Transit	Walkways and Pathways	Multi-use Pathways (within Road corrido	2	2	4	Low-Medium	1	2	2	Low	3	3	9	Medium
Transportation & Transit	Walkways and Pathways	Sidewalks	2	3	6	Low-Medium	2	3	6	Low-Medium	4	4	16	Medium-High

Figure 5.9: Risk Assessment – Transportation & Transit – Non-Core Assets

Asset Hierarchy			Capacity and Use				Function				Quality			
L2	L3	L4	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value	PoF	CoF	Risk Rating	Risk Value
Parking Services														
Parking Services	Parking Lots		2	2	4	Low-Medium	2	2	4	Low-Medium	3	2	6	Low-Medium
Speciality Equipment														
Speciality Equipment	Survey Equipment & Monuments		1	1	1	Low	1	1	1	Low	1	1	1	Low
Transit	ActiVan		2	4	8	Medium	1	4	4	Low-Medium	2	4	8	Medium
Public Works Facilities														
Public Works Facilities	Robert C. Austin Operation's Centre		4	4	16	Medium-High	3	4	12	Medium-High	2	2	4	Low-Medium
Public Works Facilities	Indoor Parking		5	4	20	High	4	5	20	High	5	4	20	High
Public Works Facilities	Storage/Salt Dome		5	4	20	High	4	5	20	High	5	4	20	High
Public Works Facilities	Acton Yard		4	4	16	Medium-High	4	5	20	High	5	4	20	High
Public Works Fleet														
Public Works Fleet	Heavy Duty Licensed Vehicles	Flusher (1)	4	2	8	Medium	1	2	2	Low	1	2	2	Low
Public Works Fleet	Heavy Duty Licensed Vehicles	Gradall (1)	1	3	3	Low	1	3	3	Low	2	3	6	Low-Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Grader (2)	1	3	3	Low	1	3	3	Low	3	3	9	Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Loader (3)	2	4	8	Medium	1	4	4	Low-Medium	3	4	12	Medium-High
Public Works Fleet	Heavy Duty Licensed Vehicles	Packer (1)	2	4	8	Medium	3	4	12	Medium-High	5	4	20	High
Public Works Fleet	Heavy Duty Licensed Vehicles	Roller (1)	1	2	2	Low	2	2	4	Low-Medium	2	2	4	Low-Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Single Axle (5)	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Small Dump (9)	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Sweeper (3)	1	2	2	Low	3	2	6	Low-Medium	3	2	6	Low-Medium
Public Works Fleet	Heavy Duty Licensed Vehicles	Tandem (17)	2	3	6	Low-Medium	2	3	6	Low-Medium	4	3	12	Medium-High
Public Works Fleet	Light Duty Licensed Vehicles	Van (5 w/ Town Hall + Survey Van)	1	3	3	Low	1	3	3	Low	3	3	9	Medium
Public Works Fleet	Light Duty Licensed Vehicles	Crew Cab (9)	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Light Duty Licensed Vehicles	Riding Mower	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Light Duty Licensed Vehicles	Tractor	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Light Duty Licensed Vehicles	Pickup (19 including Facilities)	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Fleet	Trailers	Trailer (16)	1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Machinery & Equipment														
Public Works Machinery & Equipmen	Minor Equipment		1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium
Public Works Machinery & Equipmen	Small Engines		1	2	2	Low	1	2	2	Low	3	2	6	Low-Medium

Critical Assets

Completing the risk assessment results in the identification of critical assets. Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Specifically, critical assets at the Town have been identified as having a high consequence of failure score. The most critical infrastructure assets (consequence of failure of 4 or higher) are:

- Library Content, IT and Equipment
- Major Fire Equipment
- Major Fire Apparatus (Pumpers, Heavy Rescue Vehicles, Tankers and Aerial Truck)
- Fire Facilities
- Critical Facility Component Assets (Roof, HVAC, Electrical, Mechanical)
- Aquatic Facilities
- ActiVan Vehicles
- Public Works Facilities
- Heavy Duty Licensed Vehicles (Loaders and Packers)
- Traffic Culverts
- Traffic Signals
- Traffic Signage

Critical assets receive priority risk management planning to minimize the risk exposure for the Town. Addressing these risks can include condition inspection programs and maintenance management programs.

The Town has taken steps to address the risks posed by its critical assets through the risk treatment plans shown in Table 5.3.

Table 5.3: Risks and Treatment Plans

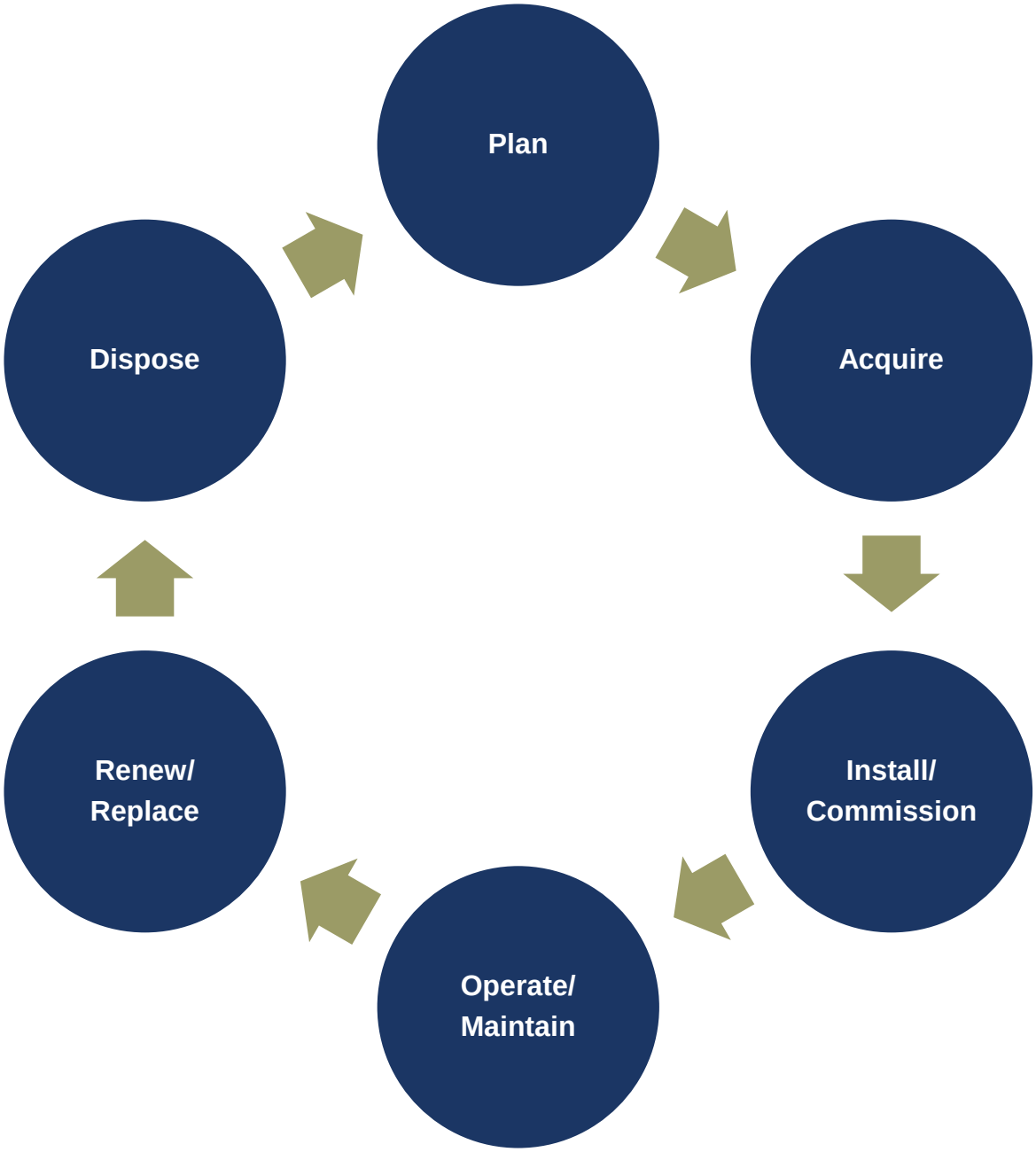
Asset Type at Risk	Risk Treatment Plan
Facilities	Building Condition Assessments that include inspections of all Facilities (and components) within the Town on a 5-year cycle.
Fleet, Machinery and Equipment	Regular inspections and preventive maintenance to ensure safety, reliability, and compliance with regulatory standards. Lifecycle and Maintenance Management Program currently under development.
Parks and Open Space	Routine inspections and reporting of issues with assets
Roads, Bridges, Culverts, Traffic Signals, Streetlights, Traffic Signage, Sidewalks and Pathways	Pavement Management Study that includes inspections of all roads within the Town on a 5-year cycle. Regular inspections by Town staff according to Ontario Regulation 239/02 – Minimum Maintenance Standards for Highways of the Ontario Municipal Act.
Bridges and Structural Culverts	Biennial OSIM inspections. Additional inspections are triggered when staff identify accelerated deterioration.
Stormwater Infrastructure	Storm sewer condition assessments

6 - Whole Lifecycle Management

Whole lifecycle management details how the Town manages assets through all phases of an asset's life. These activities are undertaken to ensure that the Town's infrastructure assets can sustain service levels while minimizing costs.

In 2021, the Town developed a Lifecycle Management Strategy that formalized how the Town manages its assets in accordance with the asset lifecycle stages illustrated in Figure 6-1. The following section details the lifecycle activities that the Town uses to manage infrastructure assets.

Figure 6.1: Whole Asset Lifecycle



Plan

Planning involves determining the needs, funding, and timing of lifecycle management activities to achieve best outcomes that maintain service levels while also encouraging cost savings. Planning can be informed by policies, procedures, design standards, master plans, studies, new regulations, etc. The Town has adopted several strategic and operational solutions to support its asset lifecycle activities including:

- Consultation and coordination with the Region of Halton, Ministry of Transportation and other Municipalities on matters which will have a direct impact on the Town. For example, studies and related plans.
- Project coordination with the Region of Halton to reduce the impact of construction activities on residents and benefit from cost savings.
- Joint contracts with the Region and other Municipalities to conduct inspections/assessments and procure winter control materials to achieve economies of scale
- Development of Master Plans for strategic oversight of programs
- Boundary Agreements with adjacent Municipalities which defined the responsibilities of both parties and facilitate shared costs associated with managing roadway assets.
- Board Agreements with the Canadian Transportation Agency which defined the responsibilities of both parties and facilitate shared costs associated with managing bridge assets.
- Improvements in operations as well as employee capabilities, communications training, etc.

These solutions are used to inform lifecycle management activities and financial planning for infrastructure assets.

Acquire

Recommendations in strategic or master plans as well as increased need for assets due to changing demands can result in the acquisition of new assets. The portion of an upgraded existing asset used to increase capacity can also be considered a new asset. Assets may also be donated to the Town. New infrastructure assets are acquired as discussed below.

Procurement

Acquired infrastructure assets are often required to go through the Town's Procurement process. Potential upgrade of or installation of new assets are reviewed to verify that they are essential to the Town's needs, and meet design specifications. The priority ranking of new assets is focused on the service and corporate risks associated with the proposed project. Service and corporate risks are discussed in detail later under Renewal & Replacement Ranking.

Asset Donations

Assets can also be acquired by the Town through donations. Donated assets are acquired through the assumption of assets constructed in new developments. Other methods can include the donation of assets to the Town from higher levels of government. An example of this is the Regional Road Rationalization.

Install & Commission

Installation and commissioning of infrastructure assets involves the building, constructing, and installation of new assets according to the desired design specifications outlined by the Town.

Asset Acquisition

Proposed new assets include assets owned by the Town which are identified within the 10-year Capital Forecast. Figure 6.2 and Table 6.1 below provide a summary of the combined growth expected at the Town over the next 10 years.

Figure 6.2: Acquired Assets

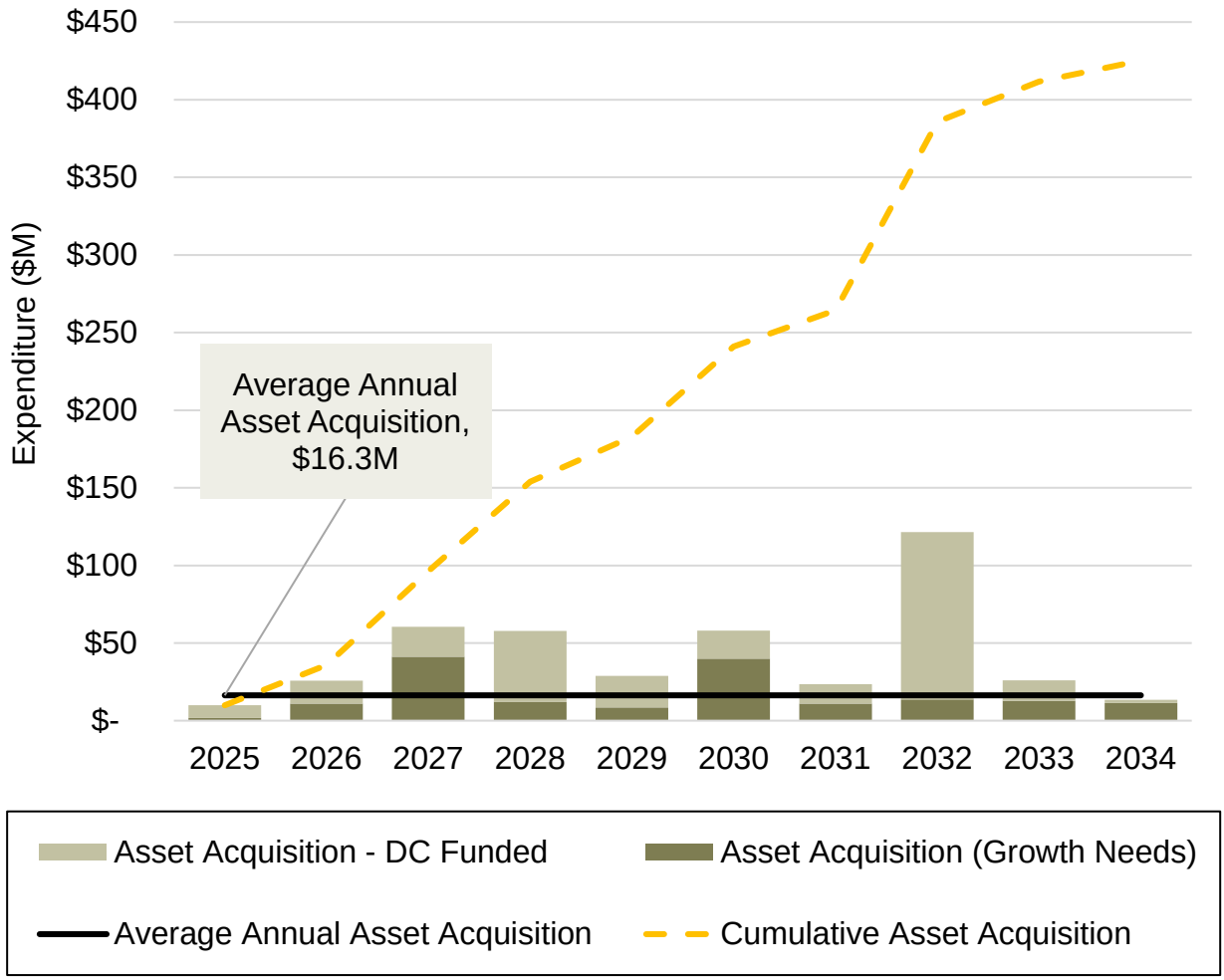


Table 6.1: Acquired Assets Summary

Year	Asset Acquisition (Growth Needs) ($M)	Asset Acquisition – Development Charge Funded ($M)	Cumulative Acquisition ($M)
2025	$1.7	$8.2	$9.9
2026	$11.0	$14.8	$35.8
2027	$41.3	$19.2	$96.2
2028	$12.0	$45.7	$153.9
2029	$8.5	$20.4	$182.9
2030	$39.9	$18.2	$240.9
2031	$11.1	$12.3	$264.3
2032	$13.6	$107.9	$385.8
2033	$12.9	$13.0	$411.7
2034	$11.5	$2.0	$425.2
TOTAL	**$163.3**	**$261.9**	

The projected construction and acquisition of new assets by the Town are based on the projects identified in the 2025 Capital Budget and the 2025–2034 Capital Forecast, which include development charge-funded initiatives. These projections have been updated to reflect the revised assumptions and funding strategies outlined in the 2022 Development Charges Funding Study.

Expenditures on new assets and services identified in the 2026 Capital Budget will be accommodated as approved through the 2026 budget process. The estimated capital investments outlined in the forecast will be funded to the extent that resources are available, as determined through the Town's Long-Range Financial Planning process.

Operate & Maintain

Operations & maintenance activities help to ensure that assets are kept in working service condition. These activities decrease the likelihood of asset failure and the subsequent need for significant and often costly repairs. The Town currently practices the following maintenance activities for its infrastructure assets:

- Scheduled preventive maintenance programs
- Corrective maintenance as required
- Reactive maintenance and repairs as required

As discussed in Section 5, critical assets are prioritized and have preventive maintenance programs. For the Town's less critical assets, assessment and priority of corrective and reactive maintenance is undertaken by staff using experience and judgement.

The Town performs preventive maintenance on its critical assets. Routine maintenance for assets consists of repair and rehabilitation activities that are designed to extend the useful life and maintain the level of service provided by the asset.

Historical Operational Budget

Maintenance activity costs are covered under the Town's Operating Budget. The trend in operational budgets are shown in Table 6.2.

Table 6.2: Operational Budget Trends

Year	Operational Budget (M)
2023	$47.8
2024	$56.4
2025	$61.1

Operational budget levels are planned to maintain current service levels as outlined in Section 3 as well as accommodate growth. As the Corporate Asset Management program at the Town matures, operational budget planning will be linked to tracking and monitoring levels of service.

Summary of forecast operations and maintenance costs

Forecasted operational budget needs are derived from the current infrastructure asset stock. As new assets are acquired by the Town, the forecasted operational budget needs will increase. Similarly, if assets are disposed of, the forecasted operational budget need will decrease.

Figure 6.3 and Table 6.3 show the forecasted operations and maintenance costs relative to the planned Operational Budget.

Figure 6.3: Operations and Maintenance Summary

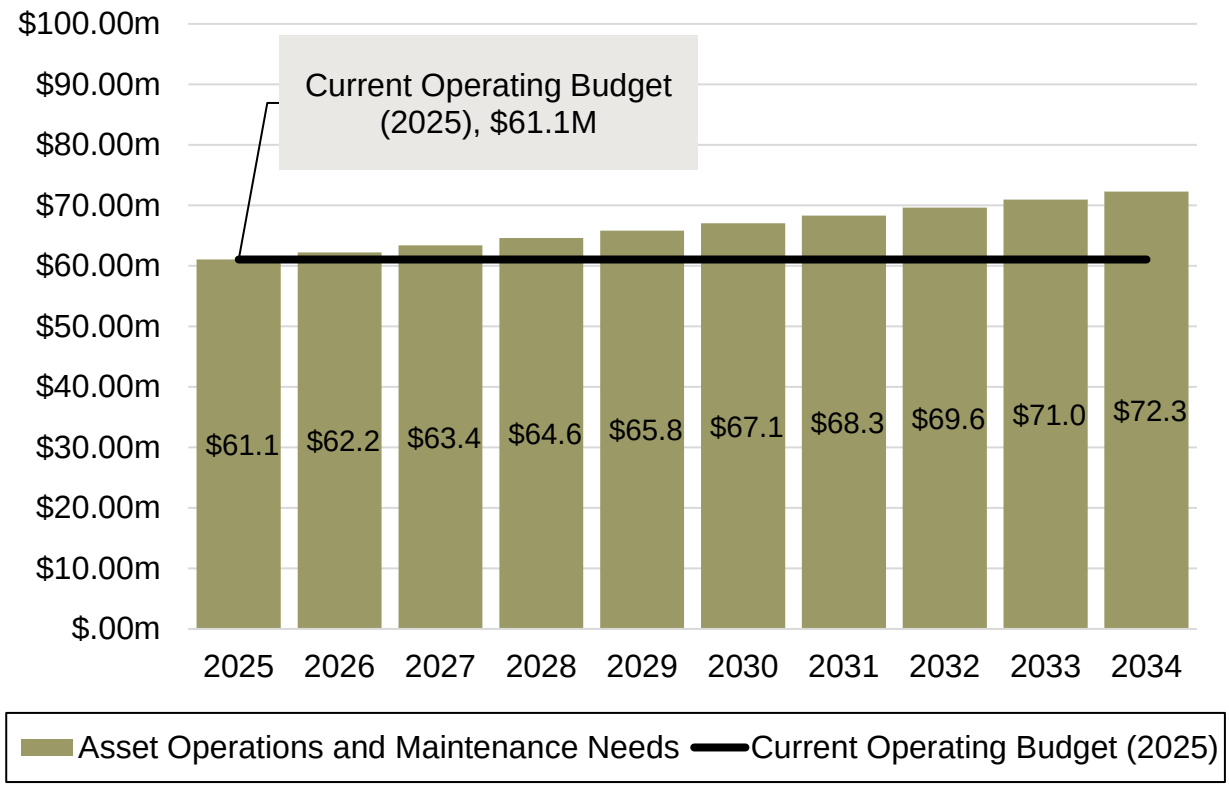


Table 6.3: Operational Forecast Summary

Year	Operational Need ($M)	Operational Budget ($M)	Shortfall ($M)
2025	$61.1	$61.1	$0.0
2026	$62.2	$61.1	($1.2)
2027	$63.4	$61.1	($2.3)
2028	$64.6	$61.1	($3.5)
2029	$65.8	$61.1	($4.8)
2030	$67.1	$61.1	($6.0)
2031	$68.3	$61.1	($7.3)
2032	$69.6	$61.1	($8.6)
2033	$71.0	$61.1	($9.9)
2034	$72.3	$61.1	($11.2)
TOTAL	**$665.4**	**$610.6**	**($54.8)**

The forecasted operations and maintenance costs are based on current needs as well as assumptions around new asset value to be acquired. Forecasted operations and maintenance for new assets were derived by calculating the portfolio-level growth rate by dividing the total value of newly acquired assets by the value of the existing asset base, reflecting the expansion of the asset portfolio.

This growth rate is then applied annually to the baseline 2025 operating budget to estimate the incremental operations and maintenance funding requirements over the next 10-years. As the Town gains more clarity around the quantity and extent of new assets to be acquired, operational budget planning will be better informed and more accurately reflect operations and maintenance needs for infrastructure assets.

Asset Condition Monitoring

Condition monitoring is an important step in assessing an asset's maintenance and renewal needs. Inspections provide insight on the timing and magnitude of the interventions required. This information is then used to inform maintenance and investment planning. Table 6.4 outlines the various condition monitoring approaches used by the Town.

Table 6.4: Asset Condition Monitoring

Asset Category	Condition Monitoring Frequency	Methodology
Roadway Network	5 Years	Pavement Management Study
Bridges and Structural Culverts	Biennial	Ontario Structure Inspection Manual (OSIM) Inspections
Roads, Bridges, Culverts, Traffic Signals, Streetlights, Traffic Signage, Sidewalks and Pathways	Varied	Routine inspections consistent with Ontario Regulation 239/02 – Minimum Maintenance Standards for Highways of the Ontario Municipal Act.
Stormwater	Annual	Annual closed-circuit television (CCTV) program
Fleet, Machinery and Equipment	Varied	Regular inspections and preventive maintenance to ensure safety, reliability, and compliance with regulatory standards.

Asset Category	Condition Monitoring Frequency	Methodology
Facilities	5 years	Building Condition Assessment – updated on a 5-year basis
Parks and Open Space	Varied	Routine inspections to ensure safety, reliability, and compliance with regulatory standards.
Other Assets	Varied	Inspections based on asset criticality

Renew & Replace

Renewal refers to major capital work that restores an existing asset to its original service potential without significantly altering the service it provides. Assets requiring renewal activities are identified through the Town's 10-year capital forecast and further supported by data from the asset register. Renewal timing is projected by combining the asset's acquisition year with its estimated useful life, helping to determine when rehabilitation or renewal should occur and to estimate associated costs.

Renewal Activities

Renewal activities are interventions that are completed at different points in an assets' useful life. Completing these activities provides the benefit of an extended useful life. The Town performs the activities outlined in Table 6.5 to extend the useful life of its infrastructure assets. The timing of these interventions is flexible based on asset condition data, institutional knowledge and subject matter expertise.

Table 6.5: Renewal Activities

Asset Category	Activity
Roads	Activities conducted as per the Town's Pavement Management Program: • Crack Sealing Applied early in the pavement lifecycle (PQI 85–70) to prevent water infiltration and slow deterioration. Typically performed once or twice per lifecycle depending on road class and condition. • Base Repairs and Overlays Mid-life treatments triggered when PQI drops to 60–50. These involve repairing structural issues and resurfacing to extend pavement life by 15–20 years (up to 25 years for higher-class roads).

Asset Category	Activity
	• Advanced Rehabilitation (e.g., A/C Removal + Base Repair + Overlay) Used primarily on collector and arterial roads when PQI is between 50–40. This treatment significantly extends service life (20–25 years) and addresses deeper structural concerns. • Minor Reconstruction Triggered at PQI 40–30, this involves partial rebuilding of the road structure. Not always tracked in asset systems like RoadMatrix but used where appropriate. • Full Depth Reconstruction Applied when PQI falls below 30. This is a complete rebuild of the road, including curbs and sidewalks where applicable, restoring the road to 100% condition. • Surface Treatments for Rural Roads Includes microsurfacing and grader prep every 10 years to maintain stability. Base repair and chip seal are used as needed for localized distress.
Bridges and Structural Culverts	Activities are conducted as part of the Town's Bridge and Culvert Rehabilitation Program: • Biennial OSIM Inspections: All bridges and structural culverts are inspected every two years to assess structural integrity, identify defects, and determine condition ratings. • Preventive Maintenance: Includes cleaning, sealing, and minor repairs to extend asset life and prevent deterioration. • Rehabilitation and Replacement: Based on inspection results, assets may undergo targeted rehabilitation or full replacement if they are nearing the end of their service life. • Safety Enhancements: Improvements may include upgrades to creek embankments, parapet walls, pedestrian/cyclist railings, and guide rails to meet current standards
Traffic Infrastructure, Walkways and Pathways	• Replacement and upgrading of traffic signals and control systems. • Sidewalk repairs and replacements to address surface deterioration and accessibility. • Installation of accessibility features such as curb ramps and tactile indicators.

Asset Category	Activity
	• Integration of improvements with road and stormwater projects for efficiency.
Stormwater	Activities are guided by the Stormwater Management Master Plan and the Town's Environmental Compliance Approval (CLI-ECA) reporting requirements. • Repairs and upgrades are implemented to address aging infrastructure and vulnerabilities identified through inspections and performance monitoring. • Corrective actions are taken in response to abnormal discharge events, system failures, or environmental concerns.
Facilities	Activities are guided by the Town's most recent Building Condition Assessment (BCA): • HVAC systems are upgraded or replaced to maintain indoor air quality and energy efficiency. • Roof replacements and repairs are conducted to address aging materials and prevent water infiltration. • Structural repairs are performed to maintain safety and extend the life of building components. • Accessibility improvements are implemented to meet AODA standards and enhance public access. • Energy efficiency retrofits, such as lighting upgrades and insulation improvements, are carried out to reduce operating costs and environmental impact. • Maintenance and capital renewal priorities are scheduled based on condition ratings and lifecycle forecasts.

Asset Category	Activity
Parks and Open Space	• Replacement or upgrading of aging playground equipment to meet current safety and accessibility standards. • Renewal of splash pad infrastructure, including resurfacing, water feature upgrades, and mechanical system replacements. • Rehabilitation of sports fields, including regrading, drainage improvements, and turf replacement. • Refurbishment of park amenities such as benches, picnic tables, shade structures, and signage. • Pathway and trail resurfacing to improve accessibility and safety. • Lighting upgrades for energy efficiency and enhanced security. • Renovation or replacement of washroom and pavilion facilities. • Drainage and grading improvements to manage stormwater and reduce erosion in open spaces.
Fleet, Machinery and Equipment	• Replacement of aging vehicles and equipment based on lifecycle costing and condition assessments. • Centralized procurement processes that involve user departments to ensure vehicles meet operational needs. • Department-specific renewals, such as fire apparatus upgrades, public works heavy equipment replacements, and specialized library service vehicles or equipment.

Replacement

Asset replacement occurs once the asset has reached the end of its useful life and renewal activities are no longer an option. Replacement of assets involves a review of required service levels to ensure capacity and function can support service levels now, and in the future.

Renewal & Replacement Ranking

Renewal and replacement activities often have a large impact on the Town's Capital Budget and are subject to project prioritization or ranking. There are a variety of factors that influence renewal and replacement ranking. When ranking renewal and replacement projects, the Town focuses on asset, service, and corporate risks, which are discussed below. For each proposed renewal project, these three risk scores are

calculated. All risk scores are combined into a single score that is compared against the scoring of other projects.

1. Asset Risk refers to the asset management approach that considers:
    a. The overall consequences that would result from an asset deteriorating to a point where it no longer provides an acceptable level of service; and
    b. The current condition of an asset compared to the condition state that would result in the asset being deemed in a 'below its acceptable condition' state.

Assets with a higher consequence of failure score will be prioritized for renewal or replacement at an earlier point in their asset lifecycle versus assets with a low consequence of failure.

2. Service Risk refers to the consequences of a group of assets failing to provide an attribute of a service at the expected level to the community, as well as the likelihood of the asset group not providing an attribute of a service. The consequence of a service delivery failure is established for each Service Attribute by evaluating the degree to which the Service Attribute aligns with the Principles and Commitments in the Town's Corporate Asset Management Policy. Figure 6.4 demonstrates the risk scoring compared to the alignment with the Principles and Commitments in the Policy.

Figure 6.4: Service Attribute Consequence of Failure Scoring

Consequence of Failure Score	Definition
5	Service Attribute Aligns with Most Principles and Commitments
4	Service Attribute Aligns with Most Principles and Some Commitments
3	Service Attribute Aligns with Some Principles and Commitments
2	Service Attribute Aligns with Some Principles and Few Commitments
1	Service Attribute Aligns with Few Principles and Commitments

3. Corporate Risk intends to quantify risks for the broad spectrum of risk categories that are considered in municipalities, including:
    a. Service Delivery
    b. Employees
    c. Public
    d. Physical Environment & Climate Change
    e. Reputation
    f. Financial
    g. Regulatory

    The rating framework for these risks are shown in Figure 6-5.

Figure 6.5: Corporate Risk Rating Framework

Impact is quantified as:		**Likelihood is quantified as:**	
Scale 4:	Catastrophic	Scale 5:	Almost Certain
Scale 3:	Major	Scale 4:	Likely
Scale 2:	Moderate	Scale 3:	Somewhat likely
Scale 1:	Minor	Scale 2:	Unlikely
		Scale 1:	Rare

External agencies can also influence renewal ranking. The Town coordinates with the Region as well as neighbouring municipalities on some projects. These projects can receive priority ranking due to the cost savings achieved through project coordination.

Summary of Future Renewal & Replacement Costs

Forecast renewal and replacement costs are projected to increase over time if the asset inventory increases. The forecast costs associated with renewals and replacements are shown relative to the planned budget in Figure 6.6 to Figure 6.12.

Figure 6.6: Forecast Renewal & Replacement Costs (Transportation and Transit)

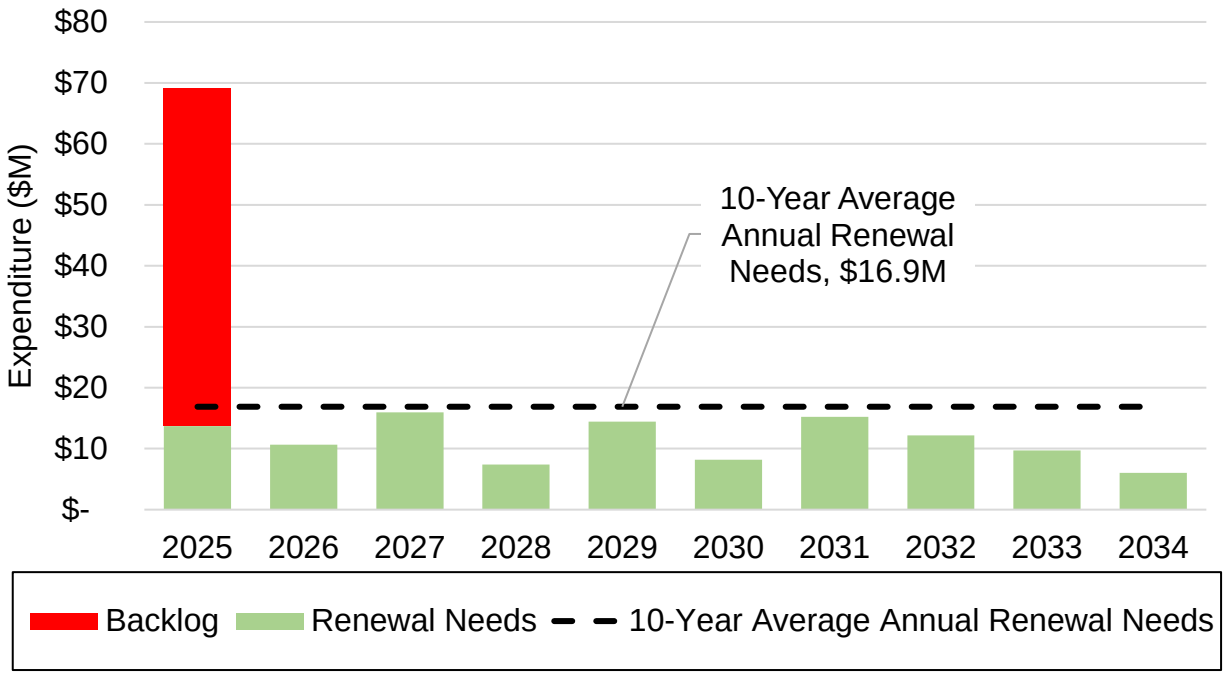


Figure 6.7: Forecast Renewal & Replacement Costs (Environmental Services)

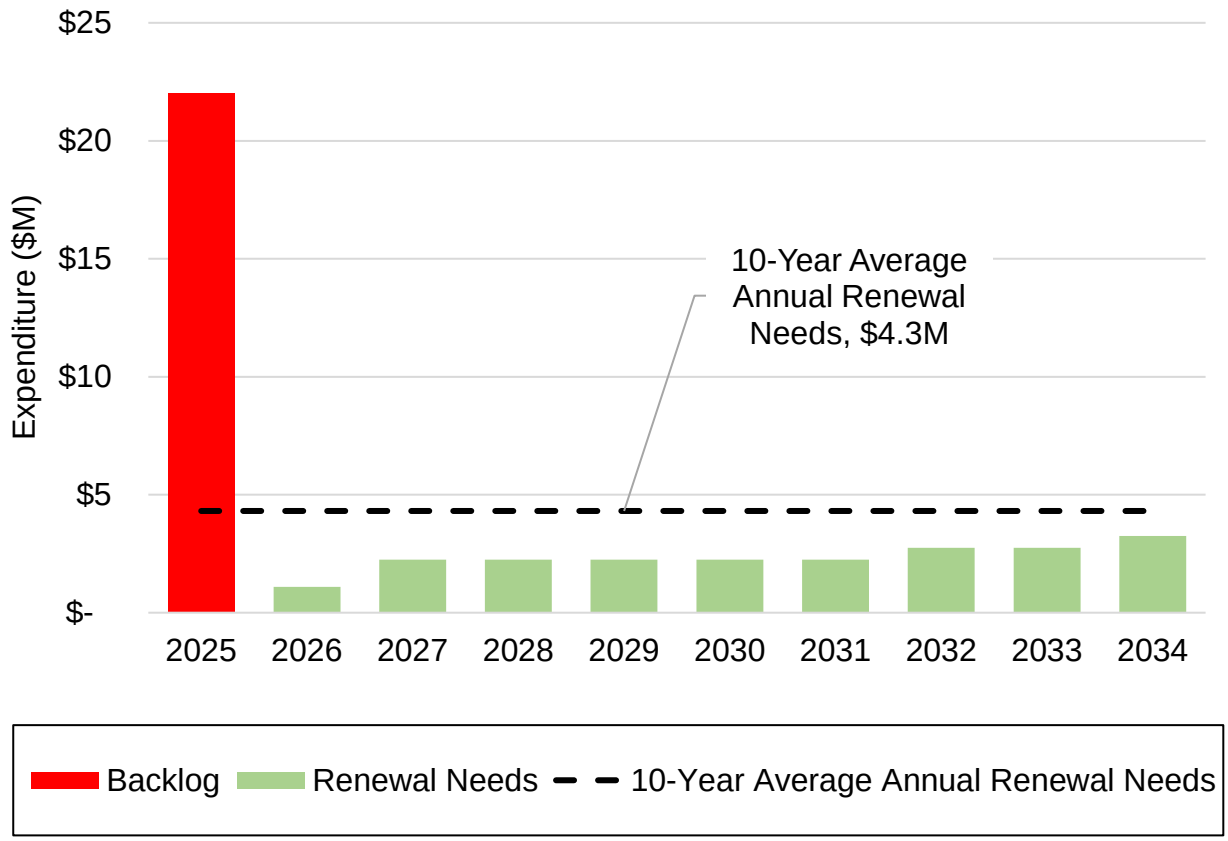


Figure 6.8: Forecast Renewal & Replacement Costs (Recreation and Culture)

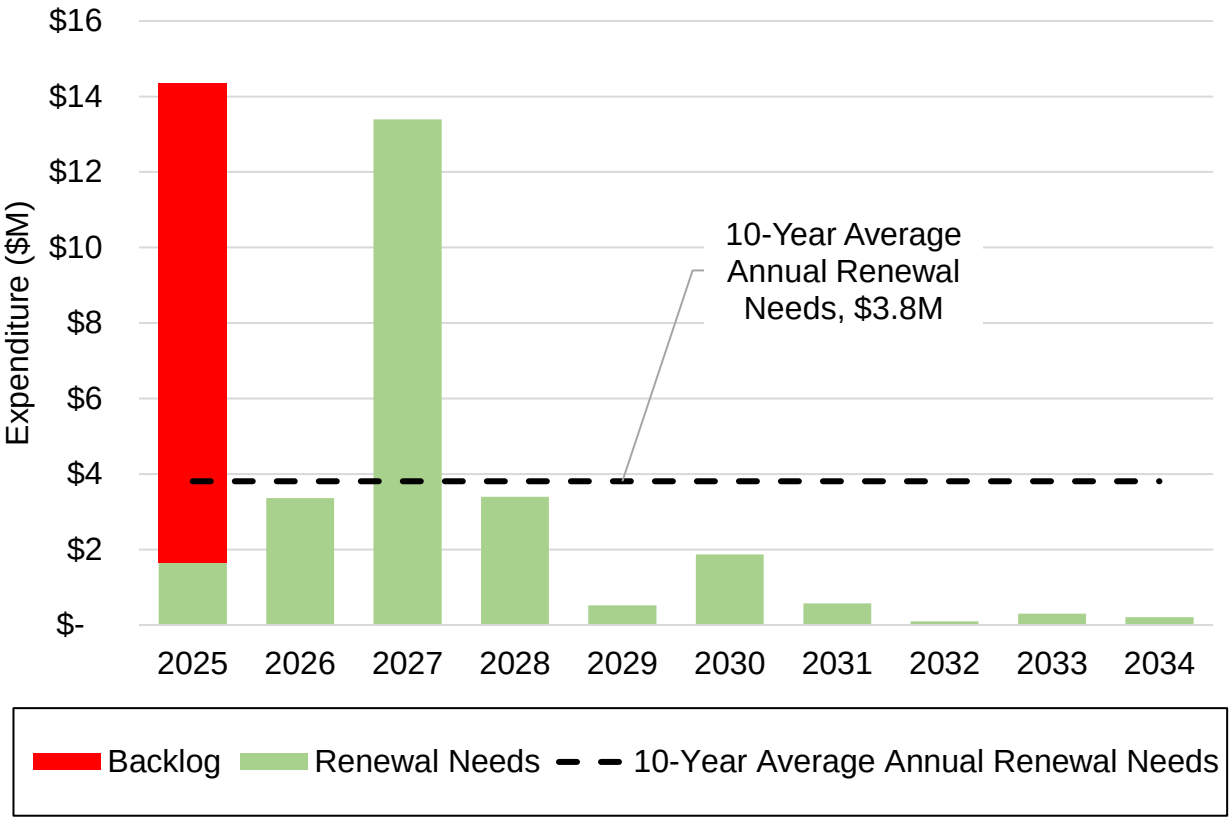


Figure 6.9: Forecast Renewal & Replacement Costs (Parks and Open Space)

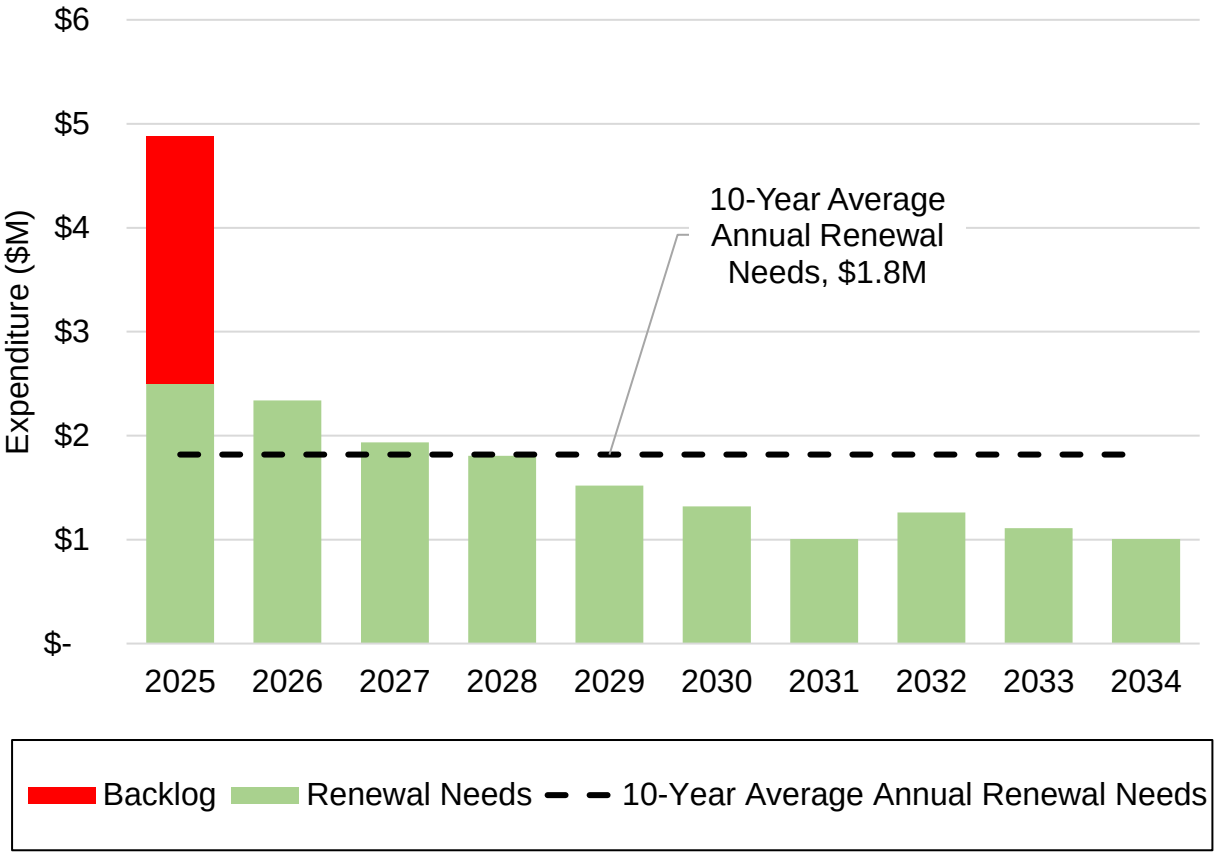


Figure 6.10: Forecast Renewal & Replacement Costs (Fire Services)

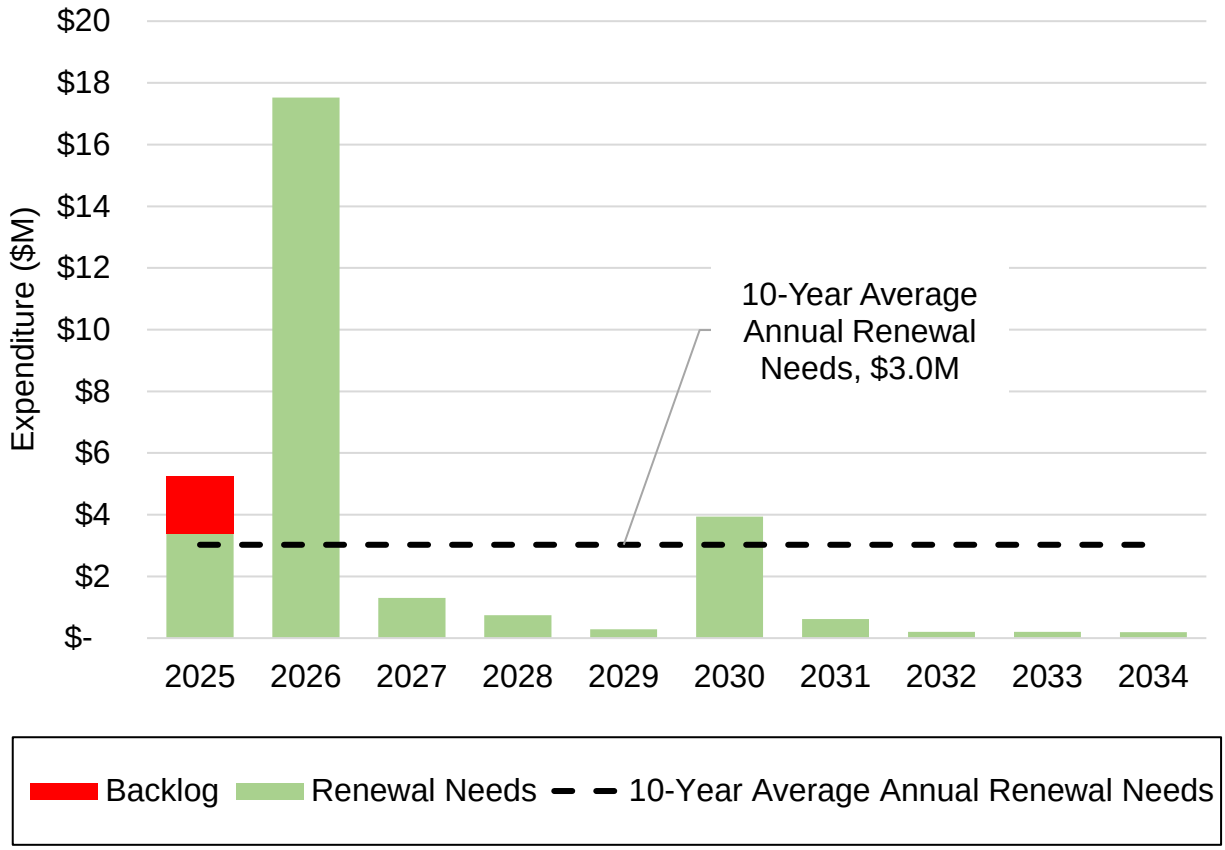


Figure 6.11: Forecast Renewal & Replacement Costs (Library Services)

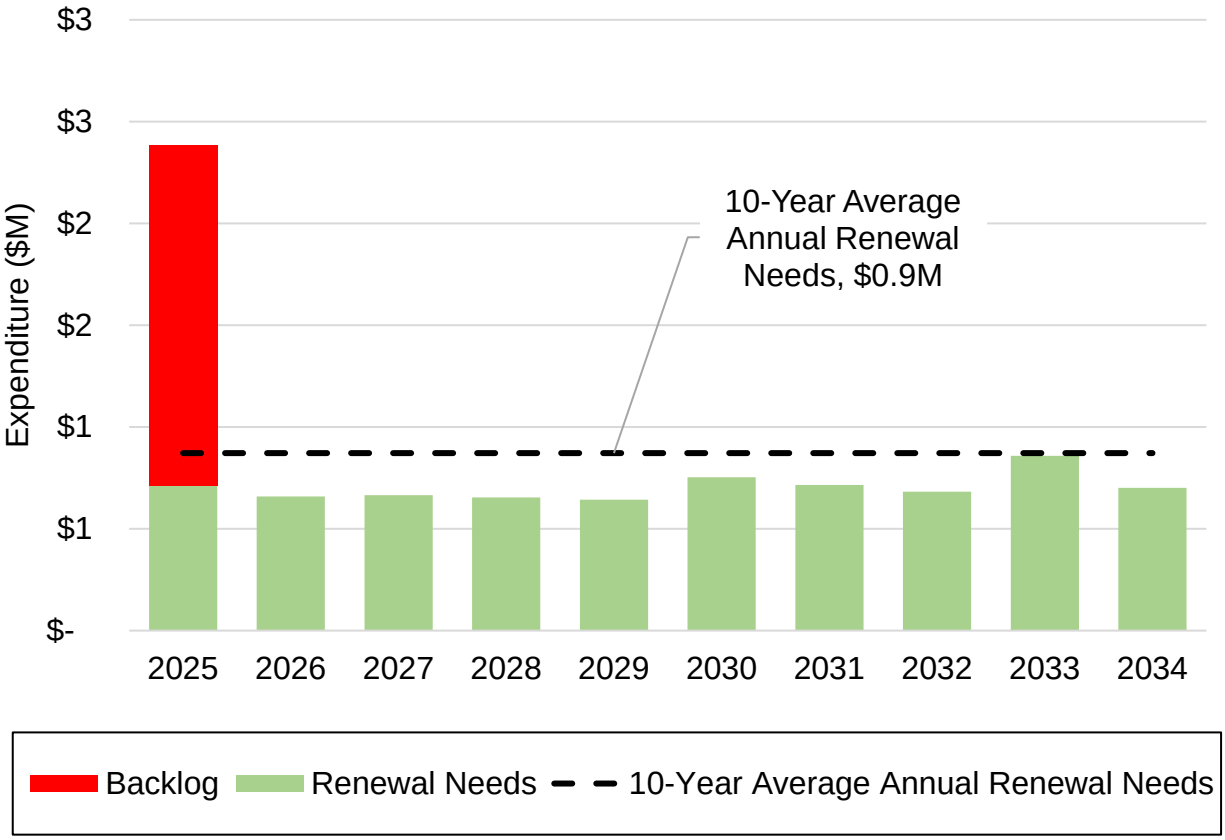
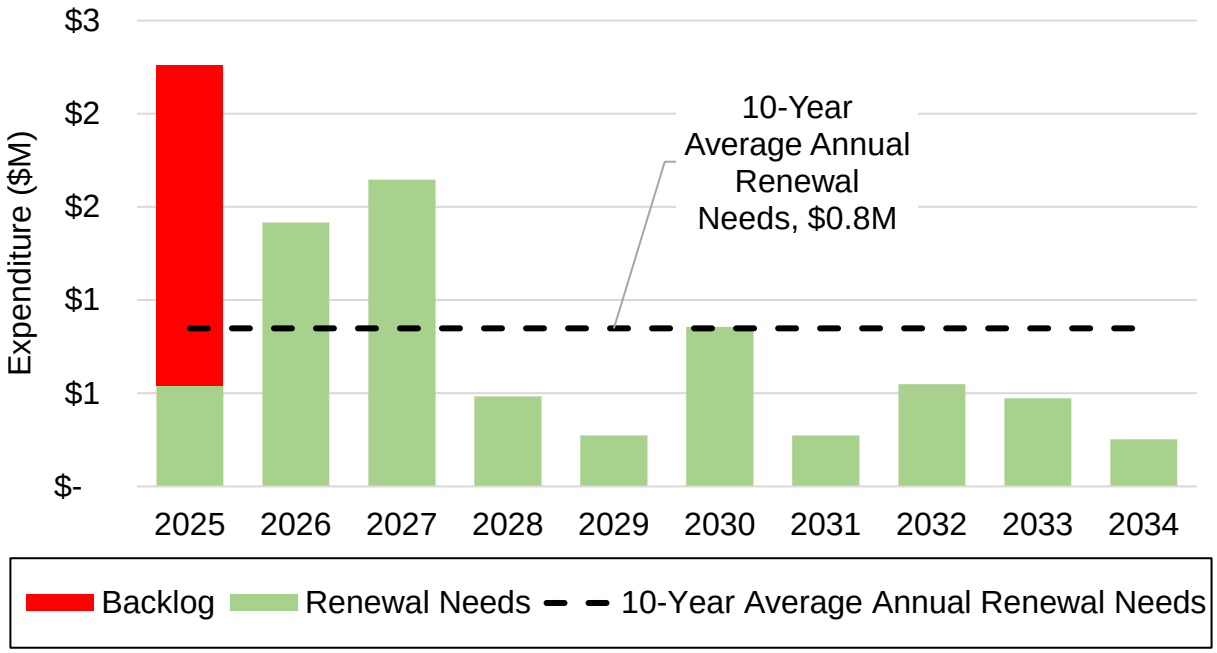


Figure 6.12: Forecast Renewal & Replacement Costs (Administrative Services)



Although renewal and replacement are two different lifecycle activities, they both fall under the Town's Capital Budget. In years where the renewal/replacement bar is higher than the planned budget line, there is an infrastructure deficit, meaning the forecasted renewal and replacement needs are higher than the planned budget.

Unfunded projects are deferred to future years and reviewed to assess needs and criticality. Higher risk or critical assets take priority and will be renewed or replaced earlier than lower risk assets. This approach over time addresses the infrastructure deficit and dollar amount of unfunded projects while managing risks.

Figure 6.13 and Table 6.7 below show the renewal and replacement needs compared to the budgeted amount.

Figure 6.13: Portfolio Forecast Renewal & Replacement Funding

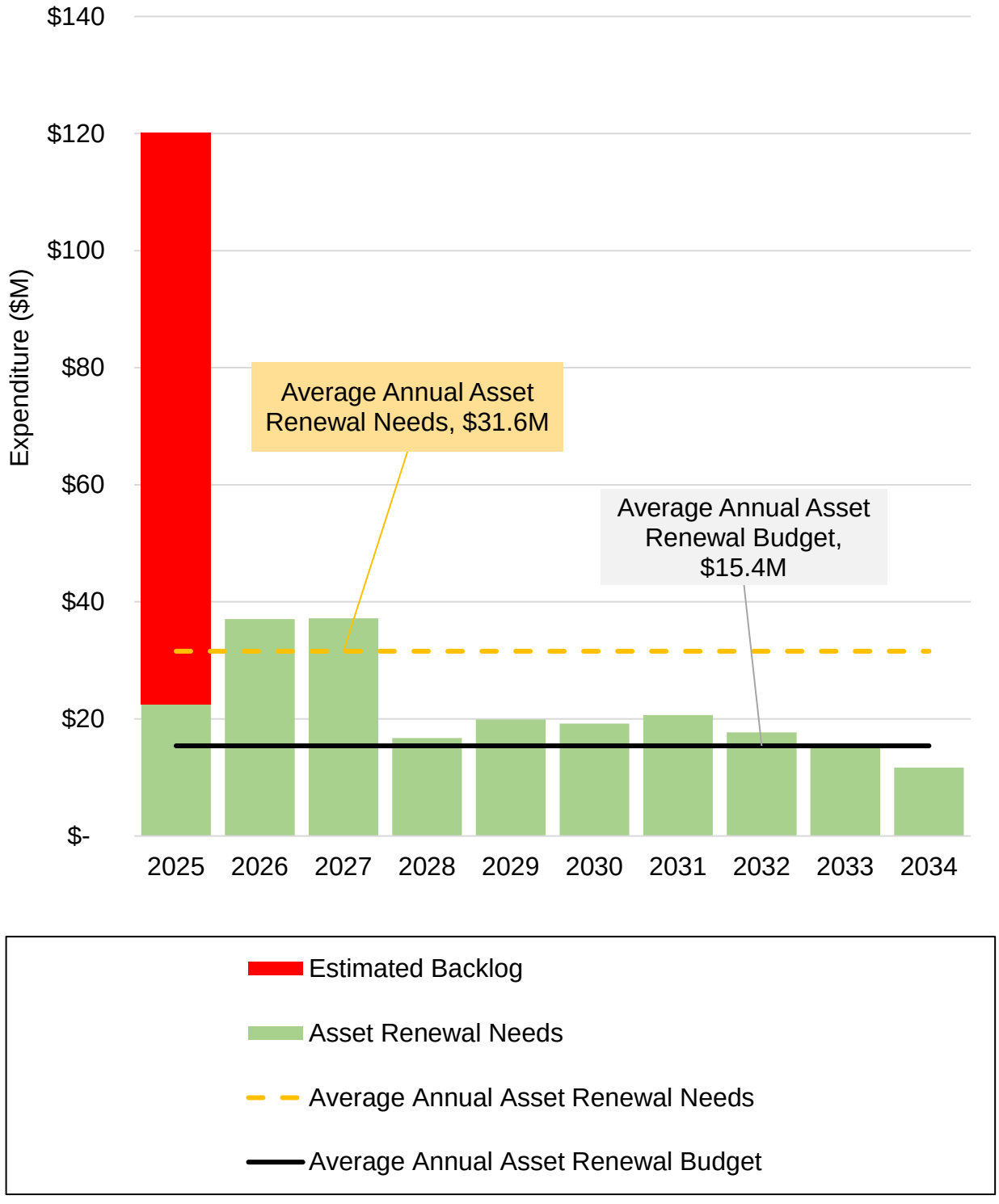


Table 6.6: Renewal Forecast Summary

Year	Backlog ($M)	Renewal Need ($M)	Renewal Budget ($M)	Annual Shortfall ($M)
2025	$97.7	$22.5	$10.7	($7.1)
2026	$0.0	$37.1	$12.7	($21.7)
2027	$0.0	$37.2	$21.0	($21.8)
2028	$0.0	$16.7	$10.4	($1.3)
2029	$0.0	$19.9	$11.6	($4.5)
2030	$0.0	$19.2	$11.2	($3.8)
2031	$0.0	$20.6	$9.4	($5.2)
2032	$0.0	$17.7	$12.4	($2.3)
2033	$0.0	$15.4	$11.5	$0.0
2034	$0.0	$11.7	$14.8	$3.7
	$97.7	**$218.0**	**$154.0**	**($63.9)**

Dispose

Disposal

Disposal includes any activity associated with the disposal of an asset once it has reached the end of its useful life or is no longer needed. This can include sale, decommissioning or demolition. Any costs or revenue gained from asset disposals is included in the LRFP.

Infrastructure Asset Disposals

Critical infrastructure assets vital to the Town are frequently replaced at the end of their lifecycle with similar asset types to ensure sustained or enhanced service. As part of this replacement process, there are often decommissioning, or demolition costs associated with removing old assets to make room for new installations.

These costs are included within the replacement cost. New regulations on Asset Retirement Obligations (ARO), specifically Section PS 3280, have been introduced for Ontario municipalities. These regulations require municipalities to identify and account for costs associated with the decommissioning, removal, and disposal of infrastructure assets at the end of their useful life.

For the Town, this means systematically accounting for decommissioning or demolition costs during infrastructure asset replacements, providing a clearer picture of long-term financial commitments and ensuring compliance with provincial standards.

7 - Financial Strategy

The financial projection is developed based on the following sections of the Asset Management Plan: the state or condition of the assets, the proposed levels of service, the risks to service delivery, and the lifecycle management activities. The Financing strategy will consider how the Town funds the planned asset management actions to meet the current service levels and integrate with the Long-Range Financial Plan. It is expected that these financial projections will improve over time as more accurate data becomes available and discussions on levels of service and asset performance mature.

Financial Sustainability and Projections

Cost of Whole Lifecycle Activities

The Town's infrastructure assets have annual costs associated with all lifecycle management activities. These costs are budgeted annually through the Town's budget process. These costs include capital and operations and maintenance costs which make up the required budget.

The investment required to maintain the current and proposed levels of service and immediate needs of the Town's infrastructure assets, are shown in Figure 7.1 and Table 7.1.

Figure 7.1 Current Investment Requirement

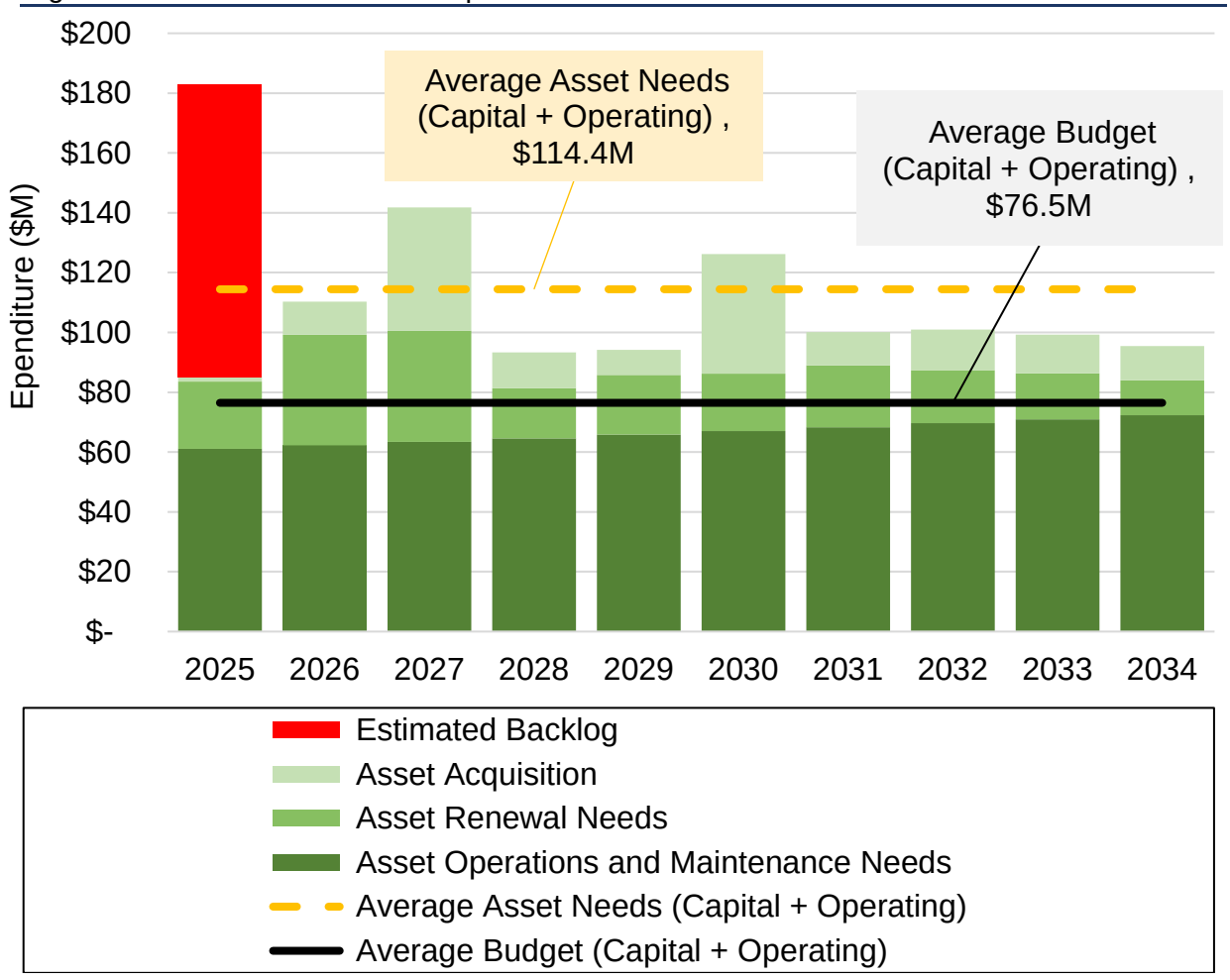


Table 7.1: Renewal Forecast Summary

Year	Estimated Backlog ($M)	Asset Acquisition ($M)	Asset Operations and Maintenance Needs ($M)	Asset Renewal Needs ($M)	Average Asset Needs ($M)	Average Budget ($M)
2025	$97.7	$1.7	$61.1	$22.5	$114.4	$76.5
2026	$0.0	$11.0	$62.2	$37.1	$114.4	$76.5
2027	$0.0	$41.3	$63.4	$37.2	$114.4	$76.5
2028	$0.0	$12.0	$64.6	$16.7	$114.4	$76.5
2029	$0.0	$8.5	$65.8	$19.9	$114.4	$76.5
2030	$0.0	$39.9	$67.1	$19.2	$114.4	$76.5
2031	$0.0	$11.1	$68.3	$20.6	$114.4	$76.5
2032	$0.0	$13.6	$69.6	$17.7	$114.4	$76.5
2033	$0.0	$12.9	$71.0	$15.4	$114.4	$76.5
2034	$0.0	$11.5	$72.3	$11.7	$114.4	$76.5
	$97.7[3]	**$163.3**	**$665.4**	**$218.0**		

[3] For many asset categories within this AMP, asset age is currently used as a proxy for asset condition due to limited assessed condition data. As a result, the estimated infrastructure backlog may be overstated. As more detailed and up-to-date condition assessments are completed, the accuracy of backlog estimates will improve.

Infrastructure Deficit

Infrastructure deficit is defined as the difference between the planned budget and the whole lifecycle needs of the assets. The forecasted whole lifecycle needs are calculated based on the Town's Lifecycle Management Strategy which relies on industry best practice and key asset data including expected useful life, installation date and replacement value.

When comparing the forecasted whole lifecycle needs (required budget) to the planned Capital and Operating budgets, the AMP identified an average annual infrastructure deficit of $37.98 million dollars.

Addressing the infrastructure deficit to achieve sustainable service delivery is part of the continuous improvement process and requires the Town to continue to refine its asset management practices through the following actions:

- Updating asset inventory data to improve accuracy and completeness
- Identification of optimum lifecycle management strategies to balance cost, risk, and performance
- Refining cost estimates and asset valuation data to reflect current market conditions
- Reassessing current and proposed levels of service to ensure alignment with community expectations and fiscal capacity
- Integration with and adjustments to the Long-Range Financial Plan to support sustainable funding strategies
- Reviewing project prioritization and timing of projects to optimize resource allocation and service outcomes

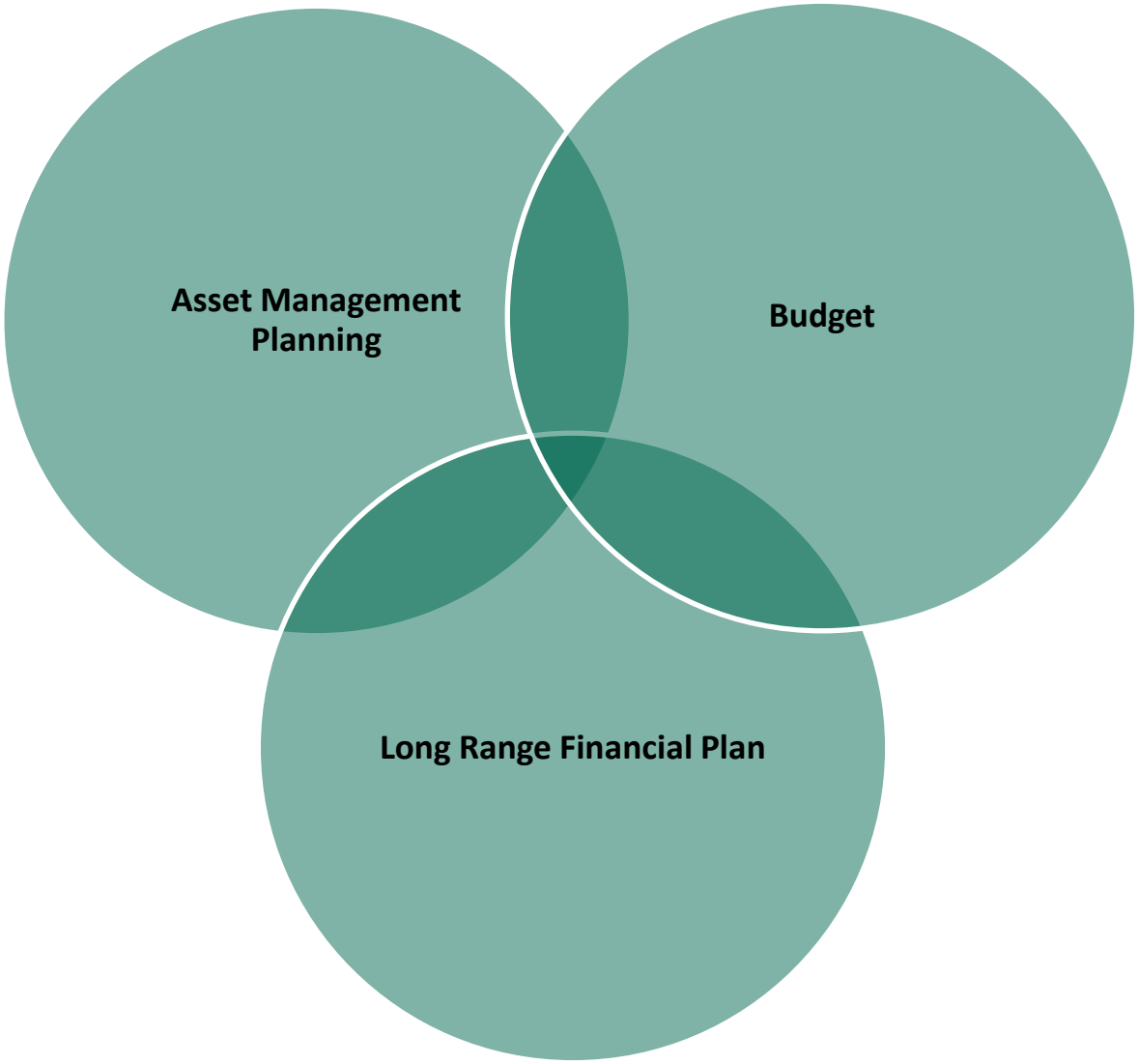
Addressing the infrastructure deficit is essential to ensuring the long-term sustainability of municipal services. By aligning investment planning with lifecycle needs and continuously improving asset management practices, the Town is taking proactive steps to close the funding gap and deliver reliable, cost-effective services to the community—today and into the future.

Long-Range Financial Plan

The Long-Range Financial Plan will be closely aligned with the Town's budgeting process and AMP by taking a comprehensive, long-term view of infrastructure needs and financial capacity. The AMP supports the LRFP by identifying the lifecycle requirements of municipal assets and forecasting the timing and scale of future investments, as well as formalizing levels of service.

As the Town's Corporate Asset Management (CAM) Program continues to mature, the integration between asset management, budgeting, and long-range financial planning will improve. This alignment will enable more informed business cases, improve prioritization of capital investments, and support the development of sustainable financial forecasts. Ultimately, this integrated approach strengthens the Town's ability to deliver reliable services while maintaining fiscal responsibility.

Figure 7.1: Integrated Approach: Asset Management, Budget, Long Range Financial Plan



It is important to emphasize that the financial requirements necessary to implement the updated Asset Management Plan will require further review and ongoing refinement, as well as the confirmation of the most appropriate manner for their integration into the Town's Long Range Financial Plan and the development of a financial strategy - while recognizing the Town's financial capacity.

The annual budget process will also continue be leveraged to advance this integration, as appropriate. If necessary, the Town's Asset Management Plan will be updated accordingly.

Funding Strategy

The funding required to support the lifecycle management activities (acquisition, operations, maintenance, renewal) of the infrastructure assets comes from many sources.

- Tax-based
- Reserves and Reserve Funds
- Development Charges
- State of Good Repair Levy
- Grants

Funding constraints are always a factor when balancing a municipality’s demand for services and the assets’ ability to provide them. To manage funding constraints and address the infrastructure deficit given the Town’s financial position, capital projects that require funding from development charges are often deferred to years when the development charges are received by the Town. Debt financing is also used to bridge timing challenges related to the receipt of revenues.

Maintaining current infrastructure in a state-of-good-repair and replacing infrastructure when required is given greater priority over the addition of new infrastructure that does not have external funding.

Figure 7.2 depicts the prioritization model that the Town follows for asset financial planning.

Figure 7.2: Budget Prioritization Model

The benefit of this approach will allow funds to be directed towards maintaining and renewing assets that the Town currently owns while addressing the infrastructure deficit. The impacts to the operating budget associated with construction and acquisition of new assets will be minimized.

Financial Data Sources

The 2025 AMP utilizes financial data. The source of the data is the Town's Finance department. The 2025 Capital budget along with the 2025-2034 Capital forecast financial data was used to develop the financial forecasting for acquisition, installation/commission, renewal/replacement, and disposal activities. The planned 2025 Operating budget was used to inform the financial forecasting for maintenance and operating activities. This data is updated annually and is considered up to date.

In compiling this Plan, it was necessary to make some assumptions. The key assumptions made in the development of this AMP as well as the level of confidence in the data behind the financial forecasts are discussed below.

Key assumptions made in this AMP are:

- The capital projects that are funded by development charges in the 2025-2034 10-year Capital forecast, as well as future development plans were used to represent new asset value to be acquired for 2025-2034.
- The planned budget for operations and maintenance was based on the 2025 Operational planned budget.
- Forecasted operations and maintenance were derived based on new asset growth at the Town over the next 10 years.
- The planned budget for renewal and replacement was determined by designating renewal amounts for each capital project in the 2025-2034 Capital Forecast
- Where no engineering-based needs assessments were conducted - forecasted renewal year for assets were calculated by adding the useful life to the installation year of the asset.
- Unknown installation dates were estimated based on condition ratings.
- Age-based condition was used in the absence of formal condition assessment information wherever applicable.
- Inflation factors (i.e. StatsCan Inflationary table) were used to update replacement costing in the absence of formal inventory and condition assessment information.
- Unknown renewal/replacement costs were based on benchmarks and industry best practice.
- Population growth was estimated using data obtained during the development of the Town's 2021-2022 Development Charge Study. Actual population and employment growth will impact demand for the services provided by the Town's assets.
- Population growth will result in new infrastructure. The extent of new infrastructure assets required, and the subsequent lifecycle costing requirements will become clearer as development plans are finalized.

- Missing information and data gaps were resolved by substituting institutional knowledge from Town stakeholders.

Asset Data Confidence

The forecast costs, planned budgets, and valuation projections in this AMP are based on the best available data. Iinformation that is current and accurate is an enabler of best-in-class asset management. Data confidence is measured in terms of accuracy and completeness. Table 7.1 outlines the confidence data for each asset class's forecast evaluated in this plan.

Table 7.1: Data Confidence Scale

Service Area	Overall Asset Data Confidence
Administration	Moderate
Library Services	Moderate
Fire Services	Moderate
Parks & Open Spaces	Moderate
Recreation & Culture	Moderate
Environmental Services	Low
Transportation & Transit	Moderate

Overall confidence on the asset data is considered to be 'Moderate'.

Asset data used to identify renewal and growth needs was drawn from two primary sources: the Town's asset management inventories and the 10-year capital forecast. While the capital forecast reflects a high degree of confidence due to its alignment with approved plans and funding strategies, the asset inventories vary in confidence depending on the completeness, accuracy, and condition data available for each asset category and service area. Both sources were reviewed and refined on a service area basis to ensure relevance and reliability in planning.

The Town continues to improve and validate asset data through targeted analysis, standardization efforts, and data management practices.

8 - Continuous Improvement

Development of AMPs is an iterative process that includes improving data, processes, systems, staff skills, and organizational culture over time. This section provides an overview of recommended improvements to the Town's asset management practices.

As summarized in Table 8.1, this AMP is compliant with O.Reg. 588/17 requirements for July 1st, 2025. A more detailed assessment of this AMP's compliance with the O. Reg is provided in Appendix C.

Table 8.1: O.Reg. 588/17 Compliance with Proposed Levels of Service

AMP Section	O.Reg. 588/17 Compliance	Comment
State of Local Infrastructure	Compliant	The AMP provides a summary of the assets, the replacement cost of the assets, the average age of the assets, the condition of the assets, and the approach to assessing condition of assets.
Levels of Service	Compliant	The AMP provides the qualitative community description and technical metrics as required by O.Reg. 588/17, the current performance as well as the established proposed performance over the next 10-years.
Future Demand	Compliant	The AMP provides the population and employment forecasts as outlined in the 2022 Development Charges Study. It also provides the lifecycle activities that would need to be undertaken to maintain the current and proposed LOS for each of the next 10 years, based on an assessment of the lowest lifecycle cost options and risks.
Financial Strategy	Compliant	The AMP includes a 10-year financial forecast based on lifecycle costs to achieve proposed levels of service. It integrates risk management, aligns with strategic goals, and supports long-term financial sustainability

Improvement Plan

It is important to recognize areas of the AMP and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Timeline	Comments
1	Implement an Asset Management Information System (AMIS) that incorporates a consolidated asset data register, a computerized maintenance management system, and predictive analysis and forecasting tools	In Progress	The AMIS will enable the Town to automate business processes and enable more data-driven decision-making.
2	Validate and document current customer and technical levels of service, and continue to monitor the proposed levels of service	Ongoing	
3	Improve accuracy and completeness of infrastructure asset data by addressing inventory and asset data gaps	Ongoing	
4	Proactively update asset unit replacement costs based on latest industry data and engineering reports	Ongoing	
5	Determine more accurate lifecycle costing that is tracked at the asset level	2025 - 2027	This will be enabled by the AMIS
6	Determine operational budget impacts of proposed growth projects	2025 - 2027	This will be enabled by the AMIS and further informed by updated development charge studies.

Task	Task	Timeline	Comments
7	Bridge the gap between asset management planning and the execution of capital and operating budgets. This includes: • Identifying all assets impacted by a project or activity. • Updating asset condition, cost, performance, and risk profiles upon project completion. • Ensuring alignment between project outcomes and long-term asset management objectives. • Leveraging data from the AMIS to inform prioritization, optimize timing, and support evidence-based budgeting. • Establishing town-wide feedback loops to ensure insights from project execution are used to refine asset strategies throughout the lifecycle of the asset.	2025 - 2027	This will be enabled by the AMIS

Monitoring and Review

The AMP will be reviewed and updated as new budgets, strategies, frameworks, and service area plans are developed to incorporate recommendations and document their impact on lifecycle management activities and financial planning. This AMP has a maximum life of 5 years and is due for complete revision and updating by 2030.

In accordance with O. Reg. 588/17, the Town will provide annual updates to Town Council on the progress of implementing this AMP, including the monitoring and reporting of established levels of service metrics. These updates will support continuous improvement and ensure that asset management practices remain transparent, accountable, and aligned with community expectations.

Appendices

Appendix A – Asset Hierarchy

Table AA.1: Transportation and Transit Asset Hierarchy

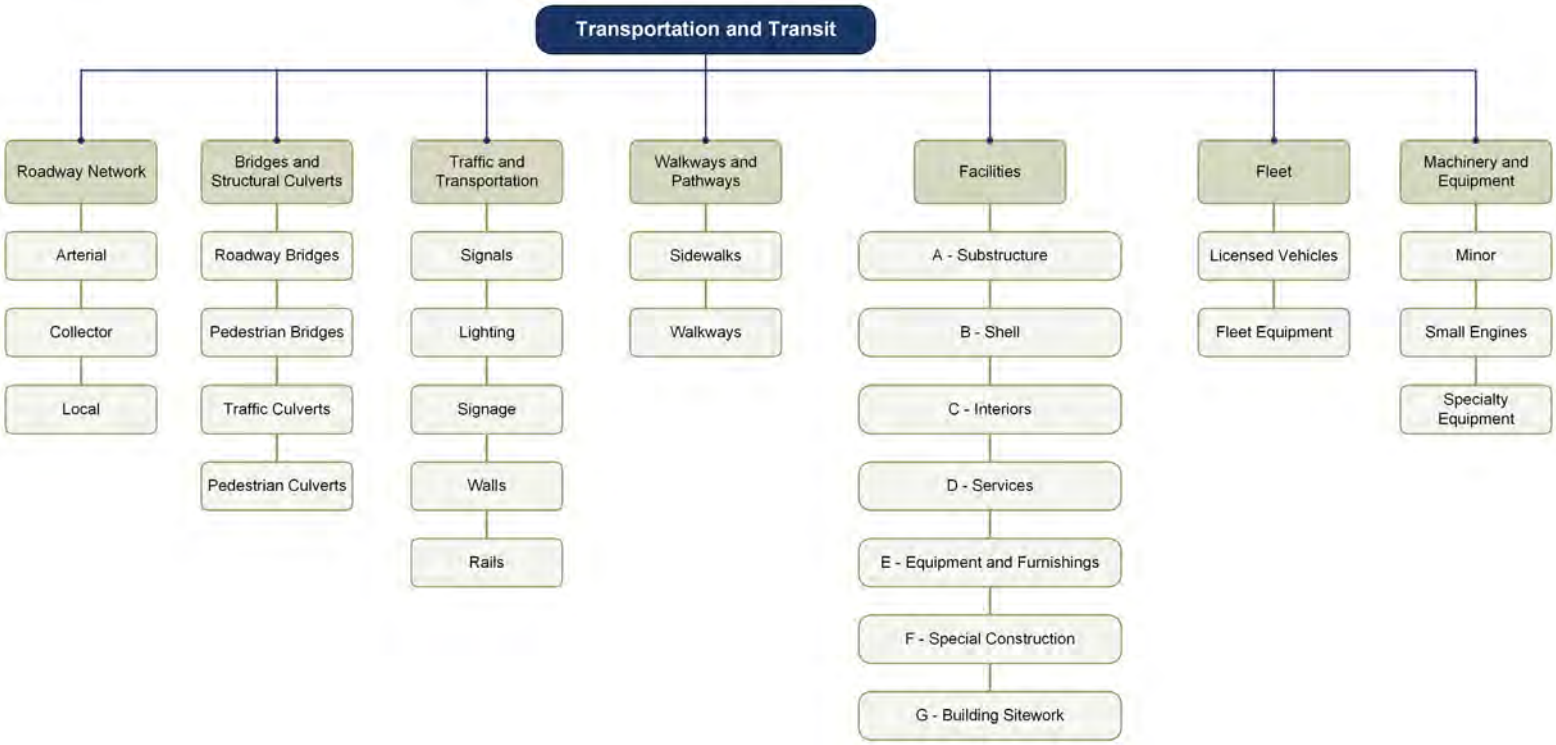


Table AA.2: Environmental Services Asset Hierarchy

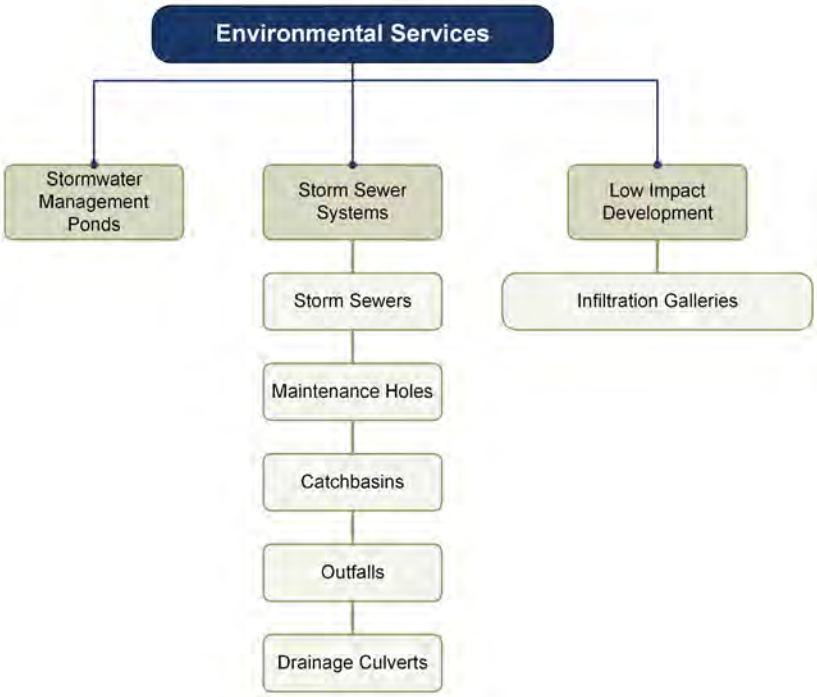


Table AA.3: Recreation and Culture Asset Hierarchy

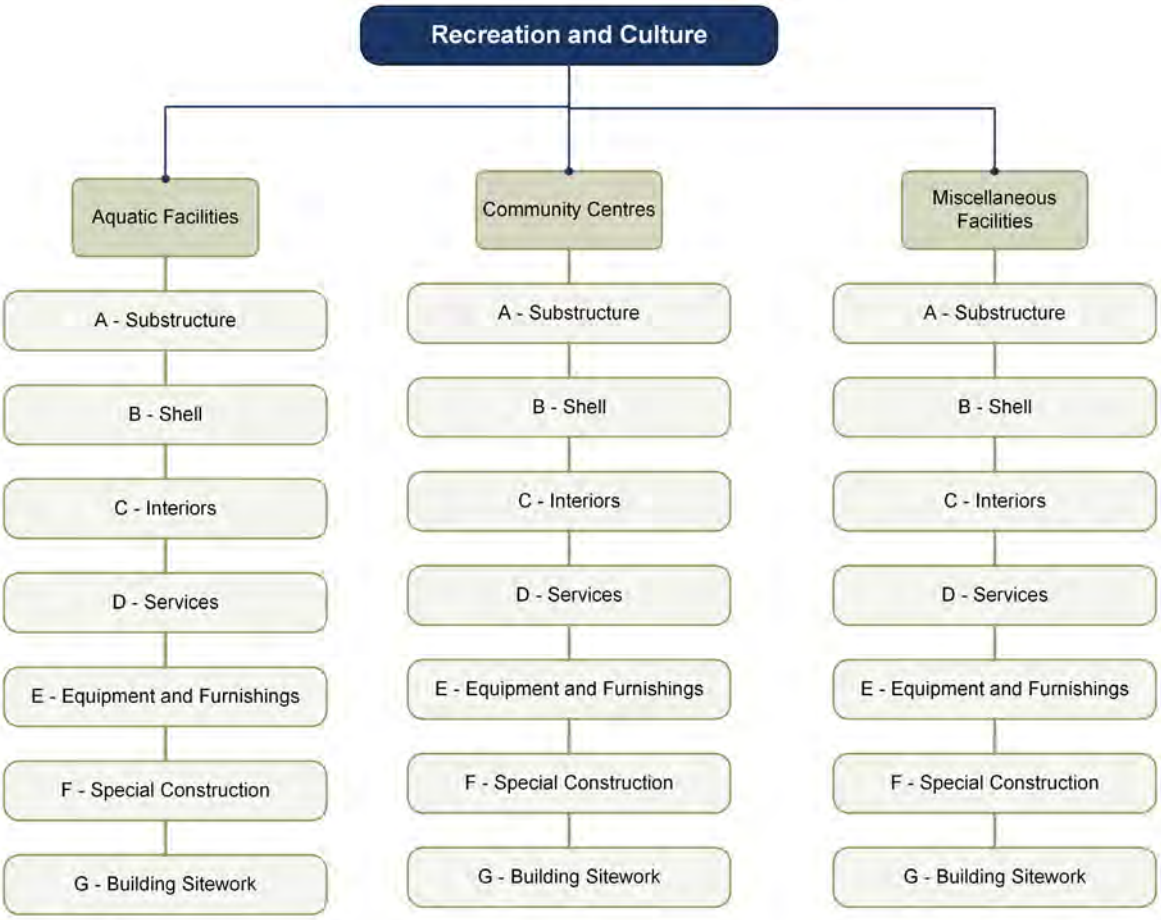


Table AA.4: Parks and Open Space Asset Hierarchy

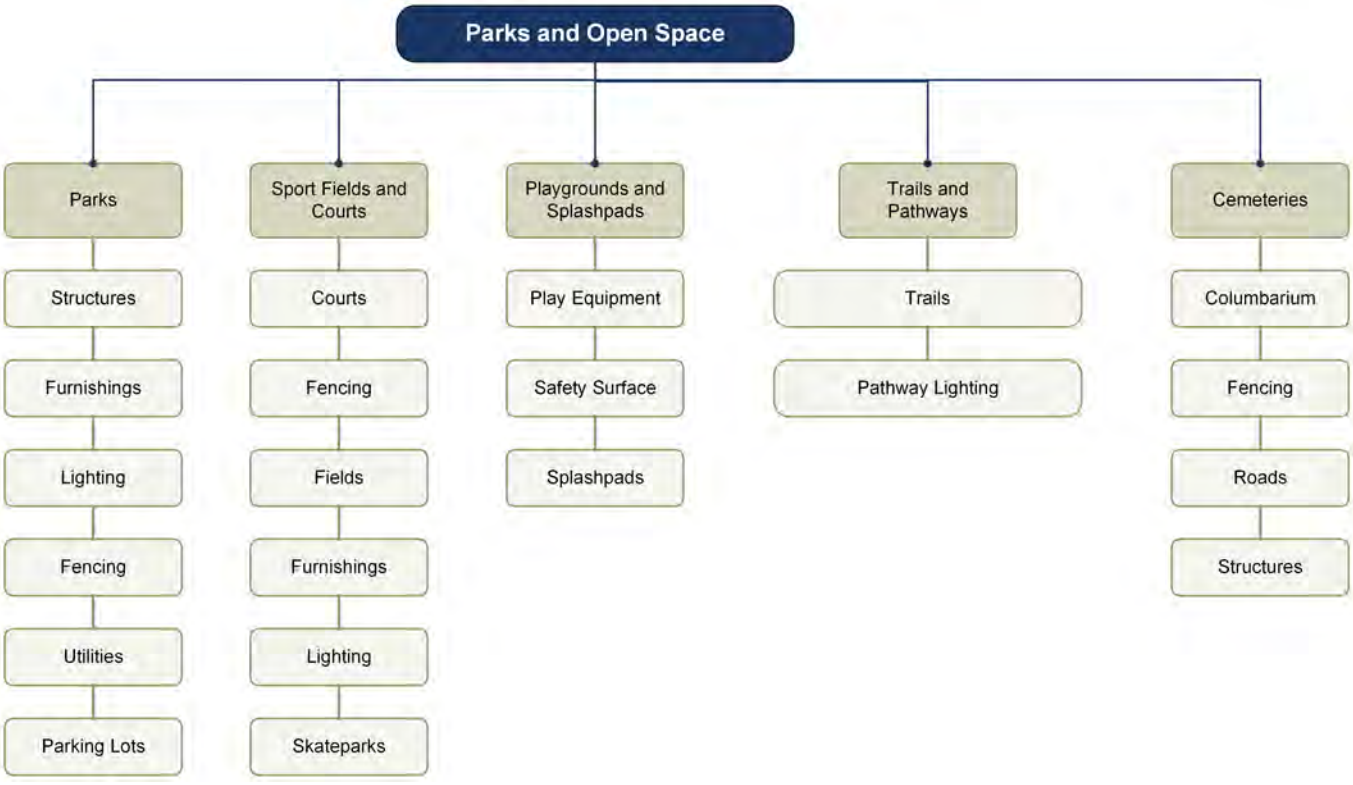


Table AA.5: Fire Services Asset Hierarchy

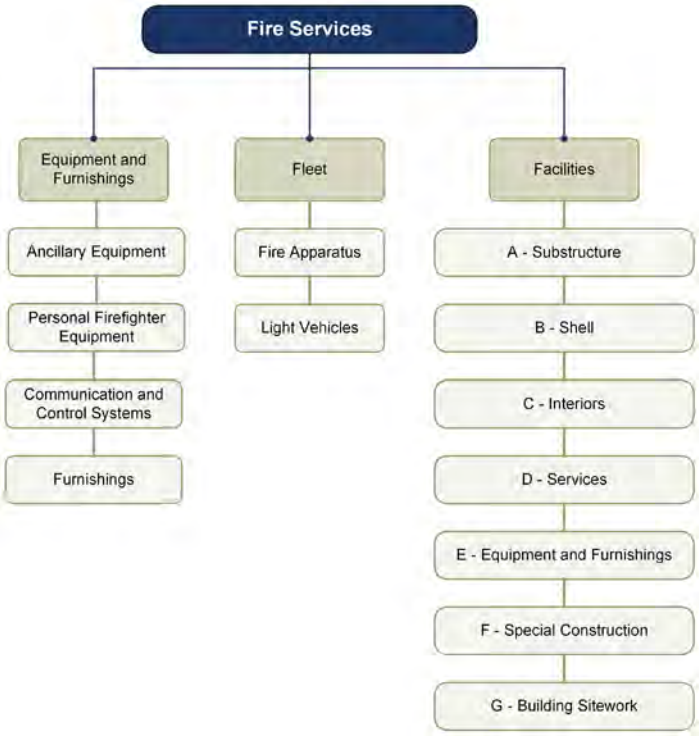


Table AA.6: Library Services Asset Hierarchy

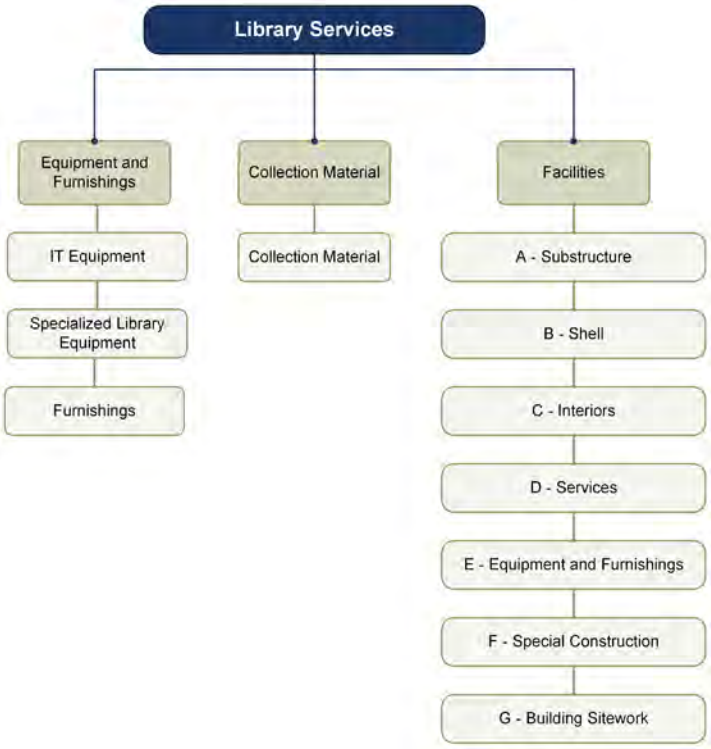
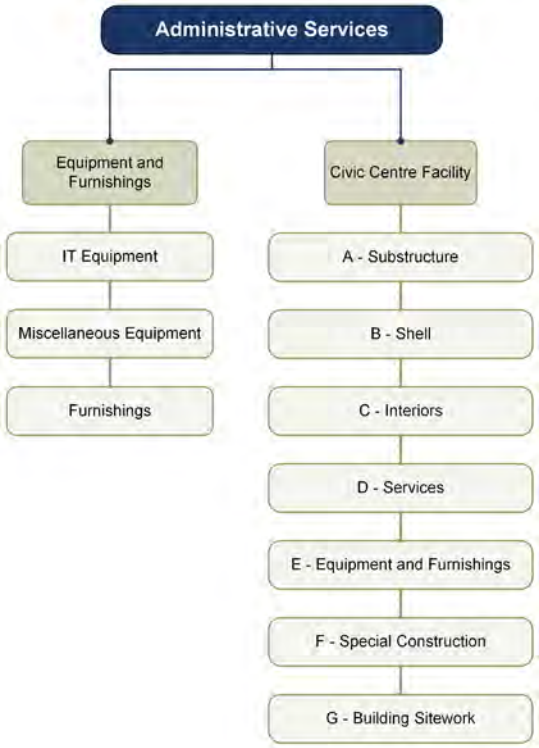


Table AA.7: Administrative Services Asset Hierarchy



Appendix B – Risk Matrices

Table AB.1: Consequence of Failure Matrix

Consequence Categories (Triple Bottom Line)		C1 Insignificant	C2 Minor	C3 Moderate	C4 Major	C5 Catastrophic
Economic	Financial	Damages, losses (including 3rd party) or fines from $1k to $10k	Damages, losses (including 3rd party) or fines $10k to $100k	Damages, losses (including 3rd party) or fines $100k to $1M	Damages, losses (including 3rd party) or fines $1M to $10M	Damages, losses (including 3rd party) or fines > $10M
Social	Health & Safety	No obvious potential for injury or affects to health.	Potential for minor injury or affects to health of an individual. Full recovery is expected; or minor medical attention may be required	Potential for serious injury or affects to health. May affect many individuals and / or result in short term disability; or Hospitalization may be required for a short period of time.	Potential for serious injury or affects to health of one or more individuals with a possibility of loss of a life and the certainty of long-term disability; or Emergency hospitalization required for one or more individuals.	Potential for death or multiple deaths with probable permanent damage; or Emergency and long-term hospitalization required for several individuals.
	Availability/ Reliability	Small number of customer experiencing disruption / impact (less than 100 people or up to a few hours)	Localized service disruption / impact (100 to 1,000 people or up to 1 day)	Significant localized disruption / impact (1,000 to 10,000 people or less than 1 week)	Major service disruption / impact (10,000 to 50,000 people or for more than a week)	Region wide service disruption / impact (greater than 50,000 people or permanent loss of services)
Environmental	Environment	Very negligible impact or can be restored within 1 week	Minor (within 1 month) very isolated damage / impact to the environment, local importance	Significant short-term impact (up to 2 months), local importance	Significant long-term impact (up to 1 year), Provincial importance.	Major long-term impact (greater than 1 year), Federal importance.

Table AB.2: Probability of Failure Matrix

Probability of Failure	Rating	Description		
		Capacity & Use	Function	Quality
Rare	1	Demand corresponds well with actual capacity and no operational problems experienced. Meets current and future capacity needs within planning horizon.	The infrastructure in the system or network meets all program/service delivery needs in a fully efficient and effective manner. (Health, safety, security, legislative etc.)	Asset is physically sound and is performing its function as originally intended. Asset is new or at the beginning of it's service life.
Unlikely	2	Demand is within actual capacity and occasional operational problems experienced.	The infrastructure in the system or network meets program/service delivery needs in an acceptable manner. (Health, safety, security, legislative etc.)	Asset is physically sound and is performing its function as originally intended. Typically, asset has been used for some time but is within mid-stage of its expected life.
Possible	3	Demand is approaching actual capacity and/or operational problems occur frequently. Meets current capacity needs but not future without modifications.	The infrastructure in the system or network meets program/service delivery needs with some inefficiencies and ineffectiveness present. (Health, safety, security, legislative etc.)	Asset is showing signs of deterioration and is performing at a lower level than originally intended.
Likely	4	Demand exceeds actual capacity and/or significant operational problems are evident.	The infrastructure in the system or network has a limited ability to meet program/service delivery needs. (Health, safety, security, legislative etc.)	Asset is showing significant signs of deterioration and is performing to a much lower level than originally intended.
Certain	5	Demand exceeds actual capacity and/or operational problems are serious and ongoing. Does not meet Current capacity Requirements.	The infrastructure in the system or network is seriously deficient and does not meet program/service delivery needs and is neither efficient nor effective. (Health, safety, security, legislative etc.)	Asset is physically unsound and/or not performing as originally intended. Asset has reached end of life and failure is imminent.

Appendix C – Regulatory Compliance

The following chart represents the Municipality's position with respect to the asset management requirements identified in O.Reg. 588/17 for all assets by July 2, 2025. (Proposed Levels of Service).

Table AC.1: Compliance with O.Reg. 588/17 (2025 Deadlines)

AMP Section	O.Reg. 588/17 Compliance Requirements (Current and Proposed LOS)	Section
State of Local Infrastructure	For each asset category, the AMP provides • a summary of the assets, • the replacement cost of the assets, • the average age of the assets, • the condition of the assets, • the approach to assessing the condition of assets.	Section 2 and Section 6
Levels of Service	For each asset category, the AMP reports the current LOS and proposed LOS, including the qualitative community descriptions and technical metrics specified for core infrastructure and as required by O.Reg. 588/17.	Section 3
Asset Management Strategy	For each asset category, the AMP provides the lifecycle activities that would need to be undertaken to provide the proposed LOS for each of the next 10 years.	Section 6
Financial Strategy	A description of assumptions regarding future changes in population or economic activity. For each asset category, the AMP provides the costs of providing the lifecycle activities that need to be undertaken to maintain the current LOS for each of the next 10 years.	Section 7
Background Information	The AMP indicates how the background information and reports upon which the state of infrastructure section is based will be made available to the public.	Section 1.2

Appendix D – Levels of Service: Key Performance Indicators

Transportation and Transit

Table AD.1: Transportation and Transit Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Capacity and Use	Description, which may include maps, of the road network in the municipality and its level of connectivity	The Town of Halton Hills owns and operates a variety of urban and rural, arterial, collector, and local roads across the municipality providing connectivity between the two urban centres of Acton and Georgetown, and surrounding hamlets and adjacent municipalities.
	Description of the traffic that is supported by municipal bridges.	The Town of Halton Hills bridges have been designed in accordance with the standards and requirements of the Bridge Design Code at the time of construction. The bridges have been designed to carry heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, and cyclists.
	Adequate quantity of fleet to provide the service	TBD – Data collection and validation for this KPI is in progress
Quality and Reliability	Description or images that illustrate the different levels of road class pavement condition	The Town of Halton Hills conducted a pavement condition assessment update in 2024. Road Class pavement condition is reviewed and updated on an annual basis in accordance with capital improvement projects. Different levels of road class pavement condition are included in Appendix E
	Description or images of the condition of bridges and how this would affect use of the bridges.	Description of the condition of bridges and how this would affect the use of bridges is included in Appendix E
	Description or images of the condition of culverts and how this would affect use of the culverts.	Description of the condition of culverts and how this would affect the use of culverts is included in Appendix E
	% of streetlights that are functioning and operating in hours of darkness	TBD – Data collection and validation for this KPI is in progress

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
	Adequate type of equipment and attachments to effectively perform activities	TBD – Data collection and validation for this KPI is in progress
	Compliant with Legislative Requirements (MTO, Highway Traffic Act, O. Reg. 555/06)	The Town is in compliance with the relevant legislative requirements
Environmental Stewardship	Public awareness of biodiversity enhancement projects	TBD – Data collection and validation for this KPI is in progress

Table AD.2: Transportation and Transit Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Capacity and Use	# of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.	0.69 lane-km/km^2
	# of lane-kilometres of collector roads and local roads as a proportion of square kilometres of land area of the municipality.	0.26 lane-km/km^2
	# of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality	2.37 lane-km/km^2
	% of bridges in the municipality with loading or dimensional restrictions	6% (8 Bridges) (2024 OSIM Inspections)
Quality and Reliability	Average pavement condition index (also referred to as the pavement quality index) value for paved roads	69.8 (2024 Pavement Condition Assessments)
	Average surface condition (e.g. excellent, good, fair or poor) for unpaved roads.	Fair (2024 Pavement Condition Assessments)
	For bridges in the municipality, average bridge condition index value.	73.6 (2024 OSIM Inspection)
	For structural culverts in the municipality, average bridge condition index value.	68.6 (2024 OSIM Inspection)

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
	% of paved roads in poor or very poor condition	17%
	% of bridges and structural culverts in poor or very poor condition	10%
	% of traffic infrastructure in poor or very poor condition	56%
	% of walkways and pathways in poor or very condition	21%
	% of Public Work facility assets in poor or very poor condition	13%
	% of Public Work fleet, machinery and equipment assets in poor or very condition	20%
	Average Detour Length around structure	7.8 km (2024 OSIM Inspections)
	% of pedestrian bridges that are AODA compliant	TBD – Data collection and validation for this KPI is in progress
	% of traffic signals with APS	TBD – Data collection and validation for this KPI is in progress
Environmental Stewardship	% of ROW areas with integrated stormwater management systems (such as permeable pavements, bioswales, rain gardens, and green roofs)	TBD – Data collection and validation for this KPI is in progress
	% of streetlights with LED or low energy fixtures	TBD – Data collection and validation for this KPI is in progress
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Environmental Services

Table AD.3: Environmental Services Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Capacity and Use	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.	The majority of the Town's stormwater management system is concentrated in the urban areas of Acton and Georgetown. These areas are serviced by mains, water tile collection systems, outfalls, vaults, and stormwater management ponds.
	Annual number of complaints received	100 Consolidated Linear Infrastructure – Environmental Compliance Approval (CLI-ECA), Annual Stormwater Performance Report (2024, Town of Halton Hills)
Function	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system.	TBD – Data collection and validation for this KPI is in progress

Table AD.4: Environmental Services Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Capacity and Use	% of properties in municipality resilient to a 100-year storm	TBD – Data collection and validation for this KPI is in progress
	% of the municipal stormwater management system resilient to a 5-year storm	TBD – Data collection and validation for this KPI is in progress
Quality and Reliability	% of stormwater infrastructure assets in poor or very poor condition	4%
Environmental Stewardship	% of SWM ponds that are below their target storage volume	TBD – Data collection and validation for this KPI is in progress
	% of planned maintenance activities completed as per scheduled for stormwater quality features	TBD – Data collection and validation for this KPI is in progress

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Recreation and Culture

Table AD.5: Recreation and Culture Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Capacity and Use	Number of Service Requests fulfilled	TBD – Data collection and validation for this KPI is in progress
Quality and Reliability	Annual number of customer complaints/service requests relating to facility condition	TBD – Data collection and validation for this KPI is in progress
Environmental Stewardship	% of facility users aware of sustainability and resiliency initiatives	TBD – Data collection and validation for this KPI is in progress

Table AD.6: Recreation and Culture Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Capacity and Use	Number of distinct opportunities (programs, non-programs and events) provided.	TBD – Data collection and validation for this KPI is in progress
Quality and Reliability	% of facility assets in poor or very poor condition	13%
Function	% of facilities that meet all regulatory requirements	100%
Environmental Stewardship	Annual electricity consumption per square foot	TBD – Data collection and validation for this KPI is in progress
	Annual natural gas consumption per square foot	TBD – Data collection and validation for this KPI is in progress
	Annual water consumption per square foot	TBD – Data collection and validation for this KPI is in progress
	Annual volume of rainwater harvested	TBD – Data collection and validation for this KPI is in progress

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Parks and Open Space

Table AD.7: Parks and Open Space Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Quality and Reliability	Annual # of distinct RFS (Request for Service) regarding service quality	TBD – Data collection and validation for this KPI is in progress
Function	% of residents satisfied with the parks, sport fields and open spaces	88% (2023 Customer Survey)
Environmental Stewardship	Annual # of community participation events in sustainability-oriented programs (e.g. tree planting, clean-up drives, etc.)	TBD – Data collection and validation for this KPI is in progress

Table AD.8: Parks and Open Space Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of cemetery assets in poor or very poor condition	18%
	% of park assets in poor or very poor condition	17%
	% of trails and pathway assets in poor or very poor condition	17%
Function	% of parks, trails and cemeteries cleaned and maintained as scheduled	100%
	% of playgrounds that meet CSA standard	100%
Environmental Stewardship	Annual # of trees planted on parks and open spaces	TBD – Data collection and validation for this KPI is in progress
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Fire Services

Table AD.9: Fire Services Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of customers that are satisfied with the effectiveness of the prevention and inspection services	98% (2023 Customer Survey)
Function	# of Fire Safety Inspections successfully completed in the first attempt (business licenses inspection, vulnerable occupancies, industrial)	TBD – Data collection and validation for this KPI is in progress
	Annual # of Fire Safety Education Engagements	TBD – Data collection and validation for this KPI is in progress

Table AD.10: Fire Services Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of fire facility assets in poor or very poor condition	13%
	% of fire fleet and equipment assets in poor or very poor condition	20%
	Accurate performance data based on total calls for service by career firefighters, reflecting international standards and industry best practices (NFPA 1710): • Turnout Time • Travel Time (first due Pumper) • Travel Time (second due Pumper)	• 80 seconds, 90% of the time • 240 seconds (4 minutes) • 360 seconds (6 minutes)
Function	Meeting compliance set by the "Emergency Management Program" and OEM guidelines	In compliance
	Ratio of apparatus/vehicles in service versus required	TBD – Data collection and validation for this KPI is in progress
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Library Services

Table AD.11: Library Services Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of residents satisfied with library services	93% (2023 Customer Survey)
Function	Service population per library (total population / Number of libraries)	62,951 (2021)
		2

Table AD.12: Library Services Technical Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of library facility assets in poor or very poor condition	13%
	% of library equipment assets in poor or very poor condition	28%
	Annual # of unfulfilled requests	TBD – Data collection and validation for this KPI is in progress
Function	Collection size (collection size/capita)	TBD – Data collection and validation for this KPI is in progress
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Administrative Services

Table AD.13: Administrative Services Customer Levels of Service

Service Attribute	Customer Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of resident inquiries resolved on initial contact	TBD – Data collection and validation for this KPI is in progress

Table AD.14: Administrative Services Customer Levels of Service

Service Attribute	Technical Performance Measure	2025 Key Performance Indicator
Quality and Reliability	% of the Civic Centre facility assets in poor or very poor condition	20%
	% of equipment assets in poor or very poor condition	18%
Financial Sustainability	Capital Reinvestment Rate	TBD – Data collection and validation for this KPI is in progress

Appendix E – Description of PQI and BCI Levels

Table AE.1: Pavement Quality Index Levels

Condition Level	PQI	Pavement Quality Index Level Description
Excellent	90 – 100	Roads in this condition provide a smooth and quiet ride, enhancing user comfort and satisfaction. The pavement is visually appealing, with a clean, uniform surface free of patching. There are no visible cracks or only minor hairline cracks, indicating excellent surface integrity. Drainage is effective, with no signs of water pooling or erosion.
Good	70 – 90	Roads in this condition offer a smooth and comfortable ride, contributing positively to user satisfaction and safety. The pavement is aesthetically pleasing, with a clean and uniform appearance. Minor surface cracks may be present but do not affect ride quality or structural performance. Drainage is effective, with no signs of water pooling or erosion. The surface shows no evidence of patching.
Fair	40 – 70	Roads in this condition provide a decent ride, though users may notice some roughness or unevenness. The surface shows visible cracking and patching, indicating prior repairs. While these repairs have restored functionality and the surface remains generally smooth, signs of deterioration are evident, such as surface wear or early rutting.
Poor	20 - 40	Roads in this condition provide a bumpy and uncomfortable ride, often due to numerous surface patches and extensive cracking. Sunken manhole covers and other surface irregularities contribute to the unevenness and may pose safety concerns. The pavement shows clear signs of advanced wear and deterioration, indicating that the road is nearing the end of its serviceable life.
Very Poor	0 - 20	Roads in this condition provide a bumpy and uncomfortable ride, significantly impacting user experience and safety. The surface exhibits numerous patches, extensive cracking, and crumbling asphalt, indicating severe structural failure. Sunken manhole covers and other surface deformations further contribute to the unevenness. Drainage is poor, often resulting in standing water that accelerates deterioration.

Table AE.2: Bridge Condition Index Levels

Condition Level	BCI	Bridge Condition Index Level Description
Excellent	90 – 100	• Bridges: All structural elements (deck, superstructure, substructure) are in excellent condition with no visible defects. The bridge provides a safe, smooth, and comfortable experience with no load restrictions or service interruptions. • Culverts (span >3m): The culvert is structurally sound with no deformation, corrosion, or blockage. Water flows freely, and there is no erosion or undermining. The culvert poses no risk to road users or adjacent infrastructure.
Good	70 – 90	• Bridges: Minor surface wear or hairline cracks may be present, but all components are functioning well. The bridge remains fully open to traffic with no restrictions and minimal impact on user comfort. • Culverts (span >3m): Some minor wear or sediment buildup may be present, but the culvert continues to function effectively. There is no impact on road safety or drainage performance.
Fair	60 – 70	• Bridges: Moderate deterioration is visible in some elements, such as spalling concrete, rusting steel, or joint issues. The bridge remains safe but may require increased maintenance or be a candidate for rehabilitation. • Culverts (span >3m): Signs of corrosion, joint separation, or partial blockage may be present. Flow capacity may be reduced during heavy rainfall, and localized erosion may begin to affect the roadbed.
Poor	40 - 60	• Bridges: Significant defects such as widespread cracking, corrosion, or deformation are present. The bridge may have load restrictions or reduced lanes, affecting traffic flow and user confidence. • Culverts (span >3m): Structural issues such as cracking, corrosion, or partial collapse are evident. Flow is restricted, and road surface settlement or erosion may be visible. The culvert may require major repair or replacement.
Very Poor	0 - 40	• Bridges: The bridge is in critical condition, with severe structural damage. It may be closed to traffic or under emergency monitoring. Public safety is at risk, and immediate reconstruction is required. • Culverts (span >3m): The culvert is severely compromised, with collapse, major blockage, or undermining of the road. It poses a significant risk to road users and requires urgent replacement to restore safe passage and drainage.